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An Empirical Study of "Fringe Benefits" and Performance of the Korean Firms

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Abstract

This paper examines the effects of fringe benefits in the compensation package on performance of the Korean firms. Theoretically, fringe benefits have two implications in relation to employees: they are effective instruments that provide incentives; at the same time, some fringe benefits, especially the power-related benefits, are often used for exploitation of self-interests. Using a six-year panel data of the Korean manufacturing firms, we do a regression analysis and identify the links between fringe benefits and performance of the Korean firms. Our results suggest that, in general, these types of compensations do not promote good performance of firms. The results also imply that perhaps some designs in pay for performance in Korea are not efficient.

Keywords: Pay-performance, Fringe benefits, Incentive, Korea

1. Introduction

The Asian financial crisis in the late 1990s drew particular attention to corporate governance. It also called the need to design a good compensation structure for employees, as we witnessed problems of managerial slacks and moral hazard, which are typically found in the principal-agent relationship. We, therefore, review relevant literature and, by adopting our research setting as Republic of Korea, examine whether pay-performance relationship has functioned appropriately as expected in one of the East Asian countries which experienced collapse of firms caused by mismanagement during the financial crisis in the 1990s.

Notably, an agency problem, principal-agency problem in full expression, rises when an owner and a proxy who works for the owner have different interests. In management, agency problem emerges when managers do not behave in a way that maximizes the interest of the shareholders. To discuss more specifically, perspectives which address solutions to the agency problem have two strands in general: optimal contracting and managerial power approaches (Bebchuk & Fried, 2003). Under optimal contracting approach, well-structured compensation scheme provides managers with efficient incentives to maximize shareholder value (Jensen & Meckling, 1976; Jensen & Murphy, 1990). While a good design in financial compensation is a key solution in the optimal contracting view, the managerial power approach alternatively takes the compensation scheme as a problem itself. According to this approach, compensation is not regarded as a fundamental solution to agency problems, but rather the problem in itself. Managers are perceived to take advantage of compensation, treating it as a kind of power, and sometimes abuse it.

In fact, compensation is decided by both market forces and managerial influence. By managerial influence, managers can manipulate products of their managerial decisions running in a way they like. The managerial power approach argues that impacts of this kind of managerial influence are sizable and that optimal contracting alone cannot adequately explain compensation practices (Bebchuk & Fried, 2003). Rather, what is more important is identification of "some type of financial benefits" that both approaches critically handle. In optimal contracting, these pecuniary benefits – we call them fringe benefits from now – are a part of incentive which is supposed to motivate managers. On the other hand, managerial power approach regards fringe benefits as governance tools that serve to satisfy managers' desire for power.

This paper overviews two opposite perspectives regarding impacts of the financial compensation offered to employees including managers, and understands the landscape of the relationship between managerial compensation and the agency problem. To be more specific, we pursue two research questions: firstly, are fringe benefits in the Korean firms positively associated with performance? And, secondly, which kind of fringe benefits contributes significantly to performance. In order to answer these questions, we collect human resource and financial data for the Korean *Chaebols.* The dataset consists of the large conglomerates that are public, operate in the manufacturing industries, and do not have a controlling shareholder. Our sample size consists of 264 observations that span from 1998 to 2003. This study is structured as follows: in section 2, we overview the agency perspectives that specifically discuss compensation problems, and propose hypotheses. Following the theoretical discussion in section 2, we present our empirical model in section 3, followed by section 4 which introduces our approach. In section 5, we provide the statistical results and conclude in section 6 with some remarks.

2. Theoretical perspectives: the agency problem

2.1 Overview of agency theory

Agency theory is concerned with solving two problems that can occur in the bilateral relationship between an employer (owner) and employees (agent). The first is the agency problem that arises when the desires or goals of the principal and agent conflict and it is difficult or expensive for the principal to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the problem of risk sharing that arises when the principal and agent have different attitudes toward risk. In this study, we focus on the first problem.

Agency theory attempts to describe the relationship using the metaphor of a contract (Jensen & Meckling, 1976). Because the unit of analysis in the contract governing the relationship between the principal and the agent, the focus of the theory is on determining the most efficient contract governing the principal-agent relationship given assumptions about people (e.g., self-interest, bounded rationality, risk aversion), organizations (e.g., goal conflict among members), and information (e.g., information is a commodity which can be purchased). Agency theory assumes the opportunistic human nature and addresses conflicts rising when agents have goals different from owners.

Agents with self-interests can satisfy their goals by exploiting rents from the organization in several ways and the idea of fringe benefits is positioned as a centerpiece of the rent-extraction hypothesis. A fringe benefit is defined comprehensively: it usually refers to pecuniary package other than salary and bonus, as well as non-pecuniary merits. More specifically, pecuniary package includes pension plans, deferred compensation, post-retirement perks, price differentials between preferred stock and common stock, consulting contracts…etc. Non-monetary merits, in general, consist of vehicle provided by a firm, membership for social network using the position, professional job training, and so on. A significant characteristic of fringe benefits is that, in a narrow sense, they are less interlocking with individual performances in contrast to salary and bonus which tend to move directly with individual or team performances within an organization and, despite presence of firm-specific variations, schedule of the benefits is programmed.

In fact, the literature on investor protection and its role in the development of corporate governance (La Porta, Lopez-de-Silanes, Shleifer & Vishny, 1998) specifies that potential problems are not only the financial structures but also related to abuse of benefits that shareholders are not even aware of. One of fringe benefits that agents are likely to exploit is "private benefits" (Bebchuk & Fried, 2003). The common feature of private benefits is that they are enjoyed exclusively by the party in control. The theoretical literature often identifies private benefits as the "psychic" value because they are related to power (Harris & Raviv, 1988; Aghion & Bolton, 1992). Perquisites, for example, can be abused by managers (and other employees, too). The use of company money as a pay for perks is the most visible but not the most important way in which corporate resources can be used to the main advantage of the controlling party. Although it is apparently against the shareholders, it is not protected by the law and is rarely documented.

2.2 The Role of Fringe Benefits: Incentive or Moral Hazard

According to Dyck and Zingales (2001), one standard deviation increase in the size of the private benefits is associated with a 48 percent reduction in the ratio of external market capitalization of equity to GNP, a six percent reduction in the percentage of equity held by non-controlling shareholders, and a 35 percent increase in the number of privatized companies sold in private negotiation rather than through public offering. This evidence gives supports to the prominent role that private benefits have come to play in corporate finance. However, the existence of private benefits is not necessarily bad, since private benefits are another face of fringe benefits and fringe benefits frequently serve as a good instrument for motivating employees. Zingales (1995) argues that the level of private benefits has no efficiency consequence, but only distributional ones. There are more aspects related to private benefits but this study limits our research scope to pay-performance relationship.

Many recent agency theory-based research papers agree that compensation can be useful for aligning the actions of agents with desired organizational outcomes (Jensen & Murphy, 1990; Tosi & Gomez-Mejia, 1989). For example, Murphy (1985) studies the pay-performance relationship of 501 managers in 72 companies and finds that salary, bonus, and total compensation are positively related to total shareholder return and growth in firm sales. Abowd (1990) analyzes the incentive pay-firm performance relationship among 225 companies and finds that greater use of the compensation is positively related to total shareholder return and gross economic return. However, Bebchuk and Fried (2005) show that the flawed compensation has been widespread, persistent, and systemic. Furthermore, the problems have not resulted from temporary mistakes or lapses of judgment that boards can be expected to correct on their own, but have stemmed from structural defects in the underlying governance structure that enable executives to exert considerable influence over their boards.

In fact, the negative view is supported by the corporate governance scandals in the U.S. that began erupting in 2001. The wave of corporate scandals shook confidence in the performance of public company boards and drew attention to possible flaws in their executive compensation practices. Even before the corporate scandal alerted advanced economies, the managerial slack brought the financial crisis in Asia in the 1990s. Notably, one of the reasons for the Korean financial crisis was mismanagement of the corporate financial strategies due to the managerial slack. Banks collapsed because they failed in collecting fraudulent loans, which had been practiced within the loosely-monitored internal system. Top managers at Daewoo, previously one of the top five business groups in Korea, were accused of embezzlement. As a result, regardless of countries, there is now widespread recognition that employees, even the board members, do not necessarily serve shareholders' interests.

Principal-agent theory posits that the agent's rational self-interest and effort aversion create the potential for moral hazard. The agent may act to maximize his or her outcomes (e.g., compensation) without extending efforts toward achieving the principal's objectives (Eisenhardt, 1989). In spite of the importance in compensation structure, there are few theoretical or empirical consensus on the impact of different forms of compensation on managerial decision and, thus, on agency costs (Depken, Nguyen & Sarkar, 2005). The literature on agency theory generally confirms that cash compensation alone does not provide the necessary incentive to lower agency conflicts. Equity compensation such as stock options and restricted stocks are generally seen as more efficient solutions among internal mechanisms because both make congruent the interests of the agents and the shareholders toward a common financial benefit, i.e. increase in firm value. However, as seen from Enron, WorldCom, and other cases for overpaying executives given their contributions to the firms, the effectiveness of equity incentives is still questionable.

Ideally, principals can simply structure compensation contracts in favor of agents' preferences for fixed pay: a wage or salary (Baiman, 1990; Eisenhardt, 1989; Stiglitz, 1987). However, because factors such as low task programmability and information symmetries (Eisenhardt, 1989) make it more difficult to monitor agents' efforts, principals must rely more heavily on pay scheme to align agents' interests (Jensen & Murphy, 1990). While the existing studies tend to focus on the major compensation items such as salary or bonus, we expect that fringe benefits also affect firm performance.

3. Methodology

3.1 Data

Three archival data sources are combined for this study. Our dataset include an entire set of the Korean firms in the manufacturing industries, of which stocks are traded in the Korean stock market. The managerial compensation data and firm performance data are drawn from the online database provided by Korea Information Service (www.kisinfo.co.kr). The data contains corporate finance and pay policy data for the firms listed on the Korea stock market, both the primary market (Korean Stock Exchange) and the secondary market (KOSDAQ). More specifically, the dataset provides data for each account in the annual financial statement. It also includes a variety of information about compensation policies and corporate financial statistics.

Our data is supplemented by several references provided by Korea Financial Supervisory Board. We remove firms whose annual financial statements are not consolidated. We also search newspapers to ensure that the firms have not experienced severe fluctuation in financial conditions, because any financial instability is likely to affect managerial compensation, and we want to eliminate extraneous variations. Therefore, any firms previously under Chapter 11, or in the process of significant restructuring, are dropped off from the dataset. Finally, we also exclude firms with missing data. Our final data is a panel dataset that spans 6 years, from 1998 to 2003 and has 264 observations overall. We present a correlation matrix and sample characteristics in Table 1.

3.2 Measurements

3.2.1 Dependent variables

First, since the principal (an owner) of a firm is the shareholder of its common stock, we choose a performance measurement that reflects changes in the value of firms. We accordingly use return on sales (ROS), a performance indicator frequently used in management research. Alternatively, we consider return on investment (ROI), however, given the turbulence in the Korean stock market during the late 1990s, we are afraid that external shocks cannot be controlled if we use ROI.

3.2.2 Independent variables

Our independent variables represent fringe benefits in a typical compensation package offered in Korea. First, we have a vector which consists of work-related fringe benefit variables. Each variable is controlled for the size. The vector consists of training (TRAIN), measured by the previous year's expenditure on employee training, divided by the previous year's sales revenue; project incentive (XPERK), measured by the previous year's expenditure on extra perks from project execution, divided by the previous year's sales revenue, and; offering stock option (PREFER), measured by an increase in the previous year's preferred stocks, divided by the previous year's sales revenue.

Our second matrix has elements of welfare-related fringe benefits: retirement benefits (RETIRE), measured by an increase in payment deferral of retirement benefits, divided by assets; housing support (HOUSE), measured by the previous year's expenditure on employee housing supports, divided by assets, and; socializing budgets (SOCIAL), a discretionary allowance offered to managers for building clientele relationship. We measure it with the previous year's expenditure on the socializing budget, divided by the previous year's sales. We use one-year time lag for every independent variable.

3.2.3 Control variables

A number of variables are assumed to affect managers' compensation in several ways and their effects should be controlled for in any study seeking to test hypotheses (Stroh, Brett, Baumann & Reilly, 1996). The existing studies have paid attention to industry (Mahoney, 1979; Gerhart & Milkovich, 1990) and size (Deckop, 1988) as organization-level variables. We agree that firm size possibly influence the link between fringe benefits and firm performance. Thus, we use the logarithm of sales revenue to control for firm size. To control for industry-related factors, we include a dummy variable for each two-digit Standard Industrial Classification (SIC) code in our regression equations. Finally, we include year dummy to control year-specific effects.

3.3 Models

We use fixed-effect model and specify it as:

$$Y_{it} = a_i + \beta X_{it-1} + \gamma W_{it-1} + \lambda T_{it-1} + \varepsilon_{it} \tag{1}$$

where i=1,…, N and t=1,…,T. Y_{it} is the performance measurement for the j^{th} firm at time t, X_{it} is a N×M matrix of independent variables, β is a 1×N vector of constant parameters for work-related fringe benefits to be estimated, γ is 1×N vector constant parameters for welfare-related fringe benefit variables, λ is a 1×N vector constant parameters for control variables, and a_i is a 1×N vector of intercepts representing the effects of the variables specific to the i^{th} individual and invariant over time. The a_i for each firm i is obtained by including dummy variables which take the value 1 for the corresponding 1 and 0 otherwise. The error term ε_{it} represents the effects of the omitted variables that are both time and cross-sectional varying. We assume that the classical assumptions for OLS apply.

4. Findings

We provide our findings in Table 2. In model (1), we only include size as a control variable. We add year dummy in model (2) and industry dummy in model (3). Three models have significant F-statistics but their R-squares do not substantially differ. Throughout the three models, variables such as *INTERCEPT, TRAIN, RETIRE, PREFER*, and *SIZE* show consistently significant estimators. Among them, *TRAIN, RETIRE, PREFER* are our key hypothetical variables.

First, a negative sign on *TRAIN* suggests that investment in employee training is negatively related to firm performance. The interpretation, however, is not theoretically supported. We conjecture that the negative coefficient is driven by a high correlation between *TRAIN* and other variable such as *SOCIAL*. The two variables, *TRAIN* and *SOCIAL,* are conceptually independent and differently measured. Second, the positive sign on *RETIRE* indicates that retirement benefits promote firm performance. We interpret that employees in Korea welcome retirement benefits more than other fringe benefits. Third, a negative coefficient on *PREFER* means that offering stock option to employees is negatively associated with firm performance. At a glance, this result seems strange and theoretically unsupported; it needs good understanding of the Korean context for the period that data was being collected. Stock option is complementary with cash payout. In addition, election of stock option requires years to wait and, thus, offering stock option means deferred payment to employees, in replacement of quick cash pay. In theory, ownership sharing with employees is described as the best solution that makes interests of employees aligned with the organizational goal. However, given the turbulent Korean stock market in the late 1990s when the financial crisis occurred in Asia, as well as corporate restructuring accompanied with the economic slow-down which subsequently prevailed from 1997, it seems that offering stock incentives did not achieve its original goal of motivating employees. In fact, Bebchuk and Fried (2003) also stress that it is practically difficult for stock incentives to make congruent behaviors of agents and an owner because offered ownership is too small.

Our results suggest that some fringe benefits are significantly associated with performance; some are positively related and others are negatively related. We find that there are more negative signs than positive signs on the fringe-benefit variables, which questions the compensation scheme designed by the Korean firms. Of course, there are several factors other than pay-performance relationship when a firm designs compensation plan for employees. Organizational value, belief, or institutional culture is also seriously considered. Therefore, the negative connections between some fringe benefits and performance does not necessarily mean that the Korean firms should remove those benefits immediately. However, in this study, we want to point out that certain types of fringe benefits do not help employees motivated for better performance, although it is apparently the most fundamental reason for paying employees.

5. Conclusion

We began with a research question, whether fringe benefits promote performance of firms. While fringe benefits have been less noted by scholars than salary or bonus, they are a substantial part of any pay package and sometimes seriously abused by ill-intentional employees. We investigated fringe benefits offered by 263 Korean *Chaebols* and examined their impacts on performance. An examination of fringe benefits tells that, in general, fringe benefits are not a good instrument to make employees motivated into better performance. Our findings reconsider effectiveness in the Korean firms' pay policy.

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Table 1. Correlation matrix (N=263)

	Mean (S.D.)	ROS	TRAIN	RETIRE	HOUSE	SOCIAL	XPERK	PREFER	SIZE
ROS		1.0000							
TRAIN	0.7905 (3.9230)	-0.2161	1.0000						
RETIRE	0.0044 (0.0054)	0.0485	0.0782	1.0000					
HOUSE	0.0000 (0.0001)	-0.0108	-0.0068	0.1654	1.0000				
SOCIAL	0.9965 (1.8932)	-0.2221	0.8157	-0.0101	-0.0101	1.0000			
XPERK	0.0001 (0.0003)	-0.0188	-0.0434	-0.0205	-0.0205	-0.0812	1.0000		
PREFER	0.5762 (1.6568)	-0.1543	-0.0422	-0.0183	-0.0183	-0.0031	-0.0586	1.0000	
SIZE	19.3297 (1.6436)	0.0559	0.3429	-0.0195	-0.0195	0.2580	-0.2467	0.1899	1.0000

Description for the above table.

Table 2. Regression results

Variable	Model (1)	Model (2)	Model (3)
INTERCEPT	-38.6102†	-33.2643†	-35.3021†
	(11.8799)	(12.7665)	(12.7891)
TRAIN	-0.7066††	-1.1473†	-1.1330†
	(0.3828)	(0.2349)	(0.2354)
RETIRE	391.3685‡	354.5180‡	371.8861‡
	(169.5616)	(170.3667)	(170.3260)
HOUSE	-3733.4211	-2915.0004	-3757.9249
	(6018.4510)	(6116.4200)	(6058.5372)
SOCIAL	-1.1476	-109.0015	-107.1883
	(0.7807)	(80.6685)	(81.2240)
XPERK	459.6452	41.4461	-5.9082
	(2212.8300)	(2423.7178)	(2428.3051)
PREFER	-1.7136†	-1.7728†	-1.7218†
	(0.5168)	(0.5215)	(0.5265)
SIZE	2.0930†	1.8784†	1.8538†
	(0.6022)	(0.6320)	(0.6324)
Year dummy	No	Yes	No
Industry dummy	No	No	Yes
R-squares	0.1273	0.1331	0.1313
F-statistics	<.0001	<.0001	0.0002

† statistically significant for the 0.01 level; ‡ statistically significant for the 0.5 level; †† statistically significant for the 0.1 level.

Description for the above Table.

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Exploration of Niche Market and Innovation in Organic Textile by a Developing Country

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Abstract

In today's challenging economic environment, innovation is a process of generating new ideas that will prevent a company from stagnation by giving its products and services a competitive edge, a compass by which the business entities would set their directions and would adopt it as a core business strategy for going forward. And customers are now more knowledgeable than ever, about the impacts of business on society and environment, so this is the time for transition to organic methods and eco-friendly products. Objectives of this study are to foresee the opportunities available in the organic textile niche markets, and examine how niche marketing and innovation is helpful to exploit these opportunities in the developing world, exclusively Pakistan, where economy mainly relies on agro-based industries with textile as a major player. Pakistan is one of the largest cotton producers in the world and due to cheap labor, has a relative advantage in producing and exporting organic textile products, as compared with developed countries. By exploiting niche market opportunities with introducing a variety of organic textile products in an innovative way, can bring a substantial amount of earnings for Pakistan.

Keywords: Innovation, Niche marketing, Organic textile, Product innovation, Developing countries

1. Introduction

In present competitive global business environment, innovation is like a compass by which the business entities would set their directions and would adopt it as a core business strategy for going forward. From marketing point of view innovation is a tool to face the competition from competitors. The concept of innovation is another milestone in modern international marketing strategy because in today's dynamic and competitive market environment many senior managers have become increasingly concerned with the need to be first, fast, and on time (Wong, 2002). In this competitive environment the firms can only compete either by reducing the cost or by innovation. By reducing the cost of production and keeping their products different from their competitors, firms can enjoy the benefits of competitive marketing environment (Porter, 1980).The innovation has four key dimensions that serve as business anchors; strategy innovation; product innovation; process innovation and market innovation (Henard & Szymanski, 2001), each dimension requiring a different set of capabilities that can't be developed or acquired overnight. Innovating along one dimension often influences choices with respect to other dimensions. As such, selecting and acting on dimensions that define a firm's innovation strategy requires a deliberate, portfolio-based approach that must be communicated clearly within the company as well as to external constituents (Mohanbir et al., 2006).

Pakistan is agriculture based country and fourth largest producer of cotton. Textile industry in Pakistan is facing strong competition in cost from other textile players. Innovation is one of the obvious options to cope with this brutal competition. As Lukas and Ferrell point out, both marketing and innovation are vital stimuli for economic growth and contribute in competitive advantage (Lukas & Ferrell, 2000). Business innovation is a creation of substantial new value for customers and the firm by creatively changing one or more dimensions of the business system. Worth of an innovation is decided by the customers, when they vote with their wallets. It makes no difference how innovative a company thinks it is; what matters is whether customers will pay. Today most firms and organizations need a continual flow of dynamic new strategies, to harness their resources and energy to the cause of continuous innovation (Pierre L. et al., 2001).

Consumers doubt not only the quality but also the very greenness of green products, therefore to build public trust, organic textiles must meet certain requirements for certification, at all stages through the processing chain, only then will consumers believe an organization's green claims. Besides the assurance that organic and conventional fibers are not commingled and that organic fibers are not contaminated; the dyestuffs and other chemicals used- especially in relation to toxicity and biodegradability, waste water treatment, wet and dry processing methods used even in finishing process and social issues like worker conditions should also be maintained according to certain standards. Pakistan is an agriculture country and has comparative advantage to grow organic cotton more efficiently in some parts of Balochistan and Sindh provinces; where people still rely on biological farming methods. Organic textile is currently a niche market as compared to traditional textile and in a niche market usually, the profits are high due to less competition. Niche marketing has been used synonymously with market segmentation, target marketing, micromarketing, regional marketing, focused marketing and concentrated marketing (Dalgic & Leeuw, 1994, Kara & Kaynak, 1997). In niche marketing strategy, all the organizational efforts are used to satisfy the targeted customers, at substantial profits. And niche marketing strategy, being more focused and targeted to customers, can be utilized to market the organic textile products. By growing organic cotton, Pakistani farmers can exploit the opportunities offered by this niche market. To achieve this goal; in addition to hard work and biological farming methods, which they already are following, they need awareness, marketing and proper guidance. Retail sales of organic cotton products are estimated to grow up to $ 3.5 billion in 2008 and $ 6.8 billion by the end of 2010 (Organic exchange, 2007). In this paper we tried to explain that how innovation and niche marketing, if embedded in organic textile can help Pakistan to explore the potential opportunities.

2. Innovation

The core renewal process in any organization, which creates value for customers, is called innovation. Unless an organization changes what it offers the world, and the ways in which it creates and delivers those offerings; it risks its survival and growth prospects. Merely creating "new things" is neither necessary nor sufficient for business innovation and this is not an automatic attribute of an organization; the process has to be enabled through sophisticated and active management. There are no guaranteed formulae for success in what is inevitably a risk-based activity, but extensive research dating back over a century suggests a series of convergent themes from which guidelines for effective innovation management can be extracted (Tidd et al., 2001). A company can't outgrow its competitors unless it can out-innovate them. Innovation is a poorly explored area with respect to organic textile. Organic textile niche market has potential opportunities; if exploited in combination with innovation can bring substantial amounts of earnings for the Pakistani textile industry. Now we discuss the strategy innovation, product innovation, process innovation and market innovation one by one.

2.1 Strategy innovation

Strategy innovation is improving, changing, and challenging the existing industry methods to create new markets, to add additional value, and meet newly emerging customer needs. Strategy innovation approaches are of two types: radical strategy innovations and incremental innovations (Hax, 1989). Most of the textile organizations are using the mass marketing strategy. But if a firm wants to gain the competitive advantages of micro marketing strategy or niche marketing strategy, this is also a strategy innovation. Firms seek to improve fit between their offerings and customer needs by surveying customers and importing knowledge from leading-edge customers into the firm (von Hippel, 1988). A niche market strategy emphasizes on a particular need, or, geographic, demographic or product segment (Teplensky, Kimberly, Hillman & Schwartz, 1993). The textile organization can use either incremental strategy approach i.e. first choose eco-textile then convert it into organic textile or radical strategy innovation approach which directly goes towards organic textile.

2.2 Product innovation

Product innovation is the result of bringing to life a new way to solve the customer's problem – through a new product development and is the most important source of revenue generation for the company (Johne, 1999). Sometimes product innovation becomes mandatory in textile organizations like eco-textiles. In European market there are strict laws and regulations about certain dyes and chemicals which are used in the dyeing, printing and finishing process of the textile value chain. Some of the chemicals used in this value chain are carcinogenic and some are not environment friendly. So the innovations brought about by certain laws, technical requirements and on customer demand are called mandatory or obligatory innovations. The other type of innovation is voluntary product innovation like organic textile products. Because the firm decides to produce these textile products keeping in view the opportunities, higher margins of profit, growth potential available to sell these products in the market.

2.3 Process innovation

Process innovation emphasizes on, integrating new production methods and technologies that lead to improved efficiency, quality, or time-to-market, and services that are sold with those products and can be achieved through small improvements in the process, sub-processes or redesigning the processes. The process innovations include, among other aspects, issues relating to new skills and abilities, a greater concern for market orientation and the development of inter-departmental communication (Henard & Szymanski, 2001). Suppose a traditional textile organization decides to exploit the niche market opportunity; may be called as strategy innovation, and choose the organic textile products to exploit this opportunity; would be referred to as product innovation. For producing the organic textile products in the textile value chain there are many processes which should be improved or changed to meet the global organic textile standards which come under the category of process innovation. The process innovation can also be used to improve the quality of products by improving or eliminating certain processes. Process innovation hugs quality function deployment and business process reengineering (Cumming, 1998).

2.4 Market innovation

In a market economy, in addition to innovations in products and production processes, there are also innovations in the marketing of products. The development of new marketing tools and methods plays an important role in the evolution of industries (Yongmin Chen, 2006). First identify the potential markets, through adroit market segmentation. Market segmentation is chiefly based on the imaginative recognition of budding market opportunities (Johne, 1999). The organizations can also identify market potential through market research. The market innovations can be differentiated into pull market innovations and push market innovations (Tornatzky & Fleischer, 1990). The market pull model suggests that the stimulus for innovation comes from the needs of society or a particular section of the market whereas in push market model, the "innovation push" itself projects organization for new innovations (Kaplan, 1999). Nike and Wal-Mart have been selling the organic textile products for last couple of years and their products primarily create their own demands, especially Nike. In case of pull market innovation approach the firms identify the demand of a certain product and then respond accordingly. As some of Pakistani textile organizations are exploiting the organic textile niche market opportunities available in the European and American markets which is an example of pull market innovation approach. The identification of new market opportunities, and then reaping these opportunities efficiently and effectively, is a challenging task. The organizations and persons meeting this task are called market champions as Nike, Wal-Mart, C & A; they are the market champions in organic textile products. Market champions see new market opportunities and point out how the needs of chosen markets might best be served, and these companies are capable of making and reshaping the markets (Johne, 1996).

3. Niche Marketing

Today, green products and services, exclusively the organic textile, are only a niche market, but they are poised for strong growth. Niche marketing is the splitting of conventional markets into smaller segments and then devising separate marketing programs for each of these smaller segments or niches (Linneman & Stanton, 1992). Establishing a niche market provides an opportunity to an organization to sell products and services to a group that has been overlooked by other businesses. Textile industry already has a well established market. If divided in to smaller segments like medical textile, nano textile, organic textile, and industrial textile then all these segments would be called as niche markets. There is a slight difference between market segmentation and niche marketing. Market segmentation is the process in which large markets are broken down in to smaller and more manageable market segments which is called top down approach. On the other hand a niche market starts from the needs of a few customers and then gradually builds up in to large markets or customer base, called as bottom up approach (Shani & Chalasani, 1992). Niche marketing is one-step ahead of market segmentation because it creates a discrete group of customers (Kara & Kaynak, 1997). In niche marketing the customer has separate needs, and then the whole company's efforts are to satisfy those needs at higher profit margins as compared to mass market. Niche marketers often progress to mass marketers and mass marketers go back to niche marketers. Most of the organizations start out as niche marketers and evolve in to mass marketers, when the saturation starts and product reaches at maturity, innovation occurs and former mass markets are inclined to come back to niche markets (Dalgic & Leeuw, 1994). Most of the traditional textile items are at maturity stage and there is a tough competition in the mass market to sell out these products even at nominal profits, so there is an opportunity for Pakistani textile organization to earn higher profit margins from niche market like "organic textile". The characteristics of niche market can be defined as; the customers in niche have a distinct set of needs, greater profit margins due to premium price, can gain certain economies through specialization, niche has size, profit and growth potential, not likely to attract competitors (Kotler, 2003). Keeping in view above niche market characteristics, if we analyze the organic textile, we see that organic consumers need environment friendly products free of chemicals and hazardous materials. The organic textile products are sold at almost double price than the traditional ones. This market has been growing at a rate of more than fifty percent annually for the last couple of years.

4. Organic Textile

Green campaigns are being launched by organizations of all types, and the impulse to go "green" is spreading faster than morning glories. Organic textile is a kind of textile which is based on at least ninety five percent of organic cotton or other organic fibers and the processing of organic textile should meat any one of the several standards certified by a qualified certifying organization (Sall, 2003). Organic textiles are also called environment friendly textiles or green textiles. Organic cotton fiber is used in everything from personal care items (sanitary products, make-up removal pads, cotton puffs and ear swabs), to home furnishings (towels, bathrobes, sheets, blankets, bedding), children's products (toys, diapers), and clothes. In addition, organic cottonseed oil is used in a variety of food products. Most astonishing, perhaps, is increasing resolve to organic fiber from big players including Wal-Mart, Nike, Marks & Spencer, and C & A which are showing a yearning to be good corporate citizens by reducing the ecological impact of their relevant apparel supply chains. The textile sector is a very complex and diverse sector; a lot of processes are involved during the textile value chain to form a finished product which finally reaches the consumers (Abrar, Zhilong, Usman, Ali, 2008). In the organic textile business everyone wants to know each other from raw material producers like farmers to end retailers like Nike and Wal-Mart. Strong commitments as well as regulations are required to fulfill the global organic textile standards at every step of textile value chain to deliver the certified organic textile products to end consumers. Given, these unique requirements and regulations, there is a higher cost in textile value chain process to produce and deliver the organic textile products. That's why most of the organic textile suppliers have developed a completely vertical integration from organic cotton to finished textile products. In this way these organizations ensure the compliance issues and supply by managing and keeping the cost low to make the organic textile profitable and affordable to end consumers. Conventionally grown cotton is the second most pesticide laden crop after coffee. It is estimated that it takes around one-third pound of chemicals to grow sufficient cotton to make just one T-shirt (Ryciak, 2006). In place of chemicals the farmers mainly use organic fertilizers, crop rotation and integrated pest management to grow organic cotton. Commercial organic cotton production is now on the move in some twenty two countries across America, Asia, Mediterranean, and Africa (EJF, 2007).

5. Opportunities for developing countries

Organic farming has been chiefly beneficial in developing countries, exclusively Pakistan, for a host of reasons. Organic farming encourages the use of labor, which is in surplus and cheap in Pakistan. The conversion from traditional farming to organic farming in developing countries is comparatively easier than developed countries. Because the farmers in developing countries like Pakistan are using less fertilizers, pesticides, herbicides and genetically modified seed due to their high prices and low availability as compared to the farmers of developed countries like America and Australia. Turkey is a developing country where organic food farming is ascending and the farmers are also encouraged to grow organic cotton by utilizing the crop rotation techniques as well. Turkey also ranks first in the production of organic cotton (Organic Trade Association, 2008). Pakistan is world's fourth largest producer and the third largest consumer of cotton. Cotton based textile constitutes over 60 percent of the total exports, it accounts for 46 percent of the total manufacturing and provides employment to about 38 percent manufacturing labor force (Economic survey of Pakistan, 2006-2007). Pakistan merchandise exports rely on the textile products predominantly and due to severe global competition in this mature sector there is a very slow growth and little profit margins in the exports of traditional textile items. So another option for textile exporters in Pakistan is to exploit the niche market opportunities available in this mature sector. These niche markets are medical textile, industrial textile, technical textile and organic textile. Being an agricultural and developing country, Pakistan has a comparative advantage in exploiting the organic textile niche market opportunities. In this way not only they can earn more profit but can also contribute in economic growth and well being of their country. Because organic textile is chiefly based on organic cotton and subsequent green value addition processes in the textile value chain, it is labor intensive which is cheap and abundant in Pakistan. The organic cotton is a niche market to be exploited by developing countries. Due to less dependence on chemicals and fertilizers for the production of organic cotton, developing countries need only little adjustments in their current production practices (Baffes, 2004). In this way they can easily qualify as certified organic cotton producers. To label and market a textile product as organic, certification of the cotton fiber along with its subsequent value addition processes is a pre-requisite.

6. Conclusion

In today's challenging and ever-changing business environment, any economy needs innovation to thrive. This can only be achieved through specialization; product differentiation and exploiting the new market opportunities, like niche markets having size, profit, and growth potential. And customers are now more knowledgeable and aware than ever before, about the impacts of business on society and environment, so this is the time for transition to organic methods and eco-friendly products. Organic farming, exclusively the organic cotton is a new opportunity to increase the farm earnings in the developing countries. In this study we choose the textile sector due to strong competition around the globe and its importance in the economy across the developing world. Pakistan is primarily an agro based country and its exports are chiefly loaded with textile products, has a comparative advantage to produce the organic cotton due to cheap labor and its profusion in the country and rest of value chain processes are also labor dependent. Organic textile is a niche market having size, higher profit margins and growth potential along with the improvement of ecosystem and social well being. The other niche market opportunities are nano textile, medical textile, and industrial textile which are capital intensive. Organic textile is a new idea and product with substantial opportunities, and should be explored empirically with innovation and niche market point of view. More extensive studies are required to further elaborate its significance.

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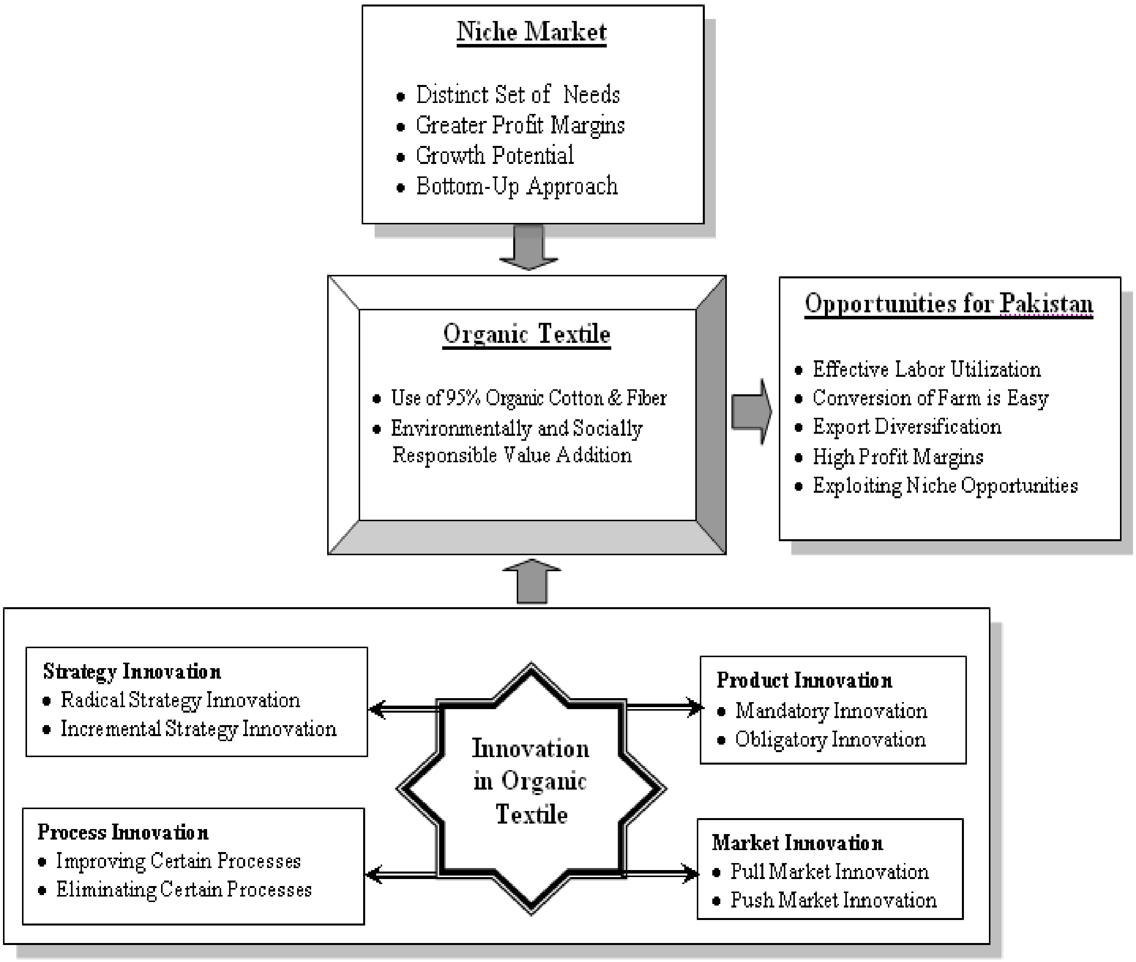

Figure 1. Innovation and Niche Marketing in Organic Textile

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Audit Competence and Audit Quality: Case in Emerging Economy

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Abstract

From the bankruptcy filing of Enron on December 2, 2001 for the next 12 months, an unprecedented string of large bankruptcies and corporate scandals emerged. Six of the ten largest corporate bankruptcies occurred in this 12-month period. Of these six, all received unmodified opinions and four of the six (WorldCom, Enron, Global Crossing, and UAL Corp) were clients of Arthur Andersen. As it is very clear external auditors play vital role in our society, on the other words, financial statement users must believe that external auditors are free from others control, or users will doubt the verity of auditors' representations. Auditor independence provides investors confidence in audited financial statements. Further, auditor independence is the cornerstone of the public accounting profession (Mednick, 1990). Any threat to audit independence may undermine this confidence. The impairment or lack of auditor independence is a main cause of many corporate collapses and corporate scandals across the world. Without independence the audit quality and audit detection duty is questionable. The results of this study shows that specialization of IACPA strongly affects on fraud detection, in addition the competency of IACPA member affects on detecting important fraud.

Keywords: Independence, Audit quality, Competence, Detection fraud, Iran

1. Introduction

Professionals are characterised by their unique expertise gained through education and training, a commitment to lifelong learning, service to society, a code of ethics, an agreement to abide by their profession's code, and participation in the self-governance and monitoring of the profession. Society grants professions autonomy with the condition that the expertise will be used in the public interest and that members will abide by the profession's code of ethics. Snoeyenbos et al. (1983) have described this as a 'social contract', in which the professional discharges his obligation by operating with high standards of expertise and integrity. When the profession does not maintain these standards the social contract is broken, and society may decide to limit the role or the autonomy of the profession. External auditors are also plying very important role in our society which have to complete competence in their duties. According to Percy (2007) the users' of financial statements looking for audit practice which cover duties as follows:

• The accounts are right;

• Companies will not fail;

• Companies will guard against fraud and error;

• Companies will act within the rules;

• Companies will be competently managed; and companies will adopt a responsible attitude to environmental and societal factors.

Auditor independence is at the heart of the integrity of the audit process that may cover above mentioned duties. When auditors and clients negotiate issues about financial reporting, maintaining the integrity of the independent audit function is mandatory for auditors and required by the standards of the accounting profession. Recently, financial scandals at companies such as Enron and World Com have eroded public confidence in the independence of the accounting profession and the quality of audit services. Auditors have long argued that legal damage are excessive, and have pushed for legal reform to such excesses. Ostensibly the need for imposing legal commitment on auditors arises from the non-observables of audit quality by the users of audited financial statements. Audit quality is the main factor in auditing practice. In nutshell, without audit quality the audit practice is undermined. In the general sense, the audit quality has positive correlation whit audit independence that without audit independence there is no quality for audited financial statements.

It has long been recognized in corporate audit thought that the success of such an audit is largely conditional on the independence of the auditor. If this condition does not exist, the degree to which the audit opinion can be trusted as an objective statement is limited. In addition, as Lee and Stone (1995) recently argued, if the auditor is incompetent, independence is not an audit characteristic to be anticipated. Lack of competence, because of lack of expertise and experience, forces the auditor to rely on client management in terms of asking questions and assessing responses. These matters appear to be of relevance to the SAA proposal, i.e. given the nature of its provision, is the current corporate auditor capable of carrying out such an audit successfully?

1.1 The role of auditors

Auditing of financial reporting status is not a new phenomenon (Salehi and Abedini, 2008). The function of formal auditing of financial reporting existed even before the publication of Luca Pacioli's method on the double entry accounting system in 1494. Whenever the advance of civilisation brought about the requirement of one person being entrusted to some extent with the property of another, some kind of check upon the fidelity of the former was advised. Auditors and auditing both have been referred to in Italy and in England in the thirteenth century (Brown, 1968). The difference between the audit functions of Luca Pacioli's days and now is that the contemporary auditing function is made mandatory by the regulators of financial organisations. However, the auditing function can only be perceived as adding value when the public trusts the process, which lends credibility to published financial statements (Rezaee, 2004). In such a condition the audit quality is the main goal for the audited financial statements. Here the question is that do the audit quality has direct relation to audit independence? As a mention earlier according to several researchers there is a positive relation between audit independence and audit quality and audit competence.

1.2 Audit competence

Sound knowledge and competence; commands a premium. Similarly there is a demand for competence in auditing and accountancy, including adequate training and experience in all facets of an auditor's work. Further, nowadays the profession has also placed increasing emphasize on auditing and accounting professional education programs for auditors to ensure that they keep abreast of the latest ideas and techniques in auditing and accounting. Gul et al. (1994, p. 25) state "the audit should be performed and the report prepared with due professional care by persons who have adequate training, experience and competence in auditing". Auditors are expected by third parties to have academic training in accounting, taxation, auditing, and other areas related to their profession. In addition they should receive further training, both formal and informal, throughout their careers. According to Hermanson et al. (1993, p. 19) "they should pass the CPA examination, they should stay abreast of current developments in accounting, auditing and tax matters. In fact, an increasing number of jurisdictions now require CPAs to engage in continuing education to maintain their right to practice". According to Noor (1996) the success of any profession may depend on three main points as bellows:

A. Advanced information;

B. Continuing professional education; and

C. Minimum levels of professional qualification.

For auditing profession, the three points are covered through auditing education, research in auditing, training of auditors, and admission to the profession after obtaining desired qualifications. However, how does the independent auditor achieve the adequate technical training, desired qualification, and proficiency required to get this job? Such achievement is usually interpreted to mean college university education in accounting and auditing, substantial public accounting experience, ability to use procedures suitable for computer-based system, and participation in continuing education programs. Mautz and Sharaf (1986, p. 140) point out the qualities of a prudent auditor, stating that "a prudent practitioner is assumed to have a knowledge of the philosophy and practice of auditing, to have the degree of training, experience and skill common to the average independent auditor". Also they should have the ability to recognize indications of irregularities, and to keep abreast of developments in the preparation and detection of irregularities.

1.3 Audit quality

Right from the days the world recognized “quality” as the weapon to fight the global competitive war (Dunk, 2002). It is applicable to every aspect; especially to auditing and accounting.

Summing up, it turns out that we know more about audit quality than we might have originally suspected:

• Auditing is relative inexpensive, less than 1/10 of one percent of aggregate client sales;

• Outright audit failures with material economic consequences are very infrequent;

• Audit reports are informative, despite the presence of false positive and negatives;

• Audit quality is positively associated with earnings quality;

• Audit quality is affected by legal regimes and the incentives they create;

• There is evidence of differential audit quality by Big 4 firms and industry experts, and differential audit quality across individual offices of Big 4 firms and across different legal regimes;

• Academic research has had little impact on regulations and policy-making in the US, although it may have had more influence in other countries such as the United Kingdom (Francis, 2004); and

• Audit quality is much related to audit committee.

The importance of perceptions of independence

External auditors hold themselves out to be professionals in every sense of the word. They subscribe to codes of ethics which provide guidance in maintaining a professional attitude and stature. In the United States the ethical code calls for auditor independence from client management (American Institute of Certified Public Accountants, 1983). Not only must an auditor be independent, however, but he or she must be perceived as independent as well. The external auditor's professional opinion would be of little value to statement users if they believe the auditor is not wholly independent of management. Users can only have faith in an auditor's representations when confidence exists that the auditor has acted as an impartial judge, basing conclusions on objective evidence. Perry (1984), state that the five most common reasons for audit failures which they are as follows: scope restrictions; incompetence; auditing by conversation; not critically evaluating transactions; and lack of Objectivity and skepticism. Each of the Perry acts can be directly linked to the concept of auditor independence. Which is one element of an auditing firm's quality control system, is defined by the accounting/auditing profession in the United States as "the ability to act with integrity and objectivity" (AICPA, 1985). Independence, Further, if the auditors are independence then they can do the best job in their career.

2. Brief history of auditing in Iran

Accounting in the world has a background of 6000 years and the first accounting documents were discovered 3600 years before Christ's birth. Documents of ancient Iran show that in 500 B.C (Mashayekhi and Mashayekh, 2008). Here we are going to explain brief history of auditing in Iran after Revolution.

Islamic Revolution of Iran in 1979 resulted in electing governmental managers for some companies, expropriating companies belonging to a number of capitalists affiliated to the past Shah’s Regimen and nationalizing some of the industrial entities. Proprietorship of public economical entities necessitated the formation of institutes to audit the accounts of the national economic or expropriated companies and entities, and formation of audit institutes of National Industries and Planning Organization, Foundation of the Oppressed and Martyr’s Foundation was necessitated from1980 to 1983.

The case of merging the audit bodies of public division was propounded in 1983, and law of founding the audit organization was approved. By approving the statutes of the Audit Organization in 1987, public audit bodies merged and the Audit Organization was established.

In the Certified Statutes and Act of Audit Organization, the responsibilities of Certified Inspector and audit affairs of all agencies and apparatuses, which were under the public proprietorship, were ceded to the Audit Organization. Furthermore, the Audit Organization was recognized as a specialized and official reference to compile principles, and regulations of accounting and auditing. Hence, for the first time, legal inspection tasks and audit were in practice consolidated, and an organization to audit the financial institutions of public division and an official reference to compile principles and standards of accounting and auditing were ordained.

After the Islamic revolution of Iran in 1979, according to a bill ratified by the Revolutionary Council, many enterprises were confiscated or came under direct supervision of Government. To audit and perform statutory examination of these enterprises, three audit firms were established in the public sector, i.e., Nationalized Industries and Plan Organization Audit Firm in1980, Mostazafan Foundation Audit Firm in1981, Shahed Audit Firm in 1983.

In 1983 an act was ratified by the Parliament, to merge and embody these three audit firms together with Audit Company (established in 1971 to audit government corporations) to establish Audit Organization. Audit Organization's by-laws were also approved by the Parliament in 1987 and the Organization was established as a legal entity with financial independence, affiliated to the Ministry of Economic Affairs and Finance to follow those audit firms functions and pursue the activities legislated in the Organization's Act and by-laws.

Audit Organization's by-laws were revised and approved by the Council of Ministers in 2003 to comply with the Article 4 of the Third Economic, Social and Cultural Development Plan and the Organization's legal status changed to State Owned Limited Company.

The Organization's main objectives are: (i) To provide government with basic needs in the field of auditing and specialized financial services for state owned and government supervised entities; (ii) To set Accounting and Auditing Standards and Professional Ethics in compliance with Islamic Rules as well; and (iii) To conduct research in scientific and practical methods of accounting to enhance accountancy compatible with country's needs.

The Board of Governors comprises of Minister of Economic Affairs and Finance as chairman, Head of Management and Planning Organization, Minister of Petroleum, Minister of Industries and Mines and Minister of Commerce. The Board sets policies of the Organization; approves plans, manuals and financial statements of the Organization; and appoints members of the Board of Executives Accounting and Auditing Standards and also the Board of Governors should approve the Organization's Code of Ethics and its disciplinary rules.

The Board of Executives comprises of Chairman and Chief Executive Officer of the Organization and four or six expert accountants, all appointed by the Board of Governors. The Board is responsible for planning, organizing, preparing manuals, managing and execution of programs. Each Board member directs and supervises a part of the Organization's activities Exposure drafts of accounting and auditing standards should be reviewed and confirmed by the Board of Executives before submission to the Board of Governors.

High Supervisory Council comprises of three expert accountants appointed by the Board of Governors and is responsible for continuous supervision of the Audit Organization's activities, review of internal control system, statutory examination of the Organization's financial statements and reporting its findings to the Board of Governors and where appropriate to the regulatory bodies.

In fulfilling its main function to audit and statutory examination of state owned companies in 2003-04, Audit Organization has audited banks; insurance companies; oil, gas and petrochemical companies; regional water and power corporations; post, telegraph and telephone companies; and steel, tobacco and many other large corporations. Social Security Organization, Mostazafan and Janbazan Foundation, Shahid Foundation, and 15th Khordad Foundation and their affiliated companies are another major group of entities audited by the Organization. Investment companies and other enterprises controlled by banking system are also among those entities audited by the Organization.

3. Review of literature

Alford and Strawer (1990, p.70) carried out a survey which results shows in the US, points out that with increasing the minimum educational requirements for CPA membership may be a direct result of the recent expansion enjoyed by the accounting profession. Expansion of accounting and auditing services and products requires auditing to expand their technical education. Therefore, the education is directly affected on audit competence which it caused to high quality of audit practice. Further, Prior research has suggested that large multinational audit firms give higher audit quality (e.g. Leuz and Verrecchia, 2000; Asbaugh and Warfield, 2003). Watts and Zimmerman (1986) predict that large audit firms supply a higher quality audit because of greater monitoring ability. These companies may have more resources (Palmrose, 1986) and they may use higher quality staff (Chan et al., 1993). Francis and Wilson (1988) suggest that audit firms invest in their brand name reputation in order to command fee levels for higher quality assurance. Such firms will then provide a high quality audit in order to protect their brand name and also future revenues (Palmrose, 1986). Large multinational audit firms have also been found to be more independent (e.g. Shockey, 1981) which might suggest that they are less willing to negotiate audit matters with clients. Moreover, Teoh and Wong (1993) find that companies audited by Big Eight have higher earnings response coefficients i.e. investors and their announcements more convincing. As regards to relevant research in Greece, Caramanis (1997 and 1998) has found that in the early years after the liberalization reforms of 1992 there was no significant difference between local and international firms in terms of audit quality. However, relatively newer evidence is more in line with the results of research in other markets (Citron and Manalis, 2001).

One factor that may affect to audit quality is fraud detection which Dechow et al. (1996) report that auditors are more likely to have detected accounting problems and Klein (2002) finds that abnormal accruals are smaller (implying less earnings management) when boards are more independent.

According to SAS No. 53 the Auditor's Responsibility to Detect and Report Errors and Irregularities (AICPA, 1988), the auditor had the responsibility to plan and perform the audit to obtain reasonable assurance that any material misstatements (including those caused by fraud) would be detected. This document also offers illustrative client business risk factors that may indicate an elevated fraud risk. In SAS No. 82 Consideration of Fraud in a Financial

Statement Audit, the AICPA (1997) attempted to further clarify the auditor's responsibility by stating that the auditor should specifically assess the risk of material misstatements that are due to fraud. This pronouncement also required the auditor to document the fraud risk assessment. SAS No. 99 Consideration of Fraud in a Financial Statement Audit (AICPA, 2002) is a more recent attempt to spell out what society expects from the auditor with respect to financial-statement fraud. Two of its main innovations require the auditor to brainstorm about the risk of material misstatement due to fraud, regardless of any past honest dealings with entity management. It's utility for improving the auditor's assessment of fraud risk, however, remains an open question.

Groveman (1996) explored how the auditors can detect misstatement in financial statements. The author highlighted that the most frequent causes of audit failures are due to inexperienced staff assigned to audits and a lack of professional scepticism. In order to maintain the appropriate degree of scepticism, auditors should not assume client management is dishonest and also should not unquestioningly expect honesty. However, the audit team must evaluate evidence objectively to determine whether or not financial statements are free of material misstatement. Regarding to the audit independence and audit quality Lacy (1990) examined the effects of investment by the CPA partners and client principals on the perception of auditor independence. Specifically examined were the effects of a joint investment by a CPA partner and a client's Chief Financial Officer (CFO) in a limited partnership unrelated to the audit client, and a direct investment by a CPA in a client company. The results showed an inconsistency between the respondents' perception of risk of losing the independence and the AICPA independence rules. The respondents were more concerned about the certain joint investments, which were acceptable under the AICPA rules, than they were about small percentage, financially immaterial direct investments which were unacceptable under the AICPA rules. The CPAs perceived that the risk of losing the independence when there was a direct ownership of stock by a CPA was greater than that of any other group who perceived the risk to be. A survey was conducted by Abu Bakar et al. (2005) among 116 loan officers in Malaysia. The results showed that 75.60 per cent of the respondents indicated that the size of the audit firm did affect the auditor independence and 74.40 per cent of them mentioned that the level of competition in the audit service market influenced the auditor independence. Furthermore, the results indicated that the provision of MAS had a negative effect on the auditor independence in Malaysia. Sajadi and Ebrahimimand (2005) elicited 98 Iranian Certified Public Accountants' viewpoints on the factors increasing auditors' independence. The objective of the study was to identify the factors which increased/would increase the auditors' independence. The results showed that the factors such as audit committee, client size, the size and experience of audit firms increased the auditors' independence, and other factors, namely, competition among the auditing firms decreased the auditors' independence. A survey was carried out by Sajadi and Naseh (2003) in Iran regarding the effectiveness of certified auditing of financial statements among 51 managers. The conclusion was that independent auditors would be effective in the detection and reduction of illicit acts and offences as well as the exercise of precise appraisal of bases used in accounting estimates. However, such auditing would not serve the purpose of improving internal control system reducing the likelihood of errors omission.

The study by Mojtahedzadeh and Aghaei (2005) focused on the factors influencing independent audit quality. The study covered the perceptions of 90 investors, 71 creditors, and 92 auditors in Iran selected on the basis of random sampling. The study showed that the investors and the creditors strongly believed that any other services affected auditor independence.

Another survey was carried out by Hassas-Yeganeh and Khaleghi (2004) in Iran regarding the attest function of the independent auditors and the respondents included auditors and investors. The results indicated that there was an expectation gap between the auditors and users on the attest function of the independent auditors. The results also showed that there were significant differences between the auditors and users regarding the reliability of the audited financial statements and the comparability of the audited financial statements. The users believed that if the audited financial statements were re-audited by others, they would show a different picture.

4. Research methodology and objective

Since the main objective of this research is determination of relationship between audit competence and audit quality in Iranian environment, therefore the research question as follows: Q1: Do audit expertise detect more fraud in auditing?

Q2: Do audit Effectiveness can detect major distortions?

Q3: Do more audit competence cause more fraud detection?

According to the above literature and the objective of this study the useful data was collected. So far accurate answer to this question, the authors design and developed a questionnaire based on method used in previous researchers. The questionnaire contains two parts namely (A) bio-data and (B) this section includes some questions regarding to audit expertise and fraud detection, audit effectiveness and fraud detection, and audit competence and fraud detection.

In this research at first step the important factor that is related to auditing quality were explored by studying technical contexts; further, the validity of explored title assessed by Delphi group that includes Iranian Association of Certified Public Accounting (IACPA) members. in the Delphi session title in Iran environment. Using gained viewpoints the elementary group asked to determine the relation and importance of detected index regulated. Hence we can say, those factors that conduct research hypotheses are those factors that are completely compatible to Iran environment. In this research participants at the first step requested to determine their idea (agreement or disagreement to the effects of independent variable on detecting important distortions), then according to their ideas requested to determine degree of agreement and disagreement for assessing degree of disagreement and agreement we used the Range of integer number from -9 to 9 which -9 represent highly disagreement and 9 represent highly agreement to the hypotheses while zero represent none of them.

To the bases of important factor we conducted three hypotheses including:

H1: Specialization of IACPA member affects on their ability on detecting important fraud.

H2: Audit efficiency (audit profit to expenditure ratio) affects on IACPA member auditing to detecting important fraud.

H3: The competency of IACPA member affects on detecting important fraud.

4.1 Results of the study

180 respondents were completed the research questionnaire. Among these 180 participants , there were 29 expert or having auditing knowledge (16.10 percent) which they worked as an independent auditor , the rest 30 (16.8 percent) were worked as an internal auditor, 60 were in financial and banking management (62.40 percent participants), 30 numbers of them were in faculty member and 31of them were accounting student. According to Table 1 out of 180 participants 55 were male (30.60 percent) and 125were female (69.4 percent). Further, 135 participants were younger than 40 (75.00 percent) and 45 participants elder than 40 (25percent). Among these 52.50 percent had less than one year experience, 36percent had experience between 10 to 20 years and 21.50 percent had more than 20 years experience.

As Table 1 reveals the majority of participant had sufficient academic degrees. Out of 180 participants 113participant, were holding bachelor degree in accounting or related subjects (62.5 percent) and 67 were holding M.A or PhD degrees (47.50 percent). Demographic characteristics of participant are summarized in Table 1.

Insert Table 1

The binomial test was first conducted to assess how many percent of participant accept the effects of independent factors on dependent ones. For this purpose we divided participants into two groups including agreeing and disagreeing with hypotheses. The results revealed that 171 participant (95.00 percent) were agree that the effect of specialization on detecting important fraud (H1); then the effect of specialization on detecting important fraud significantly confirmed ($p<0.05$). Mean degree of agreement for this hypothesis was 3.94 (SD= 2.21, 95 percent of confidence interval from 3.6 to 4.26).

For the second hypothesis 105 participant (58.00 percent) were disagree to the effect of audit efficiency on auditor willingness to detecting important fraud; then this hypothesis rejected (H2) and mean degree of disagreement for this hypothesis was -0.644 (S.D= 6.61 , 95 percent of confidence interval from -1.6 to 0.32) .

About third hypothesis, majority of participants confirmed the effect of auditor competencies on exploring important distortion (H13). 151 participants (84.00 percent) agreed to this hypothesis, then this hypothesis were significantly confirmed ($p<0.05$) and mean degree of agreement was 4.25 (S.D= 3.8, 95.00 percent of confidence interval from 3.68 to 4.88).

The result of testing hypotheses by binomial test showed in Table 2.

Insert Table 2

In this stage as mentioned before, participants requested to determine degree of agreement or disagreement to the questions. Table 3 represents the mean degree of agreement or disagreement according to their idea to the research questionnaire with calculating Mean Value, S.D, and interval confidence.

Insert Table 3

As Table 3 shows positive numbers represent mean degree of agreement while negative number represents mean degree of disagreement.

As shown in upon table the competency of auditor has the most effect on detecting important fraud by auditors.

5. Conclusion and remarks

Shaw (1995) expressed that recent high profile and unexpected corporate collapses were not created by audit failures. However, it was created by a number of failures of the executive management and of corporate bonds. But the audit failures, at least, delayed corrective action and often allowed the guilty to escape the punishment. However, unexpected collapse of an important company listed on a stock exchange (i.e. Enron collapse) will undermine the credibility and reliability of the information and the regulatory system, which is put in place to protect the investors. Therefore the auditors should do in a manner that they keep audit prestige. In such a condition they have to follow as well as obey their regulations and framework. Further Arruñada (1999, 2000), has argued that audit regulation should consider three basic characteristics of auditing: professional judgment, the specific nature of audit quality and the existence and effectiveness of private quality-assurance techniques. The results of this study showed that from the view point of participants' specialization of IACPA member affects on the ability of IACPA member for detecting important frauds. In such a condition the Iranian legislators should force the IACPA member for attending up-to day accounting and auditing short time courses. In addition, as results showed the second hypothesis is rejected, furthermore, regarding to the third hypothesis, the majority of strongly belief that competency of IACPA member affects on detecting important fraud. By the way, as mentioned before the independence of auditors also may cause to detection fraud. One of the weakness of Iranian accounting and auditing environment is the lack of audit committee which audit committee can keep external auditors independence; in fact as well as in appearance. For solving such a problem it is highly suggested to Iranian legislators form audit committee which it improve audit independence as well as audit quality.

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Table 1. Frequency table of participants

Case	Label	Frequency	Percent
Gender	Male	55	30.60
	Female	125	69.40
Age	Less than 30	28	35.60
	30 to 45	98	54.60
	More than 45	18	9.80
Experience	Less than 10	75	42.50
	10 to 20	64	36.00
	More than 20	38	21.50
Education	Bachelor degree	113	62.80
	Master	58	32.20
	PhD	3	1.70
Post	Independent Auditor	29	16.10
	Internal Auditor	30	16.80
	Financial and Banking Management	60	33.60
	Faculty member	30	16.80
	Student	31	17.50

Table 2. Dependent variable effects on detecting distortions and test result by binomial test

Hypotheses	Category	Frequency	Observed prop.	Test prop.	Asymp.sig.	Result
H1(Specialty)	Disagreeing	9	0.05	0.5	0.000	Confirmed
	Agreeing	171	0.95			
H2(Efficiency)	Disagreeing	105	0.58	0.5	0.42	Rejected
	Agreeing	75	0.42			
H3(Competency)	Disagreeing	29	0.16	0.5	0.000	Confirmed
	Agreeing	151	0.84			

Table 3. Mean degree of participants and other statistical calculation

Independent variable	Mean degree	Standard deviation	95 percent of interval confidence
Specialty	3.94	2.21	3.61- 4.21
Efficiency of Auditing	-0.64	1.61	-1.61- 0.32
Competency of auditor	4.25	2.8	3.68 -4.88

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Analysis of Economic Factors Attracting FDI in West China since Reform and Opening-up

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Abstract

Since China performed the policy of reform and opening-up 30 years ago, foreign direct investment (FDI) has exerted important function in the quick development of economy, but the location factors of West China and East China are very different, and their attractions to FDI are not same. According to the location theory of FDI, in this article, taking the city of Chengdu as the example, we utilized the method of co-integration to empirically analyze the economic factors attracting FDI in West China in past 30 years since reform and opening-up. And the analysis results indicate that quicker economic growth, higher opening degree and investment in fixed assets are important economic factors to attract foreign investments for the city of Chengdu.

Keywords: Foreign direct investment (FDI), Location theory, Co-integration, Error correction, Economic factors

1. Introduction

Under the background of the development of the west regions, the situation of attracting investments in West China is still just passable. To analyze the economic factors influencing the FDI in west regions can help us find the solution of the problem and promote the investment attraction in west regions. According to the statistics of Sichuan, Chengdu introduced 0.76 billion dollars in 2006, which increased 38.3% than the year of 2005. Though the investments attraction is increasing, but the increase degree is quite less than the east regions. In this article, taking the city of Chengdu as the example, based on the data of 17 years from 1990 to 2006, we analyze the economic factors influencing FDI in west regions to put forward feasible advices to attract FDI for west regions.

In this article, we adopt the co-integration method in the time sequence analysis, which doesn't require the time sequence of economic phenomena is stable, and can compensate the deficiency of same researches which adopt the multiple-regression analysis method and make the research results more reliable.

2. Theoretical base and model

2.1 Location theory of FDI

John Harry Dunning divided the location factors influencing FDI into four sorts including the market factor, the trade barrier, the cost factor and the investment climate. J.R.L. Howells (1984) divided the determinant factors of investment location selection into non-system factors and system factors, where, non-system factors include economic factors such as market scale, labor cost, basic establishment and cluster economic. The "World Investment Report of 1998" pointed out in the determinant factors of host country for FDI, the influence of the economic factors was very important under the premise of free policy, and these factors included market scale, cheap skilled labor force and material basic establishments.

Starting from the acquisition of data and actual economic influencing factors, this article thought the economic development situation, labor cost, trade barrier, material basic establishment and FDI accumulation are main economic factors, and based on that, this article would further analyze the concrete situation of Chengdu.

2.2 Model and data source

2.2.1 Model

Combining with the FDI location selection theory and other scholars' researches and considering the acquisition of data, in this article, we select the actual FDI utilization amount of Chengdu as the attributive variable, and select the economic factors influencing FDI as the independent variables which are divided into five sorts, and each sort is denoted by corresponding statistical index.

(1) Economic development situation (GDP)

GDP is used to reflect the total economic development situation of Chengdu, and the total development level is higher, that indicates enterprises face more chances. At the same time, quicker GDP increase speed will attract more enterprise investments.

(2) Labor cost (WAGE)

Employee yearly average wage of Chengdu is used to reflect the labor cost. And cheap labor forces will more FDI.

(3) Imports and exports amount (OPEN)

The imports and exports amount of Chengdu can reflect the trade barrier, and more amounts of imports and exports indicate the opening degree of the city. In the region with higher opening degree, the basic establishment, laws and regulations, and culture and information will be in higher opening degree, so it will reduce the information cost and trade cost, and attract FDI.

(4) Capital formation (INV)

The yearly fixed investment amount of Chengdu can reflect the construction of basic establishments and the information and guarantee of long-term economic development. For FDI, the increase of fixed investment is represented as the improvement of the investment environment in the investment region, which is propitious to attract FDI.

(5) FDI accumulation

The accumulated FDI amount of past two years of Chengdu is used to reflect the FDI accumulation and the cluster effect of the economy, and more FDI accumulation indicates better investment environment and will attract more FDI.

2.2.2 Data source

The data are from the data of 17 years from 1990 to 2006 in "Sichuan Yearbook of Statistics". The unit of FDI and OPEN are modified as ten thousand Yuan according the exchange rate of "Chinese Statistics Yearbook". The price index is computed by the 1900=100.

To eliminate the heteroscedasticity of the time sequence, in this article, we implement logarithm processing to various variables including LFDI, LGDP, LWAGE, LOPEN, LINV and LFDIS. The data processing in the article is completed by the software EVIEW3.0.

3. Model test

3.1 Causality test

3.1.1 Analysis of variable correlation

To test whether the selected variables possess correlation relationship, we will make following correlation tests.

From Table 2, though high correlations exist among variables, but that doesn't mean the causality exist among variables, so we should implement the test of causality.

3.1.2 Causality test

Through the granger causality tests to LFDI, LGDP, LWAGE, LOPEN, LINV and LFDIS, we can obtain the test results (seen in Table 3), and the test results show the F statistics and the value of P, and indicate that under the significant level of 5%, when the lagged term is 4, FDI and WAGE are reasons each other, and GDP, INV and OPEN are the reason of FID, and FDI is the reason of FDIS, but FDIS is not the reason of FDI. That indicates the change of wage level of Chengdu will influence the inflow of FDI. At the same time, the inflow of FDI will certainly promote the accumulation of FDI, but the accumulation of FDI would not attract the inflow of FDI, because the FDI accumulation of Chengdu doesn't exert corresponding cluster effect.

Therefore, according to the Granger causality test, we select LGDP, LWAGE, LOPEN and LINV as explanation variables.

3.2 Stability test of sequence

ADF test is used to implement stability test to variables including LFDI, LGDP, LWAGE, LOPEN and LINV. If the ADF is bigger than the critical value, so the time sequence data are unstable, and the test results are seen in Figure 4, and we can see that all sequences are first-order monotonously.

3.3 Long-term balance analysis

According to above tests, we adopt EG method to implement co-integration test. First, we regress to LFDI, LGDP, LWAGE, LOPEN and LINV, and the regression results are

LFDI= -15.81627+ 1.847449LGDP- 4.829677LWAGE+ 0.993140LOPEN+ 1.843420LINV

T= (1.746491) (-3.437969) (1.813246) (2.529642)

R-squared= 0.940829

Adjusted R-squared= 0.921105

F-statistic=47.70044

From above regression results, we can see that the fitting effect of the model is higher, and the results testing the stability of the residual sequence of regression results are seen in Table 5. From Table 5, the residual sequence is stable, which indicates the co-integration relation exists in attributive variables and independent variables and the relation is exclusive.

From the regression results, the positive influences of GDP, WAGE, OPEN and INV to FID are obvious, but the WAGE presents negative influence to the inflow of FDI. The positive influence of economic scale is the largest one, and every increasing one percent will make FDI increase 1.847449 percents, and the influence of fixed assets to FDI is large, and when the fixed assets increase one percent, it will promote the FDI to increase 1.84342 percents. And when the amount of imports and exports increases one percents, the inflow of FDI will increase 0.99314 percents. When the labor wage increases one percent, the flux of FDI will decrease 4.829677 percents, and the increase of wage will seriously baffle the inflow of FDI.

3.4 Model of error correction

Above analysis only aims at the long-term balance, and we will consider the short-term dynamic relation among variables by the model of ECM. Through former evaluation, we can obtain the residual sequence E (t), and we establish the error correction model taking the residual E (t-1) of lagged term as the non-balance error, i.e.

▲LFDI=-0.600870+1.254550▲LGDP+1.679108▲LWAGE+1.721345▲LINV+0.196414▲LOPEN-0.807916E (t-1)

T= (0.755879) (0.692110) (2.314374) (0.601369) (-3.509911)

R-squared=0.845580

Adjusted R-squared=0.768370

F-statistic=10.95168

As a whole, the fitting effect is good, and from the model, we can also see that there is one item of the symbol of short-term variable which differs with the symbol of the long-term balance relation, and the influencing degree sequences of various variables are different with the long-term variables. In the long term, the labor wage baffles the FDI, but in the short term, the labor wage promotes the FDI, and the reason may be that in the short term, the investors don’t consider this factor, or they more emphasize the quality of the talents and they hope to introduce the talents with high quality in the initial stages of the investment, so the labor wage will be higher. That point also is embodied in the Granger causality test, and the inflow of FDI promotes the enhancement of the labor wage. As viewed from the long term, the labor wage baffles the FDI. But in the short term, the most influencing factor to the inflow of FDI is the amount of fixed assets investment, which indicates that in the short term, the main factors attracting FDI of Chengdu are related with the acquisition of information and the investment environment.

4. Conclusions and policy advices

As viewed from the long term, the economic factors that Chengdu attracts the inflow of FDI include quick economic growth, higher opening degree, higher fixed assets investment and cheap labor cost. But in the short term, the influence of the labor cost is different, and it promotes the inflow of FDI, because the in the initial stage of the inflow of FDI, investors would employ the labor force with high costs, but in the long term, the cheap labor force occupies the advantage. In the short term, the labor wage doesn’t baffle the FDI because the foreign investors would pay higher costs when they want to attract talents in the initial stage, so in the short term, both sides present mutually stimulative function (the result of Granger test also proved that).

Whether in the long term or in the short term, the FDI accumulation of Chengdu doesn’t promote the inflow of FDI, and the reason may be the amount of FDI accumulation has not achieve certain scale, and the cluster effect has not been formed.

In the long-term balance, the economic growth is the most important influencing factor, which indicates the inflow of FDI in Chengdu roots in the stable economic development under the policy of the development of the west regions of China. So in the instruction of the policy, the stable and healthy development of economy is the important economic factor to attract FDI for west regions.

In the short-term fluctuation model, the most significant factor influencing the inflow of FDI is the amount of fixed assets investment, which indicates the good investment environment is the key to attract FDI, and the good investment environment mainly includes good basic establishments, perfect traffic network and information network.

Therefore, we put forward following advices:

(1) Perfecting the construction of basic establishments to offer the hardware support of the inflow of FDI. From the test results, whether in the long term or in the short term, the construction of basic establishments is very important for the inflow of FDI. So the public departments should strengthen the construction of basic establishments and build good investment environment, and increase the investors' confidences to the development of the economy.

(2) Maintaining higher economic growth speed. Quicker economic growth is the main reason for the inflow of FDI in the long term, and it reflects the economic scale and the development foreground. And investors all emphasize the macro economic development status of the region.

(3) Paying attention to foster talents and increase the education payout. In the short term, FDI emphasizes the talents' skills, but in the long term, it emphasizes the investment of labor cost. Therefore, the west regions should strengthen the force to cultivate talents, and under same skill standard, lower labor cost will more attract the investors.

(4) Reducing the trade barriers and offering stable system environment. The opening degree of the economy is mainly limited by the policy, so the policy of attracting investments and the stable system environment will improve the inflow of FDI, and investors will produce higher anticipated return and increase the investments.

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Table 1. Influencing direction of anticipated variable

Variable	Anticipated influencing direction
GDP	+
WAGE	-
OPEN	+
INV	+
FDIS	+

Table 2. Correlation test of LFDI, LGDP, LWAGE, LOPEN, LINV and LFDIS

	LFDI	LFDIS	LGDP	LINV	LOPEN	LWAGE
LFDI	1	0.93829579	0.917200165	0.93659585	0.90205018	0.886192939

Table 3. Results of Granger causality test

Pairwise Granger Causality Tests			
Date: 05/06/08 Time: 22:49			
Sample: 1990 2006			
Lags: 4			
Null Hypothesis:	Obs	F-Statistic	Probability
LFDIS does not Granger Cause LFDI	13	2.16108	0.23691
LFDI does not Granger Cause LFDIS		269.903	4.1E-05
LGDP does not Granger Cause LFDI	13	6.88472	0.04418
LFDI does not Granger Cause LGDP		2.38123	0.21067
LINV does not Granger Cause LFDI	13	12.5042	0.01564
LFDI does not Granger Cause LINV		1.16404	0.44326
LOPEN does not Granger Cause LFDI	13	11.5828	0.01794
LFDI does not Granger Cause LOPEN		1.13547	0.45249
LWAGE does not Granger Cause LFDI	13	18.7675	0.00742
LFDI does not Granger Cause LWAGE		8.21861	0.03275

Table 4. Results of ADF test

Variable	ADF test	Critical value (5%)	Determinant conclusion
LFDI	-1.128325	-3.1222	Unstable
▲LFDI	-7.992439	-3.1483	Stable
LGDP	-1.667461	-3.1222	Unstable
▲LGDP	-4.974729	-3.1483	Stable
LWAGE	-2.088548	-3.1222	Unstable
▲LWAGE	-5.438888	-3.1483	Stable
LINV	2.731951	-3.1222	Unstable
▲LINV	-6.039470	-3.1483	Stable
LOPEN	-0.732552	-3.1222	Unstable
▲LOPEN	-3.760169	-3.1483	Stable

Table 5. Stability test of residual sequence

ADF Test Statistic	-4.001997	1% Critical Value*	-4.0113
		5% Critical Value	-3.1003
		10% Critical Value	-2.6927

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Knowledge-Based Banking: the Bankers' Experience on OKS (Online Knowledge Sharing)

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Abstract

This paper outlines the results from a web-based survey of first time users of a bankers online knowledge sharing. Palmer´s web metrics were used to investigate the effects of key website characteristics on intention to return, satisfaction and self-efficacy. Partial least squares estimation was used to estimate both the measurement and structural parameters in our structural equation model. Statistical significance of the main relationships provided strong empirical support for author conceptual framework.

Keywords: Online knowledge sharing, Human interaction, Web evaluation

1. Introduction: Adopting online knowledge sharing

The crucial importance of having an effective web presence for the competitive advantage of a business has now become apparent. Research on how to organise e-knowledge management and how to design websites has grown rapidly in recent years. The topic attracts the interests from different management disciplines such as marketing (Wolfinbarger and Gilly, 2003; Szymanski and Hise, 2000; Childers et al, 2001), information management, knowledge management and information technology (Koufaris, 2002; Palmer, 2002; Gelderman, 1998) and tourism (Chung and Law, 2003).

For the success of knowledge management initiatives in the banks, it has become paramount to entice existing bankers to adopt the options of online knowledge sharing. This creates huge cost savings by means of scale effects in bank operations (Chen and Hitt, 2002). Compared to traditional knowledge sharing transactions (face-to-face), personalized knowledge sharing on the web cost next to nothing. As web technology is rather recent, the challenge becomes one of overcoming the resistance of bankers to adopt the new technology in transferring their knowledge.

Hence, the web competency and online experiences of existing bankers should be a matter of great managerial concern and a strategic challenge for the banks.

2. Human interaction with websites: attributes and outcomes

Many bankers carry out other e-knowledge transfer over the internet and may display varying degrees of web skills (Huizingh, 2002). Adopting web operations can be seen as one form of technology adoption (Rowley, 2002). Recent IT research, for instance O'Cass and Fenech (2003), have found support for the TAM (Technology Acceptance Model) model of technology acceptance (Davis, 1989) among web retailing adopters. More specifically, online or internet knowledge sharing has been studied with regard to user acceptance (Bock and Kim, 2004; Wang et al, 2003). The authors found that the TAM model of technology acceptance was strongly supported but could be supplemented with the concept of "perceived credibility". The latter construct is thought to mediate (together with the other two TAM concepts "usefulness" and "ease of use") the effect of self-efficacy on intention to use online knowledge sharing. Hence, issues of security and the non-divulgence of personal information are clearly important to users.

In general, website attributes also need to be comprise "relationship-benefit" features such as confidence building measures and special treatment effects in order to enhance user trust (Shankar et al, 2002), satisfaction and loyalty (Yen and Gwinner, 2003). Recently, it has been found that knowledge management system (KMS) is a critical factor behind e-knowledge success, especially in banking and finance contexts (Schoder and Madeja, 2004). Partial satisfaction with certain website attributes are also important. For instance, it has been found that satisfaction with information, and with information richness (Chung and Law, 2003), in websites were strongly linked to perceived performance and usage intentions (Jeong et al, 2003). Recently, website research has shifted focus from users' evaluation of website attributes to comprise more aspects of user relationships and human web-interaction. Barnes and Vidgen (2002), for instance, have proposed the WEBQUAL instrument with three underlying quality dimensions of a site: information quality, usability and service interaction quality.

Website performance is most likely a multidimensional and rather complex concept. As the literature is of an emergent character we are not yet in a position to pinpoint exactly what website (or other) attributes are necessary to generate high levels of user evaluations of the site. The start-up phase can be considered critical for the successful outcome of technology adoption. We continue this interactive and cognitive strand of website research by applying a quantitative e-survey to model the initial experiences of online knowledge sharing users. This study aims at investigating the experiences of new online knowledge sharing users with the aim to understand what website features impact positive user evaluations. We structure our paper as follows. First, we discus our research setting and method with regard to the implementation of the e-survey. We also briefly elaborate on the model we aim to test. Second, we outline some of the results.

3. Method

We have narrowed the situation in which experience is investigated to how first-time users manage the web site and how they get access to the e-knowledge services of a commercial bank. One important decision is how and what kind of data to collect about a first time attempts to master a website. This attempt may be comparable to a so called critical incident (CIT) (Flanagan 1954). Different data sources and approaches can be used in conjunction with CIT methods (Roos, 2002). Critical incidents are normally investigated with traditional face-to-face interviews when respondents talk about a particularly satisfying or unsatisfying incident. The incident selected should deviate from what is normal either in a positive, or in a negative way (Bitner et al, 1991, p. 73). We have used a web survey to tap experiential information about critical incidents in a web setting.

For several reasons, a particular Malaysian commercial bank was chosen. First, we were promised total access to user data and support in developing our web survey. Second, the selected bank had seen a recent surge in the propensity among its users to use its online knowledge sharing. Third, the bank has few traditional branches and is dependent upon the success of its web operations. Finally, the bank is a leading niche player focusing only on private commercial banking.

The sample (N=117) consisted of all new online users (bankers) who logged on to the online knowledge sharing during two weeks in March 2007. In this sample, respondents (N=89) with less than three months' experience of online knowledge sharing were considered a sub-sample of "beginners". We assume that this is a fairly representative sample of online users of the bank. We have not corroborated that in a statistical way.

Other practical issues with relevance to the design of the web survey were agreed on with the IT (Information Technology) department of the bank. The survey was introduced to users in the following way. When logging out from their first transaction with the online knowledge sharing, a pop-up window appeared (with a link to the survey included) asking the user to participate in a web-based survey about the performance of its website. Respondents were asked about personal information such as: telephone contact numbers, experience of online knowledge sharing (in months) and if they were interested to participate in a follow-up telephone interview.

Items were taken from Palmers (2002) study. Instead of conceptualizing web metrics as antecedents of website success, we differentiated between three types of outcomes: self efficacy, satisfaction and intention to use/return the site. The constructs comprising web metrics used by Palmer (2002, p. 165) were somewhat modified. Website features included in our conceptual framework were: Download delay, Interactivity, Knowledge, Structure of site, Ease of navigating. We made some slight changes as to the conceptualizations of the individual five constructs developed by Palmer (2002, p. 158).

Our model (see Figure 1) comprised the above website constructs and their effect on key experiential outcomes: satisfaction, intention to return and self-efficacy. The latter construct is of special interest as this may be a proxy for the effect of learning in this first time attempt to handle the website of the bank.

We used the partial least squares estimation (PLS-Graph Version 3.0, Chin, 2001) approach to estimate both the measurement and structural parameters in our structural equation model. PLS does not require multivariate normal data, places minimum requirements on measurement levels, and is more suitable for small samples (Chin, 1998; Wold, 1985). We specified reflective indicators for all the constructs, and we examined the reliability, convergent validity, and discriminant validity for the measurement instruments used (Chin, 1998; Fornell and Larcker, 1981). Our results indicate adequate reliability (in terms of composite reliability and average variance extracted), convergent and discriminant validity.

To test the hypothesis in our conceptual framework we used PLS to estimate the parameters in our structural model. To test the statistical significance of the parameters in the structural model we used a bootstrapping procedure with 500 resample (Chin, 1998).

4. Results

Overall, the statistical significance of the main relationships provides strong empirical support for our conceptual framework. Our results suggest that the model explains a substantial amount of the variance in the endogenous constructs significant at $\alpha=0.05$ (satisfaction with web site: $R^2=0.70$; web site behavioral intention to use: $R^2=0.35$) (see Figure 1). This leads to a GOF value (Tenenhaus et al., 2005) of 0.55 which exceeds the cut-off value of 0.36. Satisfaction with web site is positively affected by information provided by the web site and structure of the web site. Web site behavioral intention to use is positively influenced by download time and satisfaction by the web site.

5. Conclusions

Even at this stage any conclusions drawn from this research must remain to some extent provisional. The data paint a picture of what is, or is not happening with online knowledge sharing in local banks in Malaysia. It is apparent that as in the banking sector, knowledge sharing has entered the argot of local bank. Whether this results in a longer-term commitment or just lip service remains to be seen. At this stage in the research project it seems safe to generalize that a majority of local banks are responding to the challenges and opportunities of knowledge sharing. This is particularly evident in the extent not just of technology adoption but specifically in the widespread employment of a range of mechanisms for sharing and reusing knowledge within banks. It is also apparent in moves to address concerns of loss of knowledge and subsequent attempts to leverage knowledge value across the bank. It is strongly apparent in the widespread regard for the importance of learning, with or without recognition of the value of knowledge sharing. All in all there are indications that local banks in Malaysia is growing increasingly knowledge-focused and that local banks are becoming knowledge-based banks. The follow up interviews for this research project are continuing. Even now however, they point to the need not simply for observations of organizational knowledge sharing practices but for some means of testing and measuring these. To this end work is underway on the construction of a number of knowledge-related indices for local bank, work that will be reported in a subsequent paper.

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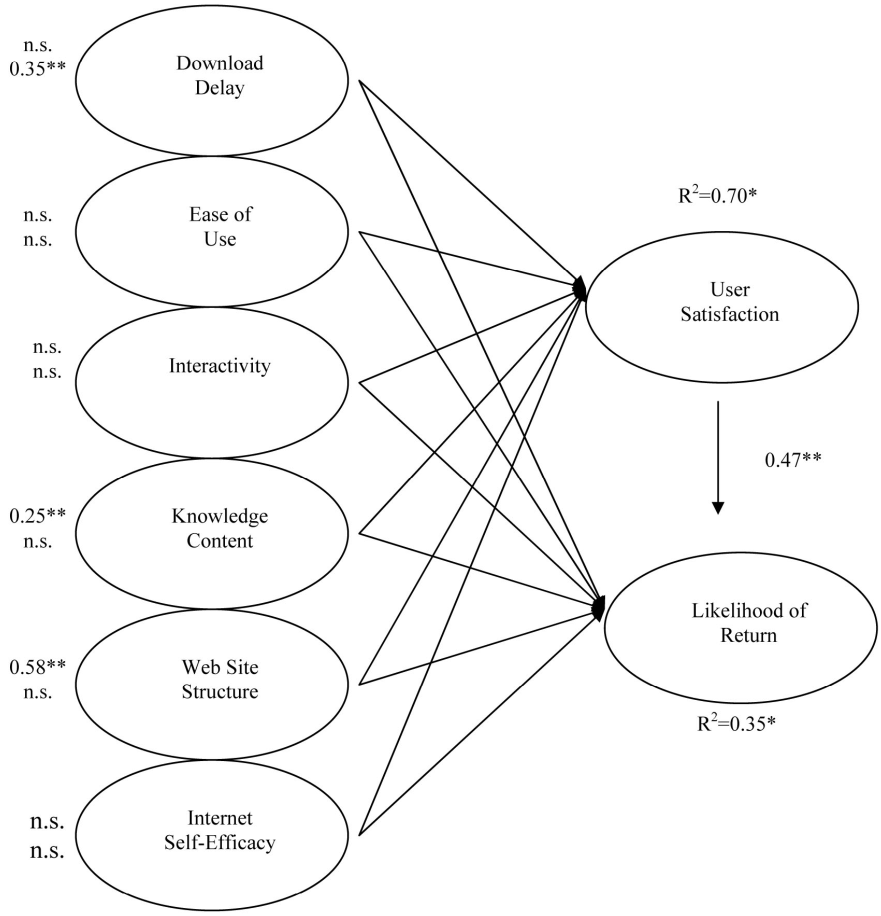

Figure 1. Empirical Finding: Structural Model

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Research on the Brand Diffusion of the China Mobile Communication Industry Based on the Innovation Diffusion Theory

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Abstract

Perhaps one of the fastest growing markets in China is the mobile telecom market. The brand diffusion of China Mobile Communication Industry that has not been addressed is of great importance to the practicing brand managers. In this article, the authors forecast the potential mobile phone users of China Mobile Communication Industry with the Bass model and analyze the impact of competition on the brand diffusion of China Mobile and that of China Unicom. The study yields the good prediction and the managerial implications.

Keywords: Brand diffusion, Bass model, GMM model

1. Introduction

The diffusion of an innovation is defined as the process through which the innovation "is communicated through certain channels over time among the members of a social system". Diffusion models in marketing describe the diffusion process of an innovation in a society over time (Rogers, 1983). Researchers in management and marketing science have contributed to the development of diffusion theory by suggesting analytical models for describing and forecasting the diffusion of an innovation in a social system. The main impetus underlying these contributions is a new product growth model suggested by Bass (1969). Following the success of Bass's model, marketing researchers have been developing many different types of diffusion models to address various issues surrounding the sales growth of new durables. Applications of the model have been shown to apply to a much wider class of products and services and it has become especially significant in forecasting B2B products and services of many categories including telecom services and equipment, component products such as semiconductor chips, medical products, and many other technology-based products and services (Bass, 2004).

A careful analysis of the diffusion literature reveals that most of the diffusion models focus only on category-level diffusion and that there are only a few models that research diffusion at the brand level. More specifically, Krishnan, Bass and Kumar (2000) point out three possible reasons for the dearth in research on brand-level diffusion: (1) the belief that the theory underlying the diffusion process (i.e., the sociocontagion theory) is most applicable to a category, not to its brands; (2) the fact that the sales of a brand in a new category are affected by multiple factors (such as category-level diffusion, marketing-mix variables such as price and advertising of each brand in the market, and different entry times of the various brands); (3) the no availability of appropriate data to test the models. Instead, they have focused on specific issues that characterize a brand's diffusion. For example, Givon, Mahajan, and Muller (1995) study the impact of piracy sales on the diffusion of legal software products and treat the pirated version as another brand whose diffusion is not observed.

In this article we focus on the brand diffusion of China Mobile Communication Industry that has not been addressed so far and is of great importance to the practicing brand managers. First, we forecast the potential mobile phone users of China Mobile Communication Industry with the Bass model; second, we analyze the impact of competition on the brand diffusion of China Mobile and that of China Unicom.

2. China mobile communication industry

The Chinese mobile telecom market has a typical duopolistic structure, involving China Mobile Communications Corporation (China Mobile, in short) and China United Telecommunication Corporation (China Unicom). At present, these two firms are the only operators with licenses to provide mobile telecom services in the China market.

Before 1994, TACS (Total Access Communications System)of China mobile(originally attached to the Ministry of Posts and Telecommunications) had been monopolizing the Chinese mobile telecom market. In 1994, China Unicom was granted a basic telecom license, which dissolved the monopoly status of China Telecom, and it offered mobile telecom services based on GSM(Global System for Mobile Communications). However, China Unicom could not have a major impact on the telecom market because of the exclusive advantage of the fixed telecommunications network of China mobile. By the end of 1999, although China Unicom had had controlled only 5% of the market, the real competition began caused by a spin-off company (China Mobile) from China Telecom.

In the period of the growth and maturity of the Chinese mobile telecom market(2.5G Age), in the early 2002, China Unicom provided a CDMA(Code Division Multiple Access)network, and China mobile also offered GPRS(General Packet Radio Service) based on GSM. The two major mobile operators in China selected different technology criteria and toed the same line ready for competition After several years' development, although China Unicom was protected by national policy and its price could decrease 10%-20%, its market share was still at a rather large distance from that of China Mobile (in the later 2007, the market share of China Unicom is 29%, China Mobile is 71%).

There would encompass questions such as: (1) How about the future development of the potential mobile telecom market of China Mobile Communication Industry? (2)Does the competition within the duopolistic mobile telecom market affect the brand's diffusion and, if so, by how much? It will be much aid to probe into two questions for brand managers.

3. Diffusion model

3.1 Bass model

The Bass model constitutes a model that is used to the formulation of empirical generalizations in marketing (Bass, 1995). Mathematically, the central idea of the Bass model is that the conditioned probability of an individual adopting at time t, given that this individual has not already adopted, is a linear function of the number of previous adopters:

$$\frac{f(t)}{[1-F(t)]} = p + qF(t) \tag{1}$$

where the random variable t denotes the moment of adoption of a new product by an individual (adopter), f(t) is the probability of adoption at time t, F(t) is the cumulative distribution function and, p and q are the parameter of innovation and imitation respectively. If we define M as the potential market of adopters, n(t) as the number of adopters at time t, with n(t)=Mf(t), and N(t) the cumulative number of adopters up to time t, (N(t)=MF(t)), we can express the Bass model as:

$$\frac{dN(t)}{dt} = (p + q\frac{N(t)}{M})[M - N(t)] \tag{2}$$

The Bass model is the most parsimonious aggregated diffusion model suggested in marketing literature (Parker, 1994) and it has large acceptance in the field of innovation diffusion (Mahajan, Muller and Wind, 2000). Since its publication, several hundred articles have been written on the applications and extensions of the model (Mahajan, Muller and Bass, 1990; Sultan, Farley and Lehmann, 1990).

3.2 GMM model

Givon, Mahajan, and Muller (1995) study the impact of piracy sales on the diffusion of legal software products and treat the pirated version as another brand whose diffusion is not observed. The following differential equations represent the diffusion dynamics over time for the legal diffusion as well as the shadow diffusion:

Legal Diffusion:

$$\frac{dX(t)}{dt} = [a + \alpha\frac{b_1X(t) + b_2Y(t)}{N(t)}][N(t) - X(t) - Y(t)] \tag{3}$$

Shadow Diffusion:

$$\frac{dY(t)}{dt} = [(1-\alpha)\frac{b_1X(t) + b_2Y(t)}{N(t)}][N(t) - X(t) - Y(t)] \tag{4}$$

and X (0) = 0 and Y (0) = 0. N(t) is the cumulative number of microcomputer owners at time t, X(t) is the cumulative number of buyers of the software at time t, Y(t) is the cumulative number of pirates at time t, a is the coefficient of external influence, b_1 is the coefficient of imitation representing the word-of-mouth influence of buyers on potential software users, b_2 is the coefficient of imitation representing the word-of-mouth influence of pirates on potential software users, α is the coefficient representing proportion of individuals influenced by word of mouth who purchase the software.

Givon, Mahajan and Muller (1995) extend the Bass model and demonstrate how shadow diffusion of a software may influence its legal diffusion. Their diffusion modeling approach captures the growth of a software over time taking into consideration the influence of pirates on the software diffusion. They analyze the dominant role that pirates play in converting potential users in users of the software. Adoption data from spreadsheets and word processors in the United Kingdom are used to illustrate the application of their model (Ruiz-Conde, 2004).

3.3 Extended application of the GMM model

The authors extend the GMM Model to the Compitive Diffusion of China Mobile and China Unicom, then equtions (3) and (4) wil be different; that is, N (t) is the potential market of mobile phone users at time t, X(t) is the cumulative phone subscribers of China Unicom at time t, Y(t) is the cumulative phone subscribers of China Mobile at time t.

4. Empirical results

4.1 Data

The yearly subscribers' data (China Mobile, China Unicom and their total) were already collected from MII (Ministry of Information Industry). These data, from 1991 through 2007, are included in Table 1.

4.2 Forecasting with the Bass model

Table 1 shows that China Unicom shares only 5% of the market to the end of 1999. For China Mobile, from 1991 through 1999, it held near-monopoly positions in its respective markets, and the category-level sales growth is of primary concern. We used the 9-year data of China Mobile subscribers. We estimated the Bass model by nonlinear least squares. Table 2 provides the parameter estimates with the Bass model on brand's diffusion of China Mobile.

M stands for 921,019,000 subscribers who are the eventual population of potential users of China Mobile and also that of China Mobile Communication Industry because China Mobile was a monopoly during 1991-1999. The number is close to 0.9 billion forcast by MII. q>>p, that is, in terms of attracting new subscribers, the internal influence(word-of-mouth communication)is much greater than the external influence(mass-media communication).That shows a brand's formation should depend on the extent to which it receives good word-of-mouth from its own previous adopters. The R^2 value is remarkably high. It shows the fit of the model to the data.

Table 3 shows the comparison of the actual and forecast data of China Mobile subscribers from 2000 to 2004. In figure 1, plots 1-9 illustrate the fitted and actual subscribers curve, and plots 10-13 illustrate the forecast and actual subscribers curve for China Mobile Communication Industry. From table 3 and figure 1, we conclude that the model well forecasts the data of the following three years, and but the forecast number increases faster form the fourth year because the time series data for the model fits was long ago from now and the initial data were small. And also, several studies of the sensitivity of the parameters of the Bass model indicate that estimates using data for first purchase adoption rates of single products are not very stable unless the period over which the estimates are formed extends past the peak of the curve.

Figure 1 shows the fit of the model to data. Clearly, there is close correspondence between the model and data. A plot of fitted versus actual subscribers data similarly shows very correspondence. The model fits well.

4.3 Impact of competition on brand's diffusion with the GMM model

Unless there is only one company in an industry (a monopoly), the Bass model is not appropriate for modeling brand growth or for examining the impact of competition on brand growth. With the GMM model, the paper used the China Unicom data of yearly new subscribers to analyze the brand competition diffusion of China Mobile Communication Industry.

Table 4 provides the parameter estimates for China Unicom. In Table 4, a, which is same to p in Table 2, is the coefficient of external influence of China Unicom. b_1 is the coefficient of imitation representing the word-of-mouth influence of China Unicom phone subscribers on potential phone users; $a<<b_1$ suggests that the growth of China Unicom was mainly driven by word-of-mouth communication. b_2 is the coefficient of imitation representing the word-of-mouth influence of China Mobile phone subscribers on potential users; $b_2> b_1$ suggests that the intensity of the word-of-mouth influence of China Mobile is more than that of China Unicom. α is 0.2998, and this value suggests that the rate of all the potential mobile phone users who were converted to China Unicom phone subscribers at any time t due to the word-of-mouth influence of the duopolistic brand is 0.3,while that of China Mobile is 0.7. That indicates more potential mobile phone users were likely to choose China Mobile on the brand selection. Figure 2 is the actual and predicted fitted-graph of the yearly new subscribers of China Unicom with the GMM model. Figure 2 and the R^2 value both prove that the model describes the growth rate behavior of two competition brands rather well.

5. Conclusion

In the paper the results presented here suggest that the Bass model can be used to forecast the eventual population of potential users of China Mobile Communication Industry, and the GMM model can be used to analyze the impact of competition on the brand diffusion of China Mobile and that of China Unicom. The authors hope that the approach will stimulate others to develop alternative approaches and provide options for brand managers.

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Table 1. The subscribers of China Mobile, China Unicom and their total (10^4 of subscribers)

Year	1991	1992	1993	1994	1995	1996	1997	1998
Total	5	18	64	157	360	690	1320	2380
CM*	5	18	64	157	360	690	1320	2240
CU*								140
1999	2000	2001	2002	2003	2004	2005	2006	2007
4330	8530	14480	20720	26920	33490	39340	46270	54910
3800	6660	10380	13900	17710	22280	26560	31850	38660
530	1870	4100	6820	9210	11210	12780	14420	16250

*: CM is China Mobile; CU is China Unicom.

Table 2. The parameter estimates with the Bass model on brand’s diffusion of China Mobile

m	P	q	R^2
92101.90	0.0001	0.6176	0.9894

Table 3. The comparison of the actual and forecast data of China Mobile subscribers

Year	2000	2001	2002	2003
Actual	8530	14480	20720	26920
Forecast	7741	13406	22121	34047

Table 4. Parameter estimates for China Unicom with the GMM model

a	b_1	b_2	α	R^2
0.0743	0.2083	0.3442	0.2998	0.9152

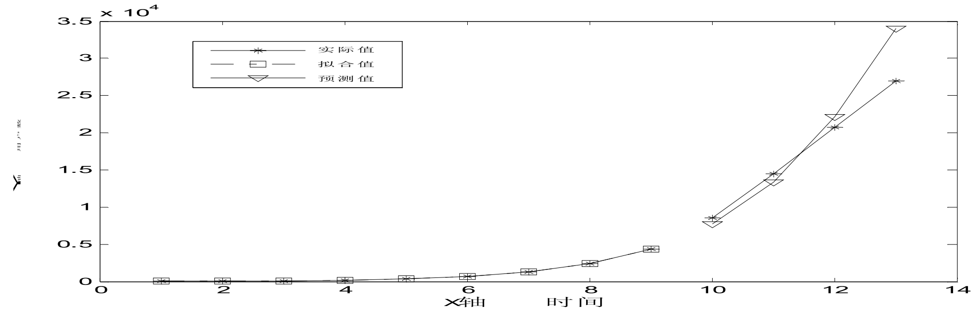

Figure 1. The Actual (*) and fitted (□) and forecast (▽) data of China Mobile

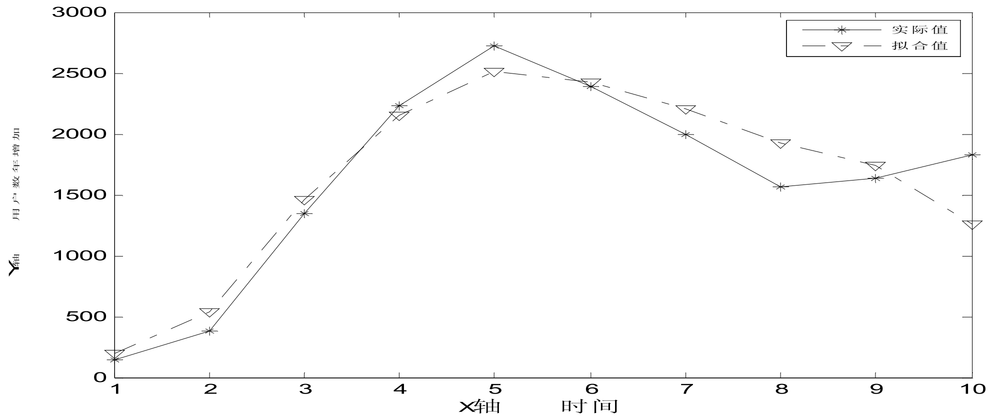

Figure 2. The Actual (*) and predicted (▽) data of the yearly new subscribers of China Unicom

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Human Performance Factors in the Evaluation of Virtual Organizations

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Abstract

Performance evaluation is one of the most important issues that have been considered due to the transition from industrial age to knowledge era. Virtual organizations, as one of the challenges of third millennium, which came to existence for enhancing organization's performance through outsourcing, are not excluding. The main objective of this paper is to investigate the main factors that affect the virtual organization performance and to show how these factors can be used in virtual organization evaluation.

Based on review of literature, this study provides a conceptual model of important performance factors of virtual organization. This conceptual framework gives a valuable insight into the performance in virtual organization and can give a useful help to practitioners to evaluate the performance of these organizations. Then, we use expert opinion to validate proposed model and to rank the importance of the factors.

Keywords: Virtual organization, Performance measurement factors, Evaluation, Knowledge management

1. Introduction

Both developments in communication technology that facilitates the fast access, process, transferring of information, and innovation in reorganization due to conformity with fast changes in environment and preparing customer needs, have leaded to the emersion of virtual organization (Ulrich, 1999) which is consistent with post-industrial age. As Lipnack and Stamps (1997) argued, the four major ages has brought some benefits to social groups and organizations in their time: the benefits of first age were the formation of small social groups; in the second age, hierarchy had established in organizations; industry development in third age had resulted in the formation of bureaucracy. Finally the fourth age, information century, leads to the extension of organization boundary, the creation of widespread work networks, and the formation of virtual organizations. Hence, the benefits which information century brings, in general, are in the development of information and communication technology (computer science) and especially is in the formation of virtual organizations. The world "virtual" originates from computer science, in where, virtual memory means operating the programs more extensively than actual memory (Kavan et.al., 1999). Even in the organization level this concept is utilized, because external sources are used such that does not really belong to organization. "Outsourcing" that means buying product or service from outside instead of procuring them internally, has become prevalent phenomenon in business. Indeed, virtual organizations supply many of their activities from external sources and create a structure that jobs operated by external units instead of operating them by each internal units. In virtual organizations small and self reliant units are related with each other by the help of information and communication systems and as a result of joining such small organizations, a huge network of organizations are produced which are able to do massive missions (Kavan, 1999). Therefore in virtual organizations traditional boundaries obscured, different cultures would be merged and many redesigned jobs would be emerged.

Intelligent organizations use the following three virtual dimensions, to reach their strategic goals and to restructure their activities: location, time, and structure (Kurtakko and Kurtakko, 1998). From locational dimension, information and communication technology, especially internet, economize separation between operation and workforce which have been together. In timing dimension, organizations can change their activities according to the zone time. Another application of time dimension is flexibility in workforce work time that work via telecommunication, because they can adjust their commercial needs with their family life. Finally, organizations can utilize more flexible structures like networks, which integrate different people and expertise for operating special activities. People can be a member in temporary teams and the virtual organization till the time they are needed.

Virtual organization has some benefits and constraints as follows:

- *From organizational perspective:* It reduces costs and constraints that associated with work location (Lepak and Snell, 1998), it provides access to an extensive set of capable workforce, and leads to flexibility, gaining from environment opportunities, the reliance of organizations to the source of each other, and better responsibility to customers.
- *From employee perspective:* It provides more independence, freedom, flexibility, life control, and it reduces the conflict between work and life that emerges from work in traditional location.
- *From society perspective:* It reduces traffic problem and environment pollution, are created for physical movement.
- *From structural and inter-organizational relationships perspective:* small, independent and self reliant units operate more easily and their ability to respond to fast changes in market and the use of their potential ability in design, produce, marketing and supporting the product is more than before. But when virtual organization's workforces are independent and there is no control on them, it is possible that the noncooperative actions of a supplier organization in the long term are considered as a threat and therefore making the coordination between them is difficult (Chesbrough and Teece, 1996). Here the structural characteristics of virtual organization are not underscoring but the characteristics of human resource management in such organizations are underlined.
- *Human resource:* one of the challenges in virtual organizations is reaching to some patterns for collective interaction and communication between work groups and workforces that are separated in distant places. Kurland and Egan (1999) have separated the problems of managers and employees in this circumstance. Because employees are not with managers, they think they can't have complete control on them. It is possible that employees be isolated socially and professionally due to loss of face to face relationships. From social side, less informal interaction is formed between workforces and friends. However if work is done in home, isolation will be more than before. From professional side, workforces worry that as going from sight, they go from thought and with respect to organization rewards and promotion they are not treated correctly. In such conditions their perception of justice would be an important issue that organization should have sensitivity facing it and do essential departure.

The concept of virtual organizations that are based on the loss of location and time boundaries, is an attractive idea but it introduces a new employment paradigm. Innovation in technology makes every employee as a potential immigrant in more different work place. This condition explains an attractive challenge to change organizational structure, work organizing, increase in productivity and flexibility and human resource improvement (Kurland and Egan, 1999).

The supervision and control issues are an unseparated part of organizations; hence, virtual organizations are not strange with these facts too. But here the essential question is that how we can evaluate virtual organizations and measure the performance of employees and trust them for doing their duties and manage people that are absence physically. Therefore, the discussion of virtual organization has reached to the level that managerial needs should be considered, investigated, and essential departure is done in the whole level of this organizations. The first step in performance appraisal is the determination of some factors that the performance of teams and workforces is measured by them and it is not possible unless with a performance appraisal approach in the different level of virtual organization. Based on organization level division, first, we introduce three levels and their importance and then we offer a model, composed of organization levels and some important factors for appraisal.

2. The virtual organization's working level

Generally, people in virtual organization work in three levels: virtual organization director level, virtual teams and workforces level (Fritz et.al., 1998). We introduce them as following:

2.1 The directors of virtual organization

Ulrich and Beatty (2002) have identified five roles that must be in director's level of virtual (and other) organizations: coaching, architecting, designing, facilitating, and leading. They defined these roles as follows:

2.1.1 Coaches

They help participants to see what did and did not work and offer specific counsel and advice on what can be done to improve performance. In virtual organizations, they coach senior leaders about how they can personally build stronger organizations. Coaches read to their business leaders and learn how to provide them concrete feedbacks on their behavior. They must learn to give clear, direct, candid, and useful feedback to both the business leader and team. They must build a relationship of trust with the business leader. This relationship emerges as they express personal concern for the leader, empathizes with the leader's challenges, offers specific observations, and is willing to offer the leader feedback he or she may not receive elsewhere.

Business leaders need to have a clear sense of what they want to accomplish. Often these goals may be defined by examining each stakeholder relevant to the business leading, including: customers, boards, senior management team, suppliers, alliance partners, investors, government agencies, employees, and etc. Using this stakeholder map, a coach may help the leader identify for each stakeholder:

• What are your goals with this stakeholder?

• What are the current relationships with the stakeholder?

• What needs to be adapted to reach the goals?

• What are the actions that you can take to ensure that the goals are met?

• What are the metrics for success with each stakeholder?

Stakeholder map provides a template that the business leader can recall and readily use to focus attention.

2.1.2 Architects

They help to turn general and generic ideas into blueprints for organizational action. They shape the way work flows consistent with the ideas and ideals of the business leader. They help identify choices not evident to the business leader about how organizations might be better governed. They come to the management meeting understanding business realities and virtual organizations and ensure that dialogue focuses on the right issues. They must have a concept of organization and be able to apply that concept to the firm. They continually look for the strategic agenda of the firm and try to envision how it turns into an organizational agenda. In their management meetings, they offer ideas and alternatives about how to weld organization capabilities across alliances to deliver value to customers and employees. They perform organizational diagnoses by asking questions such as:

• Given our strategy, do we have the right organization?

• Given our strategy, what are the capabilities we must have to deliver the strategy in an effective and efficient way?

• Given our strategy, what roles must be played by management team members to ensure implementation?

In addition to assessing and understanding their firm's employees, they will need to conduct an assessment of the capabilities of their firm's web partners' workforces to meet the firm's expectations as strategic partners in their emerging business webs.

2.1.3 Designers

Architects create blueprints, but without becoming implemented, they become ideals without impact. Turning ideas into action matters because unless creative ideas are implemented, they add no value. Acting on ideas comes when employees who come to work behave in ways consistent with strategy and capability. They become not only experts at seeing what needs to be done, but at making it happen. In summary, jobs that a designer can undertake in virtual organization includes following:

- Executing and implementing virtual operational plans (long-term, medium- term and short-term);
- Human resource plans (Competence, Rewards and performance management, Communication, Governance, Change processes);
- Designing the outsourcing of human resource, activities and the type of its outcome.

2.1.4 Facilitators

Even with good intent, most change efforts fall short. Facilitators understand the process of getting things done in the long term, not short term. They have the ability to make changes happen and to sustain those changes at three levels. *First*, they help teams operate effectively and efficiently. *Second*, facilitators ensure that organization's changes happen. As organization facilitators, they bring together resources, focus attention, and make sure that decisions are made quickly and accurately. *Third*, facilitators ensure that alliances operate. Facilitators ensure that action occurs within teams, organizations, and alliances. The guideposts for action come from considering who is involved, what information is used, and how decisions are made. They ensure that the right people are on the team to accomplish the team goals, that the right information is generated to make good decisions, and that the team operates well. Facilitators using a checkup team can take a team through a periodic (e.g. quarterly) team diagnosis about purposes, decisions, relationships and learning. Facilitators help organizations make changes happen fast when they build discipline into decision making:

- Clarity of the decisions
- Who makes the decisions?
- When must decisions be made?
- What processes are needed to make good decisions?
- How will a decision be returned and reported?

Facilitators must create cross-alliance actions and commitment. To do so, they must ensure that information moves across alliance boundaries, that knowledge in one firm is shared with another, and that information systems connect people in different organizations.

They must learn skills of process observation. Facilitators know how to amass resources to accomplish goals. These processes include the ability to do team processing, organizational decision making, and alliance management.

In some ways facilitators are like coaches only instead of focusing on a person, they focus on collectives of people in teams, organizations, or alliances. Like coaches, they shape points of view and offer feedback on progress. Only facilitators have the more complicated task of doing so for collective groups of individuals, not just individuals.

2.1.5 Leaders

In order to lead, leaders need to apply a leadership model to themselves. The leadership model we advocate follows a simple equation: effective leadership = attributes × results. Attributes means that leaders know and do things that ensure they do things the right way. Results mean that leaders ensure outcomes from their knowledge and actions. Leaders need to define clearly the behaviors they should demonstrate as leaders (e.g. setting clear goals, being decisive, communicating inside and out, and managing change), and they also must define clearly the results they must deliver.

Greiner and Metes (1995) discuss the new leadership skills required to lead in the virtual environment, including the ability to manage a network of interdependent firms, to design virtual operations, to create and sustain virtual relationships with internal as well as external constituents, to support virtual teams, and to keep virtual teams focused. The leader of a virtual organization demands a new set of skills unlike the skills required in a traditional hierarchy.

2.2 Virtual teams

According to Katzenbach and Smith (1993), “A team is a small number of people with complementary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable.” Similarly, Sweezy, Meltzer, and Salas (1994) suggest a team is “a distinguishable set of two or more people who interact dynamically, interdependently, and adaptively toward a common and valued goal, objective, or mission; each of whom has been assigned specific roles or functions to perform, and who have a limited life-span membership.”

Nowadays, the structure of teams has changed considerably due to change in organizations and the nature of their works. The ordinary boundaries of organizations which are, between the horizontal units of organization, between inside and outside of organization and between geographical and cultural market areas, have been changed. The relationship between people from inside and those that conceived outside of organization (customers, suppliers, shareholders etc.) up to now, has been more important than before and the *organizations without boundary* is forming and organizations has found the value of collective work and group corporation (Ashkenazi et.al., 1995).

The most essential activities of business like supply chain management, sale, quality improvement, change management and etc, require people collaboration beyond the boundary of the organization. In order to do such activities, the organizational and geographical boundaries could prevent employees work. In virtual teams, team members work beyond the geographical and organizational boundaries together in separated place, one time and with the same organizational rules (Cantu, 1997). Virtual team, like any other teams, includes groups of people that interact with each other due to doing dependent activities and the conductor of team is the same goal. Really, virtual teams have the basic characteristics of ordinary teams but team members may separated in different geographical locations and don’t use face to face relationships. The factors that join virtual team members, are technologies associated with web and trusting each other (Eggert, 2004).

2.3 The workforces in virtual organization

In the virtual organization progress toward goals is done by employees. Due to outsourcing, workforces in these organizations, in addition to do their tasks, they have improver role and can be the strength or the weakness of a virtual organization. In virtual organizations workforces have following characteristics (Lipnack and Stamps, 1997):

- They do not have the same physical location
- They do basic mutual relationships by the use of computer communication technologies
- They rarely visit each other and sometimes they might not see each other for a long time
- Occasionally, they have different languages and cultural histories
- They have some personally constraints and troubles, it is possible, even others not be aware of it

3. Performance evaluation of organizations and the importance of it

The use of evaluation methods in formal manner comes from nineteen century. It can be said that performance evaluation is developed at the same time with the development of management thoughts under the management schools trends. Change and development in evaluation factors from the form of general and comprehensive principles of the evaluation of organizations to total quality management indicate the trend of evaluations development.

There are two viewpoints that how performance evaluation came into existence. The first one is traditional evaluation theory that has two important goals for evaluation: judgment and performance reminding. The second one is modern theory that considers development and improvement of performance where the dynamic side of evaluation is an essential side of it. The investigation of different approaches to performance evaluation explains that evaluation methods should be proportionate with the growth and development of organizations and it responds to different dimension of them. Nowadays, some factors that should be considered in performance evaluation are: technology development, the role of critical success factors in performance, the structure of internal and global competition, quality benefits, the place of organization and its products and services to market and customers and etc. Another point that considered in the literature of performance management nowadays is the statement that there is an important and considerable relation between outcomes evaluation (output) and input and process evaluation (input). Nowadays the dominant thought is the statement that, the refining of inputs and operation process rationally, leads to the offering of proper products and services. The final control of operation cannot explain the state of organization's total performance. Output is the result of the activities of organization's different units in resource forming and output control can not help to the correction plans of processes and their supporting operations.

Specialists in management believe that performance evaluation systems should be reviewed periodically. This work can be a result of changes in essential values which direct performance evaluation systems. Recently, some attempts have been done to find either a standard or a framework to help organizations to use it for performance evaluation. In other words, it helps them to gap analysis. For many organizations, the ability of judgment about the development with some set of acceptable criteria is valued, useful and informing.

Many authorities on the subject have provided answers to this question that "why measure performance?". National Performance Review (1997) notes that performance measurement yields many benefits for an organization. One benefit is that it provides a structured approach to focusing on a program's strategic plan, goals, and performance. Another benefit is that measurement provides a mechanism of reporting about program performance to upper management. In the General Service Administrations (GSA's) performance-based management sated that measurement focuses attention on what is meant to be accomplished and compels organization to concentrate time, resource, and energy on achievement of objectives. Measurement provides feedback on progress toward objectives. If results differ from objectives, organizations can analyze gaps in performance and make adjustments (Cited by Artley and Stroh, 2001).

Recalling the above discussion and the importance of performance evaluation in virtual organization, in the next section, we will argue about the necessity of the existence of some factors and consequently evaluation of different levels of virtual organization.

4. The evaluation factors of different level of virtual organization

4.1 Virtual organization director

Regarding to section 2.1 about Virtual organization's directors, we have found that these factors are important to have a high performance directing in virtual organization:

Coach: They should build the *relationship of trust*, have *stakeholder map*, learn it to the leaders, and give effective and real time *feedbacks* to the teams and the leaders.

Architect: Regarding *strategic plan*, they should help business leader to identify choices that is not evident and to turn general and generic ideas into blueprints for organizational action. To do this they should assess and understand *workforces and their capabilities*.

Designer: They should *know and bring current theory and research* to action in order to shape employees behavior consistent with strategy and capability to turning ideas into action.

Facilitator: They should help teams to operate effectively, ensuring that changes happen and alliance operates properly. To do this they should consider *who* is involved, *what information* is used, and how decisions are made. They should have some abilities to do *team processing*, *organizational decision making*, and *alliance management*.

Leader: An effective leadership is a function of *attributes* and *results*.

4.2 Virtual teams

Hacker and Lang (2000) found objectives of virtual teams and then critical indicators of these objectives. The three objectives are *performance against schedule*, *internal customer service*, and *overall virtual team health*. By focusing resources on the critical indicators and regularly evaluating status, virtual teams will be in a better position to meet their mission.

Performance against schedule: The *performance against schedule* indicator summarizes the overall percentage of projects that is finished as scheduled. How the team defines projects in terms of priority can play a part in the overall score, as a miss on a critical project affects the score more than a slip on a lesser one. Therefore, the overall *performance against schedule* score is both an indicator of the performance of the team as well as accurate planning within the team. They identified two areas to focus on in the short term to improve *performance against schedule*-balancing work load and work hours and actions required completed on-time.

Internal customer satisfaction: The nature of the virtual team's work requires team members to work with other groups and develop processes that will benefit the efficiency of these groups. Therefore, the image of the team within the larger organization is important to the success of the team. Therefore the effectiveness of the team's interaction between groups should be evaluated. They identified four critical indicators: On-time delivery, quality, communication, overall satisfaction. These indicators can be measured by the result of a survey that given to groups within the larger organization.

Overall virtual team health: Team health is a measure of how well the team members function together and how important it is to team effectiveness. Team health survey evaluates seven areas: goals and results, membership, team processes, team linkages, team development, coach checklist, and core team structure. Similar to the customer satisfaction survey, the target is to eliminate all "needs improvement" responses. The specific areas that causing problems are: meeting attendance, individual performance reviews, division of labor, commitment letters.

4.3 Virtual workforces

Dibben (2002) showed that how following factors can affect the performance of a workforce in virtual organization:

- The understanding of work and its process.
- Self-motivation.
- The high ability of verbal and written communication.
- Being criticizable and compatible.
- Having positive insight.
- The good understanding of organization and its strategy.
- Technical capability.
- Self-confidence.
- Being result-oriented.

5. The necessity of knowledge evaluation

Nonaka said: 'When markets shift, technologies proliferate, competitors multiply, and/or products become obsolete almost overnight, successful companies are those that constantly create new knowledge, disseminate it widely throughout the organization, and quickly embody it in new technologies and products'. (Nonaka, 1991). Davenport and Prusak (2000) defined knowledge as ''a fluid mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information''. Knowledge is originated and is applied in the mind of individuals, whereas in organizations it can be embedded in routines, processes, practices, and norms (Davenport and Prusak, 2000). It actively enables performance, problem solving, decision making, learning and teaching by integrating ideas, experience, intuition, and skills, to create value for employees, the organization, its customers, and shareholders (Liebowitz, 2000).

Knowledge management is the process of discovering, acquiring, developing, sharing, reserving, evaluating, and utilizing the knowledge in organization via the creation of useful link between technology, human resource and process in order to achieving organization's goals. Regarding the possibility of access to more information and increase in overall human knowledge, in virtual organization this process has faster speed and the control and management of it needs more skills in scope of knowledge management (Jones, 2000). Knowledge management is the management of people intellectual power and collective memory. Nowadays, knowledge is power and it is truly power when everyone has access to it. What that is necessary in virtual organization is supporting the culture of knowledge partake and sharing. In virtual organization, the degree of collaboration should be high enough so get them the ability to respond quickly and to solve work problems. The cultural that everyone takes apart easily in information sharing is one of the most important necessities. When more people introduce their viewpoint about the solving process of major problems, there are more possibilities for true decision making and as a result work projects implemented with higher quality.

The key to the success of virtual organization is providing some facilities for transferring of knowledge and finding special channels and unions for this purpose. Some of success factors in this point are: having clear organizational goals, clear viewpoint, jointing work culture, relationship of trust and etc. Firstly, awards and motivation factors can facilitate transfer process, but in subsequent points sharing culture, rather than awards, plays a substantial role in determining behavior and people role in knowledge transfer. Hence for success and the creation of culture infrastructure, these issues should be considered in the strategic planning of virtual organizations.

Knowledge evaluation identifies the access level to the determined goals and with the use of this feedback can help to design corrective action. In the knowledge evaluation the factors that should be considered is *knowledge acquiring, knowledge sharing, knowledge usage,* and *knowledge creation*.

We showed the complete framework in Figure 1. Finally, reliability tests were carried out and the value of Cronbach's Alpha for the three levels and the factors in each level is given in Table1. The results suggest that the instrument used in the study was reliable as the reliability statistics of the items that are above 0.7 (Hair et al, 1998).

A questionnaire designed which in one hand included some questions about the adequacy and comprehensiveness of the three levels and factors in each level for the evaluation of virtual organization and on the other hand included questions about the priority and importance of these factors.

Based on expert opinion obtained from these questionnaires, the importance level of items were measured in a 5-point Likert scale, ranging from 1 = very low, 2 = low, 3 = average, 4 = high, and 5 = very high. The results, which shown the importance and priority of the factors, are represented in Table 2.

6. Conclusion

In this paper the necessity of performance evaluation and most effective factors are discussed in increasing organizations, virtual organization. The necessity of performance evaluation, the levels of organization that should be evaluated, the factors that should be evaluated and measured, and finally the knowledge evaluation is the most important issue that investigated in this paper.

At the end, it should be noted that the information and communication technologies are changing and developing continuously and these changes are the natural characteristics of new work environment. Organizations are seeing changes in the tools, methods, and technologies of communication and therefore they should choose the best and useful techniques to evaluate performance factors. Finally, the experimental and the practical applications are needed to provide full support for this conceptual paper.

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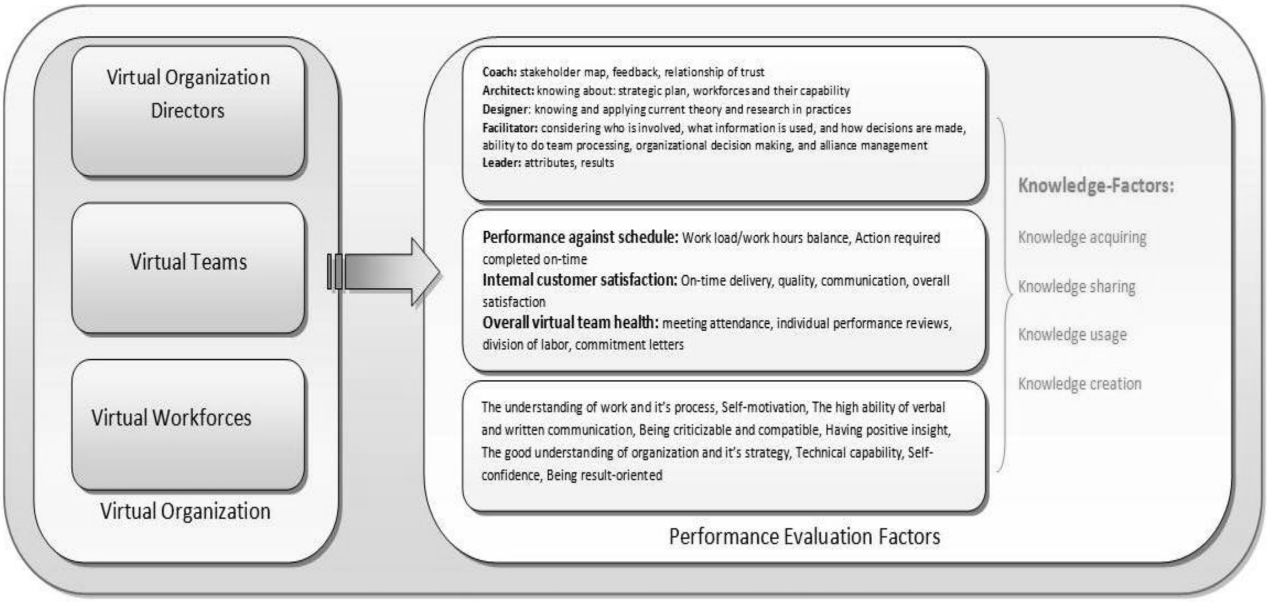

Figure1. Performance Factors in the Evaluation of Virtual Organization

Table 1. Reliability tests

Evaluated items	Cronbach's Alpha
Three level for performance evaluation	0.84
Factors in Virtual Organization Directors level	0.78
Factors in Virtual Teams level	0.89
Factors in Virtual Workforces level	0.73
Knowledge-factors	0.81

Table 2. The importance level of the factors

Factors	Mean ratings
Factors in Virtual Organization Directors level	Form 3.6 to 4.8
Factors in Virtual Teams level	Form 3.9 to 4.9
Factors in Virtual Workforces level	Form 3.7 to 4.5
Knowledge-factors	Form 3.2 to 4.4

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Impact of Ownership Structure and Corporate Governance on Capital Structure of Pakistani Listed Companies

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Abstract

This paper explores the relationship between corporate governance and capital structure of listed companies in an emerging equity market, Pakistan. The study covers the period 2002 to 2005 for which firm level data for 58 randomly selected non-financial listed companies from Karachi Stock Exchange has been examined by using multivariate regression analysis under fixed effect model approach. Measures of corporate governance employed are board size, board composition, and CEO/Chair duality. Impact of shareholding on financing decisions has also been examined by using managerial shareholding and institutional shareholding. Similarly influence of controlled variables like firm size and profitability on firms' financing mechanism is also investigated. Results reveal that board size and managerial shareholding is significantly negatively correlated with debt to equity ratio. However corporate's financing behavior is not found significantly influenced by CEO/Chair duality and the presence of non-executive directors on the board. However, control variables firm size and return on assets are found to have a significant effect on capital structure. No temporal effects are observed. Therefore results suggest that corporate governance variables like size and ownership structure and managerial shareholding play important role in determination of financial mix of the firms.

Keywords: Corporate governance, Ownership structure, Capital structure

1. Introduction

Corporate governance is a philosophy and mechanism that entails processes and structure which facilitate the creation of shareholder value through management of the corporate affairs in such a way that ensures the protection of the individual and collective interest of all the stakeholders. Sound corporate governance principles are the foundation upon which the trust of investors and lenders is built. Good corporate governance practices may have significant influence on the strategic decisions of a company, e.g. external financing, that are taken at board level. Therefore corporate governance variables like size of board, composition of board, skill set at board and CEO/Chair duality may have direct impact on capital structure decisions.

Corporate governance is generally associated with the existence of agency problem and its roots can be traced back to separation of ownership and control of the firm. Agency problems arise as a result of the relationships between shareholders and managers and are based on conflicts of interest within the firm. Similarly conflict of interests between controlling shareholders and minority shareholders is also at the heart of the corporate governance literature. According to modern corporate finance theories, agency cost is one of the determinants of capital structure. However empirical literature on corporate governance does not provide any conclusive evidence on the existence of relationship between corporate governance, ownership structure and capital structure of firm.

The corporate governance has been a growing area of management research. A comprehensive review of literature reveals that empirical work is mostly focused on the impact of corporate governance on firm's performance or examines the influence of ownership structure on firm value (Claessens, 2002). However relationship between corporate governance and capital structure has not been fully explored. Only few studies discuss the said relationship. Berger (1997), Friend and Lang (1988), Wen (2002) and Abor (2007) discuss the influence of corporate governance on the capital structure decisions of firms for developed and emerging markets. But no such study has been conducted to investigate the relationship between corporate governance and capital structure for Pakistani listed companies. Pakistan is an emerging market of South Asia and in recent past has shown remarkable performance, attracting considerable direct foreign investment. We believe, it is about time to explore the impact of corporate governance and ownership structure on firms' capital structure decisions.

According to modern corporate finance theories, agency cost is one of the determinants of capital structure whereas corporate governance is structured to alleviate agency issues; hence corporate governance and capital structure are linked through their association with agency costs. This paper integrates various strands of the literature and examines the effects of corporate governance and ownership structure on capital structure decisions of Pakistani listed companies since the promulgation of Code of Corporate Governance by Securities Exchange Commission of Pakistan in 2002. Study examines the impact of three sets of variables on capital structure. The first set includes corporate governance variables represented by Board Size, Composition of Board and CEO/Chair Duality. The second set comprises ownership variables which include Managerial Shareholding and Institutional Shareholding. The third set consists of control variables which include Size of Firm and Profitability. The capital structure is represented by debt to equity ratio.

This paper has been structured as follows:

- Section I is introduction.
- Section II provides an overview of existing literature on the subject.
- Section III explains the data, variables and methodology employed during empirical work.
- Section IV presents and discusses the findings of the study.
- Finally, Section V briefly concludes the whole discussion.

2. Literature review

2.1 Ownership structure and capital structure

Jensen and Meckling (1976) argue that managerial shareholding reduces managerial incentives to consume perquisites and expropriate shareholders' wealth and results in alignment of the interests of management and shareholders. It also reduces the propensity to involve in non maximizing behavior. Fama and Jensen (1983) and Demsetz (1983) argue that managerial shareholding may still have adverse effects on agency conflicts and it may entrench the present management leading to an increase in managerial opportunism. Jensen (1986) a gain addresses the issue of agency theory and finds that managers of a firm may make efforts to expand the firm beyond its optimal size for their personal gains and this may result in increase in gearing levels. These efforts may lead to greater power and status for managers but it will have a negative impact on firm efficiency.

Friend, Irwin and Lang (1988) discuss role of managerial self-interest in making capital structure decisions. They find that there exist negative relationship between leverage ratio and management's shareholding. This indicates that in the absence of any outsider principal stockholder the tendency of low debt to equity ratio will continue which will lead to higher non diversifiable risk of debt to management

Berger, Philip, Eli and Yermack (1997) investigate the relationship between managerial entrenchment and firms' capital structures. Results indicate that entrenched CEOs make efforts to remain away from debt and gearing ratios remain lower in the absence of demand from owners. A critical examination of changes in leverage levels reveals that gearing levels moves upward when steps to reduce entrenchment are taken. These steps may include threats to managerial security through involuntary CEO replacements and the replacement in the board of directors.

Short, Keasey and Duxbury (2002) examine the influence of ownership structure on the financial structure of UK firms. Results reveal that there exist positive relationship between management ownership and leverage ratio whereas negative relationship is observed between large external equity holder's ownership and financial leverage. However, relationship between management ownership and leverage ratio is not significant in the presence of a large outside equity holders. These findings suggest that outside equity holders affects the agency costs of equity financing and debt financing.

Brailsford (2002) finds that the managerial ownership and leverage may be related in nonlinear fashion. He provides evidence about the presence of negative relationship among managerial equity holding and gearing levels. He discovers that low level ownership by managers leads to low level of agency conflicts and results in higher level of debt. On the other hand higher levels managerial ownership results in managerial opportunism and ultimately leads to lower debt levels.

2.2 Board size and capital structure

The board of directors is highest body of a company that is responsible for managing the firm and its operation. It plays vital role in strategic decisions regarding financial mix. Pfeffer and Salancick (1978) find a significant relationship between capital structure and board size. The evidence regarding direction of relationship between board size and capital structure is mixed.

Berger (1997) finds that firms with larger board of directors generally have low gearing levels. He argues that larger boards exert pressure on managers to follow lower gearing levels and enhance firm performance. Abor and Biekpe (2007) examine the relationship between corporate governance and capital structure decisions of Ghanaian Small and Medium Enterprises by using multivariate regression analysis. The results provide evidence about negative relationship between board size and leverage ratios and SMEs with larger boards generally have low level of gearing.

On the other hand, Wen (2002) finds positive relationship between board size and capital structure. He argues that large boards follow a policy of higher levels of gearing to enhance firm value especially when these are entrenched due to greater monitoring by regulatory authorities. It is also argued that larger board may find difficulty in arriving at a consensus in decision which can ultimately affect the quality of corporate governance and will translate into higher financial leverage levels. Jensen (1986) states that companies with high gearing level rather have larger boards. Anderson (2004) finds that the cost of debt is generally lower for larger boards because lenders think that these companies are being monitored more effectively by a diversified portfolio of experts. So debt financing becomes a cost effective choice.

2.3 Non executive directors and capital structure

Non executive directors are cornerstone of modern corporate governance. The relationship between presence of non executive directors and capital structure has been explored by few researchers but evidence in this regard is mixed. Some representative work is reviewed below.

Pfeffer and Salancick (1978) accentuate that non executive directors plays a pivotal role in enhancing the capability of a company to get recognition from external stake holders. Thus leads to reduction in uncertainty about company and enhance ability of the company to raise funds. They find that higher level of representation of non executive directors on board leads to higher gearing levels. Jensen (1986)and Berger (1997) find e that companies with higher gearing levels rather have relatively more non executive directors whereas companies with lower representation of non executive directors experience lower leverage. Abor and Biekpe (2007) provide evidence about the presence of positive relationship among gearing levels and CEO duality, board skills and board composition. Ghanaian SMEs that have more outside directors and a diversified set of skills at board generally have higher level of gearing.

On the other hand researchers like Wen (2002) provides evidence about the existence of significantly negative relationship between gearing level and representation of non executive directors on the board. The possible reason is that non executive directors monitor the managers more efficiently and effectively so managers are forced to seek lower gearing levels for achieving superior results. Similarly companies with higher representation of non executive directors are bound to follow low financial leverage with a high market value of equity.

2.4 CEO/Chair duality and capital structure

Another important feature of modern corporate governance is CEO/Chair duality. It indicates the corporate management where the CEO also serves as chairman of the board. This situation has direct impact on the financing decision of the company.

Fama and Jensen (1983) argue that in a firm decision management and decision control functions should be separate. Decision management function encompasses the right to initiate and execute new proposals for the disbursement of the firm's resources while decision control function comprises of the right to approve and monitor those proposals. This separation is ensured through a set of internal checks and internal controls. This system facilitates the judicious utilization of firm's resources. Therefore the same system should be implemented at the premier level. Therefore role of chief decision management authority (CEO) should also be separated from role of chief decision control authority (chairman). Board of directors is the seat of premier level of decision control mechanism in the corporate structure so it must not be controlled by CEO. Presence of CEO/Chair duality signals the absence of separation of decision management and decision control and it ultimately leads to agency problems.

Fosberg (2004) finds that firms with separate chairman and CEO employ the optimal amount of debt in their capital structures. He discovers that firms with separate CEO and chairman generally have higher financial leverage. However it is worth mentioning that this relationship is statistically insignificant. Abor and Biekpe (2007) also provide evidence about the presence of positive relationship between gearing levels and CEO duality.

Control Variables and Capital Structure

2.5 Firm size and capital structure

Relationship between size and leverage of a firm is discussed in two different contexts. One point of view supports positive relationship between firm size and leverage. Titman and Wessels(1988) state that large firms do not consider the bankruptcy costs in deciding the level of leverage as these are just a small percentage of the total value of the firm. Therefore large firms may prefer to use higher level of gearing. Friend and Lang (1988) and Marsh (1982) also support the positive relationship between size of firm and leverage levels.

Another group of researchers provides evidence about the existence of negative relationship between size of firm and leverage. Rajan and Zingales (1995) find that as large firms are generally well-established and have good performance track record, enabling them to issue equity at fair prices. In turn, this reduces their reliance on debt and therefore there exists negative relationship between size and leverage of the firm.

2.6 Profitability and capital structure

Myers and Majluf (1984) find that profitable firms generally have low gearing levels because these firms prefer internally generated funds over external financing. These results are in line with pecking order hypothesis.

3. Data description and methodology

This study analyses relationship between capital structure and corporate governance for 59 non-financial companies listed at Karachi Stock Exchange. The sample period is 7/2002 to 6/2005 which starts just after the promulgation of Code of Corporate Governance in Pakistan. Total data consists of 177 observations for 59 companies. Board Size, Board Composition, Proportion of Non-Executive Directors, CEO/Chair Duality, Institutional Shareholding and Shareholding of Board Members are used as measures of Corporate Governance. Similarly, impact of control variables like Return on Assets and Firm Size on capital structure has also been studied. Variables included in study have been measured as follows

3.1 Dependent variable: capital structure - leverage

Capital Structure is the dependent variable and it is quantified by using debt to equity ratio. Debt to equity ratio can be calculated either by using market value or by using book value. The use of book value measure of leverage has been preferred in this study. The reason is that optimal level of leverage is determined by the trade-off between the benefits and costs of debt financing. It is an established fact that prime benefit of leverage is debt-tax shield and it is available on book value of the debt. Secondly, leverage can be calculated either by using total debt or by using long term debt as a percentage of total equity. Long term debt is better option but in this study total debt to equity ratio has been used because in Pakistan a tendency to use short-term financing even for longer term funding needs is fairly prevalent. There are number of companies that do not have long term debt. There are a number of causes for this state of affair. The first is unwillingness of commercial banks to extend longer term facilities. The second is relative absence of financial institutions specializing in long term financing. The third reason is the nascent state of capital market for long term debt in the country. Currently, less than two dozen term finance certificates are being traded at Karachi Stock Exchange while the number of listed companies is well over 600. Most companies find it quite difficult to access the capital market for debt financing. Under these circumstances, we considered it wise to take the total debt figure for measuring the companies' gearing level.

3.2 Independent variables

3.2.1 Board size

The board of directors is apex body in the corporate set up, playing central role in a firm's strategic decisions like financial mix. It is therefore considered an important variable to study the impact of corporate governance on capital structure. The variable Board size is measured as logarithm of number of board members. It is hypothesized that larger boards have negative relationship with leverage.

3.2.2 Board composition

Presence of non-executive directors on a company's board gives signal to the market that company is being monitored efficiently so lenders consider company more credit worthy. In turn, this makes it easier for the company to raise long term funds through debt financing. It is hypothesized that higher representation of non-executive directors on board leads to higher gearing levels. Variable Board composition represents the proportion of non-executive directors on board and is calculated as the number of non-executive directors divided by total number of directors.

3.2.3 CEO/Chair Duality

If a person holds both slots of chief executive officer and chairman than it may create agency problems. Higher level of control by CEO may lead to managerial opportunistic behavior and can lead to lower gearing levels under entrenchment hypothesis. It is hypothesized that CEO/Chair duality is negatively related to leverage levels. The variable CEO/Chair duality is included as a dummy variable. It is taken as 1 if CEO is chairman; otherwise it is taken as 0.

3.2.4 Institutional Share Holding

Presence of institutional shareholding in a company helps it to raise long term finance at an advantageous cost. In the first place, these institutional investors themselves act as a source of long term debt as they are willing to provide debt to a company over whose board they enjoy an influence. Secondly, these institutional investors serve as an effective monitoring device over the company's strategic decisions. They bring down the company's agency costs and also reduce managerial opportunism. This gives confidence to general public and other lenders – resulting in favorable terms of borrowing by the company. It is therefore hypothesized that firms with higher Institutional Shareholding are likely to have a higher debt to equity ratio. Institutional Shareholding is measured as percentage of shares held by institutions as disclosed in annual financial reports.

3.2.5 Managerial Shareholding

Large debt increases the threat of bankruptcy so higher managerial self interests in long term sustainability of the company may induce managers to reduce gearing levels. Therefore it is hypothesized that relationship between managerial equity holding and gearing levels is negative. Managerial shareholding is measured as percentage of shares held by members of board disclosed in annual financial reports.

3.2.6 Size of firm

Large firms generally have close links with their lenders and find it easy to arrange debt on favorable terms. So it is hypothesized that there exists a positive relationship between the Size of Firm and leverage level of the firm. The variable Size of Firm is measured as logarithm of total assets.

3.2.7 Profitability- Return on Assets

Pecking Order Theory of capital structure states that companies use internally generated funds as first priority to finance project. Then as second priority debt is used and finally option of equity is exercised to finance company projects. Therefore it is hypothesized that profitability of firms has negative relationship with leverage levels. In this study Return on Assets (ROA) is used as measure of profitability and it is calculated by dividing a company's net earnings by its total assets

3.3 Specifications of the Econometric Model

This study employs multivariate regression analysis in a panel data framework to measure the dependence of capital structure on corporate governance variables. The panel data analysis helps to explore cross-sectional and time series data simultaneously. Pooled regression has been used with assumption of constant coefficients. Constant coefficient model assumes intercept and slope terms are constant.

The general form of model is

$$LEV_{it} = \beta_0 + \beta_1(\text{Log } BZ)_{it} + \beta_2(\%\ NED)_{it} + \beta_3(\%INSTSH)_{it} + \beta_4(MANGSH)_{it} + \beta_5(ROA)_{it} + \beta_6(SZ)_{it} + \beta_7(DUALITY)_{it} + \varepsilon_t$$

Where LEV = Leverage

BZ = Board size

NED = Non Executive Directors

INSTSH = Institutional Shareholding

MANGSH = Managerial Shareholding

ROA = Return on Assets

SZ = Size of Firm

DUALITY= CEO/Chair Duality

ε = Error Term

β_0 = Intercept of the equation

β_i = marginal effect of variable on debt to equity ratio

4. Empirical results

Table 1 exhibits the descriptive statistics. Results reveal that average size of board in Pakistani listed companies is 8.5 with largest board of 19 members and minimum board of size 7 (which is the statutory lower limit for a public company). Non-executive directors (NEDs) constitute 48% of boards which is a fairly good representation. However, it cannot be said with any certainty that these NEDs are also independents (INEDs) Managerial ownership is approximately 21% which is significantly high in textile and sugar sector and significantly low in oil and gas sector. Institutional shareholding is 15% which is reasonable, however it is not as well spread out across companies as it should be. Average rate of return on assets is 8%. Average (total) debt to equity ratio is 1.48 representing a fairly reasonable overall capital mix.

Table 2 shows the results of correlation analysis.

- Profitability is negatively correlated with debt to equity ratio which is consistent with pecking order theory that firms use internally generated funds as first option to finance projects before resorting to debt.
- There is a positive relationship between leverage and the size of firm. This appears rational as larger firms have more assets for collateral and it is easier for them to negotiate better terms with lenders. It may also be pointed out here that in Pakistan, most commercial banks are very conservative in their lending policies. Prudential Regulations prescribed by State Bank of Pakistan make it extremely difficult for commercial banks to be adventurous in their lending policies. Hence, presence of a large assets base is necessary for any borrowing, long or short term.
- Correlation analysis indicates that managerial holding is negatively correlated with debt to equity ratio. This is quite consistent with other studies which argue that as managers' shareholding in a company increases, they tend to bring down the size of firm's debt to reduce the risk and costs of bankruptcy. In Pakistani context, management controlled companies are generally those whose majority equity is held by families. Families are always averse to the thoughts of bankruptcy and refrain from incurring higher debts.
- Institutional share holding is positively correlated with capital structure. This positive relationship is result of efficient monitoring and reduction of the agency cost and managerial opportunism. Temporal effect has also been tested but result is found insignificant for time dummies
- The size of board is found negatively correlated with debt to equity ratio indicating larger boards may exert pressure on managers to follow lower gearing levels and enhance firm performance. An aspect of this observation is that larger companies have larger boards – and larger companies with larger assets base are more inclined to incur debt at favorable terms.
- Relationship between NEDs and shareholding is negative which shows that concentration of ownership leads to reduce the presence of NEDs on boards. This results in establishment of stronger control on firms. This phenomenon is common in family owned businesses and it can be said that Pakistani equity market is dominated by family owned companies. Domination of a board by a close family and absence of a reasonable number of INEDs are the practices that are generally deemed against the spirit of good corporate governance. These practices adversely affect the performance of company as shown by the relationship between Return on Assets and managerial shareholding.

Table 3 presents results of multivariate regression analysis

$$LEV_{it} = 2.44 - 1.85\ (\text{Log BZ})_{it} + 0.17\ (\%\ \text{NED})_{it} + 0.75\ (\%\text{INSTSH})_{it} - 0.90\ (\text{MANGSH})_{it} - 4.95\ (\text{ROA})_{it} + 0.35\ (\text{SZ})_{it} - 0.11\ (\text{DUALITY})_{it} + \varepsilon_t$$

Results reveal that:

- Multivariate regression analysis provides that an increase of 1% in Profitability leads to 4.95% decrease in leverage and this relationship is significant at $\alpha = 0.05$. Results have economic relationship and are in inline with pecking order theory which assumes that profitable firms use internally generated fund for financing as first choice.
- Debt to equity ratio is significantly affected by Size of the firm and an increase in size increase the tendency of the firm to exercise the mode of debt financing. Correlation analysis indicates the presence of insignificant relationship whereas regression analysis provides evidence about existence of significant relationship at $\alpha = 0.05$. It may be due to the fact that large firms have established their reputation as successful organization and have tangible assets on balance sheet that can serve as collateral so it is relatively easier for large firms to secure debt financing on favorable terms.
- Regression analysis also provides evidence about the existence of significant negative relationship between size of board and debt to equity ratio. This relationship is consistent with results of correlation analysis and is also in line with Berger (1997) and Abor (2007) which argue that larger boards prefer low debt levels. Larger boards may emphasize owner-manager to employ more equity capital in order to improve firm performance.
- Presence of NED on the board has no significant impact on leverage. It may be due to fact that in family owned business NEDs are generally representatives of financial institutions, or hand picked nominees of the controlling

shareholders. For NEDs to make a difference in company's strategic decision making process, it is important that they should be independent non-executive directors (INEDs). A mere NED is in fact quite ineffective, particularly in Pakistani context. Again, the distinction between INEDs and NEDs is also quite blurred in the Pakistani scenario as no statistics are available about this very important aspect of corporate governance. The Code of Corporate Governance has not made it mandatory to have independent directors on the highest forum of corporate decision making. Hence, we believe this finding needs greater attention than was possible to give in the present study. Similarly, institutional shareholding and CEO/Chair duality has insignificant impact on debt to equity ratio which also substantiates the above justification.

- Managerial ownership is significantly affects capital structure represented by debt to equity ratio. An increase in managerial share holding by 1% leads to reduction in leverage by 0.9 %. It may be argued that higher levels of debt increase the probability of default and managerial interests in long term viability persuade them to exercise the option of lower leverage levels. These results are in line with Friend, Irwin and Lang (1988) who argue that in the absence of any external significant shareholding the propensity to have lower debt to equity ratio will persist and will result in higher non-diversifiable risk of debt to management.

5. Conclusion

This paper empirically examines the relationship between corporate governance, ownership structure and capital structure for Pakistani non-financial listed companies for the period 2002-2005 by using multivariate regression analysis. Results reveal that board size is significantly related to capital structure. However representation of NEDs on board and CEO/Chair Duality has no significant relationship with capital structure. One possible explanation for this situation may be that in Pakistan NEDs are not independent in true sense. However correlation analysis suggests that CEO/Chair Duality and manager ownership are negatively correlated with profitability.

On the other hand managerial ownership has negative relationship with debt to equity ratio indicating that concentration of ownership induces the managers to lower the gearing levels. Institutional ownership has positive relationship with capital structure which is consistent with corporate governance philosophy but this relation is statistically insignificant. This may be due to the fact that corporate governance practices are still in an infancy phase in Pakistan. In family-owned and close-held companies it takes considerable time to accept any change that runs counter to the momentum set by history.

Traditional determinants of capital structure like size and profitability have significantly effect on corporate financing decisions. Profitability is negatively related with debt to equity ratio and it is consistent with pecking order hypothesis. Similarly, size has positive relationship which shows that large firms can arrange debt financing due to long term relationship and better collateral offering. Therefore we can conclude that corporate governance and ownership structure has important implications on the financing decisions.

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Table 1. Descriptive Statistics

	Leverage	***Board Size***	***% NED***	***Inst. Hold***	***Managerial holding***	***ROA***	***Log (Total Asset)***
Mean	1.48	8.46	0.48	0.15	0.21	0.08	3.35
Median	1.17	8.00	0.57	0.12	0.09	0.06	3.47
Std Dev	1.14	2.12	0.27	0.12	0.24	0.07	0.64
Kurtosis	3.88	6.94	-0.88	-0.17	-0.24	0.97	-0.79
Skewness	1.80	2.36	-0.35	0.72	0.94	0.49	-0.29
Minimum	0.05	7.00	0.00	0.00	0.00	-0.16	1.96
Maximum	6.52	19.00	1.00	0.56	0.86	0.30	4.80

Table 2. Correlation Matrix

	Leverage	***log Board Size***	***% NED***	***Inst. Hold***	***Managerial holding***	***ROA***	***Log(Total Asset)***	**Duality**
Leverage	1.00							
log Board Size	-0.07	1.00						
% NED	0.04	0.10	1.00					
Inst. Hold	0.15	0.09	-0.28	1.00				
Insider holding	-0.19	-0.34	-0.25	-0.24	1.00			
ROA	-0.25	0.24	0.00	-0.05	-0.23	1.00		
Log(T Asset)	0.14	0.40	0.02	0.13	-0.46	0.34	1.00	
Duality	-0.07	0.10	0.18	-0.10	0.03	-0.03	-0.09	1.00

Table 3. Results Multivariate Regression Analysis

	Coefficients	**t Statistics**	**P-value**
Intercept	2.44	2.52	0.01
log Board Size	-1.85	-1.98	0.05
% NED	0.17	0.50	0.62
Inst. Hold	0.75	1.03	0.31
Managerial Holding	-0.90	-2.12	0.04
ROA	-4.95	-4.14	0.00
Log(Total Asset)	0.35	2.33	0.02
Duality	-0.11	-0.62	0.54

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New Exploration on Chinese Enterprises Human Capital

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Abstract

We can study how human resource turns into human capital and realizes its values as capital by analyzing the logical and economic relationship between human resource and human capital. Manpower means three meanings for enterprises: namely resource, manager, and management level. To transform human resource into human capital needs important conditions. The core is the investment in human capital and its effective management. To explore this issue profoundly is meaningful for enterprises' business management in practice.

Keywords: Human resource, Human capital, Return on investment, Property right and distribution system

1. Meanings of human capital based on human resource

Discussions on enterprises' human capital are wide and extensive. For example, these discussions concern its connotation and composition, property right, operations and management, assessments and performances, status and meanings, etc. As people are studying these issues, they put enterprises' human capital and funds at the same level, regarding the former as the carrier of science & technology, and the core of management system, and the lager as the blood of enterprises' operations, and the base of development.

As for the theoretical evolvement, Karl Marx is the first man who has discussed the relationship between labor power and capital. He has mentioned the labor power and the ownership of labor power in his work *Capital* (Karl Marx, 1957, p. 58, 190-191, 194-195). The human capital theory is founded by T. W. Schultz, an American economist, in early 60s of last century. In 1960, he expatiated on the "human capital theory" in a speech in American Economic Association, which has been regarded as the symbol of the birth of human capital theory (T. W. Schultz, 1984, p. 25). Afterwards, Gary S. Becker, Jacob Mincer, and Daniel Denison have modified this theory further. The foundation of human capital theory creates a new thought on human production ability. According to this theory, material capital refers to physical materials available, including workshops, equipments, machines, supplement matters, land resources, cashes and funds, and other securities, while human capital refers to manpower, namely the summation of opportunity costs in educating and training employees, and also the sum of humans' production knowledge, labor and management techniques, health and quality. Human capital means "human competence", namely the sum of human competence developed by investment in human capital (Zhang Fenglin, 2006, p. 61-63).

At the enterprise management level, human capital management is not a brand-new system. It integrates two analysis dimensions, namely the "human capital" management and the "return on investment", together, regarding manpower as capital in investment and management, based on human capital management. According to human capital market and return on investment, human capital management can help to adjust management measures timely and gain long-term returns. The most difference between traditional human resource management and human capital management is that the former emphasizes on factor and management operations, and the later on investment and economic analysis. Therefore, "human capital" refers to the capital transformed from the human resource that brings about expected economic interests for enterprises based on investors.

However, the problem is how to explain why human capital is also enterprises' capital? Or, how does manpower turn into capital? How does it carry out its capital function? As capital, how does manpower realize its capital value? To study these issues, the first is to understand the logical and economic relationship between manpower and capital.

For enterprises, manpower has three meanings. The manpower means labor power at the first level, namely the human resource, the primary factor in production business. If all labor powers refer to humans, humans are the most active element in productivity. Classical economics offers other explanations, namely "three key factors of production" -profits from capitals, rentals from lands, and wages for laborers ------ that is the well-known Say Theory. Karl Marx has already intensively analyzed the labor power in political economy and advanced the labor value theory that labors create values: labor power is the most primary factor in enterprises' production, which is the most important content in enterprises' productivity system.

The manpower means manager at the second level. Modern enterprise theory and practice distinguish managers (operators) from common labor powers (labors) more and more. Management experts think that entrepreneurs can determine enterprises' development direction, speed, and result. Entrepreneurs are representatives of managers and the core of enterprise management system. But entrepreneurs are not the real owners of enterprises to a great degree, especially in enterprises with relatively perfect modern enterprise system.

At the third level, the manpower means the business management team with high qualities and competences in enterprises. If team members who are in charge of enterprises' operations and management merely get wages and rewards, two problems need to be solved further. Firstly, as enterprises are in front of market risks, business risks, and operation risks, business managers may shift off or get rid of responsibilities (or not fulfill their responsibilities as much as possible), which will surely harm enterprises' development. Secondly, if business managers have not motives and practical pursuits for greater interests, they may fail to drive enterprises' development or avoid any risk. Therefore, owners of enterprises can select some managers as partners and cooperators with common interests, namely taking these managers as owners of enterprises by means of equity allocations, option incentives, and bonuses, etc. To be simple, employ these manpower as capital -which deepens modern enterprise theory and forms human capital theory. Scientific and technological knowledge, management techniques, and other human capital factors are main signals that differentiate knowledge economy from industrial economy and even post-industrial economy times. The operation of traditional industrial economy chiefly relies on currencies, lands, equipments, and other material resources and capital investments. A new survey shows that if take the contribution to social output, not only individual income, the return on human capital investment in China reaches 30% or 40%, higher than the return on material capital investment, 20%. It means the economic condition that benefits the confirmation of human capital shows in China (Liu Yan, 2006, A3).

By analyzing the meanings of manpower to enterprises, we can conclude a simple process for turning manpower into capital.

Human (with labor power) →→ Human resource (with special or specialized labor power, techniques, and experiences, participate in enterprises' activities) →→ Manpower knowledge capital (science and technology, management responsibility, professional talents or elites, specialized trainings and experiences, work periods in enterprises) →→Human leader (operators, managers, leaders, and the leader who masters specialized technologies in certain field) →→ Human capital (intellectual property right, management buyout (MBO), stockholders, owners' intentions and arrangements).

2. Conditions for human capital

In general, to transform human resource into human capital needs these conditions as follow:

(1) Turn human resource into managers ("manpower knowledge capital"): In order to turn human resource, namely common labor power, into managers, enterprises must pay attentions to and invest in specific manpower. Enterprises' investments are in proportion to individual experiences accumulation and technique maturity. To turn human resource into managers needs enterprises investments (costs), which can transform manpower into capital assets (intellectual property right) and implicit capital (core competence, such as product brand, and core technology).

(2) Turn managers ("manpower knowledge capital") into human capital: After forming "manpower knowledge capital", enterprises must invest more (such as the owners' emotional investments, trusts, and nutrition from social environment). By this way, "manpower knowledge capital" can become a component of human capital based on repetitive eliminations and trainings. In general, the formation of human capital is based on enterprises' investments. One is wages and distributions, and the other is trainings and education (Zhang Yongcheng, 2006, p. 5-9). Under this condition, managers, together with capital, become factors of enterprises' production turnover, possessing common responsibilities and obligations with capital.

(3) To turn "manpower knowledge capital" into human capital needs a long-term or special appraisal process ------ namely the value changes due to appreciation or depreciation. The greatest character of human capital is the uncertainty and its coherence with enterprise environment needs. In coherence, its capital value is equivalence or appreciation, if not, then depreciation. Appreciation means profits, and depreciation losses. Therefore, human capital is also a component of enterprise assessment. The appraisal and assessment of human capital value is a special process, which is different from normal cost accounting system. The expenditure on human resource is consumptive (regular), while the expenditure on human capital is capital expense ------ it is important to understand this point, which can help to differentiate the operation and management of human resource and human capital, and their contributions to business and accounting modes.

(4) The common operation of capital includes: investment, circulation, and bonus. If there are only investment and

circulation, it is capital movement. If manpower assessment merely lies in investment and circulation, it will not become capital but human resource or common manager. Therefore, any enterprise should not employ the human capital concept exaggeratedly or freely. Sometimes, it is hard to distinguish between capital and funds. After all, they share same measurements, namely price and value. The human capital with investment can generate capital accumulative effect and could be managed in form of capital gain. Otherwise, it is common production factor.

To sum up, the manpower (human resource) that can not directly benefit from enterprises' capital gain does not belong to human capital. Therefore, any manpower that benefits from capital gain possesses the basic nature of human capital. However, the annual rewards from the boss for the sake of incentives should not be regarded as reasons for being taken as human capital.

3. Labor property right: the basic connotation of human capital

The human capital is embodied by owners of labor power (namely laborers), and their knowledge, techniques, and relevant capabilities, which serve as the main factors for production increment. Therefore, the human resource with techniques is the most important one among all resources. The return on investment in human capital is larger than that in material capital.

The human resource that has intellectual property right and labor property right is human capital. In a sense, to study the property right of labor power is to probe into the core value of human capital (Ye Zhengmao & Hong Yuanpeng, 2001, p. 3-5). In order to study the property right of labor power, we should know two points: the first is the content of property right (namely the labor property right and the intellectual property right), and the second is the responsibility and the obligation of property right.

The property right of labor power reflects the labor property right. The definition of labor property right is meaningless unless people possess basic work ability and obtain relevant knowledge and techniques. The basic work ability ensures the survival of laborers, being the foundation of labor value. The knowledge and techniques guarantees the development, being the precondition for realizing the labor value.

Intellectual property right is resulted from the full development of labor property right. It is the primary precondition of labor property and also the basic connotation of human capital. The laborer-based intellectual property right reflects laborers' capabilities and also their knowledge and techniques. In a sense, the knowledge ------ people's education level, the technique ------ experiences, and the wisdom ------ people's capability, cause people's differences, what can also be used to explain the differences between common owners of labor power and owners of human capital.

Another fundamental difference between owners of labor power with intellectual property right and the owners of labor power with labor property right is that the former has the surplus right of claiming for surplus labor fruit as possessing and employing the labor power. The surplus claim right can be studied from the social aspect or the aspect of economic organization in which laborer works. The laborer, as a component of society, possesses the right of sharing social development fruits, which means the share of public goods and semi-public goods. The laborer's surplus claim right, in a scope of an economic organization, means the laborer, merely as the owner of labor power, has the surplus claim right. Accordingly, the former becomes the root of social status (includes political status), and economic status (includes the status in daily life), and the later the root and the result of enterprise capital (chiefly enterprise' human capital).

4. Deductions and significance

Based on these studies and conclusions, we can get these deductions as follow:

(1) Enterprises' assessments and evaluations (the way to evaluate performance) on production and managers, and even the backbone and core employees, are only a kind of management system or method, what belongs to the management of wages, performances, and human resource, instead of the content or the scope of capital management.

(2) The management buyout (MBO) and the introduction of intellectual property right as equities happened in enterprises, namely the equity incentive and the option incentive (the former focuses on physical capital, and the later the virtual capital) in a common sense, are in the scope of enterprise capital.

The two deductions are important in six aspects. Firstly, the human resource management is the normal management method and process for common enterprises. In contrast to capital management, human resource management is more a production factor management. It has more definite management objectives, values, and responsibilities. However, human capital management is a special management method and process for stock enterprises, which belongs to the fields of capital composing and profits management, associating closely with enterprises' future, mode, competence, culture, and development.

Secondly, the two concepts should not be mixed or abused in enterprise business management. Human resource management is right for all enterprises, especially for small and medium-sized enterprises or mini enterprises. It has common and general contents of enterprise management. Human capital management is especially for stock enterprises or the enterprises (no matter whether it is large or small) in which intellectual property right exerts vital effects. In a sense, it dominates enterprise management. By identifying their differences, managers (bosses, business operators, and business owners) can understand the contents and methods of enterprise management clearly, in case of mixing the primary meanings of management and capital. Meanwhile, it simplifies researchers' thoughts on management.

Thirdly, the two deductions can help managers and researchers select right management tools properly. People often mention "equity trap" or even a saying "option: a notorious incentive mechanism" (Zhu Weiyi, 2007, C. 19), or agree the "cost lock" (Bao, Huichun, 2006, p. 25). That is because they mix the human resource concept and the human capital concept in practice. In performance evaluations and incentives, people may misuse the equity incentive and option incentive that will cause "equity trap" ------ in fact, it extends the human resource issue further to the human capital aspect. People also mention "performance puzzle" frequently. Here, people narrow the human capital management to the human resource aspect in practice. Turning capital structures, capital functions, and capital gains into performance evaluations makes operators escape from pressures and owners lose management directions. Therefore, to understand the two concepts and their uses is meaningful for practice.

Fourthly, to identify the difference between human resource and human capital can help to distinguish the productivity composing and the capital composing. The productivity composing includes human resource in general. The application of human resource in enterprise operations can determine whether it is labor-intensive or technology-intensive. The greatest difference between productivity composing and capital composing is that the former is a production factor but the later a production condition.

Fifthly, human resource accounting is based on regular expenditure, forming a logical and conditional relationship with current return, while human capital accounting is based on capital expenditure, forming an economic and distribution relationship with current return. In addition, the later can affect the long-term return accounting. What more important is its effects on the accounting and transaction of capital values and enterprise values. And it also serves as a base for an enterprise selecting suitable management system.

Sixthly, along with the development of modern enterprise system and stock economy, the transfer from human resource to human capital in practice drives the multiple ownership of production material in a sense. In special, the introduction of human capital as equities in enterprises advances the reform of ownership, and also directly triggers the breakthrough in the reform of distribution system, exploring on the construction of property right incentive mechanism. If human capital is a distribution system for socialist market economy, the capital property right in modern property right system offers a wider view, including virtual intellectual property right, such as patents, brands, commercial secrets, technological secrets, and human capital, and will serve as the new content of labor value studies. The harmonious society is human-oriented, what will more facilitate the exploration on harmonious society's distribution system based on social fairness and economic efficiency.

5. The measurement mode for enterprise human capital

Enterprise human capital based on labor property right is different from other physical capital in value measurement. If there is a re-evaluation on physical capital (namely the capital replacement in modern accounting theory) in traditional accounting, the measurement of human capital in modern enterprises concerns three factors: the first is the measurement of personal labor cost; the second is the measurement of surplus claim right under the labor property right (namely the measurement of property right and distribution right as human capital); the third is the measurement of future profitability with the changes of prices, yields, and performances. These three factors are the main contents for enterprises measuring the values of human capital.

(1) The price of personal labor, namely personal cost (PC). The wage of laborer can be simplified into the cost of laborer's daily life, namely the necessary expenditure on life materials for maintaining the re-production of laborer ------ the wage of laborer and other income. The wage is firstly used for buying sorts of life necessities, maintaining normal re-production (based on the average consumption price, regardless of the economical or luxury states) or paying off debts.

(2) The price of personal labor capital (namely the price of human capital in HCM). The price of personal labor capital is caused by education cost, experience cost, and intellectual property cost.

1) Labor capital education cost (EC) = School education cost (SEC) + Position education cost (PEC)

Here, EC refers to all expenses on education;

SEC = all education cost – average personal or family education cost (SEG) = ($\sum$EC-SEG)

2) Labor capital's experience cost (UC) = $\sum (EC_i \times (1+UCR_i)^{TM}-EC_i)$

Here, the labor capital's experience cost UC means the cost for acquiring techniques in work. UC generates from the maturity of techniques. The length of work time is decisive for UC. In general, UC should take the degree of maturity, namely the length of service, into consideration;

i stands for the level of education;

UCR means the rate of experience cost increase at different education level;

TM refers to different lengths of services at different education level.

3) The intellectual property cost (ZC) means the sum of risks and profits afforded by the laborer as capital. We can discuss this issue from six aspects. Firstly, the use right of labor capital is controlled by the carrier of labor (the owner of labor capital includes many subjects, such as government, enterprise, family, investor, and individual; while the carrier of labor is the laborer. From a capital aspect, the owner of labor capital differs from the carrier of labor capital (Ye Zhengmao & Hong Yuanpeng, 2001, p. 7). Secondly, the property right of labor capital mainly belongs to the carrier. In other words, it is personal monopoly asset. Thirdly, the disposition of labor capital property right is under the influences of the carrier's personal motives to a great degree, namely the so-called "the combination of value realization and personal efforts". Fourthly, the profitability of labor capital property right is the essential reason for driving the carrier of labor capital to realize self-development and the investor to invest in developing labor capital. Fifthly, risks of labor capital property right are inevitable. The labor capital property right is a typical virtual asset, associating closely with and flowing along with the laborer individual. Therefore, it has risks, similar to other capital property right, and strong uncertainty. Generally, the property right and profitability originated from investments in human capital are either positive or negative even in a great loss. Sixthly, the labor capital's intellectual property right is different. Because the labor capital is the sum of all production knowledge and techniques of people, the difference of its carriers leads to different property rights and efficiencies. To sum up, the conclusion is: the labor capital's intellectual property right is not a fixed number or constant but a rate, namely ZC′.

Considering the conditions of enterprises, this rate can be reflected by the yield, namely: the return on labor intellectual property right = ∑enterprise return on labor / enterprise' total cost of labor, or: $ZC' = \sum LP / \sum LC$. Besides, because there is a significant correlation between enterprise risk and human capital's intellectual property right, we should take enterprise's quantitative performance (A) into consideration. Therefore: the intellectual property right of enterprise's labor capital = $(EC+ UC) \times ZC' + A$.

(3) Then, we can get these simple and important measurement modes:

1) The value of personal labor capital = the price of personal labor + the price of personal labor capital = $PC + (EC + UC) \times ZC' + A$.

2) The enterprise's total human capital value = $\sum (PC + (EC + UC) \times ZC' + A)$.

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An Analysis on the Conditions and Methods of Market Segmentation

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Abstract

With the development of world economy, there are so many enterprises occur around the globe. Simultaneously, the business competition among them is becoming more and more fiercely and consumers are also diverse in needs and wants. Thus, the exact market segmentation is absolutely vital for business success and market gains. This paper discusses mainly on the conditions and methods of market segmentation through relevant theories reviews and some real cases analyses. There are lots of bases or variables to segment markets which include consumer markets and industrial markets, such as geographic segmentation, demographic segmentation, psychographic segmentation and behavioral segmentation and so forth. On the basis of these variables, business can segment the market which it can serve best and benefit most from which.

Keywords: Market, Market segmentation, Bases, Diverse needs

1. Introduction

Today, companies recognize that they cannot appeal to all buyers in the market or at least not to all buyers in the same way. Because each of the buyers is unique, and they come from different backgrounds, live in different areas and have different interests and goals. As a result, they are too varied in their needs and buying practices. What's more, the companies themselves vary widely in their abilities to serve different segments of the market. Rather than trying to compete in an entire market, each company must identify the parts of the market that it can serve best and most profitably. During the past century, major consumer products companies held fast to mass marketing, which means mass-producing, mass-distributing, and mass-promoting about the same product in about the same way to all consumers, because they thought that mass marketing creates the largest potential market. However, the diversity of consumers and fierce competition has made it hard to practice mass marketing. Thus not surprisingly, many companies are now retreating from mass marketing and turning to segment marketing, and history has already read (or is reading) this typical, or the very story in China today. Especially, as China entered into WTO, more and more foreign companies have penetrated into the market of China, which brings about more intense competition and more threats to Chinese enterprises. Therefore, in order to possess a share of market, Chinese enterprises should carry out market segmentation to find market segments from which they can benefit most and in which their products are most competitive.

2. Definitions of market segmentation

Market segmentation was first put forward in the middle of 1950s by Wendell.R.Smith, an American professor of marketing. "Market segmentation is to divide a market into smaller groups of buyers with distinct needs, characteristics, or behaviors who might require separate products or marketing mixes." (Charles W. Lamb, 2003, p. 214). Or explained in another way, market segmentation is the division of the whole market into smaller, relatively homogeneous groups.

Different marketing professors have different explanations of market segmentation. Peter D, Bennett ed, a faculty member at Pennsylvania State University, gave a more specific and detailed definition of market segmentation in his Dictionary of Marketing Terms. According to him, market segmentation is the process of subdividing a market into distinct subsets of customers that behave in the same way or have similar needs. Each subset may conceivably be chosen as a market target to be reached with a distinctive marketing strategy. The process begins with a basis of segmentation—a product specific factor that reflects differences in customers' requirements or responsiveness to marketing variables (possibilities are purchase behavior, usage, benefits sought, intentions, preference or loyalty). Steven C.Wheelwright, Senior Association Dean of Harvard Business School, defined in this way: market segmentation consists of clustering the firms' potential consumers in groups (called market segments) that clearly differ from each other but show a great deal of homogeneity within the group. In other words, the objective is to find groups of consumers who share the same or similar preferences. However, it is also important that the so-created groups be sufficiently different from each other.

Although so many definitions of market segmentation are given with different words, the core of market segmentation is that it's a set of potential customers alike in the way they perceive and value the product, in their purchasing behavior, and in the way they use the product.

3. The Role of market segmentation

Until the 1960s, few companies practiced market segmentation. However, recently it has become popular and played an important part in the marketing strategy of almost all the successful organizations. Market segmentation has been a powerful marketing tool for several reasons.

Most importantly, nearly all markets include groups of people or organizations with different customer needs and preferences. Market segmentation helps marketers define customer needs and wants more accurately. Secondly, market segmentation is useful for firms to find market opportunities. Under the situation of buyer's market, the marketing strategy of the business should be made to find attractive market environment opportunities. Thus market segmentation is the right tool to achieve the goal. Because by market segmentation the enterprise can know what needs have been satisfied, what needs have been met partially and what wants are still the potential ones. Accordingly, that what commodities are of fierce competition, and what commodities need to be developed will be found. Therefore, market segmentation provides the enterprise with new market opportunities. Thirdly, it helps the company master the features of target markets. Fourthly, it is significant for the enterprise to design marketing mixes. Market mix is a kind of marketing plan made by business through considering product, price, sales promotion, selling place and other factors. There is only one best mix for each specific market and the best mix is achieved only by market segmentation. Fifthly, through market segmentation small companies can develop market and survive among the big companies. Customer needs vary greatly and are different from each other, so even if it is a big company, its resources are limited and couldn't satisfy all the needs of the whole market. In order to exist, the small companies should make use of market segmentation to segment the whole market so as to find the market segments which are suitable for their own advantages and where wants and needs are still not satisfied. The last but not least, market segmentation makes it easier to get feedbacks and regulate the marketing strategy. Because in the market segments, enterprise supplies different products for different market segments and makes suitable marketing strategy for each market segment. As a result, it is more convenient to get market information and perceive the responses of customers. All these are of great importance for the business to develop the potential needs and adjust the strategy in time.

4. The Steps in segmenting markets

As the above shows that market segmentation is the key strategy for almost all the successful organization. Thus, learning how to segment markets is becoming very pressing.

According to Charles W. Lamb and Carl McDaniel (2003, p. 228), the first step in segmenting markets is to "select a market or product category for study". It may be a market in which the firm has already occupied a new but related market or product category, or a totally new one. The second step is to "choose a basis or bases for segmenting the market". This step requires managerial insight, creativity and market knowledge. There are no scientific procedures for selecting segmentation variables. However, a successful segmentation plan must produce market segments which meet the four basic criteria: "substantiality, identifiability, accessibility, and responsiveness". The third step is "selecting segmentation descriptors". After choosing one or more bases, the marketer must select the segmentation descriptors. Descriptors identify the specific segmentation variables to use. The fourth one is to "profile and analyze segments". The analysis should include the segment's size, expected growth, purchase frequency, current brand usage, brand loyalty, and long-term sales and profit potential. This information can then be used to rank potential market segments by profit opportunity, risk, consistency with organizational task and objectives, and other factors which are important to the company. The fifth step is to "select target markets". This step is not a part of the segmentation process but a natural result of it. It is a major decision that affects and often directly determines the firm's marketing mix. The last one is "designing, implementing and maintaining appropriate marketing mixes". The marketing mix has been described as product, distribution, promotion and price strategies which are used to bring about mutually satisfying relationships with target markets.

The steps mentioned above are the basic steps for enterprises to segment their markets, but every enterprise has its own situation and marketing strategy. Therefore, each enterprise should adjust its steps to segment the market in accordance with its own market on the basis of the basic steps.

5. Bases for segmenting consumer markets

There are two main markets: consumer markets and business markets. In the process of market segmentation, each of the two markets has its own segmentation bases or variables. Here arises a new concept – segmentation bases or variables. They are features of individuals, groups or organizations and often used by marketers to divide a total market into segments. The choice of segmentation bases is significant because an inappropriate segmentation strategy may lead to lost sales and missed profit opportunities. The key is to identify bases or variables which will produce substantial, measurable, and accessible segments which are crucial for carrying out right marketing mixes. The followings are the bases for segmenting consumer markets.

5.1 Geographic Segmentation

Geographic segmentation calls for dividing the whole market into different geographical region units, such as countries, states, regions, counties, towns or streets. The enterprise can determine to do business in one or more geographic regions or to operate within all the regions, but much attention must be paid to the differences of needs and preferences among regions. Different regions have different customs, so the enterprise must execute marketing strategy in accordance with the local situation.

Many companies today are localizing their products, advertising, and promotion to fit the needs of individual regions, cities and even neighborhoods. For example, Campbell found that its canned nacho cheese sauce, which could be heated and poured directly onto nacho chips, was too hot for Americans in the East and not hot enough for those in the West and Southwest. As a result, today Campbell's plants in Texas and California produce a hotter nacho cheese sauce than that produced in the other plants to serve their regions better. Some other companies are seeking to cultivate those untouched or untapped areas. For example, many large companies are leaving away from the major cities and suburbs with fierce competition to set up shops in small-town America. Hampton Inns has opened a chain of smaller-format motels in towns too small for its standard-size units. For example, Townsend, Tennessee, with a population of only 329, is small even by small-town standard. But the result is very satisfactory. Situate on a heavily traveled and picturesque rout between Knoxville and the Smoky Mountains, the village serves both business and vacation travelers. Hampton Inns opened a unit in Townsend and plans to open 100 more in small towns. It costs less to operate in these towns, and the company builds smaller units to match lower volume.

Geographic segmentation provides useful distinctions when regional preferences or needs exist. But it's important for marketers not to only use geographic location as a segmentation method because distinctions among consumers who are in the same geographic location also exist. Therefore, using multiple segmentation bases is probably a much better strategy for targeting a specific market.

5.2 Demographic Segmentation

In demographic segmentation, the market is divided into different groups on the basis of age, sex, family life circle, income, occupation, education, religion, race, generation gap and nationality. Demographic variable is the most commonly used base to identify consumer groups. Partly because the desires, preferences and usage rates are closely related to demographic variable and the other reason is that it is easier to measure demographic variable than other types of variables. Even if the target are described according to non-demographic factors (say personality type), but demographic factors should be considered in order to know the size of target markets and reach target markets effectively.

Maybe generation gap, as a variable, is a little difficult to understand. Therefore, more explanations will be given to show how generation gap has been used to segment markets. Many researchers recently have intended to segment markets by using generation gap. This idea comes from the fact that each generation has been affected greatly by the environmental background of the process of growing up, such as music, sports, policies and different kinds of events at that time. Demographers call these groups as "cohorts". Members of a cohort have the same main experiences. Marketers often advertise to a cohort group by using the "icons and images" dominant in their experience (Joseph F. Fair, 2003, p. 291). Meredith, Schewe and Karlovich (2002) distinguish seven groups: "the depression cohort, the World War II cohort, the postwar cohort, leading-edge baby boomer cohort, trailing-edge baby boomer cohort, generation X cohort and the generation Y cohort." (Cathy Goodwin & James W. Gentry, 2000). For example, an advertising company, Leo Burnett, has analyzed the young generation of China through generation gap. The result shows that in China, the "open-minded generation" puts emphasis on the sense of achievement, love relationship and the inner harmony. They are willing to spend more money rather than time. Although they still attach to their parents, they are eager for modern life. Their parents are called "old generation" and pay much attention to setting good examples for their children, and striving for a bright future of the country (Fara Warner, 1997). So on the basis of the study, the scene of an advertisement made by McDonald in China is that a grandfather is eating French fried chicken with chopsticks.

5.3 Psychographic Segmentation

In this segmentation, the customers are divided into different groups according to life style or personality or values. People in the same demographic group may show great differences in psychographic features. Life style is formed partly because the consumers are "time-constrained or money-constrained". Those whose time is limited intend to do two or more tasks at the same time, for example, they will call someone or eat while they are driving, or they will go to work by bike in order to build up their bodies. They prefer cats to dogs for it is easier to feed cats. Thus some firms will offer convenient services for these time-constrained customers. And for those money-constrained customers, the firms will offer services or products with low costs. Another aspect of psychographic segmentation is personality. With different personalities the customers may exhibit a great variety of preferences. Some customers are frank; some are full of vigor and enthusiasm; some are reserved and like what are conventional. As a result, the firms must add personality to their products so as to meet the needs of customers. The typical example of using personality to segment markets is the automobiles companies. They design different types of cars that are family-used for those conservative buyers or which symbolize vigor and fashion fitting for the youth. Another example is Hello Kitty of Sanrio. This brand owns a group of loyal customers and so this Japanese company, Sanrio, receives wide support from those young women in Japan who prefer to prettiness. Sanrio has found that in times full of uncertainties, the young women yearn to those carton characters during their childhood. The render, round and silent image of Hello Kitty stimulates the sense of concern and protect of them. Because Kitty has no expression on its face, people can own it with the expression they expect it to be. For the young girls Kitty is their companion; and for girl students of secondary schools, it is their special friend.

5.4 Behavioral Segmentation

In this segmentation, buyers are divided into groups on the basis of their knowledge of, attitude toward, usage of, or response to a product. "Many marketers believe that behavioral variables, including occasions, benefits, user status, usage rate and loyalty status, are the best starting points for constructing market segments." (Philip Kotler, 2007)

The first one is occasions. Buyers can be distinguished according to the occasions when they begin to need, purchase or use products. Occasional segmentation can help the companies to enlarge the usage scope of their products. For example, sometimes the companies can take the advantage of some festivals, such as Mother's Day and Father's Day, to increase the sales of candy and flowers, and there are also many companies that prepare products for promotion on Christmas. "A company also can be concerned about some special events in the life, such as getting married, giving birth to a baby, being ill and being fired, to give these people new needs." (Geoffrey E.Meredith, 2002)

Another segmentation included in behavioral segmentation is user status. Markets can be segmented into groups of "non-users, ex-users, potential users, first-time users and regular users" of a product (Philip Kotler & Gary Armstrong, 2005). The key to being successful for the enterprise is carrying out different marketing strategies so as to keep their regular customers and attract new or potential customers. For example, some potential users will become real users in some stages of the life, so mother-to-be (those who are now pregnant and will become mothers soon) will soon turn into heavy users. Producers of infant products and services will know their names and offer them with products to capture some of them who will become buyers of the companies. The leading companies in the market aim to attract potential users for they can benefit more by doing so, while the smaller companies focus on going all out to appeal to current users away from the market leaders.

The last one is loyalty status. The consumers can be loyal to some brands, stores or companies. The company, Oliver, defined loyalty as a deep promise that cannot be influenced by the outside world or by the transformed behaviors occurring in promotion activities and will continue to prefer to some product or service and purchase again. Buyers can be divided into four groups according to brand loyalty status: "hard-core loyals (consumers who buy one brand all the time), split loyals (consumers who are loyal to two or three brands), shifting loyals (consumers who shift from one brand to another), and switchers (consumers who show no loyalty to any brand)" (P. Rossi, E. McCulloch and G. Allenby, 1996). The enterprises can learn a lot from analyzing the degree of consumer loyalty. Firstly, the enterprises can know what consumers are loyal to their products. If they study those consumers with low degree of loyalty, they can learn which brands are their real competitors. For example, if the consumers of Pepsi, at the same, drink Coca-Cola, Pepsi should take changing its brand positioning into account. Secondly, through studying those consumers who have given up their products, the companies can get known of the weak points in marketing strategy. And what's more, as to those consumers without loyalty, the enterprises can make use of promotion to attract them.

6. Bases for Segmenting Industrial Markets

Consumer markets and business markets use many of the same bases to segment their markets. Business buyers can be segmented geographically, demographically or behaviorally. Yet business markets also use some additional variables, such as "customer operating variables, purchasing approaches, situational factors, and personal characteristics." (Philip Kotler, 2007, p. 296). By going after segments instead of the whole market, companies will have a much better chance to deliver value to consumers and to receive maximum rewards due to close attention to consumer needs. The followings are the variables proposed by Bonoma and Shapiro (1984) in segmenting the industrial markets and major questions that business marketers should ask in determining which segments and customers to serve.

6.1 Demographic Segmentation

Demographical variables include industry, company and location, the related questions are which industries they should serve, what size companies they should serve and what geographical areas they should serve.

There are great differences among different regions in the aspect of needing some industrial products. For example, a lot of companies producing computer hardware are located in Silicon Valley of California. Moreover, some markets possess regional features for the buyers who want to purchase from the local suppliers. It is very hard for the non-local suppliers to compete with them in terms of price and service. Thus, in order to make profit within the industries geographically concentrated, enterprises should be established close to the market. To answer the question that which industries they should serve, one example will be given. The sellers of computer can sell computers to banking system, manufacturing system, medical care system and education system and so on. These industries have different requirements for software program, and service. On condition that business marketers acquire a deep understanding of every industry's needs, more efficient marketing mixes can be designed.

6.2 Customer Operating Variables

Operating variables include technology, user or nonuser status and customer capabilities. That what customer technologies they should focus on, they should serve heavy users, medium users, light users or nonusers, and they should serve customers needing many or few services are the questions to ask.

Customers' requirements for the technologies the producers can supply are different. They seek for different benefits. For example, when buying tires plane producers attach more importance to safety than truck producers do; automobile manufacturers have different requirements for the grades of tires when producing standard cars and automobiles for match. And also the capabilities of purchasing vary greatly. Many enterprises set up special service systems separately for their users different in size so as to meet the features of uses with different kinds of scale. For example, manufacturers of office effects divide their uses into two categories: the regional managers manage large clients such as banks, and their local salesmen contact those smaller users.

6.3 Purchasing Approaches

Purchasing approaches are composed of purchasing-function organization, power structure, nature of existing relationships, general purchase policies and purchasing criteria. In this variable, they should ask that they should serve companies with highly centralized or decentralized purchasing organizations, they should serve companies that prefer leasing, service contracts, systems purchases or sealed bidding, and they should serve companies that are seeking quality, service or price.

Centralized and decentralized purchasing affects the purchasing strategy a lot. Centralized purchasing is closely related to the experts in purchasing of a certain series of products, specialization means that these experts are more familiar with the strong points and weak points of the suppliers than those who are engaged in decentralized purchasing. These experts, such as engineers, are more powerful than those people engaged in decentralized purchasing in the aspect of making decisions. For example, centralized purchasing market segment should be served by national salesmen; while those decentralized purchasing can be served by local representatives.

6.4 Situational Factors

Situational factors are made up of urgency, specific application and size of order. There are also three questions to ask: Should they serve companies that need quick and sudden delivery or service? Should they focus on certain applications of their product rather than all applications? And should they focus on large or small orders?

For those companies that need quick and sudden delivery or service, the door producer, Atlas, sets a good example. It carries out the marketing strategy of effecting delivery within four weeks, as the clients require, in the market of doors for industrial usage (the average lead time in door business is from 12 weeks to 15 weeks). As a result, this corporation dominates the whole market. The main markets of Atlas are those enterprises that need special specification urgently of doors for industrial usage.

6.5 Personal Characteristics

They include buyer-seller similarity, attitudes toward risk and loyalty. The questions that are in accordance with these variables are the followings: Should they serve firms whose people and values are similar to theirs? Should they serve risk-taking or risk-avoiding customers? And should they serve firms which show high loyalty to their suppliers?

The personal characteristics of purchase decision makers (their demographic characteristics, decision style, tolerance for risk, confidence level, job responsibilities, and so on) influencing their buying behavior and thus offer a basis for segmenting some business markets. IBM computer buyers, for instance, are sometimes featured as being more risk averse than buyers of less expensive clones that perform essentially the same function. Therefore, in advertising, IBM emphasizes its reputation for high quality and reliability.

7. Four business segments

On the basis of the above variables, Rangan, Moriarty and Swartz (1992) found four business segments: The first segment is programmed buyers who view the product as not very important to their operation. They buy it as a routine purchase item, usually paying full price and receiving below-average service. Clearly, this is highly profitable segment for the vendor. The second one is relationship buyers who regard the product as moderately important and are knowledgeable about competitive offerings. They get a small discount and a modest amount of service and prefer the vendor as long as the price is not far out of line. They are the second most profitable group. The third segment is transaction buyers who see the product as very important to their operations. They are price and service sensitive. They are knowledgeable about competitive offerings and are ready to switch for a better price, even at the sacrifice of some service. The last one is bargain hunters who see the product as very important and demand the deepest discount and the highest service. They know the alternative suppliers, bargain hard and are ready to switch at the slightest dissatisfaction. The company needs these buyers for volume purpose, but they are not very profitable.

In a word, compared with those companies opening up to the whole market, the companies which serve market segments usually offer values to the customers well and then gain better returns, since they know the needs of customers better. Therefore, an enterprise should at the very beginning determine which industries they should serve. Of course, the promising industries are always chosen. Within the industries which are chosen, the enterprise should further the segments according to its size or location and moreover, design different systems of management for different branch segments. For instance, the company should arrange customer managers for those big clients, while do business with small clients through telephone.

8. Cases study

All the above are the theories of market segmentation. However, in order to be successful, the company must put these theories into practice, that is, make market segmentation flexible according to its situation. Each company has its own segmentation strategy. Appropriate segmentation is related to the operation of one company.

8.1 Coca-Cola and KFC's Geographic Segmentation

Coca-Cola introduced the Fei Yang brand of soft drink exclusively for the Taiwan market, the line compromises teas and juices in such indigenous and distinctive flavors as oolong with iron Buddha leaves, lychee and guava. They are packaged in Tetra packs to give them a separate identity from Coke. What's more, KFC customized its product and strategy to suit Japanese tastes. It positioned its stores as trendy and high class, not as fast-food outlets. French fries were substituted for mash potatoes, the sugar content of coleslaw was reduced and a menu of fried fish and smoked chicken were added. The two cases explain the application of geographic segmentation. Both of them operate in almost all the geographic areas but pay attention to local variations.

8.2 Huffy Corporation

Huffy Corporation was set up in 1928, and now is the biggest producer of bike in America. The success of Huffy should be owed to the appropriate market segmentation. Because according to the analysis of needs features of international bicycle market and the analysis of demand and supply, Huffy took geographic factor, usage of products and consuming level as the variables to segment international bicycle market. Then it divided the whole market into Hong Kong market, South Asian and developing countries market, European market, North American market and so on. Moreover, it analyzed specifically the feature of needs and trend of changing in each market segment. In North American market, America and Canada are the main importers of bikes in international market recently, with the amount of import accounting for over 50% of the total world trade, thus Huffy Corporation firstly established itself in the domestic market and expanded its share of the local market. Then Huffy carried out a series of measures to modify image of the product and enhance the ability of competition. From this case, we can see that the accurate segmentation of the bike market made by Huffy Corporation increases greatly the understanding to consumers and also is helpful for it to find the weakness of competitors, setting basis for positioning exactly.

8.3 Dell Corporation

In demographic segmentation, money-constrained individuals were mentioned. Companies which aim to serve them will create lower-cost products and services as Dell has done in China. Dell launched the Smart Personal Computer in order to bring down the cost of a PC and make it more attractive for 85% of the Chinese urban citizens who don't have a computer but can afford one. The Smart PC costs $575 but has enough memory to support applications that consumers want to run. Dell sent its sales teams to shopping centers in Chinese large cities to give consumers a chance to "see and touch" the product and make them less worry about buying by phone. Since Smart PC's launch, Dell sales have grown dramatically, giving it a five percent market share in China.

8.4 Miller Beer Corporation

In the late of 1960s, Miller Corporation was ranked eighth in beer industry of America, with only eight percent of market share and fell far behind many renowned brands. In order to change this situation, they determined to take the strategy of active attack. They, at the very beginning, did a lot of market researches. As a result, they found that if the beer industry was segmented on the basis of usage, the beer drinkers could be divided into light drinkers and heavy drinkers. Although most people belonged to the former, the amount of drinking of them accounted for one eighth of that of the later. They also found some of the characteristics of the heavy drinkers. They mostly were blue-collar workers; they would spend more than three hours every day watching TV; and they liked sports. Therefore, the corporation made its mind to take the group of heavy drinkers as their target market. As a result, they made great achievement. Till 1978, the annual volume of sales amounted to 20 million boxes, ranked as second in America. The case shows that choosing the right target market can help a company capture the market successfully, gaining a majority share of the market. But target market is chosen on the premise of effective market segmentation. A market segment that can bring benefit to the company must be established on the basis of appropriate segmentation standard. Therefore, how to identify the factors in market segment properly is of great significance to a company.

8.5 Motorola's Brand Segmentation

Since the 1990s, the amount of mobile phone users in China has increased dramatically. By the end of 2000, there were 100 million people using mobile phone. It was such a big market that almost all the brands mobile phone in the world were attracted to enter into China, and competition also became more and more fierce. As one of the tycoons of mobile phone market, Motorola is the earliest cross-national corporation to enter into the market of China. In 1987, Motorola almost monopolized the mobile phone market of China. However, in 1996, because of the open of GSM digital network, Nokia and other brands seized opportunities to penetrate into the market of China with market share increasing quickly. Under this situation, Motorola has to modify its strategy to segment the market in details. In the past, Motorola always impressed consumers as conventional, technology-oriented image, and the users of Motorola mobile phone were career-oriented or work-oriented. But as the market expanded continuously, the needs of consumers became diverse. Thus, Motorola must change its former brand image. It used the result of a 25-nation segmentation research project to segment the brands of its mobile phone. It created four different sub-brands: Accompli, Timeport, V. and Talkabout. Accompil is designed for customers seeking leading edge wireless technology; phones with state-of–the-art features such as office assistant software and a large touchscreen. Most users of this brand are men who are fascinated to technology. Timeport phone features Internet browsing software as well as a desktop organizer. It is similar to the Accompil, but caters to the business users who emphasize efficiency and often need to make decision be methodical in their pressing jobs. V. with the latest styles as well as high-end technology targets status-seeking phone users. Top models come with mini-browsers for Web surfing. Talkabout is made for those who use the phone for everyday calling; these phones offer standard features at good value. Recently, in the four groups of target consumers, divided by Motorola, Talkabout belongs to mass consumer market. It will be the consumer market which grows most fast and be the focus for all the manufacturers to compete.

8.6 Office Depot and OfficeMax of America in Japan

This is an opposite one without using proper segmentation variables. In 1998, when Office Depot and OfficeMax entered into the market of Japan, 20,000 small-sized Japanese stationery stores couldn't help to tremble. Because the stationery stores of Japan are very conservative and usually don't allow bargaining. And the two American companies planned to set up several hundreds of office effects supermarkets, which Japanese never saw, and where pens, notebooks and faxes at a discount were sold. However, practice showed that the American shops were too large and too Americanized for Japanese consumers. Firstly, Japanese office effects are very different from American office ones. Secondly, the shops themselves were too Americanized. Japanese couldn't know the labels written by English. As a result, the two companies suffered a lot. They had to modify their marketing strategy to satisfy the local Japanese customers. The case shows the importance of making use of geographic segmentation in a new market.

9. Conclusion

Market segmentation is to divide the whole market into meaningful, relatively small and identifiable market segments, which are groups of individuals or organizations with similar product needs. Before the 1960s, few enterprises carried out market segmentation. However, today segmentation is a crucial marketing strategy. It enables marketers to regulate marketing mixes to meet the needs of particular segments. And it helps marketers identify consumer needs, preferences and find new marketing opportunities, too. Market segmentation is especially significant for Chinese businesses. In view of the more and more important position of China in world trade and its entry into WTO, a great number of foreign-invested companies are entering into China. This phenomenon brings Chinese enterprises advanced technologies and perfect management system, but also it brings more fierce competition. Thus, those domestic businesses in China must plan market segmentation strategy to find market segments from which they can benefit most and to survive among so many cross-national corporations. In a word, to make good use of the advantages of market segmentation is a must for nearly all the enterprises of China and those outside the country.

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Perceive Value as a Moderator on the Relationship between Service Quality Features and Customer Satisfaction

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Abstract

Quality management (QM) literature highlights that service quality is a critical determinant of organizational competitiveness. The ability of an organization implements service quality program will positively motivate customers' perceive value; this may lead to increased their satisfaction. The nature of this relationship is less emphasized in service quality service models. In this study, a survey research method was used to gather 102 usable questionnaires from academic staffs who have studied in one Malaysian public institution of higher learning in East Malaysia (HIGHINSTITUTION). The outcomes of hierarchical regression analysis showed three important findings: firstly, interaction between perceive value and responsiveness insignificantly correlated with customer satisfaction. Secondly, interaction between perceive value and assurance insignificantly correlated with customer satisfaction and thirdly, interaction between perceive value and emphathy significantly correlated with customer satisfaction. This result demonstrates that perceive value has increased the effect of emphathy customer satisfaction, but perceive value has not increased the effect of responsiveness and assurance on customer satisfaction. Further, this study confirms that perceive value does act as a partial moderating variable in the service quality models of the organizational sample. In addition, implications and limitations of this study, as well as directions for future research are discussed.

Keywords: Service quality, Perceive value and customer satisfaction

1. Introduction

Service quality and customer satisfaction are inarguably the two core concepts that are at the crux of the marketing theory and practice (Spreng and Mackoy, 1996). In today's world of intense competition, the key to sustainable competitive advantage lies in delivering high quality services that will in turn result in satisfied customers (Shemwell *et al.,* 1998). Therefore, there is not even an iota of doubt concerning the importance of service quality as the ultimate goal of service providers throughout the world (Sureshchandar *et al.,* 2002). In an era of global competition; many organizations have now shifted the paradigm of service quality to customer's perspective (Parasuraman *et al.*, 1985). Rely on this paradigm; a customer will judge the quality of service if its service meets his/her expectations (Grönroos, 1984; Parasuraman *et al.,* 1985, 1988). Many scholars think that employee satisfaction with the service features may increase retention and loyalty (Alexandris et *al.*, 2002), thus lead to increased organizational competitiveness (Shemwell *et al.,* 1998).

2. Service quality

Service quality has been defined as a form of attitude – a long-run overall evaluation (Zeithaml, 1988; Parasuraman *et al.,* 1988). Perceived service quality portrays a general; overall appraisal of service, i.e. a global value judgement on the superiority of the overall services and it could occur at multiple levels in an organization (Sureshchandar *et al.,* 2002). Many scholars such as Parasuraman *et al. (*1988), Juwaheer and Ross (2003) and Walker *et al.* (2006) highlight that responsiveness; assurance and empathy are the most important service quality features. Responsiveness is often defined as the willingness of service provider to provide service quickly and accurately (Juwaheer & Ross, 2003). Assurance refers to credibility, competence and security in delivering services (Juwaheer & Ross, 2003). Empathy is related to caring, attention and understanding the customer needs when providing services (Juwaheer & Ross, 2003).

Extant research in this area shows that properly implementing such service quality features may increase customer satisfaction (Gronroos, 1984; Parasuraman *et al.*, 1988; Walker *et al.,* 2006). In a quality management context, customer satisfaction is defined as a result of comparison between what one customer expects about services provided by a service provider and what one customer receives actual services by a service provider (Caruana et *al.*, 2000; Parasuraman *et al.*, 1988). If services provided by an organization meet a customer's needs, this may lead to higher customer satisfaction (Foster, 2004; Parasuraman *et al.*, 1988; Walker *et al.,* 2006).

Surprisingly, a thorough investigation of such relationships reveals that effect of service quality features on customer satisfaction is not consistent if perceive value is present in organizations (Caruana *et al.*, 2000; Varki & Colgate, 2001). Perceive value is considered as customer recognition and appreciation the utility of a product that is given by a service provider which may fullfil his/her expectation (Foster, 2004; Heininen, 2004; Walker et *al.*, 2006). In a service management context, the ability of an organization to use responsiveness, assurance and empathy in delivering services will increase customers' perceptions of value; this may lead to higher customer satisfaction (Sureshchandar, 2000; Sureshchandar *et al.*, 2002). Even though many studies have been done, little is known about the moderating effect of perceive value in service quality models. Hence, it motivates the researchers to measure the moderating effect of perceive value in the relationship between service quality features and customer satisfaction that occurs in one Malaysian public university in East Malaysia. For confidential reasons, name of the organization is kept anonymous.

3. Literature review

Several studies about soft quality program in Western organizational settings show that service quality may indirectly and directly affect customer satisfaction. In terms of direct relationship perspective, Bitner (1990) examined the quality service based on a sample of 145 tourists and found that service quality had been an important antecedent of customer satisfaction. In addition, Caruana *et al.* (2000) conducted a research on 80 personal interviews with customers of the audit firm and found that service quality positively correlated with perceived value. Extant research in this area reveals that relationship between service quality and customer satisfaction is strongly moderated by perceive value. For example, Eggert and Ulaga (2002) conducted a study about customer satisfaction based on 301 employees in US organizations. This study found that properly implementing service quality features (i.e., assurance, empathy, reliability, responsiveness and tangibles) have increased individuals' perceive value about the quality features. As a result, it might lead to an increased customer satisfaction.

The service qualiy research literature is consistent with the notion of perceive quality models. For example, Parasuraman *et al.* (1985) conceptual service quality model highlights that matching between service quality standards and customers' standards may decrease service performance gap and increase customers' perceive value about the quality systems. Consequently, it may lead to higher customer satisfaction.

The literature has been used to develop the conceptual framework for this study as shown in Figure 1.

Insert Figure 1 here

Based on the framework, this study hypothesizes that:

H1: There is a positive relationship between service quality features and customer satisfaction

H2: Perceive value moderates the relationship between service quality features and customer satisfaction

4. Methodology

4.1 Research Design

This study used a cross-sectional research design which allowed the researchers to integrate service quality literature, in-depth interviews, pilot study and the actual survey as a main procedure to gather accurate and less bias data (Davis, 1996; Cresswell, 1998; Sekaran, 2000). This study was conducted in one public institution of higher learning in East Malaysia (HIGHINSTITUTION). In this institution, one center for teaching and learning has been established to develop and management sophisticated teaching and learning facilities in central teaching buildings. This center uses teaching and learning quality standards set up by the Ministry of Higher Education, Malaysia to set up and manage lecture theatres and lecture halls in the teaching buildings.

In order to understand the nature of quality service, in-depth interviews were first conducted involving four experienced officers, that is one assistant registrar, one information system manager, one assistant administrative officer, and one supporting staff who have worked in the center. They are selected based on purposive sampling where the employees have good knowledge and experiences in designing and administering quality service program. Information gathered from such employees helped the researchers to understand the nature of quality service policies and procedures, employees' perceptions of value about service quality and customer satisfaction characteristics, as well as the relationship between such variables in the studied organizations. After refining, categorizing and comparing the information with relevant theoretical and empirical evidence, this was used as a guideline to develop the content of survey questionnaires for a pilot study. Next, a pilot study was conducted by discussing survey questionnaires with five experienced academic staff that have backgrounds in social sciences, humanities, sciences and technology. This information was used to verify the content and format of a survey questionnaire for an actual research.

4.2 Measures

Back translation technique was used to translate the content of questionnaires in Malay and English in order to increase the validity and reliability of the instrument (Wright, 1996). The survey questionnaire was developed based on the modification of SERVQUAL instrument **(**Parasuraman et *al.*, 1985). This questionnaire consists of three major sections: firstly, responsiveness was measured using 4 items. The items used to measure this variable were (1) repair teaching and learning facilities, (2) assist academic staff in operating teaching and learning facilities, (3) booking system for lecture halls and/or lecture theatres and (4) ready to assist academic staff if needed. Secondly, assurance was measured using 3 items. The items used to measure this variable were (1) confidence in the service provider, (2) comfortable in dealing with the service provider and (3) efficiency in providing services. Thirdly, empathy was measured using 3 items. The items used to measure this variable were (1) understandable about academic staffs' needs; (2) put a priority in monitoring central teaching buildings and (3) ability of fullfiling the academic staffs' requests.

Fourthly, perceive value had 3 items that were modified from service quality related perceive value (Monroe, 1990; Caruana et *al.*, 2000; Foster, 2004). The items used to measure this variable were (1) teaching and learning facilities are useful for teaching and learning, (2) teaching and learning facilities help to improve teachings and teaching and (3) teaching and learning spaces are comfortable for teaching activities. Fifthly, customer satisfaction had 4 items that were modified from service quality related customer satisfaction (Bitner, 1990; Eggert and Ulaga, 2002; Walker *et al*., 2006). The items used to measure this variable were satisfaction or dissatisfaction with (1) the service provider's attitude and behavior, (2) the ability of service provider treats academic staff, (3) the ability of service provider communicates with academic staff and (4) the willingness of service provider to maintain the teaching and learning conditions of central teaching buildings. All these items were measured using a 7-item scale ranging from "very strongly disagree" (1) to "very strongly agree" (7). Demographic variables were used as a controlling variable because this study focused on employee attitudes.

4.3 Sample

The unit of analysis for this study is academic staffs who have worked in the HIGHINSTITUTION. In the first step of data collection procedure, the researchers met the university's HR department to find out about the rules for distributing survey questionnaires to academic staff. Considering the organizational rule, a convenient sampling technique was used to distribute 120 questionnaires to academic staff in all faculties at the main campus of the university. Of that total, 102 usable questionnaires were returned to the researchers, yielding 84 percent response rate. The survey questionnaires were answered by participants based on their consents and a voluntarily basis.

4.4 Data analysis

A statistical package for social science (SPSS) version 15.0 was used to analyze the questionnaire data. Firstly, exploratory factor analysis was used to assess the validity and reliability of measurement scales (Hair et *al,* 1998). Secondly, Pearson correlation analysis and descriptive statistics were conducted to determine the collinearity problem and the usefulness of the data set. Finally, a hierarchical regression analysis as recommended by Cohen & Cohen (1983) was used to measure the moderating effect of perceive value in the hypothesized model. Moderating effect is an interaction that shows the degree of relationship between the independent variables and dependent variables will change if other variables exist in the relationship (Cohen & Cohen, 1983; Jaccard *et al.*, 1990). Results of an interaction are evident when the relationship between interacting terms and the dependent variable is significant. The fact that the significant main effects of predictor variables and moderator variables simultaneously exist in analysis it does not affect the moderator hypothesis and is significant to interpret the interaction term (Baron & Kenny, 1986).

5. Findings

5.1 Sample profile

In relation to sample profile, Table 1 shows that the majority respondent characteristics were females (58.8%), ages between 31 to 35 years old (54.9%), masters degree (80.4%), serve between 4 to 7 years (49.0%), and lecturers who had backgrounds in social sciences and humanities (58.0%).

Insert Table 1 here

5.2 Validity and reliability analyses for measurement scales

The validity and reliability analyses were conducted based on the procedures established by Hair *et al.* (1998), and Nunally and Berstein (1994). A principal component factor analysis with oblique rotation using direct oblimin was used to determine the possible dimensions of the constructs. Further, The Kaiser-Mayer-Olkin Test (KMO) which is a measure of sampling adequacy was conducted for each variable and the results indicated that it was acceptable. The original survey questionnaires have 48 items which are related to five variables: responsibility (7 items), assurance (7 items), empathy (7 items), perceive value (7 items) and customer satisfaction (10 items). The factor analysis was conducted to condense the 31 items to 17 items.

Table 2 shows the results of validity and reliability analyses where (1) all research variables exceeded the minimum standard of Kaiser-Meyer-Olkin's value of 0.6, were significant in Bartlett's test of sphericity, (2) all research variables had eigenvalues larger than 1, and (3) the items for each variable exceeded factor loadings of 0.40 (Hair *et al.*, 1998), and (4) all variables exceeded the acceptable standard of reliability analysis of 0.70 (Nunally & Bernstein, 1994). These statistical results support the notion of perceive value theories (Parasuraman *et al.,* 1985; Kano, 1984), and empirical studies **(**Eggert & Ulaga, 2002; Varki & Colgate, 2001), signifying the goodness of data for this study.

Insert Table 2 here

Table 3 shows that the mean values for each variable are between 5.01 and 5.43, indicating the level of responsiveness, assurance and empathy, perceive value and customer satisfaction are ranging from high (4) to highest level (7). The Pearson correlation coefficients between the independent variables (i.e., responsiveness, assurance and empathy) and moderating variable (i.e., perceive value) and between dependent variable (i.e., customer satisfaction) were less than 0.90, indicating the data are not affected by serious colinearity problem. These correlations also provide further evidence of validity and reliability for measurement scales used in this research (Hair *et al*., 1998).

Insert Table 3 here

Insert Table 4 here

The table shows the outcomes of testing moderating hypotheses in Model 3. Firstly, interacting variable (responsiveness x perceive value) insignificantly correlated with customer satisfaction ($\beta = -0.22$, $p>0.05$), therefore H1 was rejected. This result demonstrates that the inclusion of perceive value had not increased the effect of responsiveness on customer satisfaction. This indicates that perceive value does not act as a moderating variable in such relationships.

Secondly, interacting variable (assurance x perceive value) is also insignificantly correlated with customer satisfaction ($\beta = -1.83$, $p>0.05$), therefore H2 was rejected. This result demonstrates that the inclusion of perceive value had not increased the effect of assurance on customer satisfaction. This indicates that perceive value does not act as a moderating variable in such relationships.

Thirdly, interacting variable (empathy x perceive value) significantly correlated with customer satisfaction ($\beta = 1.72$, $p<0.05$), therefore H3 was accepted. This result demonstrates that the inclusion of perceive value had increased the effect of empathy on customer satisfaction. This indicates that perceive value does act as a moderating variable in such relationships.

6. Discussion, implications, limitations and directions for future research

The finding for this research shows that perceive value does act only as a partial moderator in the overall relationship between service quality features and customer satisfaction. In the context of HIGHINSTITUTION, the service provider (center for teaching and learning) is given a major responsibility to plan, maintain, and monitor sophisticated teaching and learning facilities (i.e., lightings, air-conditioners, computers, multimedia and physical equipments) in the central teaching buildings based on the rules set up by the university leadership. These practices have increased the quality of delivering teaching and learning services (i.e., responsiveness, assurance and empathy), this may increase academic staffs' perceive value about the service features. Although such perceptions of value are high, majority academic staffs feel that empathy in delivering of teaching and learning services can only increase their satisfaction whreas perceptions of value about the use of responsiveness and assurance in delivering of teaching and learning services cannot increase academic staffs' satisfaction.

Based on the information gathered from the in-deph interview, perceive value does not able to moderate the relationship between responsiveness, assurance and customer satisfaction and this may be caused by several external factors. Firstly, the teaching and learning facilities in the central teaching buildings are intensively used from morning to night within learning semesters for the purposes of teachings, seminars, short courses and workshops. If these teaching and learning facilities are not properly used, this may not be repaired or replaced with other equipments within short time. The duration of repairing and/or replacing with other equipments will take long time; this may increase academic staffs' complaints and criticisms to the service provider.

Secondly, as a new campus, the teaching and learning facilities in the central teaching buildings are properly installed and managed by the service provider. For example, the service provider is given a major responsibility to provide teaching and learning aids for particular purposes such as teaching, seminar, short courses and workshops. Although the service provider may provide teaching and learning equipments, it does not have sufficient equipments that meet academic staffs' expectations. Besides that, the service provider does not have enough staff that may monitor and maintain the requested equipments if many functions are done at several lecture theatres and lecture halls in central teaching buildings. Inability to manage such teaching and learning facilities may decrease comfortable, trust and courtesy of academic staffs when organizing teaching, seminar, short courses and workshops teaching in the central teaching buildings. As a result, it may lead to increased academic staffs' feelings of dissatisfaction and misjudgment about the services.

This study provides significant impacts on three major aspects: theoretical contribution, robustness of research methodology, and practical contribution. In terms of theoretical contribution, this study provides two important findings: firstly, perceive value about the use of empathy in teaching and learning services has increased customer satisfaction. This finding is consistent with studies by Eggert and Ulaga (2002) and Varki & Colgate (2001). Secondly, perceive value about the use of responsiveness and assurance in delivery teaching and learning services have not increased customer satisfaction. This result is not consistent with studies conducted by Caruana *et al.* (2000), Eggert and Ulaga (2002) and Monroe (1990). The findings of this study show that majority of academic staff perceive that the ability of service provider to properly use empathy in delivering teaching and learning services will increase their perceptions of value about the services. As a result, it may lead to an increased academic staffs' satisfaction in the organization.

Regarding the robustness of research methodology, the data gathered using service quality literature, the in-depth interviews, pilot study and survey questionnaires have exceeded a minimum standard of validity and reliability analyses, this can lead to the production of accurate and reliable findings. With respect to practical contribution, the findings of this study can be used as a guideline by management to improve the design and administration of service quality program in organizations. Specifically, the design and management of service quality may be improved if managers emphasize on the suggestions: firstly, staff who involve in providing teaching and learning facilities need to be given proper quality management training programs. Through this training program, the staff may increase their understanding about the concept and importance of practising new knowledge, skills and good moral values. As a result, it may lead to improved job quality.

Secondly, staffs who involve in providing teaching and learning facilities need to be given better rewards. For example, staffs who involve improving teaching and learning facilities are from low level positions. By providing monetary incentives for the staff who involve in working overtime will invoke their satisfaction, this may lead to increased motivation to perform job better. Thirdly, recruitment policy needs to be changed from hiring fresh employees to experienced employees. Stafs that involve in providing teaching and learning facilities are usually dealing with professional employees. If an organization hires experienced staff this will decrease mistake and increase efficiency in installing, maintaining and monitoring sophisticated teaching and learning facilities. As a result, it may lead to an improved customer service. Considering such factors in developing and managing teaching and learning services will help academic staff to improve their teaching and learning activities, this may lead to increased students' understanding about up to date knowledge, skills and attitudes that they learn from their lecturers. Thus, it may lead to increase the effectiveness of teaching and learning in universities.

The conclusion drawn from the results of this study should consider the following limitations. Firstly, this study was a cross-sectional research design where the data were taken one time within the duration of this study. This research design did not capture the developmental issues (e.g., intra-individual change and restrictions of making inference to participants) and/or causal connections between variables of interest. Secondly, this study only examines the relationship between latent variables (i.e., responsiveness, assurance, empathy, perceive value and customer satisfaction) and the conclusion drawn from this study does not specify the relationship between specific indicators for the independent variable, moderating variable, and dependent variable. Thirdly, the outcomes of multiple regression analysis have focused on the level of performance variation explained by the regression equations and it is also helpful to indicate the amount of dependent variable variation not explained (Tabachnick & Fidell, 2001). Although a substantial amount of variance in dependent measure explained by the significant predictors is identified, there are still a number of unexplained factors that can be incorporated to identify the causal relationship among variables and their relative explanatory power. Therefore, one should be cautious about generalising the statistical results of this study. Finally, the sample of this study only used academic staff in a single university and they were chosen by using a convenient sampling technique. The nature of this sample may decrease the ability of generalizing the results of this research to other organisational settings.

The conceptual and methodological limitations of this study need to be considered when designing future research. Firstly, this study sets a foundation for research on relationships between service qualities, perceive value and customer satisfaction. It has raised many questions as well as confirming initial propositions. A few research areas can be further explored as a result of this study. Secondly, the organisational and personal characteristics as a potential variable that can influence perceive value about service quality needs to be further explored. Using these organisational (e.g., ownership and type) and personal (e.g., sex, age and position) characteristics may provide meaningful perspectives for understanding of how individual similarities and differences affect service quality policies within an organisation. Thirdly, the cross-sectional research design has a number of shortcomings; therefore other research designs such as longitudinal studies should be used as a procedure for collecting data and describing the patterns of change and the direction and magnitude of causal relationships between variables of interest. Fourthly, the findings of this study rely very much on the sample taken from one organisational sector. To fully understand the effect of service quality on individual attitudes and behaviours via its impact upon perceive value, more organisational sector (e.g., government link companies, business organizations, and non-profit organisations) need to be used in future study. Finally, other personal outcomes of perceive value such as retention and loyalty should be considered in future research because they are given more attention in considerable service quality literature (Alexandris *et al*., 2000; Parasuraman *et al*., 1988; Walker *et al*., 2006). The importance of these issues needs to be further explained in future research.

In sum, the findings of this study confirm that perceive value does act as a partial moderating role in the service quality model of the organization. These results have partially supported and broadened service quality research literature published in most Western countries. Therefore, current research and practice within service quality models needs to consider individuals' perceive value as a critical aspect of service quality. The findings of this study further suggest that perceive value should be seen as a crucial aspect of service quality where perceive value about service quality may strongly induce positive subsequent personal outcomes (e.g., satisfaction, retention and thus loyalty). Thus, it may lead employees to maintain and increase academic excellent in universities.

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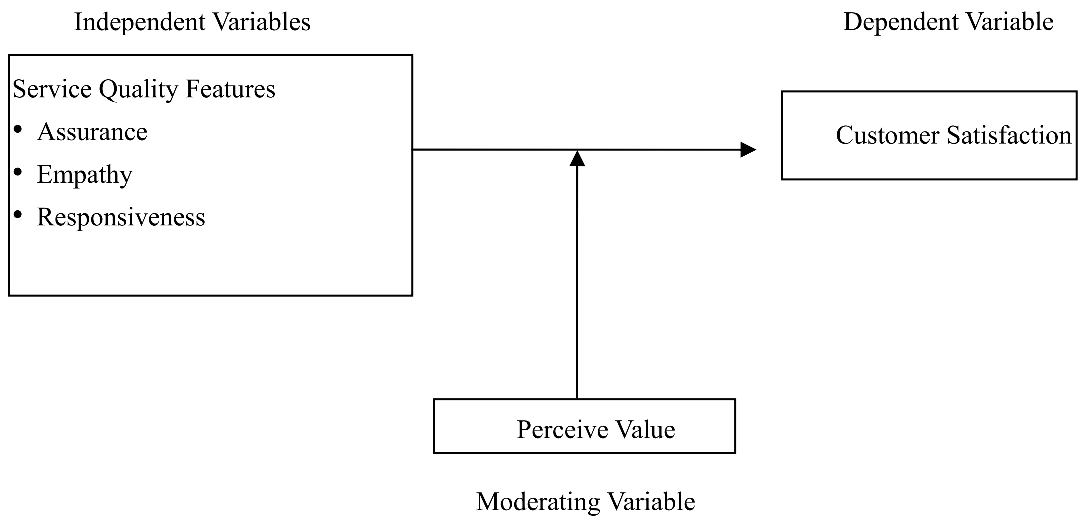

Figure 1. Research model of perceive value as a moderator on the relationship between service quality features and customer satisfaction

Table 1. Profile of Respondents (N = 102)

General Characteristics	Sub Characteristics	Percentage
Sex	Male	41.2
	Female	58.8
Age	Less than 30 years	20.6
	31-35 years	54.9
	36-40 years	16.7
	More than 40 years	7.8
Education	Bachelor	9.8
	Masters	80.4
	PhD/Professional doctorate	9.8
Length of service	Less than 3 years	19.6
	4-7 years	49.0
	8-11 years	26.5
	12-15 years	2.9
	More than 15 years	2.0
Field of study	Social sciences and humanities	58.8
	Sciences and technology	41.2

Table 2. Results of Validity and Reliability Analyses

Measures	Item	Factor Loadings	KMO	Bartlett's Test of Sphericity	Eigenvalue	Variance Explained	Cronbach Alpha
Responsiveness	4	0.62 – 0.89	0.78	180.25, p=.0005	2.76	68.97	0.85
Assurance	3	0.60 – 0.90	0.63	118.20, p=.0005	2.15	71.70	0.80
Empathy	3	0.47 – 0.60	0.66	98.50, p=.0005	2.12	70.62	0.78
Perceived Value	3	0.62 – 0.89	0.78	180.25, p=.0005	2.76	68.97	0.85
Customer Satisfaction	4	0.60 – 0.90	0.63	118.20, p=.0005	2.15	71.70	0.80

Table 3. Correlation between Variables and Descriptive Statistics

Variable	Mean	Standard Deviation	Pearson Correlation				
			1	2	3	4	5
1. Responsiveness	5.22	0.64	(1)				
2. Assurance	5.10	0.78	0.51**	(1)			
3. Empathy	5.01	0.83	0.55**	0.64**	(1)		
4. Perceived Value	5.25	0.79	0.47**	0.35**	0.56**	(1)	
5. Customer Satisfaction	5.43	0.59	0.59**	0.54**	0.53**	0.50**	(1)

Note: Correlation value is significant at *p<0.05; **p<0.01; ***p<0.001

Reliability estimation are shown diagonally (value 1)

Table 4. Results for Hierarchical Regression Analysis with Perceived Value as the Moderating Variable and Customer Satisfaction as the Dependent Variable

Variables	Customer Satisfaction		
	Model 1	Model 2	Model 3
Controling Variable			
Sex	0.28	0.09	0.10
Age	0.06	-0.02	0.02
Education	0.17	0.18	0.15
Length of service	-0.07	-0.10	-0.08
Faculty	0.09	0.13	0.13
Independent Variable			
Responsiveness		0.35	0.39
Assurance		0.25	1.45
Empathy		0.07	-1.05
Perceive Value		0.18	0.57
Moderating Variable			-0.22
Reponsiveness x Perceive Value			-1.83
Assurance x Perceive Value			**1.72***
Empathy x Perceive Value			
R^2	0.10	0.53	0.56
R^2 Adjusted	0.05	0.48	0.49
F	2.14	11.46***	9.34***
R^2 Change	0.10	0.43	0.03
$F\ \Delta R^2$	2.14	20.90***	1.93

Note: Correlation value significant at *p<0.05, **<0.01, ***p<0.001

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Entrepreneurs of the Streets: an Analytical Work on the Street Food Vendors of Dhaka City

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Abstract

Street food vending is a prevailing and distinctive part of a large informal sector in Dhaka city, the capital of Bangladesh. The paper attempts to gain insight into the business of street food vendors: highlight the problem areas and identify some key factors that positively affect their sales revenue. Using factor analysis as a tool, four major problem areas for the street food vendors have been identified. The problem areas are related to business operation, business knowledge, extortion, and product and production. Through regression analysis, it has been found that business experience, and initial capital is two key factors that positively affect sales revenue. Formal education, however, does not have any significant impact on business performance. The paper also comes to the conclusion that lack of security and problems in the supply of raw materials are two major problems as perceived by the vendors.

Keywords: Street food vendors, Informal sector, Food safety, Small business

1. Introduction

Street food vending is a prevailing and distinctive part of a large informal sector in Bangladesh. It is commonly viewed in public spaces particularly in the cities and distinctive in the sense that it provides a basic need to the urban inhabitants. The items made available by the street vendors comprise of a diverse range of selection, starting from small snacks such as biscuits, tea, nuts and phuchka/chotpoti (Note 1) to wholesome meals such as ruti-bhaji (Note 2) and rice. Each street food enterprise is generally small in size, requires relatively simple skills, basic facilities, and small amounts of capital. As such they hold tremendous potential for generating income and employment for the rapidly rising urban population of Dhaka city, the capital of Bangladesh. This paper is an attempt to gain an insight into the factors affecting the nature of the business. The specific objectives, we set forth, are to test some stylized facts about street food vending; how some key variables affect the sales revenue of the business and identify and explain the key impediments faced by the vendors.

Drawing from the definition quoted by Dardano (2003) we define street food as food prepared on the streets and ready-to-eat, or prepared at home and consumed on the streets without further preparation. The food items are sold by vendors and hawkers especially in streets and other similar public places. It is largely recognized that street foods play an important socio economic role in terms of employment potential, special income for women, and in serving the food at prices affordable to the lower and middle-income groups. It is also dubbed as the very essence of a country or region's tradition. It is believed to mirror the ways of ordinary people reflecting lifestyle, race, and religion (Wickware, 1998 quoted in Muzaffar, 1998).

The street food vending has largely been considered as part of the informal sector; and separate numbers specifically for street food vending is hard to find. One of the reasons why counting the number of vendors in informal food sector is a formidable task because many of the vendors are itinerant, moving one site to another. However, in an article by Allain (1991), it is found that in the Indonesian city of Bogor annual sales of street food amount to US$67 million (quoted in Cohen, 1986) and in Malaysia US $2.2 billion (quoted in Allain, 1988). Thus, street food vending plays a vital role for the economic planning and development of many towns.

2. A Review of literature

There exists ample discussion on street food vending in literature although a large portion of it is concentrated on the health and hygiene feature of this group. There are also some papers that concentrate on the nutrition aspects of street food vending and its ability to provide a basic need to the urban dwellers at affordable prices. Akin to this line of thought, Acho-Chi (2002) looked into the mobile food service practice in Kumba, Cameroon, in terms of its basic characteristics, the locational factors influencing its socio-spatial distribution, the critical success factors determining customer choices, and its impacts on the local environmental resources and quality of urban life.

Among those concentrating on health and hygiene, Muinde and Kuria (2005) point to the unstable and precarious of establishments of the street food vendors of Africa. They identify the lack of basic hygiene and sanitary practices both in the case of serving as well as preserving food in this sector. To that end the study emphasizes on the need for the establishment of street food centers by the city council, the training of street food vendors on hygiene, sanitation and the establishment of code of practice for the street food industry and the empowerment of Public Health Officers. Subratty, Beeharry, and Sun (2004) conducted a similar study in Mauritius and highlight the need for health education among food vendors.

In a report of FAO, Pan American Health Organization (PAHO), and Barbados National Standards Institution (BNSI) (2003) a comparison of health and hygiene standards practiced by street food vendors was carried out among seventeen English speaking Caribbean countries. It was found that although in varying levels, improper hygiene practices, lack of running water, improper storage of food etc. were prevailing in almost all the countries.

On a similar note, Nicolas et al. (2007) collected data on street vended food in western African countries to find the contamination mechanisms and suggest improvement pathways. They recommend the Food Safety Objective (FSO) concept developed by FAO and WHO to aid governments in elaborating guidance for street food production, vending and consumption.

A host of literature also exists focusing on the nutrition aspect of street foods. To sight an example of this, a profile of street food vending was conducted in Botswana by Ohiokpehai (2003) where the focus was on the content and nutritional impact of street food for people where some segments of the population rely almost entirely on street food vending for their everyday meals.

Von and Mahoane (2006) found that street food vendors in South Africa were capable of producing relatively safe food with low bacterial counts, although there was still a need for proper hygiene conditions and access to basic sanitary facilities.

Published literature in respect of identifying and a need for acknowledging the problems of entrepreneurs of street food vending in Dhaka city is scarce. Amin (1989) states that a large part of Dhaka city's economy goes unrecognized and referred it as the 'traditional sector' or informal sector, operating outside the incentive system offered by the state and its institutions. Wickware (1998) points out that the food vendors in informal sector are distinct from their official brethren only because their work status is more unstable, more vulnerable, and illegal (quoted in Muzaffar, 1998). Amin's (1989) work also provides a comparison between formal and informal sectors helping us identify some key features attributable to street food vending as well (Table 1).

3. Research propositions

Amin (1989) identifies that setting up a business in the informal sector may not require formal education. Since operating the food vending business in the streets demands simple skills, the perception is that the vendors do not need to have a high educational background in order for a better performance. Thus, we propose:

Proposition 1: Number of years spent in educational institution does not significantly affect the performance of the business (street food vending) in terms of raising sales revenue.

The presence of business acumen is important to run any form of enterprise. Experience helps develop the insight of doing business in an efficient manner. Although receiving formal education may not be very important in running the business in the streets, experience should be an influencing factor. Our proposal, therefore, is:

Proposition 2: Experience in terms of years doing the business significantly affects the sales revenue of food vendors.

The easy access to such a business, as stated in Amin (1989), is perhaps explained by the requirement of small amount of initial capital. However, starting with a higher initial capital is likely to ensure a better performance. Thus, we suggest the following proposition:

Proposition 3: The amount of initial capital plays a significant role in raising the sales revenue of the street food vendors.

Literature also suggests that the state of business in informal sector is characterized as unstable, vulnerable, and illegal (Amin, 1989; Wickware, 1998). Such attributes result in a sense of insecurity amongst the street food vendors. Not feeling secured, doing the business in the streets, acts as a major impediment and the next proposition is therefore:

Proposition 4: Lack of security affects significantly the overall problem in doing business as perceived by the vendors.

The food vending business in the streets of Dhaka can be viewed as competitive, labor intensive, requiring less advanced technology and a reliance on domestic inputs (Table 1). Access to raw materials to produce these nonstandard products tends to be relatively easy and smooth. This leads us to suggest:

Proposition 5: Supply of raw materials does not significantly affect the overall problem faced by the street food vendors.

4. Method of analysis

4.1 Identification of problems and design of questionnaire

In order to attain the research objectives we aimed at conducting a survey to collect primary data for analysis. The lack of detailed discussion in the context of Bangladesh in the published literature prompted us to gain a first hand knowledge from the field. One of our objectives was to identify the kinds of impediments that exist in this business as perceived by the vendors. Since the existing literature did not help us much in this regard, we decided to conduct a preliminary survey using a semi-structured questionnaire on street food vendors from three different places of Dhaka city in early May, 2008. The purpose was to list the major problems suggested from the entrepreneurs' point of view. A total of 35 vendors participated in this preliminary survey and they were asked to state top ten problems they face as an entrepreneur in this business. Following is the list of problems they identified as major ones:

What is important to note from the vendors' response is that hygiene (for example access to running water or proper sanitary facilities) and food safety (for example access to clean drinking water and problems relating to storage of food) is not identified as a major challenge for them (the food vendors). Perhaps there exists a lack of awareness from the vendors' side or this aspect is more of a concern for observers thinking of consumers' right to have safe food.

Using the information obtained from the preliminary survey, we created a structured questionnaire to carry out the investigation for analysis. The listed problems were used as scale items to execute a further attitudinal survey in order to test the research hypotheses. In addition to the 13 problems above, a variable of overall problem as perceived by the vendors was used as a scale item also (Table 2).

4.2 Source and reliability of data

The survey, using the structured questionnaire, took place in 10 different locations of Dhaka city where concentration of street food vendors is relatively high in late May and June, 2008. These places include bus, railway, and launch stations, parks, busy market places and other such public spaces. We received responses from 155 vendors of which only 5 were female entrepreneurs.

The respondents were asked to provide their opinion on the 14 scale items discussed above and they were processed through five point bi polar scale system. In the scale 5 and 4 indicate strongly agree and moderately agree respectively, while 3 indicates no comment, and 1 and 2 refer to strongly disagree and moderately disagree respectively. The 14 scale items were assessed for reliability using coefficient alpha. The reliability coefficient was 0.78 (Table 3) which exceeded the value of 0.70, being consistent with the recommendation of Nunnally (1978).

4.3 Tools of analysis

With the collected data we primarily carried out two types of analysis using statistical software. These are factor analysis, using SPSS, to identify the key problems explaining the major impediments of doing the business and regression analysis, using EViews, to test the statements we hypothesized. The initial reliability test on the scale items ensures appropriateness of factor analysis (Cronbach's Alpha stands at 0.78). Other assessments of the suitability of the data for factor analysis also support the condition. For instance Nunnally (1978) recommends a 10 to 1 ratio that is 10 cases for each item to be factor analyzed. Our sample size of 155 satisfies the minimum requirement of 140 cases (since there are 14 items). Two major statistical measures, generated by SPSS also support the appropriateness of factor analysis on the data. Both KMO index which is above 0.6 and Bartlett's test of sphericity which is significant suggest the minimum value for a good factor analysis (Table 4).

5. Discussion on findings

5.1 Descriptive statistics

The research puts emphasis on identifying the caveats as expressed by the street food vendors in the city of Dhaka. Table 5 summarizes some of the demographic features of the sample. As mentioned earlier all vendors willing to be interviewed in the survey were predominantly male. The respondents tend to fall into the middle aged group, average age standing at about 34 years. Evidence also reveals a poor educational background of the respondents. The mean formal education is at 3.75 years reflecting the fact that most of them could not even complete their primary education. The sample is comprised of a considerable amount of married male vendors, percentage of which is 72%.

The average length of activity of the vendors is close to 7 years and on average they work around 12 hours per day (Table 6). The mean value for number of days worked in a month show that they take very few days off.

The average monthly income of a food vendor appears to be Taka 5647 whereas average monthly expenditure is Taka 5939 (Figure 1). This puts them at the risk of becoming a net borrower. However, it may be noted that they are not always the sole earners of the family and may get support from other earning family members. Among the overall expenditure, spending on food dominates at 60%, followed by rent at 15%. Hence bare minimum living costs eat up the majority of their income. The remainder 25% consists of all other expenses such as those on clothing, remittance, health, education, traveling and expenditure on cigarettes.

The composition of overall expenditure shows that apart from expenditure on cigarettes, all of the spending fall under the bracket of necessary expenditure leaving them very little room, if at all, to enjoy the perks of city life.

5.2 Results of factor analysis

As stated earlier, the first step to our analysis is to identify the impediments faced by street food vendors in conducting their daily business. Having realized 13 problems, we try to group them using the method of factor analysis. The result of the factor analysis is shown in Table 7. We see that four factors emerge from the factor analysis of problems faced by the vendors. The extraction of the constructs, we chose, was based on the factors having eigen value above 1 and total accumulated variance of the factors stands at around 60%. Among the four factors, business operation related factor contributes most significantly with the eigenvalue of 3.387 and it explains 23.23% of the variance. The problem relating to business knowledge becomes the second highest contributing factor with the eigenvalue of 2.178. The remaining two are extortion related and product and production related factors.

Table 8 illustrates the loadings of scale items in each of the factors. Some of the items are dropped from each factor because they either have low loading values, or have negative impact on reliability, or do not have a deep relationship with the factor. Law and regulation becomes the highest loading item in explaining the business operation related factor. Bad weather, lack of security and supply of raw materials are the other three items with relatively high loadings. In factor two, lack of business knowledge turns out to be the variable with greater loading relative to lack of appropriate skill. Extortion related factor is addressing the significance of extortion fee by local "mastans" (extortionists). And lastly, high cost of production is identified as the highest loading item for factor explaining the problem relating to product and production. The reliability coefficients of all factors are also shown in Table 8. Not all of these, however, show values higher than the threshold level.

The above grouping might enable policy makers to effectively identify areas of intervention when they integrate this sector into urban planning.

5.3 Results from regression analysis

In the second part of our analysis we attempt to clarify the propositions stated earlier with the help of two regression models. The two dependent variables stated are 'sales revenue' and 'overall problems as perceived by street vendors' as all the propositions seek to explain these two factors.

The first regression equation is designed to explain sales revenue of street food vendors through years of formal education, experience and initial capital.

$$SALESREV = 683.2528 + 53.29855\ EDUYR + 1.941025\ EXPR + 0.032246\ INICAP \quad (1)$$

Std. Error	(178.3700)	(27.52442)	(0.896845)	(0.009991)
t-value	(3.830536)	(1.936410)	(2.164281)	(3.227679)
Sig. Level	(0.0002)	(0.0552)	(0.0324)	(0.0016)

$R^2 = 0.14$ Adjusted $R^2 = 0.12$

Where,

SALESREV = Daily sales revenue in Taka

EDUYR = Educational background in terms of years spent in school

EXPR = Experience in terms of number of months doing the business

INICAP = Initial capital at the start of the business in Taka.

The estimated equation above helps us to reach the following conclusions:

First, the coefficient of educational background in terms of years spent in school is positive but not significant at 5% level. Thus we deduce that years spent in education does not significantly affect sales revenue generated by street food vendors. This allows us to not reject our first proposition.

Second, the coefficient to experience in business is positive and significant at 5% level, allowing us to not reject our second proposition that ‘experience in terms of years doing the business significantly affects the sales revenue of food vendors’. As experience enables vendors to gather insight and knowledge that holds more purpose to them than formal education would.

Finally, the coefficient to initial capital is also positive and significant. As per proposition 3, we observe that the amount of initial capital plays a significant role in raising the sales revenue of the street food vendors.

The second regression model is explaining the overall problem as perceived by the vendors through lack of security and problem related to supply of raw materials.

$$OVRPROB = 2.162722 + 0.294919\ PROBE + 0.203993\ PROBJ \quad (2)$$

Std. Error	(0.183253)	(0.052999)	(0.061771)
t-value	(11.80183)	(5.564632)	(3.302425)
Sig. Level	(0.0000)	(0.0000)	(0.0013)

$R^2 = 0.409$ Adjusted $R^2 = 0.398$

Where,

OVRPROB = Overall problem as perceived by the street food vendors

PROBE = Problem of lack of security

PROBJ = Problem of supply of raw materials.

As illustrated by the equation above, the overall problem as perceived by street food vendors can largely (39%) be explained by lack of security and supply of raw materials.

The coefficients to both the problems are positive and significant indicating that both of them positively affect the overall problem as perceived by the street food vendors. We would therefore not reject proposition four and reject proposition five.

6. Conclusion and observations for policy makers

The street food vendors play an important role in Dhaka city. At root, it creates numerous jobs and absorbs a rising proportion of the unemployed workers. Recognition of this sector and proper assistance should significantly improve their performance in the business. Through the result of our study we identify four major areas of problems that street food vendors face today. These problem areas emerge as per the perception of street food vendors themselves. The four problem areas are relating to: (i) business operation, (ii) business knowledge, (iii) extortion related, and (iv) product and production.

It was also found, that for this sector experience holds more importance than formal education. As operating the food vending business in the streets demands simple skills, the perception is that high levels of education is not necessary for better performance in the business. Such perception has been confirmed by the estimated model. Thus the sector proves to be a potential area to absorb the massive unskilled/semi skilled unemployed population. It was found that experience and initial capital significantly and positively affect sales revenue.

The insignificance of formal education holds an interesting insight for policy makers when they plan for after work classes targeting the adult or employed children. In order to attract this group it is important to make formal education seem worthwhile to them. If Non Governmental Organizations (NGOs) and other institutions incorporate skill development (in relevant areas) into their curriculum, it might create an incentive for the street food vendors to avail formal education.

As for the overall perceived problems of the vendors, they identify lack of security and access to raw materials as the dominant problems. These identified problem areas might enable policy makers to efficiently recognize caveats for intervention when they seek to do so.

Acknowledgement

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Notes

Note 1. A popular spicy snack in the sub-continent.

Note 2. A bread based meal common for breakfast.

Table 1. Some attributes of informal sector businesses

Market Structure	Characteristics of Informal Sector Businesses
Output Market	No barriers to entry
	Competitive firms
	Nonstandard, unregistered products
Factor Market	Easy access
	Competitive
	No compliance to labor legislation
	No access to credit, self financed bodies
Technology	Adapted traditional technology
	Relatively labor intensive
	Domestic inputs
	May not need formal education
Industrial organization	Small, unincorporated
	Unregistered
	Small scale operation
	Non-remunerated family works
	Seasonal part time occupation
	Generalized tax evasion
	Unlimited risks

Source: Adapted from Amin, 1989.

Table 2. List of variables used as scale items

1. PROBA = Lack of business knowledge
2. PROBB= Lack of appropriate skill
3. PROBC = Lack of capital
4. PROBD = Lack of manpower
5. PROBE = Lack of security
6. PROBF = Laws and regulation related problem
7. PROBG = Police harassment
8. PROBH = Extortion fee by local 'mastans' (extortionists)
9. PROBI = Political instability
10. PROBJ = Problem with supply of raw materials
11. PROBK = Problem of high cost of production
12. PROBL = Bad weather
13. PROBM = Perishable product
14. OVRPROB = Overall problem in doing the business

Source: Preliminary field survey, May, 2008

Table 3. Reliability statistics

Cronbach's Alpha	Number of items
0.78	14

Source: SPSS output from field survey, May and June, 2008.

Table 4. KMO and Bartlett's Test result on problems

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.686
Bartlett's Test of Sphericity	Approx. Chi-Square	252.582
	Df	78
	Sig.	.000

Source: SPSS output from field survey, May and June, 2008.

Table 5. Some demographic information of the sample

Variable	Observation
Mean Age (years)	34.43
Mean Formal Education (years)	3.75
Marital Status (%)	
Single	27.2
Married	72.1
Widowed	0.7

Source: Field Survey, May and June, 2008.

Table 6. Duration of activity and average work load

Item	Mean
Length of activity (months)	80.24
Days / Month	28.17
Hrs / Day	12.16

Source: Field Survey, May and June, 2008.

Table 7. Factor analysis (Varimax) of the problems faced by the street food vendors

Factor	Eigen Value	Explained Variance	Accumulated Variance
Business operation related	3.387	23.230	23.230
Business knowledge related	2.178	13.083	36.313
Extortion related	1.199	12.190	48.503
Product and production related	1.086	11.877	60.380

Source: SPSS output from Field Survey, May and June, 2008.

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table 8. Loading of items within each factor explaining problem

Factor	Loading	Reliability
Business operation related		0.75
Laws and regulation	0.790	
Bad weather	0.740	
Lack of security	0.737	
Supply of raw materials	0.702	
Business knowledge related		0.71
Lack of business knowledge	0.795	
Lack of appropriate skill	0.751	
Extortion related		0.41
Extortion fee by local mastans	0.759	
Police harassment	0.696	
Product and production related		0.60
High cost of production	0.828	
Perishable product	0.677	

Source: SPSS output from Field Survey, May and June, 2008.

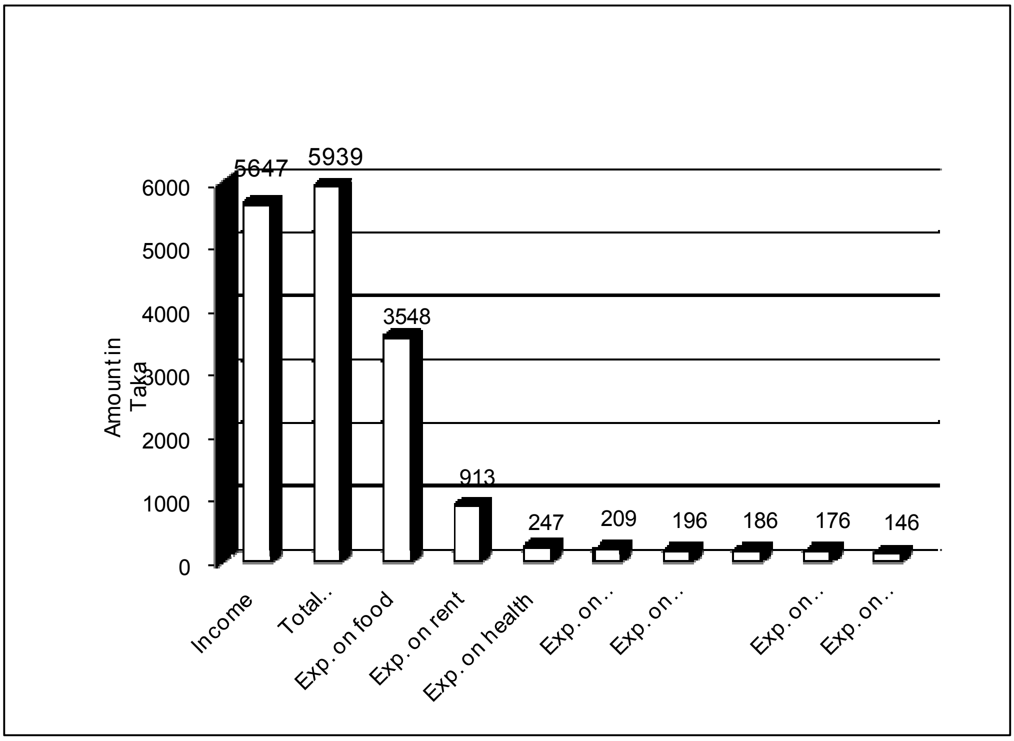

Figure 1. Monthly income and expenditure pattern

Source: Field Survey, May and June, 2008.

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Research on Enterprise International Competitive Advantage Sustainability

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Abstract

The economical globalization brings the enterprise competition globalization is an indisputable fact, the enterprise participates in the international division of labor and the international competition becomes the question which any enterprise may can't avoid, how the enterprise establishes the competitive advantage in the international competition, and maintains the sustainable competitive advantage is very important regarding to the enterprise's development and survival. This article has analyzed enterprise international competitive advantage and the connotation and forms of mechanism of the sustainability, and has constructed the enterprise sustainable competitive advantage model.

Keywords: International competitive advantage, Resources, Capability, Sustainability

1. Enterprise international competitive advantage and sustainability

1.1 Enterprise international competitive advantage

Enterprise competitive advantage can be defined as: "enterprise in the production operating within the territory, able to provide consumers with the same quality or better than the quality of rival products at the lower price, and to get more than competitors average level of profit, then the enterprise has a competitive advantage."

The enterprise international competitive advantage is the stretching on enterprise competitive advantage basis, mainly decided by the production and management domain size the enterprise engaged in, when the enterprise production and management field expanding to the international market, the competitive advantage become the international competitive advantage. Therefore, in the context of economic globalization, enterprise competitive advantage and enterprise international competitive advantage is the same concept.

1.2 Sustainability of the enterprise international competitive advantage

Enterprise international competitive advantage sustainability is the development from a dynamic perspective of the concept of competitive advantage, competitive advantage and sustainable competitive advantage is of the same connotation. Barney stressed in his "enterprise resources and sustainable competitive advantage" that the sustainability of competitive advantage in essence is not a time for the calendar and not mean that competitive advantage will always exist, but for some reasons the advantage to a certain period of time cannot be copied by other companies. He stressed the importance of the following points: First, sustainable competitive advantage must be considered against the existing and potential competitors; Second, the sustainability is not a time for the concept of the calendar; Third, sustainability does not mean that the competitive advantage will always exist, the unforeseen changes of the industry competition structure may make the original sources of sustainable competitive advantage no longer valuable. As a result, he believed that the sources of competitive advantage should meet four conditions: that is valuable, scarcity, not imitative and irreplaceable. Sustainability of enterprise competitive advantage is rooted in its own essential character. I believe that the international business sustainability of competitive advantage can be defined as the sum characteristics: at a long period of time, enterprise in the international market continue to integrate resources and to enhance innovation, always maintain the comparative advantage and continue to exceed the average profit level of the competitive industry.

2. The formation of enterprise international competitive advantage

2.1 Sources of formation of the enterprise competitive advantage

In order to achieve the target of competitive advantage, the enterprise has to decide many elements, and the whole theory can be divided into the resources theory and the capability theory. Worner Feierte released the "Enterprise resources foundation theory" in 1984, has put forward that the enterprise internal resources are of great significance to the enterprise business profits and to the maintenance of competitive advantage, and has a decisive role for the enterprise to create market advantage. The accumulation of enterprise internal organizational capability, resources and knowledge is the key to explain the enterprise to get excess profit and to maintain competitive advantage. Then many economists carried on the classification and the concrete research to resources. In summary, resources theory believe that enterprise resources with heterogeneity and non-full mobility features, therefore, there are many differences between different enterprises, in other words, the heterogeneity of resources has led to business heterogeneity. As the resources are not completely free movement, the heterogeneity between enterprises may exist for a long time. If an enterprise has resources which are scarce and able to create value, and these resources either can be imitated by its competitors, or can be replaced by other resources, then this enterprise has a monopoly position and this become the necessary condition for the sustainable competitive advantage and the excess profits.

Enterprise capability theory believes that the enterprise capability is the required skills and knowledge to achieve the objectives of the organization. Although the broad resources include capability, but the capability theory considering that capability is different from resources, capability based on the ability of man-made carrier, it is the main ability to allocate, develop, protect, use and integrate the resources. Enterprises with similar resources often have difference in the efficiency of resources usage, this difference is the difference of capability, which is the cause of the deep-seated competitive advantage. In 1990, Prahalad and Hamel published a "Enterprise core capability theory", according to their definition, core capability is the accumulated knowledge of organization, especially about how to coordinate the different skills of production and the organic integration of a variety of technical flow of knowledge. Core competitiveness is a mixture of many factors, it is the combination of technology, governance mechanisms and collective learning. Core competitiveness is the collection of a set of skills and technology, not a single technology or skill. It is a source of competitive advantage. There are three main features of core capability: First, the core capability has the full user value, able to create value and reduce costs; Second, the core capability is unique, it is difficult to be imitated by competitors; Third, the core capability must has a certain tractility, to provide support to enterprise to access to a number of markets.

The difference between two theories is that the capability theory considering that the core capability is the source of enterprise sustainable competitive advantage, while the resources theory considering that the strategic resource is the source of sustainable competitive advantage. Capability theory take the ability of resources disposition and conformity as part of the core capability, while resources theory take the enterprise capability as part of enterprise resources. The capability theory emphasizes that the enterprise develop corporate strategy around core capability, while the resources theory stresses the resource-based competitive strategies. In short, the source of competitive advantage is the enterprise capacity and resources.

2.2 Formation of enterprise competitive advantage

The formation of enterprise competitive advantage is based on enterprise resources and capability advantage. As far as these two factors, none of these factors alone can become a sufficient condition for competitive advantage. But the effective combination of both factors is a necessary condition of high and sustained competitive advantage. Resources and internal capability are the results of long-term development, if resources and capability can not be copied and imitated by competitors, then the enterprise has formed competitive advantage. Resources are the relative stable, easy to be observed assets, these assets will help to improve the performance of enterprise. And capability of enterprise refers to continual usage of skills to the organizational structure and staffs to complete the task. Looking from the resources advantage aspect, competitive advantage includes: brand name, enterprise own technical knowledge and skills of its employees. Corris and Montgomery believe that resources can exist in various forms, they may be the general elements which widespread in the competitive transaction and are very easy to buy, or they may be the resources of high degree, accumulated over years and are difficult to be copied. From the aspect of capability advantage, competitive advantage includes: management, learning ability and capability to innovate and so on. In the process of the obtain of competitive advantage, the raise of enterprise internal capability and the synthesis utilization of each kind of capabilities are the most crucial factors, when these two factors are organically integrated, enterprise will has the competitive advantage.

3. Model building of enterprise competitive advantage sustainability

3.1 Influencing factors of enterprise resources and capability changes

3.1.1 Influencing factor of enterprise resources changes

After the formation of competitive advantage, the enterprise mainly in the stage of growth or mature, one of the characteristics at this stage is the entry of competitors and the increased competition, this time the maintain of existing competitive advantage and the sustainability of competitive advantage are mainly decided by the speed and difficulty of the existing and new enterprises innovation and mimic ability. There is no significant influence to the brand resource because it will form a relative stable consumer group once the corporate brand is awared by consumers, and brand also does not allow the public to imitate, so such resource is relative stable, particularly when the brand has become a well-known brand. The change of enterprise own technical resource is mainly decided by competitors' ability to imitate, or its difficulty to be copied, if the resource is easy to be imitated, it will soon be lost. Manpower resource is the most uncertain resource, and its influencing factors are most complex.

3.1.2 Influencing factors of enterprise capability changes

Enterprise capability means the usage of skills to enhance its own value to lower costs, or do the both tasks at the same time in order to achieve higher economic efficiency. These tasks achieved or skills enhanced through continuous coordination of the activities of the business team. Compared to resources, capability is more instability, more difficult to alternate. This is because the capability development and maintenance are achieved by coordinating the changing efforts of staffs, therefore, capability is dynamic, so its impact factor is even more complicated. Management is the certain organization's managers through the implementation of the plans, organization, leadership and control functions to coordinate the activities of others, to achieve common goals. As a process, managers play an important role, corporate managers are the entrepreneurs, so management can be understood as the capability or the spirit of entrepreneurs. Entrepreneur capability should include the capability of predicting the future accurately, making decisions, constructing the enterprise organizations, leadership of organizations, controlling the organizations movement and integrating the enterprise resources , and so forth. These changes of capability are finally decided by the entrepreneurs' own quality. The enterprise innovation includes technological innovation, production innovation, market innovation and ideas innovation, and so on. The innovation capability is achieved by the completion of the above innovations, and the specific content of these capabilities should be determined by entrepreneurs and members of the organization. Enterprise learning capability is the capability to learn new knowledge and to access new skills, the capability is got by the establishment of learning organization, and the fundamental driving force of the organization is the capability or the spirit of entrepreneurs. Other capabilities include the capability to open up the market, the skills to communicate the relationship and so on, in fact these influencing factors are some aspects of the determining factors of the management, innovation and learning capability. Above analysis does not explain the enterprise core capability directly, but actually the enterprise core capability is contained. The core capability is the integration of many kinds of capabilities, an independent capability is impossible to form core capability. When the factor which also affect other capability changes, the enterprise core capability will inevitable changed. The changes of core capability will lead to changes of the enterprise competitive advantage.

3.2 Model of enterprise competitive advantage sustainability

Enterprise resources and capability are not play alone, they fuse to each other, support to each other, and there is a complementary relationship. Enterprise resources are the basis of enterprise capability, and the efficiency of enterprise resources depends on the enterprise capability. It is the complementary of resources and capability that form the competitive advantage, then continued to form the sustainability of competitive advantage. Based on the complementary of resources and capability to build a model of competitive advantage sustainability (see Figure 1).

Enterprise establish competitive advantage by integrate resources and capability, then the problems faced is the changing competitive environment, including the entry of competitors, changes in the industry environment, changes in market demand, and so on. In the face of these problems, enterprise should carry on re-development and re-creation to resources and capability at the right moment. And re-integrate to form the competitive advantage for the new environment. This kind of competitive advantage must duplicate the above process once facing the environment changes. We can see the sustainability of competitive advantage is the dynamic process enterprise change the integration of resources and capability to adapt to environmental changes. The process will be continued permanently, and the competitive advantage will last forever. If a link is in trouble, dynamic process will end, the competitive advantage will has no sustainability, enterprise will lose its competitive advantage, and enterprise will be out of the industry.

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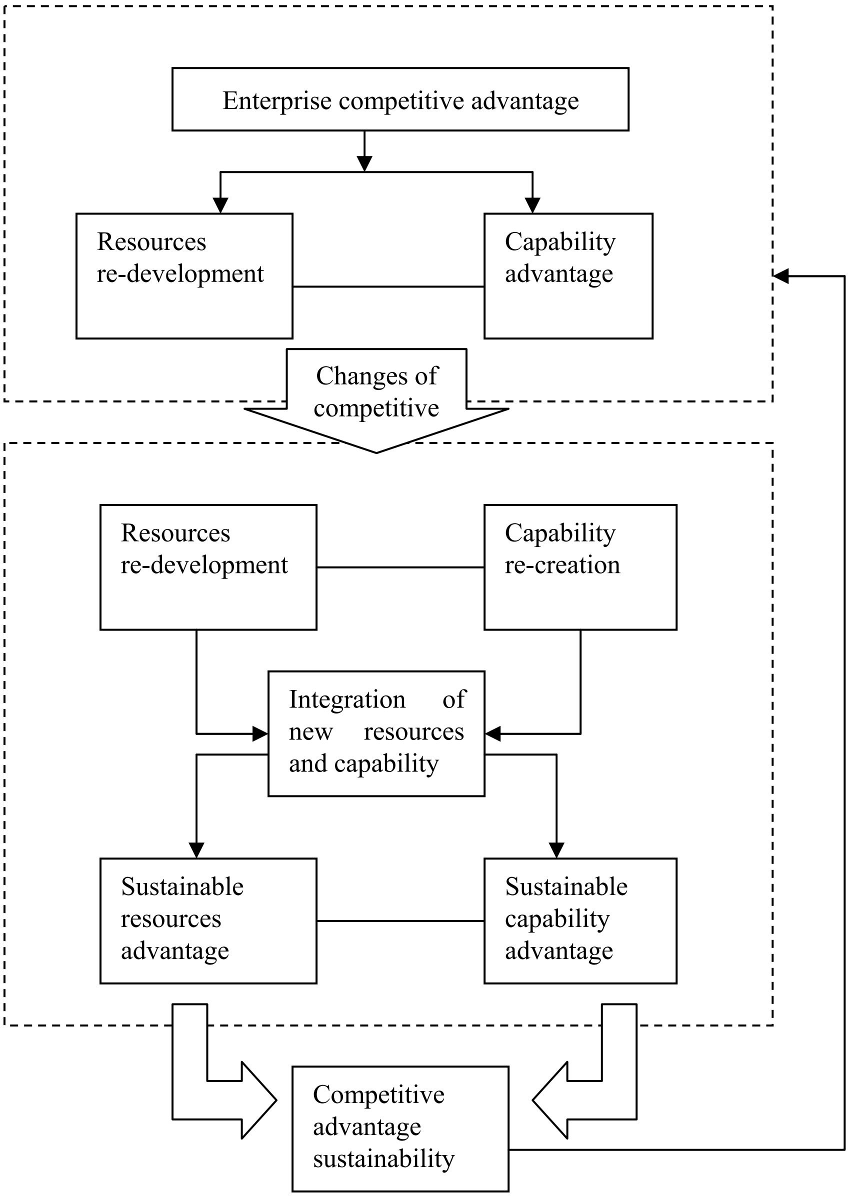

Figure 1. Model of enterprise competitive advantage sustainability

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Research on Functionary Mechanism of Innovative Culture in Enterprise

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Abstract

Sustainable development is contacted with Sustainable Innovation. Innovative culture in enterprise is the core of survival and development, innovative prosecution and innovative management, the fundamentality of maintaining sustainable innovation, the base of developing innovative competitive power. Innovative culture in enterprise helps enterprises achieve sustainable development through influencing innovative executor and cultivating innovative environment and then providing impulsion for independent innovation.

Keywords: Innovative culture, Sustainable development, Independent innovation

Enterprise innovation culture is created and shaped in the activities of innovation and innovation management in order to adapt to the rapid development and change of market competition environment. It can motivate staff to innovate and develop gradually employees' conscious awareness of innovation, that is, employees can innovate constantly and try their hard to innovate, so that innovation becomes an integral part of the life and core values of employees. Therefore innovative culture in enterprise is the core of survival and development, innovative prosecution and innovative management, the fundamentality of maintaining sustainable innovation, the base of developing innovative competitive power. In the current competitive market environment, it is the only way for enterprise to develop to shape enterprise's core competitiveness through innovation culture. Innovative culture in enterprise promotes innovation and helps enterprises improve their core competitiveness and achieve sustainable development through fostering innovation stuff of innovation subject and cultivating innovative environment.

1. Enterprise innovation culture helps to foster innovation stuff

1.1 Enterprise innovation culture helps to set innovation concept

One of the constituent elements of enterprise innovation culture is the atmosphere in which everyone is innovating whenever. So that it is helpful for innovation subject to build up innovation concept in enterprise in this atmosphere.

1.2 Enterprise innovation culture helps to raise innovation consciousness

Innovation consciousness is a kind of high-level mental reflection of an objective reality. It is produced in the course of practice needs in social life of community and individual according to the motive of discovery and invention. In this practice people show their intention, desire and idea in order to regulate and adjust their direction of activities. Enterprise innovation consciousness is the most direct spiritual strength that decides the innovation ability of enterprise. It will help people to shape such advanced concepts as deploitation consciousness, opening awareness and so on. It can also help enterprise form democratic enterprise culture.

1.3 Enterprise innovation culture helps to cultivate innovation spirit

Innovation culture is essentially a people-oriented culture whose center is people. All the fruits of innovation in enterprise are to serve humanity so that people can live a more convenient and more comfortable life. Consequently, as the important features of innovation culture, people-oriented culture pays attention to the innovation value of and innovation contributions of every member, to the idea and advice of the staff, to the most democratic activities on the widest sense, to the demand at all aspects and all levels of the staff, and to staff exercising their powers fully within their authority. Therefore, enterprise innovation culture helps to cultivate innovation spirit.

1.4 Enterprise innovation culture helps to stimulate innovation thinking

The most core part of innovation culture is innovation values, while the inclusive thought of encouraging innovation and tolerating failure is an essential part of innovation values. Because innovation means risks and uncertainties, that is, the possibility of failure, the innovation culture should put more emphasis on encouraging innovation and spurring the employees' innovative behavior and tolerate their failure in innovation, which will help to maintain the innovation enthusiasm of the staff so that they can maximize their professional skills and develop their innovation thinking so as to achieve the success of innovation.

In a word, enterprise innovation culture helps to foster the innovation stuff of innovation subject.

2. Enterprise innovation culture helps to cultivate innovation environment

Innovation environment is a set of factors that is conducive to innovation. It is a set of all material factors and intangible factors which is benefit for innovation. Innovation environment includes not only physical environment such as infrastructure, labor, human resource, engineering level and other material factors but also immaterial environment such as social systems, social psychology, social customs, legal systems, social moral, political policies and other immaterial factors. Enterprise innovation environment is important condition to ensure enterprise to promote innovation culture, while enterprise innovation culture helps to cultivate innovation environment. Therefore the sustainable development of enterprises can not do without continuous innovation and the continuous innovation can not do without the support of innovation culture of enterprise. Only enterprise innovation culture is the fundamentality to maintain durative innovation. The construction of enterprise innovation culture is to create a favorable environment suitable for innovation features and coincident with innovation law in order to achieve innovation.

The construction of enterprise innovation culture helps to form an open, innovative and cooperative atmosphere of culture. Such an atmosphere makes for the communication between researchers and people in other departments, the collection of a lot of information, the improvement of the feasibility of setting up scientific research projects, carrying out the co-operation of collective and team in the process of innovation, and getting the understanding and support of related management in the face of difficulties and contradictions.

At the same time, it is decided by the characteristic of external environment such as diversity and mutability that an important condition of the existence of enterprise is to analyze such change innovatively, find out the influence of such change on the existing mode of organization, and generate strategy rapidly to adapt to the change so as to achieve the new co-ordination with the environment in the minimal cost and the fastest speed. The sensitivity to environmental changes, the mechanism strategy and speed to deal with environmental changes which are shown in this process is critical for the development of enterprise.

3. Enterprise innovation culture is the driving force of independent innovation in enterprise

With the acceleration of the process of economic globalization, the division of work and the transfer of the international industry are more and more dependent on the level of the capability of enterprise innovation. Through effective innovation on technology and other aspects, the production of innovation diffuses rapidly in enterprise. Then the enterprise forms its own core competency gradually and obtains competitive advantage to lead the market. Therefore, enterprises should step up innovation efforts. The core of enterprise innovation is the innovation of culture which is followed by the innovation of technology and management.

3.1 Enterprise innovation culture provides innovative values for enterprise

The core of enterprise culture is values, and the values of innovation culture advocates change and is progressive. Shaping the innovation values is a process that all the members of the organization understand all the connotations of innovation, build innovative thinking, realize the process of innovation and treat the outcome of innovation reasonably.

3.2 Enterprise innovation culture provides innovative system for enterprise

To maintain long-lasting capability of innovation and improve the efficiency of innovation in enterprise, it is necessary to build corresponding system which is the basis of carrying out innovation acts. The innovation activities are uncertain and there are no specific rules and regulations to follow, but as the organizer and manager of innovation activities, it is need for enterprise to establish a set of matching system in order to get the most fruit of innovation in the lowest cost. In short, the building of system is an integral part of innovation culture, and it is an important safeguard for an organization to develop its continuous ability of innovation.

3.3 Enterprise innovation culture requires enterprise to adopt incentives to promote innovation

In addition to an increase in wages and promotion, the incentive for innovation action can create a variety of Honor in recognition of foster innovation and build up heroes to strengthen innovation positively in order to encourage people to innovate.

All in all, the enterprise with right values pursues sustainable development of enterprise rather than short-term profit maximization. So it is more important for such enterprise to create economic value, social value and environmental value than pursue simply enterprise profits, and all the values constitute the driving force for innovation. At the same time, with the edification of enterprise values, scientific and technical personnel in enterprise will have a strong sense of crisis and urgency. Therefore they will speed up the pace of technological innovation in enterprise in order to promote the rapid development of enterprise. In a word, enterprise innovation culture is the headspring which can never be taken entirely and the vast and fertile soil of independent innovation.

4. To strengthen the building of enterprise innovation culture to promote the sustainable development of enterprise

With the acceleration of economic globalization and the process of scientific and technological development, the requirement for innovation is increasing, for innovative environment is more and more complex. So the task of constructing enterprise innovation culture is more and more difficult. It is needed for enterprise to exert fully the function of enterprise innovation culture, establish its unique pattern of innovation culture management and carry out reconstruction of enterprise innovation culture timely in order to achieve the sustainable development of enterprise and enterprise innovation culture.

4.1 The support of high-level leader with innovative ideas

The cultural ideas promoting innovation should firstly be appreciated and supported by high-level leaders because the formation of enterprise culture is the process of converting enterprise culture ideas into reality by the senior management through such process as constituting system, developing training and implementing system. In fact, according to the consensus of business and theory circles at home and abroad, the enterprise theory itself is traceable to respect of the senior leadership and is closely related with their moral character, values, and culture beliefs. Therefore, the attitude of the leader to innovation is particular important in the process of innovation. The leader supports, encourages, leads and helps employees to innovate, and gives feedback and positive consolidation to innovative actions, which will contribute to the innovative concept in-depth hearts of the people.

As a result, in order to realize innovation in enterprise, it is first required for high-level leaders to have the spirit of innovation, support innovation, support transformation, and encourage the original and independent innovation activities. The high-level leader must be able to tolerate failure, and even encourage failure, rather than try to suppress a variety of behavior may lead to failures; must have a long-term vision, pay attention to sustainable development of enterprise and achieve long-term competitive advantage. In other words, it is possible for an enterprise with innovative high-level managers to form innovation culture.

4.2 Cultivate learning organization

Innovation is the process of practicing exploration according to the knowledge learned before, the process of producing new knowledge based on the previous knowledge, and is an upgrade to learning. So learning and innovation are inseparable. On the one hand, the process of innovation itself is a process of learning, no learning, no innovation; On the other hand, innovation is the practice of learning are the upgrade of learning, and all the fruits of innovation is generated on the basis of the rich results in the past. As a result, the building of enterprise innovation culture should emphasized the importance of learning, and we should strive to cultivate enterprise into a learning organization. So education and training are needed. The education and training should be not only on enterprise innovation culture but also on creative thinking of staff. The employees can master the meaning of innovations culture, erect the values proud of innovation and practically translate innovative vision into real innovation culture through training on enterprise innovation culture; Through training on creative thinking the staff can be rich in imagination and divergent thinking so that everyone may have novel originality.

4.3 Providing material security of building innovation culture

The material environment of innovation atmosphere cannot be lack of hardware devices required for technological innovation, such as the tools, instruments, equipment, funds and so on which are needed in innovation. Because without the hardware facilities, innovation will not be able to start. In addition, the completeness or not of the innovation data and information, and such hardware facilities as the workplace and living conditions are indispensable conditions to attract and promote innovation personnel to carry out an innovation.

4.4 Providing the system security of building innovation culture

To create innovation culture and develop innovation activities, there must be system security to promote innovation in enterprise in addition to the building of the soft environment. Such system security is the rigid means to cultivate innovation culture. It makes every building of innovation abide its own rules and avoids the possibility of the blindness and randomness in the construction of innovation culture. The innovation culture system promoting innovation includes such aspects as the setting up of the organizational structure about innovation, the system about the introduction and development of innovative talent, the system about innovation incentives and the system about the assessment and application of innovation fruits.

In short, the enterprise innovation culture is an invisible hand, and it is like a banner which has a strong infectivity and appeal. Only enterprise innovation culture is the fundamentality to maintain durative innovation and then sustainable development in enterprise. With the acceleration of economic globalization and the process of scientific and technological development, the requirement for innovation is increasing, for innovative environment is more and more complex. So the task of constructing enterprise innovation culture is more and more difficult. It is needed for enterprise to exert fully the function of enterprise innovation culture, establish its unique pattern of innovation culture management and carry out reconstruction of enterprise innovation culture timely in order to achieve the sustainable development of enterprise and enterprise innovation culture.

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Supply Chain Management as a Sustainable Performance Booster for the Accommodation Enterprises: Evidence from North Cyprus Tourism Sector

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Abstract

The main purpose of the article is to assess the supply chain practices of the hotels and to reveal effects of such practices on the hotels' performance. Supply chain applications comprise relationships of hotels with their suppliers, tourism intermediaries and customers. In order to obtain sustainable performance development, hotel management should understand the key factors that have higher contribution. This study aims to investigate these factors as sources of superior performance in the competitive market place and to provide insights for directing resources. In this sense, hotels' performances not only analyzed in terms of financial measures, but also non-financial measures.

General conclusion of the study is that there is positive relationship between the supply chain practices of the hotels and their performance. Performance of the hotels in managing backward and forward linkages affects their success considerably that can be regarded as a source of competitive advantage.

Keywords: Hospitality management, Supply chain relationships, Tourism sector

Introduction

After 1990's, intense competition in markets has required businesses to be very careful about resource management. Using limited resources efficiently and effectively becomes the main common goal of almost all businesses. Furthermore, it is has been understood that a single business cannot produce all goods and services and provide them to several markets without any contribution of other businesses. Success can be obtained by collaboration of businesses via combining their capital, labour, land, technology, efforts, knowledge, abilities, and other various resources. The efforts of producers to establish partnerships with their collaborators (for example suppliers, wholesalers, retailers…) underlie the significance of 'supply chain management'. An effective supply chain will be more powerful than single-handed businesses in today's competitive markets. Most of the producers and retailers realize the importance of supply chain management in order to improve their effectiveness and efficiency along the supply chain. All of the businesses in the chain should be integrated and act as a single entity in order to be dominant in a market (Tan, Kanan and Handfield, 1998).

The need of collaboration is relevant and very important characteristic for tourism sector. Several businesses are in charge of creating and providing a tourism product to its end user. An effective and efficient supply chain in a tourism sector is very important for wealth and sustainable development of destinations. Particularly, when the situation of tourism industry in countries' economies is considered, the importance of the topic emerges and becomes highlighted.

Although tourism has been called as the "locomotive sector" of North Cyprus's economy for years and several actions/strategies has been implemented in order to develop it, desired goals and objectives still have not been achieved yet. One of the main reasons for the under-development of tourism sector is individual behaviours and mentality of tourism operations at North Cyprus. Most of these tourism businesses consider only their own gains and make their plans for short-run. On the other hand, they cannot sustain their gained advantages in the long-run. Therefore, tourism businesses need to collaborate and understand their business methods, expectations and support each other (for example financial support or by sharing information) to obtain effectiveness and efficiency. The collaboration should include all of the stakeholders from supply to end users of the products.

The need of collaboration in tourism industry has been widely stated but the factors of relationships in supply chain are not discussed for tourism industry. The critical factors should be uncovered to acknowledge their importance and their value and their effects on performance of tourism operations.

The main aim of this study is analysing the relationships of hotels (which are in North Cyprus tourism sector) with suppliers, travel intermediaries (tour operators/travel agencies) and customers; and uncovering factors at these relationships that increase performance of the hotels. It is more likely to be more powerful in the competitive market by having this kind of critical information and directing the resources accordingly.

1. Supply chain and supply chain management

Supply chain has been defined by several authors. Although perspective can be different, they are same in terms of the main philosophy. A supply chain can be defined generally as "three or more organizations directly linked by one or more of the flows of products, services, finances, and information from a source to a customer" (Mentzer, DeWitt, Keebler, Min, Nix, Smith, and Zacharia, 2001, p. 4; Christopher, 2005, p. 17). A network based definition is proposed by Aitken (1998): "a network of connected and interdependent organizations, mutually and co-operatively working together to control, manage and improve the flow of material and information from suppliers to end users". Christopher (1998) put forward a value-based variation on the theme, defining a supply chain as "the network of organizations that are linked through upstream and downstream relationships in the different processes and activities that produce value in the form of products and services in the hands of the ultimate customer".

According to an enterprise, a supply chain can be divided into two: supplier-oriented linkages and customer-oriented linkages. Supplier-oriented linkage represents all activities that a product is designed; components and resources (for example raw materials, information, capital, expertise…) are obtained (Kotler and Armstrong, 2006, p. 360-361). It can be possible to improve the products and become successful by considering suppliers as the same member of the team. On the other hand, customer-oriented linkage, which consist of wholesalers, retailers and customers), is very high important in bringing products to its end users. This part of a supply chain is also called as marketing channel or distribution channel (Timur, 1996; Kotler and Armstrong, 2006).

The definition of supply chain management provided by The Global Supply Chain Forum is recommended and used by several authors (such as Lambert and Cooper, 2000; Ho, Au, and Newton, 2002; Felix and Qi, 2003; Patterson, Grimm, and Corsi, 2003; Lambert, García-Dastugue, and Croxton, 2005, Tracey, Lim, and Vonderembse, 2005; Busi and Bititci, 2006):

"Supply Chain Management is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders".

The hotel's supply chain applications comprise relationships of hotels with their suppliers (backward-linkage) and tourism intermediaries (forward-linkage). In order to obtain a sustainable increase in performance, a hotel management should understand the key factors that have higher contribution. This study aims to investigate these factors as sources of superior performance in the competitive market place and to provide insights for directing resources. In this context, performance of the hotels is not only analysed in terms of financial measures (for example: net profit, production and selling costs…), but also in terms of non-financial measures (for example: product quality, customer satisfaction, market power…).

Hotels will be affected by the poor inputs of their suppliers. After that, tour operators who include these hotels into their package tours will not probably satisfy their customers completely. Moreover, the performance of travel intermediaries (who are responsible for promoting, bringing and selling the products to customers; and managing the activities of carrying the customers to the hotels) will affect the performance of the hotels (even though the products and services of the hotels are high-quality).

Examining the performance of the hotels, by only considering their financial performance will be a partial analysis. In addition to financial performance, customer relationship forms another important dimension of the hotels. Hotels, who are successful in their customer relations, also gain various financial and non-financial benefits (Reicheld and Sasser, 1990; Rust and Zahorik, 1993). Successful hotels in their customer relations are expected to increase customer satisfaction and loyalty; and most likely gain advantages in a market with the increased performance.

First of all, profits of hotels is expected to increase by supply chain management with less costly processes and higher production and sales volume. Frohlich and Westbrook (2001) approved the positive effects of supply chain integration. The authors divide the gains of supply chain management in two: productivity related gains and gains that are not related with productivity. Fall in costs and increase in sales volume are shown in productivity related gains. Improvement in quality of products is stated as the most important return under the gains that are not related with productivity.

2. Hypothesis

The hypotheses that examine the relation between the collaboration of hotels with other supply chain members and its effects are developed separately for both directions (supplier-oriented linkages and customer-oriented linkages) of supply chain. By this way, it will be possible to obtain more detailed information. The hypothesis that test the relationships between the supply chain activities of hotels and the criterion (that are important for performance improvement) are given below:

$H1_a$: There is a significant positive relationship between the collaboration of the hotels with their suppliers and *net profits* of the hotels.

$H1_b$: There is a significant positive relationship between the collaboration of the hotels with travel intermediaries and *net profits* of the hotels.

$H1_c$: There is a significant positive relationship between the collaboration of the hotels with their customers and *net profits* of the hotels.

$H2_a$: There is a significant positive relationship between the collaboration of hotels with their suppliers and *market share* of the hotels.

$H2_b$: There is a significant positive relationship between the collaboration of the hotels with travel intermediaries and *market share* of the hotels.

$H2_c$: There is a significant positive relationship between the collaboration of hotels with their customers and *market share* of the hotels.

$H3_a$: There is a significant positive relationship between the collaboration of hotels with their suppliers and average annual *sales growth* of the hotels.

$H3_b$: There is a significant positive relationship between the collaboration of the hotels with travel intermediaries and average annual *sales growth* of the hotels.

$H3_c$: There is a significant positive relationship between the collaboration of hotels with their customers and average annual *sales growth* of the hotels.

$H4_a$: There is a significant positive relationship between the collaboration of hotels with their suppliers and *production and sales costs* of the hotels.

$H4_b$: There is a significant positive relationship between the collaboration of the hotels with travel intermediaries and *production and sales costs* of the hotels.

$H4_c$: There is a significant positive relationship between the collaboration of the hotels with customers and *production and sales costs* of the hotels.

In addition to the factors stated above, the collaboration should also include customer related factors that are very critical in the hospitality industry. In other words, hotels should take account of customer satisfaction in assessing performance. The relationship between the supply chain activities of hotels and customer satisfaction is examined by the hypotheses given below:

$H5_a$: There is a significant positive relationship between the collaboration of hotels with their suppliers and *customer satisfaction*.

$H5_b$: There is a significant positive relationship between the collaboration of the hotels with travel intermediaries and *customer satisfaction*.

$H5_c$: There is a significant positive relationship between the collaboration of the hotels with customers and *customer satisfaction*.

The main aim behind developing close relationship with customers is increasing the number of loyal customers. Loyal customers are expected to choose the company and its products among various alternatives. It is shown by several studies that loyal customers repurchase the company's product, give positive advises to their friends and acquaintances, increase the company's market share, and provide benefits also in the long-run (Bitner, Booms and Tetreault, 1990; Cronin and Taylor, 1992; Reichheld, 1993; Parasuraman, Zeithaml and Berry, 1994, Zeithaml, Berry and Parasuraman, 1996; Imrie, Cadogan and McNaughton, 2002). According to the results of some other studies (Anderson, Fornell and Lehmann, 1994; Chang and Chen, 1998; Vickery, Jayaram, Droge, and Calantone, 2003), there is positive relationship between responsiveness of customers' wants and performance of businesses. It is expected to have more effective abilities to please customers with supply chain management by increasing business processes (Narasimhan and Jayaram, 1998; Narashimhan and Kim, 2001). In order to reach these goals, customer loyalty should be maintained. The hypothesis given below examines the relationship between the collaboration of hotels with supply chain members and customer loyalty:

$H6_a$: There is a significant positive relationship between the collaboration of hotels with their suppliers and *customer loyalty*.

$H6_b$: There is a significant positive relationship between the collaboration of the hotels with travel intermediaries and *customer loyalty*.

$H6_c$: There is a significant positive relationship between the collaboration of the hotels with customers and *customer loyalty*.

Providing customers products of good quality has been thought as a key of success (Bharadwaj, Varadarajan and Fahy, 1993). Superior product quality can be a source for differentiation in a market. According the results of some previous studies, there are positive relationship between the product quality (good and service quality) and business performance: The enterprises, which are able to provide high quality in their products, can maintain customer satisfaction (Rust and Zahorik, 1993; Anderson, Fornell and Lehmann, 1994; Fornell, Johnson, Anderson, Cha and Brant, 1996; Oh and Parks, 1997), customer loyalty (Reicheld, 1993; Reicheld and Sasser, 1990; Rust and Zahorik, 1993; Zeithaml, 2000), profitability (Aaker and Jacobson, 1994; Anderson, Fornell and Lehmann, 1994; Easton and Jarell, 1998; Kimes, 2001) and more market share (Anderson, Fornell and Lehmann, 1994).

It was stated in some of the studies (Doney and Cannon, 1997; Krause, Pagell and Curkovic, 2001) that the ability of businesses to satisfy their customers by providing products of good quality is affected by the quality level of their suppliers products. An increase in the quality of products of the hotels at North Cyprus is expected to be obtained with an increase in quality of inputs as a result of collaboration with suppliers.

$H7_a$: There is a significant positive relationship between collaboration of hotels with their suppliers and *quality of hotels' products*.

When we consider the forward-linkage of the supply chain, a collaboration with tour operators and travel agencies is expected to provide benefits in bringing products to end users effectively and efficiently and in marketing the products. Additionally, hotels will be informed about the demand and expectations of consumers. These results are likely to cause more effective design of the products and also increse in perceived quality.

$H7_b$: There is a significant positive relationship between collaboration of hotels with their travel intermediaries and *quality of hotels' products*.

Customers should also be considered as part of the supply chain. It will be possible to understand and satisfy the expectations and desires of the customers. By this way, the power of a company, which provide products of higher quality than competitors, will increase. According to the results of some studies (Au and Tse, 1995; Harris and Watkins, 1998), customer-oriented companies have advantages over their competitors. Customer-orientation helps to understand the need of existing and potential customers and provide them goods and services of higher quality.

$H7_c$: There is a significant positive relationship between collaboration of hotels with their customers and *quality of hotels' products*.

Supply chain management is considered as a source of competitive advantage in a market (Mentzer, DeWitt, Keebler, Min, Nix, Smith, and Zacharia, 2001; Tan, Lyman, and Wisner, 2002; Kotler and Armstrong, 2006). While transporting products to their end users in fastest way with higher quality and lower cost, a chain of integrated businesses becomes a requirement. In a supply chain management, obtaining success becomes possible by investing to relationship based processes and combining resources that cannot be easily imitated by competitors (Dyer, 1996; Dyer and Singh, 1998). Members of a supply chain can obtain speed in transportation and delivery, reduction in costs and increase in quality of their products that can provide them more power in markets (Choi and Hartley, 1996).

In supply chain management, an integrated structure emerges that make use of various functions and abilities of its members. According to the suggested model, the hotels which are in a strong supply chain are expected to obtain benefits together with other supply chain members and compete more effectively in the market. First of all, these benefits are expected to be perceived in terms of increases in product quality, market share, profits, customer satisfaction and loyalty; and finally competitive advantage in the market is expected to be maintained.

$H8_a$: There is positive relationship between the collaboration with suppliers and *achieving competitive advantage* in the market.

$H8_b$: There is positive relationship between the collaboration with travel intermediaries and *achieving competitive advantage* in the market.

The role of customer in obtaining a competitive advantage should not be underemphasized. Considering the customers as the part of the supply chain will bring a sustainable relationship that provide benefits to both sides in the long run.

$H8_c$: There is positive relationship between the collaboration with customers and *achieving competitive advantage* in the market.

3. Methodology

The survey instrument was developed by using the previously used and tested measures. The construct measures and the related sources are given at the Table 1.

Respondents were asked to comment on the statements by using 5-point Likert scale in which (1) represents "strongly disagree" and (5) represents "strongly agree" for the statements related with inter-firm communication effort; hotel's perspective toward other supply chain members, other supply chain members' commitment to the hotel; (1) represents "never" and (5) represents "always" for performance improvement and feedback. Furthermore, the respondents were asked to evaluate their hotels' performance according to the major competitors of the industry (whereas (1) represents "very low" and (5) represents "very high").

The survey was applied in hotels located at North Cyprus. The data is collected from the top managers. Top managers have ability and availability to evaluate the performance of the hotel. Using the perceptions of managers about the hotel's performance was used (Vickery, Droge and Markland, 1994; Shamdasani and Sheth, 1995 Walton, 1996; Tan, Handfield and Krause, 1998; Geyskens and et al., 1999; Germain, Droge and Christensen, 2001; Narasimhan and Das, 2001; Joshi, Kathuria and Porth, 2003; Vickery, Jayaram, Droge and Calantone, 2003) and its objectivity was approved (Dess and Robinson, 1984; Venkatraman and Ramanujam, 1987; Chandler and Hanks, 1993) by several researchers.

Because of the difficulties experienced in obtaining accounting data and problems about comparing different companies with different figures, the usage of perception-based measures has been increased. In order to evaluate the effects of relationships between the hotels, suppliers and travel intermediaries, the researcher should obtain the data that is very critical and sensitive. Furthermore, the performance figures may be calculated by using different methods, periods and data at different companies. This may cause variations at the results. Moreover, there is no certainty about the accounting results. Sometimes subjective calculations may be used. Tan, Handfield and Krause (1998) compared the perceptional performance results with some financial data (income per share, sales, net income…) obtained by Dun and Bradstreet data-base and found statistically significant correlations. In another study, Carr and Pearson (2002) compare the perceptions of the respondents with the data obtained from a financial database (Computstat). The data obtained from the respondents was matched the financial data at least 71 percent of the time for both variables.

4. Data analysis, findings and discussion

4.1 Reliability of the data

To assess the internal validity of the theorized grouping of survey items, coefficient alphas were calculated for different aspects of the survey items. The alpha obtained for overall construct is 0.84. In order to be more confident about the reliability of the items, Cronbach alphas were also calculated for each of the supply chain management practices. All calculated alphas exceed the Nunnally's criterion of 0.70 level that is generally considered acceptable.

4.2 Collaboration of the hotels

Collaboration of the hotels with the suppliers, travel intermediaries and customers were determined by looking the mean scores of the supply chain practices of the hotels (inter-firm communication effort; performance improvement and feedback; hotel's perspective toward suppliers and travel intermediaries; suppliers', travel intermediaries' and customers' commitment to the hotel; customer relations and management). A mean score above 3.00 means a high level of collaboration. On the other hand, if the mean score is below 3.00, it will represent a low level of collaboration.

The overall mean score of the survey construct equals to 3.06. Although the overall score of the study seems to be above 3.00 (which means high collaboration level), it cannot be considered as very satisfactory level to achieve superior level of performance. However, it is fine enough to compare the means of high and low level of collaborations. By looking the means, it can be understood that the highest collaboration takes place with the customers and the lowest with the suppliers.

Respondents were asked to evaluate their hotels' performance according to the major competitors of the industry. The managers stated their perceptions on 5-point Likert scale.

Independent-samples t-tests were conducted in order to compare the performance measures' means of the hotels, which were categorized as high-collaboration and low-collaboration. In order to be able to conduct t-tests and obtain meaningful results the data were transformed (Table 4).

The means of performance measures are compared according to the collaboration level of the hotels. Significant differences were found between the more collaborative hotels and the low collaborative hotels with their customers ($t=3.14$, $p<0.05$) in terms of earning net profit. In other words, according to the results of independent samples t-tests the hotels, which collaborate more with customers, are more likely to earn more net profits. On the other hand, there are no significant differences between the collaboration level of the hotels with suppliers and travel intermediaries and the net profits. It means that according to the managers, their net profits would not increase if they have collaborated with the suppliers and travel intermediaries. At the end of these findings, hypothesis $H1_c$ was accepted; but $H1_a$ and $H1_b$ were rejected. In other words, according to the respondents, the most important component at the supply chain in *increasing net profit* of the hotels is the linkage with customers (collaboration with customers, $\mu=3.44$). High collaboration with customers is more likely to increase the net profit. Although significant differences were not found according to the collaboration level, the net profit mean score of the collaboration with the suppliers is not very low. These results may denote that the respondents perceive their suppliers as a source to increase their profits by decreasing the cost and improving the quality of their inputs.

Second group of hypotheses test the relationship between the level of collaboration of the hotels with other supply chain members and the hotels' market share. According to the managers, market share is related with the forward-linkage of the supply chain. Significant differences were found between the means of the market share variable that was analyzed by dividing the data according to high collaboration and low collaboration (table 6). There is positive relationship between the collaboration of the hotels with travel intermediaries ($t = 4.57$, $p<0.01$) and with customers. ($t = 3.08$, $p<0.05$). When the hotels are involved more in collaboration practices with travel intermediaries and the customers, their market share are intended to increase. On the other hand, there is no significant relationship between the collaboration with suppliers and the market share. Therefore, $H2_b$ and $H2_c$ were accepted and $H2_a$ was rejected.

In increasing the market share of the hotels, the most important factor at the supply chain is the collaboration with travel intermediaries ($\mu=4.72$). In other words, high collaboration with travel intermediaries increases the market share of the hotels significantly. Conversely, the respondents do not consider their suppliers as a source of increasing the market share.

The relationships between the collaboration practices and the sales growth (Table 7) are similar to the relationships between the collaboration practices and the market share. According to the respondents, in order to increase the sales of the hotels, collaboration with the travel intermediaries ($t = 4.16$, $p<0.01$) and collaboration with the customers ($t = 3.19$, $p<0.05$) should be maintained. According to the results of this study, collaboration with the suppliers has not significant effect on sales of the hotels. By looking these findings, $H3_b$ and $H3_c$ were accepted and $H3_a$ was rejected.

The highest mean score of the sales performance was stated for 'high collaboration with travel intermediaries' ($\mu=4.75$). According to the managers, they can increase the hotels' sales by collaborating with travel intermediaries. Customers are also important for the hotels in increasing their sales; but the suppliers are not perceived as important in this context.

Significant relationships were not found between the collaboration level of the hotels with other supply chain partners and the cost performance of the hotels (Table 8). Although the means of the costs are lower for the hotels that collaborate more with their suppliers, travel intermediaries and customers, the cost performance means of the groups are not different significantly. As a result of these findings, all of the hypotheses ($H4_a$, $H4_b$ and $H4_c$) which assess the relationship between supply chain practices and the production and sales costs were rejected. The results show that the respondents were perceive their production and sales costs as high and collaboration with the supply chain partners would not decrease their costs. However, the lowest means were observed at the collaboration with suppliers. The differences showed that the respondents consider the suppliers much more important than travel intermediaries in obtaining cost reductions.

On the other hand, the hotels can increase *customer satisfaction* by collaborating with travel intermediaries ($t = 4.07$, $p<0.01$) and customers ($t = 3.01$, $p<0.05$) (Table 9). The respondents do not consider suppliers as a source for increasing customer satisfaction ($H5_a$: rejected, $H5_b$ and $H5_c$: accepted). Furthermore, according to the results, the customer loyalty cannot be maintained by collaborating with suppliers. Significant results were obtained between the *customer loyalty* (Table 10) and the collaborations with travel intermediaries ($t=2.85$, $p<0.10$), and customers ($t=4.28$, $p<0.01$). In other words, according to the managers, high collaboration with travel intermediaries and customers are more likely to lead customer loyalty. Thus, $H6_b$ and $H6_c$ were accepted and $H6_a$ was rejected.

In order to increase customer satisfaction and customer loyalty, the hotels must obviously and definitely collaborate with the customers. The highest means were become apparent from the factor of 'high collaboration with customers' in achieving customer satisfaction ($\mu=4.68$) and customer loyalty ($\mu=4.56$). Moreover, travel intermediaries were also perceived as other effective source for satisfaction of customers and maintaining the loyalty. However, suppliers are not seen as contributors to these customer related performance measures.

The results show that the hotels which collaborate more with suppliers and customers can improve the quality of their products (Table 11). The means of quality performance of the hotels (which collaborate more with suppliers ($t = 2.99$, $p<0.05$) and customers ($t = 4.06$, $p<0.05$) are significantly higher than the hotels in which collaboration with suppliers and customers are low. The collaboration with travel intermediaries does not have significant effects on quality performance of hotels. Therefore, $H7_a$ and $H7_c$ were accepted; however $H7_b$ was rejected.

In increasing the quality of the hotels' products, the most important factor at the supply chain is the collaboration with customers ($\mu=4.54$). In other words, high collaboration with customers increases the quality of the hotels' products significantly. By establishing close relations with customers, the hotels are more likely to obtain opportunity to comprehend the needs and expectations of them. Suppliers are also identified as another contributor for the hotels to increase their products' quality. The managers probably recognize the value of the inputs (which are obtained from the suppliers) in enhancing the quality.

Significant results were found for all of the supply chain relationships of the hotels in analyzing their effect on achieving competitive advantage (Table 12). According to the respondents, the supply chain activities of the hotels with their suppliers, travel intermediaries and customers affect their competitive position in the market. The high collaboration in the supply chain is expected to increase the market power of the hotels. All of the hypotheses related with effects of the supply chain activities in obtaining competitive advantage ($H8_a$, $H8_b$ and $H8_c$) were accepted as a result of these findings. Furthermore, the highest mean about obtaining competitive advantage belongs to the high collaboration with customers ($\mu=4.54$). According to the managers, the customers are the most important component of the supply chain in sustaining competitive advantage.

In order to comprehend the strong and weak points of the relationships, three highest and three lowest mean scores were derived from the data for each one of the link from the hotels to suppliers, travel intermediaries and customers (Table 13). Assessment of the suppliers' performance and sharing information is most involved activities by the hotels. On the other hand, the respondents gave low scores to the items which are very important for the health of the supply chain. They do not view their suppliers as an extension of their company, do not make investments in the suppliers' operation and do not perceive the inputs' prices as reasonable.

Inviting travel intermediaries' personnel to the hotel to increase their awareness about the products they sell is the most preferred activity by the respondents of the survey (Table 14). Furthermore, the respondents also agreed about the exchange of information practices with travel intermediaries. On the other hand, the hotels do not invest generally in the travel intermediaries' operation, pricing strategies of the travel intermediaries' are not perceived as reasonable, and travel intermediaries are not believed as loyal to the hotels.

Activities related with maintaining customer satisfaction, recovering the service failures and building/maintaining customer relationships effectively are very important and implemented by the hotels (Table 15). Although the mean scores are note very low for the customer relationships related items, the lowest means belong to determination of future customer expectations, interaction with customers to set reliability, responsiveness, and other standards, and enhancement of customers' ability to seek assistance.

5. Conclusion

Development of tourism industry is crucial for economic improvement of North Cyprus. It is not always possible to be successful in the competitive marketplace by only operating in isolation and considering individual interests. Collaboration with supply chain activities can be a key success factor for tourism operations in strengthening their power and increasing performance.

In this study, the supply chain activities of the hotels operating in North Cyprus were examined and their effects on the performance were analyzed. In order to examine the effects of the various supply chain activities on the hotels' performance, the data (which represents the hotel managers' responses) were divided into two: high collaboration and low collaboration. Significant differences were found that means the means of the performance measures are different according to the level of supply chain collaboration.

The collaboration level of the hotels with other supply chain members is not very low. However, advancement in supply chain practices is expected to provide more opportunities to increase the performance of the hotels. The hotels should be very careful about their operations. Unconscious and unplanned practices can easily bring the level to the 'low collaboration' field. Insufficiency in the supply chain collaboration weakens the market power of the businesses and will most likely cause to escape several opportunities in terms of increasing the performance.

The managers perceive the customers as the most important component of the supply chain and allocate most of their resources to build and maintain relationships with them. Suppliers are seen as the least important partner in the chain.

According the results of this study, high collaboration with suppliers improves the quality of their products and provides advantages to the hotels to enhance their competitive position in the market. High collaboration with travel intermediaries improves the performance of the hotels in terms of market share, sales, customer satisfaction, customer loyalty and competitive advantage. Finally, high collaboration with customers increases net profit, market share, and sales; enhance customer satisfaction and customer loyalty; improve quality of the hotels' products; and provide opportunity to achieve competitive advantage.

The managers should become aware of the importance of collaboration in the supply chain. The activities which scored low should be considered as the points that are needed to be improved. There are vital activities which are not recognized as a factor of strengthening the performance.

Collaboration in the supply chain should not be a single-sided philosophy or belief. All supply chain members should locate the supply chain management into their organizations and manage their activities by considering the whole chain.

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Table 1. Construct measures and sources

Inter-member communication effort	
-Exchange of information in this relationship takes place frequently and informally, and not only according to a pre-specified agreement.	Heide and John, 1992
-In this relationship, any information that might help the other party will be provided for them.	
-Both parties keep each other informed about events or changes that may affect the other party.	
Performance Improvement and Feedback	
-Assessment of ……….'s performance through formal evaluation, using established guidelines and procedures.	
-Use of a ……… certification program to certify ……..'s quality, thus making inspection unnecessary	Krause 1999, 1997
-Site visits by your firm to …….'s premises to help ……… improve its performance	
- Inviting supplier's personnel to your site to increase their awareness of how their product is used (Inviting travel intermediaries' personnel to your site to increase their awareness about the products they sell)	Krause and Ellram, 1997
- Recognition of ……….'s achievements/performance in the form of awards	
- Training/education of the ………….'s personnel	
- Investment in the …………'s operation	
Hotel's perspective toward …………………	
-We view our …………. as an extension of our company	
-............... ' problems are our problems	
-Continuous improvement of our …………'s product/service is an objective of our enterprise.	
-The product/service quality of ……………. is high.	Krause, 1999
-Our suppliers have the ability to consistently deliver its products on promised due dates. (The travel intermediaries have the ability to consistently deliver the products to customers.)	Krause, Pagell and Curkovic, 2001.
The cost of inputs obtained from our suppliers is reasonable. (The travel intermediaries set reasonable prices to the products)	
…………… are sufficiently flexible in satisfying the changing needs.	
Suppliers and Travel Intermediaries commitment to the hotel	
.... has a strong sense of loyalty to us	
.... are willing to make a long-term investment in helping us	
.... see our relationship as a long-term alliance	
..............., willing to dedicate whatever people and resources it takes to make us a satisfied customer	Krause, 1999
Customer relations and management	
Determination of future customer expectations.	
Determination of key factors for building and maintaining customer relationships.	
Enhancement of customers' ability to seek assistance.	
Evaluation of formal and informal complaints.	
Follow-up with customers for quality/service feedback.	Tan, Kannan, Handfield and Ghosh 1999
Interaction with customers to set reliability, responsiveness, and other standards.	
Measurement and evaluation of customer satisfaction factors.	

Customers Commitment to the Hotel (Brand) Customers are aware and recognize our hotel among other competing brands. Customers believe that the quality of our hotel (and our products) is extremely high. Customers are loyal to our hotel. Customers can quickly recall the associations (logo, symbol, features, image...) of our brand. **Performance Measures** Net Profit Market share Average annual sales growth Average production costs Customer satisfaction Customer loyalty Quality of products **Competitive power in the market** We can differentiate our products in the market. We have cost advantages over the rivals. We have the ability to satisfy the needs and expectations of a niche. The quality of our products/services is higher than the rivals'. Our hotel has the ability to respond to the all kinds of products/services provided by the rivals.	Aaker, 1991, 2000 Yoo and Donthu, 2001 Tan, Kannan, Handfield and Ghosh 1999 Tan, Handfield and Krause, 1998 Porter, 1980, 1985

Table 2. Reliability Alphas of the Survey Instrument

	Alpha
Inter-firm communication effort	0.93
Performance Improvement and Feedback	0.78
Hotel's perspective toward …………………	0.82
.... commitment to the hotel	0.77
Customer relations and management	0.91
Performance Measures	0.89
Competitive power in the market	0.84
Overall alpha	0.84

Table 3. The means of Collaboration in the Supply Chain

Hotel's Collaboration with Suppliers, Travel Intermediaries and Customers	Means
Collaboration with suppliers	2.62
Collaboration with travel intermediaries	2.91
Collaboration with customers	3.66
Average	3.06

The table given above shows the means for the collaboration of the hotels with suppliers; with travel intermediaries; and with customers.

Table 4. Key for Transformed Values

Means	New Values	Meaning
1.00-3.00	1	Low
3.01-5.00	2	High

Table 5. Effects of the Collaboration on Net Profit

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	3.42	0.77	1.78	0.193
Low Collaboration with suppliers	3.31	0.68		
High collaboration with travel intermediaries	2.76	0.71	1.57	0.275
Low collaboration with travel intermediaries	2.67	0.75		
High collaboration with customers	3.44	0.81	3.14**	0.032
Low Collaboration with customers	3.01	0.86		

***p<0.01; **p<0.05; *p<0.10

[a]S.D.: Standard Deviation; all mean scores were rounded up to two decimal places.

The table given above demonstrates the relationships between collaboration of the hotels with supply chain members and the effects of this collaboration on net profit of the hotels.

Table 6. Effects of the Collaboration on Market Share

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	3.53	0.79	1.21	0.246
Low collaboration with suppliers	3.41	0.82		
High collaboration with travel intermediaries	4.72	0.74	4.57***	0.008
Low collaboration with travel intermediaries	3.87	0.79		
High collaboration with customers	4.64	0.64	3.08**	0.036
Low collaboration with customers	4.31	0.68		

***p<0.01; **p<0.05; *p<0.10

All mean scores were rounded up to two decimal places.

[a]S.D.: Standard Deviation

Table 7. Effects of the Collaboration on Sales Growth

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	3.66	0.90	0.94	0.487
Low collaboration with suppliers	3.64	0.89		
High collaboration with travel intermediaries	4.75	0.70	4.16***	0.009
Low collaboration with travel intermediaries	4.10	0.76		
High collaboration with customers	4.67	0.55	3.19**	0.029
Low collaboration with customers	4.22	0.61		

***p<0.01; **p<0.05; *p<0.10

All mean scores were rounded up to two decimal places.

[a]S.D.: Standard Deviation

Table 8. Effects of the Collaboration on Production and Sales Costs

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	4.03	0.74	-1.23	0.236
Low collaboration with suppliers	4.11	0.94		
High collaboration with travel intermediaries	4.34	0.68	-1.49	0.287
Low collaboration with travel intermediaries	4.42	0.68		
High collaboration with customers	4.13	0.50	-1.15	0.256
Low collaboration with customers	4.24	0.77		

***p<0.01; **p<0.05; *p<0.10
All mean scores were rounded up to two decimal places.
[a]S.D.: Standard Deviation

Table 9. Effects of the Collaboration on Customer Satisfaction

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	3.13	0.84	1.46	0.294
Low collaboration with suppliers	3.07	0.59		
High collaboration with travel intermediaries	4.31	0.88	4.07***	0.009
Low collaboration with travel intermediaries	3.71	0.76		
High collaboration with customers	4.68	0.38	3.01***	0.048
Low collaboration with customers	4.38	0.42		

***p<0.01; **p<0.05; *p<0.10
[a]S.D.: Standard Deviation; all mean scores were rounded up to two decimal places.

Table 10. Effects of the Collaboration on Customer Loyalty

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	2.37	0.54	1.24	0.244
Low collaboration with suppliers	2.23	0.79		
High collaboration with travel intermediaries	3.38	0.48	2.85*	0.057
Low collaboration with travel intermediaries	3.14	0.65		
High collaboration with customers	4.56	0.56	4.28**	0.007
Low collaboration with customers	3.83	0.59		

***p<0.01; **p<0.05; *p<0.10; S.D.[a].: Standard Deviation

Table 11. Effects of the Collaboration on Quality of Hotels' Products

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	4.16	0.92	2.99**	0.045
Low collaboration with suppliers	3.87	0.69		
High collaboration with travel intermediaries	2.49	0.77	1.48	0.293
Low collaboration with travel intermediaries	2.42	0.89		
High collaboration with customers	4.54	0.44	4.06***	0.013
Low collaboration with customers	3.93	0.32		

***p<0.01; **p<0.05; *p<0.10

S.D.[a].: Standard Deviation; all mean scores were rounded up to two decimal places.

Table 12. Effects of the Collaboration on Achieving Competitive Advantage

	Mean	S.D.[a]	t-score	Sig.
High collaboration with suppliers	2.96	0.77	2.83*	0.086
Low collaboration with suppliers	2.76	0.89		
High collaboration with travel intermediaries	3.94	0.56	4.51***	0.008
Low collaboration with travel intermediaries	2.98	0.56		
High collaboration with customers	4.54	0.71	3.09**	0.047
Low collaboration with customers	4.11	0.92		

***p<0.01; **p<0.05; *p<0.10

S.D.[a].: Standard Deviation; all mean scores were rounded up to two decimal places.

Table 13. Highest and Lowest Means Related with the Supply Chain Activities of the Hotels with Suppliers

Items	Means
Assessment of supplier’s performance through formal evaluation, using established guidelines and procedures.	4.25
In this relationship, any information that might help the other party will be provided for them.	3.75
Exchange of information in this relationship takes place frequently and informally, and not only according to a pre-specified agreement.	3.23
We view our supplier’ as an extension of our company	2.36
Investment in the suppliers’ operation	2.04
The cost of inputs obtained from our suppliers is reasonable.	1.69

The first three rows represent the highest means and the remaining three represent the lowest means.

Table 14. Highest and Lowest Means Related with the Supply Chain Activities of the Hotels with Travel Intermediaries

Items	Means
Inviting travel intermediaries’ personnel to your site to increase their awareness about the products they sell.	4.49
Both parties keep each other informed about events or changes that may affect the other party.	4.10
In this relationship, any information that might help the other party will be provided for them	3.97
Investment in the travel intermediaries’ operation	2.14
The travel intermediaries set reasonable prices to the products	1.94
Travel intermediaries has a strong sense of loyalty to us	1.77

Table 15. Highest and Lowest Means Related with the Supply Chain Activities of the Hotels with Customers

Items	Means
Measurement and evaluation of customer satisfaction factors.	4.85
Evaluation of formal and informal complaints.	4.69
Determination of key factors for building and maintaining customer relationships.	4.56
Determination of future customer expectations.	3.09
Interaction with customers to set reliability, responsiveness, and other standards.	3.07
Enhancement of customers' ability to seek assistance.	2.87

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ICT Adoption in Small and Medium Enterprises: an Empirical Evidence of Service Sectors in Malaysia

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Abstract

The purpose of this study is to gain a deep understanding of the factors which influence the adoption and usage of ICT by SMEs in Malaysia. This study examines the relationship between ICT adoption and its five factors which are perceived benefits, perceived cost, ICT knowledge, external pressure and government support. The results of this study show that three factors examined are significantly important to the adoption of ICT where as perceived cost and external pressure are found to be insignificant in determining its adoption. This study provides a greater understanding of SME's perception about ICT adoption in their service business. Those SMEs who are interested in promoting their business on online may find these results helpful in guiding their efforts.

Keywords: ICT, SMEs, Melaka, Johor, Malaysia

1. Introduction

Today's business world has been deeply influenced by Information and Communication Technologies (ICT) and the application of ICT among business is widespread. ICT are rapidly changing global production, work and business methods and trade and consumption patterns in and between enterprises and consumers. Denni (1996) stress every business must bring ICT into their business operation and take advantage of the benefits they offer. In the developed countries including Australia and United Kingdom Small and Medium enterprises (SMEs) account for more than half of all business and over half of all employment (Kazi, 2007). Nowadays small businesses are increasingly using and adopting information and communication technology due to the advent of Personal Computer, cost-effectiveness and cheaper ICT products. Alberto and Fernando (2007) argued that the use of ICT can improve business competitiveness with internet providing numerous opportunities for SMEs to compete equally with large corporations.

As the world economy continues to move toward increased integration as a result of advances in information communications technology, and the increasing reduction in trade barriers, some of the greatest opportunities for small businesses will derive from their ability to participate in the regional and international markets (Mutula and Brakel, 2006). Adoption of the ICT is considered to be a means to enable these businesses to compete on a global scale, with improved efficiency, and closer customer and supplier relationships (Chong et al., 2001). In this respect, SMEs should consider information and communication technology (ICT) as an important approach in their business to take competitive advantage from the global markets (Mutsaers et al., 1998). Moreover, ICT is a resource of SME which may help them to access and contribute to in order to enhance its competitiveness (Swash, 1998).

Some empirical studies by Bartelsman and Doms (2000), Brynjolfsson and Yang (1996), Dedrick et al. (2003), Kohli and Devaraj (2003) and Melville et al. (2004) confirms the positive effect of information and communication technologies (ICT) on firm performance in terms of productivity, profitability, market value and market share. Their study also reveals that ICT has some effect in terms of intermediate performance measures, such as process efficiency, service quality, cost savings, organization and process flexibility and customer satisfaction. The introduction of ICT will offer various new investment opportunities within local industries, particular in the area of SMEs. Industries that are developing may take advantage of ICT which are being recognized by many previous studies. In fact, there is a need to accelerate the implementation of ICT to improve business performance. In order to do so, it is important to measure the key factors driving the growth of ICT and providing appropriate recommendation on this study.

This paper aims at investigating the factors that influence ICT adoption by small and medium enterprises in service industries of the southern area. A variety of internal and external factors have been identified as preventing many SMEs from implementing ICT. The study, which is reported in this paper, provides more in-depth information about the reasons why local SMEs are reluctant to adopt ICT for their business activities. Identifying the major reasons may help the industry or government to provide appropriate information and support thus enhance ICT usage. Most of the empirical research is based on large companies, and SME in fact are characterized by the lack of knowledge about the real advantages that ICT could add to their business (King, 1994; Palvia, 1994). After the discussion of ICT usage, conclusion is drawn along with significant recommendations to improve ICT utilization amongst SMEs.

The article is structured as follows. Section 1 is the introduction. Section 2 presents a literature review of ICT adoption in SMEs. Section 3 presents the conceptual framework of this study. The research design and the data collection process is presented in section 4. Section 5 presents an analysis of the results. Section 6 presents the limitation. Section 7 provides managerial implication, while section 8 discusses some conclusions.

2. Malaysian SMEs and ICT usage

Small and medium enterprises (SMEs) play a vital role in the Malaysian economy and are considered to be the backbone of industrial development in the country (Saleh and Ndubisi, 2006, Ramayah et. al., 2002). Small and medium sized enterprises (Hashim, 2000) are defined as firms employing full-time employees 150 or with annual sales turnover not exceeding RM25 million, and play a significant role in the country's economic development, particularly in the manufacturing sectors (Ramayah et. al., 2002). As of December 2005, a total of 600,000 SMEs were registered in Malaysia (SME bank). They contribute 27.3 per cent of total manufacturing, 25.8 per cent to value-added production, own 27.6 per cent of fixed assets, and employ 38.9 per cent of the country's workforce (SMIDEC, 2002). There are 192,527 establishments in the services sector, and 186,728 (or 96.7 per cent) of these are made up of SMEs in Malaysia (DOS). According to Yusoff (2004) the services sector grew by 6.8% in 2004, driven by higher consumer spending and a record level of tourist arrivals. Growth emanated from strong expansion in all sub- sectors with transport and communication in the lead at 8.4% followed by wholesale and retail trade, hotels and restaurants (7.1%) and finance, insurance, real estate and business services (6.5%). Together with new growth areas in information and communications technology (ICT), the services sector was able to maintain its premier position in terms of its share of GDP at 57.4%.

Malaysian businesses, small and medium-sized enterprises (SMEs) have been relatively slow in web adoption. According to Lee (2005) about 30 per cent of SMEs in Malaysia have a web presence and use IT extensively in their daily operations. This reflects a poor rate of IT adoption among the estimated 600,000 local SMEs. Most SMEs perceived the barriers of implementing IT into their business operations as expensive, risky, complex procedure, lack of technical expatriate, and customer services (Yeung et al., 2003; Chong et. al., 2001; Pires and Aisbett, 2001). According to Soh et al. (1997) if SMEs in Malaysia adopt the ICT, the potential commercial functions that could be performed include, marketing themselves both locally and globally, gathering business information and consumer feedback, providing customer support and conducting electronic transactions. On the other hand, if ICT implementation is successful, it would have severe repercussions on small businesses with their limited resources (Chong et. al., 2001).

According to Lim (2006) most SMEs in Malaysia realize that ICT is critical to the productivity and performance of their companies. But, implementation and maintenance of these ICT systems is restricted due to inability to handle, owing to high staff turnover and lack of ICT project management expertise. He also stresses that many Malaysian family-based SMEs are still operating their business the conventional way. Consequently SMEs which have invested in ICT systems fail to implement and maintain these systems successfully. Similarly, Tan (2006) argues that ICT in Malaysia is facing big challenges due to the slow adoption of technology by SMEs in Malaysia. He also suggests that SMEs must learn to adopt technology to increase their global competitiveness.

3. The conceptual framework for the study

The conceptual model tested in this paper contains constructs that have demonstrated theoretical support, based on a number of researches done in this area in different developed and developing countries, particularly on ICT and other innovation perspective. The model examines the factors that would possibly affect the ICT adoption. The conceptual model is shown in Figure 1.

Insert Figure 1 here

The schematic diagram of the theoretical framework above is use to show the relationship between the dependent and independent variables. Essentially, the theoretical framework show above is the foundation on which the entire research is based upon.

ICT adoption is the dependent variable in this research. The dependent variable is analyzed in this research in order to find out the answer or solution to the problem i.e. what contributes the company to adopt ICT in their business? In this situation, the study has tested five independent variables i.e. perceived benefit of ICT, perceived cost of adoption, ICT knowledge and skill of the employees, external pressure, and government support that are believed to have some influences towards the dependent variable (ICT adoption) either in positive or negative way.

3.1 Perceived benefits

The existing literature has proved that the greater the benefits perceived by the SMEs the higher the possibility of ICT adoption. Perceived benefits should be considered as one of the factors that could affect ICT adoption in the firms. In one empirical study, Giovanni and Mario (2003) found that ICT is able to offer enterprise a wide range of possibilities for improving their competitiveness such as provide mechanisms for getting access to new market opportunities and specialized information services. According to OECD (2004) it was found that ICT is able to improve information and knowledge management inside the firm and increase the speed and reliability of transactions for both business-to-business (B2B) and business-to-consumer (B2C) transactions. Besides that, they also explained the opportunities offered by ICT, which an organization can exchange real-time information and build closer relationship with suppliers or business partners and customers. This study also found the possibility of immediate customer feedback according to the customer demand in the new markets.

Sakai (2002) study also stress that the extensive use of ICT can allow micro-enterprises with ideas and technologies to remain small and profitable or generate substantial global sales by exploiting their intellectual property over the Internet. On the other hand, Pohjola, 1998 suggests that ICT is thought to contribute to overall growth in the long-term. Generally primary motivation for the SMEs to adopt new technologies (such as the Web) is the anticipated benefits these technologies will bring to the company (Premkumar and Roberts, 1998). Nowadays SMEs have recognized the positive impacts of ICTs such as computer terminals, e-mail and Internet to the organization level as well as their applications on business performance.

According to a study by Lymer et al (1997) it stresses that ICT implementation in the organization which includes SMEs has the potential to reduce costs and increase productivity level. According to them small firms might find cost-effectiveness as a motivating factor to use Internet-commerce for improving communication with trading partners and consumers. Lauder and Westall (1997) have given their experts opinion that ICT impacts include cheaper and faster communications, better customer and supplier relations, more effective and efficient marketing, product and service development and better access to information and training. Barua (1995) study found a positive impact on ICT usage in business and it is able to increase business performance.

Since there are many perceive benefits that have been made available through adoption with ICT, there are still many organisations not taking advantage of ICT. Therefore, perceived benefits are taken into consideration as one of the factor that affects ICT adoption in SMEs.

3.2 Cost

The cost of adoption is an important factor in the adoption and utilization of the Web (Ernst and Young, 2001). Generally, the higher the costs adoption of the innovation, the slower the pace of innovation expansion is likely to be (Mansfield, 1968; Davis, 1979). The cost factor was studied by various Information System (IS) researchers (Seyal and Rahim, 2006; Premkumar et al., 1997; Drury and Farhoomad, 1996; Cox and Ghoneim, 1996) and found direct and significant relationship between cost and adoption of technology. The lower the cost of adoption the higher the new innovation such as the ICT will be adopted by the company and vice versa.

Perceived cost is another independent variable included in the framework. The reason perceived cost is included in the framework is because it plays an important role for SMEs in determining adoption of ICT in their business. The SMEs will less likely to adopt ICT when its initial set-up cost is high (Dixon et al, 2002). Poon & Swatman (1996) and Reynolds (1994) stated that small businesses often have difficulty in obtaining financial resources. Any new technology like ICT may be considered too expensive to many SMEs because of their lack of financial resources (Poon and Swatman, 1999). Tidd (1997) expressed that SMEs face specific problems in the formulation of their innovation strategies due to their limited resources and range of technological competencies.

In any situation implementing ICT into SMEs need a huge amount of start-up cost. However, a ready-to-use online package integrating a new system into an existing system is very expensive for SMEs thus increase their financial burden (Mehling, 1998). According to Duncombe and Heeks (2001), survey on US SMEs found that 90 % of the survey SMEs lack of finance and skills are the main constraints for organization to utilize ICT. Some of them cannot afford to buy a computer or make efficient use of it in the short or even medium period of time.

3.3 ICT knowledge and skill

Recent research on ICT adoption is emphasized on SMEs and examined the factors influencing SMEs adopting ICT. According to MacGregor et al (1996), small business tends to avoid ICT into their business, if it is seen as complex to use. This is not surprising because SMEs always lack of skills amongst workforce to use ICT (Spectrum, 1997). Paul and Pascale (2003) study reveals that the ICT adoption in SME depends on the CEO/owner being the ICT decision-maker. Their findings clearly indicated that ICT adoption is positively related to firm size.

It is very important for organization to determine its employee's knowledge or skills of ICT because those knowledge or previous experiences may influence organization decision in adopting ICT. However, the ability of manager or owner in ICT's knowledge or skills is definitely increasing the opportunity of ICT use amongst SMEs. Reynolds (1994) found that small business owner/managers are unlikely to adopt more sophisticated technologies if they are not familiar with the basic ones. This is because of the limited number of employees with lack of technical knowledge. This lack of knowledge based employees might hinder or prevent technology adoption if the owner believes that this technology can only be employed using specialist staff (Reynolds, 1994). MacGregor et al. (1996) and Cragg and King (1993) also stressed that employees of small businesses tend to lack skills and expertise to use IT in their businesses. It examined that SMEs always lack of skills amongst workforce to use ICT (Spectrum, 1997). The lack of suitable technical and managerial staff with sufficient ICT expertise is another major barrier for SMEs in adopting ICT. Allison (1999) agrees that a skilled and knowledgeable work force was closely linked with the successful implementation of technology. More researchers confirm the finding such as Cragg and King (1993) found that one of the strongest inhibiting factors for small firm to implement information technology was the lack of information system knowledge.

3.4 External pressure

External pressure like pressure from business trading partners is one of the important predictor that has strong influence on adoption of ICT. Lacking of pressure from their trading partners, the business owner may perceived the technology as a waste of resources (Thong and Yap, 1995; Iacovau et al, 1995). It means that SMEs trading partners are not fully utilizing IT in doing business. According to Kirby and Turner (1993) dependency on customer/supplier is closely related to 'external pressure to adopt. When a major supplier or customer adopts IT, the small business owner is more likely to adopt (Kirby and Turner, 1993). Julien and Raymond (1994) and Thong and Yap (1995) also confirmed industry sector has been shown to be interested to adopt technology if competitors and trading partners or a whole industry are adopting IT, the individual small business is likely to adopt as well. Parker (1997) and Poon and Swatman (1996) studies, found that small businesses are often forced to use IT by large companies. So this could be a factor driving the use of web-commerce if their trading partners force them to use it.

3.5 Government support

Both industry and government bodies have a role to play in promoting and supporting small business networking and ICT. According to Doig (2000), Australian governments are committed to accessible e-commerce for SMEs, and have decided that some intervention was necessary to make participation affordable, particularly for small and remote businesses. Doig (2000) also reported that in 1998, a national framework was established to ensure all Internet based e-commerce systems used by governments in Australia and New Zealand became fully interoperable, which benefited SMEs and their access to the marketplace). This has strong industry support with most of the major e-commerce service providers now established in Australia.

Given the globalisation of the ICT industry, there is a need to understand government role in contributing to the success of ICT development. A study carried out in Israel to identify three important factors that had contributed to the creation ICT industry in Israel (Vinig et al., 1998). According to them the Israeli government placed support of the ICT industry played an essential role in initiating the financial base. Their government also initiated a list of programs which will lead to the establishment of financial base for Israel ICT industry. At the same time, programs alone could not lead to a successful ICT industry. The other government support in ICT is government's tax incentives. This program support start-ups ICT companies to attract foreign investors to form a strong international oriented companies was created locally.

4. Hypotheses

A hypothesis is a statement or proposition that can be tested by referring to a collection of empirical studies. Hypotheses are usually stated in a form that predicts either the differences or association between two variables under study (Churchill and Brown, 2004). Development of a hypothesis involving causal ordering where possible and measurable would be useful in guiding the analysis strategy. Often such hypotheses can be made if the meaning of an item is carefully analyzed within a chronological context.

A null hypothesis predicts there is no difference between the tested groups in relation to some variable, or that there is no relationship between two variables (Malhotra, 2004). Null hypothesis in this research is noted as H_0 while alternate hypothesis is noted as H_1. It is important to note that a researcher can never actually prove that an alternate hypothesis is true (Malhotra, 2004) because of the many potential errors, either known or unknown, involved in the measurement of variables and the selection of research subjects. It is usual for the researcher to test whether the null is probably true or probably false to accept the alternate hypothesis as the alternate logical solution of the research problem (Churchill and Brown, 2000)

The following hypotheses are derived from the relationships found from the previous literatures.

Insert Table 1 here

5. Methods

5.1 Samples and procedures

A survey instrument was formulated to obtain feedback from SMEs in Malaysia, assessing their awareness, receptivity and adoption of ICT in their business. In order to focus on SMEs, lists were sought from the Small and Medium Industries Development Corporation (SMIDEC) in Malaysia web site. As such, the surveys sent out were personally addressed to the owner and or manager of each of SMEs. Due to the exploratory nature of this study, a cross sectional approach was undertaken to measure firms' responses regarding adoption of ICT.

The population of this study comprises all SMEs from service sectors in Melaka and Johor Bahru states in Malaysia that are registered under Small and Medium Industries Development Corporation (SMIDEC). The target groups were SMEs considered based on the number of employees in the industry is most commonly used in management research (Ghobandian and Gallear, 1996; Haksever, 1996; Terziovski et. al., 1997). The SMIs industries are classified as those industries with total workforce of less than 150 employees (SMIDEC, 2002). Data were gathered based on mail and personal administered questionnaire. A packet of 400 survey instruments, enclosing a return envelop were sent to randomly selected from insurance, banking and finance, health and medical, education, tourism, logistics, professional management, IT related service and advertising sector. The respondents for this study were targeted to be the owner or manager of the organisations because they always had the chance to deal with ICT in their working position.

To maximize the return rate, three subsequent reminders were sent over telephone and the mail lists maintained by SMIDEC after the initial surveys were mailed. Telephone inquiries were conducted only three weeks later as a last resort for those SMEs that had not responded. The response rate for the survey was 48.25 per cent (193 responses). Due to missing values for at least two sections of the responses 13 samples were discarded from this research and *finally 180 samples were then processed and analyzed.*

5.2 Statistical tools

Bivariate frequency distribution of the respondents, according to types of businesses, ownership of the company, respondent's position, computer ownership, Internet access, length of Internet access, and operating system was presented. Data were collected on demographic variables are processed and reported in percentage through the descriptive analysis. Descriptive analysis refers to the transformation to describe a set of factors that will make them easy to understand and interpret (Sekaran, 2000; Zikmund, 2000).

5.3 Test of reliability, validity and identification of factors

5.3.1 Reliability

The measurement of reliability provides consistency in the measurement of variables. Internal consistency reliability is the most commonly used psychometric measured assessing survey instrument and scales (Zhang et al., 2000). Cronbach alpha is the basic formula for determining the reliability based on internal consistency Kim and Cha, (2002). The values of alpha for perceived benefits yields a reliability co-efficient of 0.876 as shown in Table I. this value far exceeds the minimum standard of 0.7 set by Nunnally (1978). The value of 0.876 generates a strong indication that there is an internal consistency in the measurement. Similarly, the six statements measure for cost generates a Cronbach Alpha value of 0.861, highlighting an internal consistency in the measurement.

The values of alpha obtained for ICT knowledge and skill is 0.856, which suggest that scale is reliable for use in this study. The measures for external pressure gave Cronbach Alpha values of 0.878 also being supportive. The reliability coefficient for government support (0.792) indicates high internal consistency among its statements. This is consistent with reports by Nunnally (1978). Since the Cronbach's alpha values are in between 0.792 to 0.878 and all above cut off limit, that is 0.7, the constructs are therefore deemed to have adequate reliability.

5.3.2 Test for construct validity: factor analysis

A factor analysis was conducted in order to develop factors that help in explaining the role of experience and reference group in online brand trust. As suggested by Hair et al., (1995), six factors were identified for the factor analysis using the eigen value criteria that suggest extracting factors with an eigenvalue of greater than 1.0. In conducting the factor analysis we followed Hair et al (1995) and Alfansi and Sargeant (2000). The rotated factor matrix is displayed in Table II. The five factors identified explain 62.31 percent of the total variance. The extraction method used was principal axis factoring with Varimax rotation. This method has been widely accepted as a reliable method of factor analysis (see, Alexander and Colgate, 2000). In our survey, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy score (0.92) was well above the recommended 0.5 level (Malhotra, 1999) suggested that the data may be factorable. Moreover, the Bartlett's test of sphericity indicated that there was adequate correlation among the chosen variables ($X^2_{(406)}$ = 2945.30, $p<0.01$).

However one item of perceived benefit, one item of good online experience loaded together with other items is considered as insignificant and not meaningful as it is of low correlations decided to remove from all further analysis.

Insert Table 2 here

5.3.3 Normality of Data and Multi-collinearity

This study involves a relatively large sample (180 SMEs) and therefore, the Central Limit Theorem could be applied and hence there is no question on normality of the data. Two major methods were utilized in order to determine the presence of multicollinearity among independent variables in this study. These methodologies involved calculation of both a Tolerance test and Variance Inflation Factor (VIF) (Kleinbaum et al, 1988). The results of these analyzes are presented in Table 4. As can be seen from this data, i) none of the Tolerance levels is <or equal to .01; and ii) all VIF values are well below 10. Thus, the measures selected for assessing independent variables in this study do not reach levels indicate of multicollinearity. The acceptable Durbin – Watson range is between 1.5 and 2.5. In this analysis Durbin – Watson value of 1.722, which is between the acceptable ranges, show that there were no auto correlation problems in the data used in this research. Thus, the measures selected for assessing independent variables in this study do not reach levels indicate of multicollinearity

6. Result and analysis

In this section, the results and analysis of the empirical study are presented and discussed. The main aim of this analysis is to identify the major factors that influence ICT adoption by SMEs in Malaysia. First the socio-economic characteristics of the respondents are analyzed. Then, the factors those related with ICT adoption are discussed. Finally, the some recommendations are given to the managerial and government context.

6.1 General information of the respondents

Table III shows the profile of the responding companies including types of businesses, ownership of the company, respondent's position, computer ownership, Internet access, length of Internet access, and operating system for the respondents. The study in this research actually provides the frequency distribution of each variable for the sample respondents.

The majority of the surveyed companies are wholesale and retail business (47.7%) while it is found 170,046 companies and covering 88.8 per cent of all enterprises in Malaysia (Saleh and Ndubisi, 2006). Most of the respondents' company in this study was from local ownership which was 88.3 percent or 159 out of 180 respondents. On the other hand, foreign ownership company only constituted 21 companies which were 11.7 percent. More than 50 per cent (53.9%) of the surveyed middle manager and below represents higher percentage amongst all respondents which were 97 respondents. However, executive became second highest in this study, which was 27.8 percent, followed by Manager, 12.8 percent. In addition, top level management such as CEO, and owner of the company was least participate in this study which only contribute 5.6 percent and 10 out of 180 respondents. Moreover questionnaires were frequently answered by lower level management because top level management always lack of time in answering questionnaire. Even though about 57.22% of the respondents indicated that their companies did have computer, but 86 of the companies have Internet connection where more than 57.28% of them had been using Internet less than 5 years, and 42.72% using Internet for more than 5 years.

The results indicate that most of the companies adopt Windows XP for their computer system. There were 69 out of 103 companies using Windows XP which carried 66.99 percent and 27 companies were using Windows 2000/98 for their operating system on respondents' work computer. The Mac OS X was using in some organization but their usage was lower which accounted for 6.8 percent only. The main reason most organization choosing Windows XP as their operating system might be the user-friendly of this system.

Insert Table 3 here

6.2 Regression analysis

The data were analysed using multiple linear regression analysis following the guidelines established by Hair et al. (1998). The purpose of regression analysis is to relate a dependent variable to a set of independent variables (Mendenhal and Sincich, 1993). Table IV present the result of predictors of ICT adoption. The regression coefficient of independent variables on ICT adoption was estimated. The overall model is significant at the 1% level. The independent variables explain 53% of the variance in the ICT adoption. Of the independent variables, perceived benefits (+), ICT knowledge and skill (+) and government support (+) are the only predictors statistically different from zero and had a significant and direct effect on ICT adoption intention. The remaining perceived cost (-) and external pressure (+) had no significant direct effect on ICT adoption intention. Table IV presents the results of the individual hypotheses being tested.

Insert Table 4 here

7. Discussion

In this section, we will present and discuss the conclusions derived from our results and we will make consistently a series of recommendations for government and SMEs management.

According to the results, a perceived benefit has a strong, significant relation to ICT adoption. It is expected since past literature has consistently shown that perceived benefit has a significant and positive influence on the ICT adoption (Wang and Tasai, 2002; Grover and Goslar, 1993; Bingi et al., 2000). The subscale mean value (not shown here), indicate Internet will allow company to cross international boundary. However, respondents are not found computer simplify their daily business operation. The results obtained in the study are supported by Premkumar and Roberts, (1998) on ICT adoption by SMEs.

Usage of ICT applications in business purposes brings numerous advantages for its user to business area. At present, most of the businessmen are curious to find out the benefit that they can gain through appropriate ICT implementation. Implementing ICT in the organisation will be able to offer businesses a wide range of possibilities for improving their competitiveness such as provide mechanisms for getting access to new market opportunities and specialized information services Giovanni and Mario (2003). Moreover, businesses are able to receive immediate customer feedback which allows companies to react fast to changing customer demands and recognizing new market niches.

Some respondents would also like to agree with the use of Internet on business will be important for future company's progression. Most of the respondents believe that doing business over the Internet will generate desired returns in terms of profit (mean value).

Perceived cost was not found to have any direct impact on ICT adoption. One possible reason is that recently, Malaysian government has been providing all types of financial support to the SMEs, due to the promotion of ICT by the government through Multimedia Super Corridor (MSC) and Small and Medium scale Industries Development Corporation (SMIDEC). The SMEs have options to get financial support for the costs of ICT include investment in the process of its implementation in their businesses (networks, PCs, data storage, demonstration, servers, software/hardware and other peripheral devices). These conditions can consequently lead to an unimportance of perceived cost of ICT adoption.

The relation between ICT knowledge and skill of the employees with ICT adoption is significant. It is important for the organisation to determine its employee's knowledge or skills of ICT because those knowledge or previous experiences may influence organisation decision in adopting ICT. Moreover, the ability of manager or owner in ICT's knowledge or skills is certainly increasing the opportunity of ICT use among businesses. Reynolds et al. (1994) found that small business owner/managers are unlikely to adopt more sophisticated technologies if they are not familiar with the basic ones. This supported by Mehrtens et al. (2001) who demonstrated clearly that employees with technological skill are particularly encourage firms to recognize and implement ICT into the businesses. This is a principal internal motivating factor for business to adopt ICT.

Past studies found that external pressure play a critical role IT adoption by small firms (Beatty, 1998; Webster, 1994; Swatman and Swatman, 1991). But this study found show that external pressure has a positive relationship with ICT adoption intentions, this relationship is not significant (please refer Table IV). One possible reason is that Malaysia SMEs are not involved in the global business. Due to that there is not much pressure from customer or suppliers to adopt ICT in their business operation.

According to the result, government support has a significant and strong positive relation to ICT adoption. According to Stoneman and David, (1986) the impact of government policies and initiatives has been shown to have direct and indirect stimulation to the supply of information which produces faster technology diffusion. For example, governmental efforts to establish a national information infrastructure in US, Singapore and Malaysia have shown that both governments provide a legitimate and positive leadership role in developing the information infrastructure in its effort to digitize its economy (Kettinger, 1994; Tan, 1998).

8. Limitations and future directions

Like other empirical studies, this study is not without its limitations. Our sample consisted of SMEs in Melaka and Johor Bahru states in Malaysia may limit the generalizability of the results. Although several technology adoption studies focused on the zone basis (Van Beveren and Thomson, 2002; Cloete et al., 2002), state based respondents, such as experience using technology, differ from state to state from overall population of SMEs. The sample size itself is relatively small. The study can be strengthened by increasing the sample size and including participants in other geographical areas. With an increased sample size, a more detailed empirical analysis among the independent variables and the variables that have multiple categories can be performed. Potential correlations between some of the independent variables (e.g. gender, race, education level of the manager) need to be reported in a future study.

9. Implications

9.1 Implications for research

This study presents an introductory research that explains 52 per cent of the variance in SMEs adoption of EC. This research can serve as a starting point for other ICT adoption research, while encouraging further exploration and integration addition adoption constructs. Future research needs to focus on a larger cross section and more diversified random samples to verify the findings of the current study. Moreover, to further clarity of the factor influence on ICT adoption in the businesses, Technology Acceptance Model (TAM) and or other model could be used. Future inquiries could also examine the causal relationships between factors and SMEs' perceive overall ICT adoption by employing a structural equation modeling technique. In addition, future research needs to examine ICT adoption in the context of cross-national differences.

9.2 Implications for practice

The study reveals five significant indicators of SMEs' intention to adopt ICT in their business. Government agencies like MCMC, MDeC, SMIDEC, and other government agencies should create better awareness of the benefits of EC to encourage higher rate of adoption. It can be done by having seminars or induction sessions to allow SMEs to evaluate their new inventions. In order to receive greater responses towards ICT adoption, it is recommended that authority should give certificates as a token and financial support to attend the seminar. They could establish a close link with all SMEs and get continuous feedback from them in order to identify the problem areas and take necessary actions to rectify them. Another way to enhance the to use of ICT in the SMEs sectors, that the government should enforce standardized, consistent and uniform policies in all SMEs sectors, agencies or subsidiaries in implementing ICT system. As it is found in this study, respondents mentioned ICT is a complex system, the system should be made as user-friendly as possible as not all users are familiar with computers and the Internet, especially the old SMEs. Providing online help and giving end users the choice of their preferred language will ease their usage. Management of SMEs should provide adequate pre-training to their employees on how to use ICT systems in business at all levels so that the employees should get comfortable with its use. Security of information must be ensured with the help of the restricted access level of passwords.

10. Conclusion

The purpose of this study is to investigate factors affecting intention to adopt ICT in the SMEs of two states in Malaysia. This study also contributes to and extends our understanding of the Internet as a medium for commercial use in the service arena, identifying the rationales for adopting or rejecting the ICT by the SMEs. From a managerial viewpoint, the findings provide support for investment decisions, and for decisions relating to the development of Internet services that address and take the concerns and needs of companies into consideration.

The research was done under theoretical framework developed based on the previous study. The multiple regression analysis shows that perceived benefits, ICT knowledge and skill, and government support are significant elements of ICT adoption. The model explains 52 per cent of the variance in SMEs intention to adopt ICT. As Malaysian government grows in importance and priority for business worldwide, an understanding of the factors that influence SMEs adoption of the ICT is invaluable.

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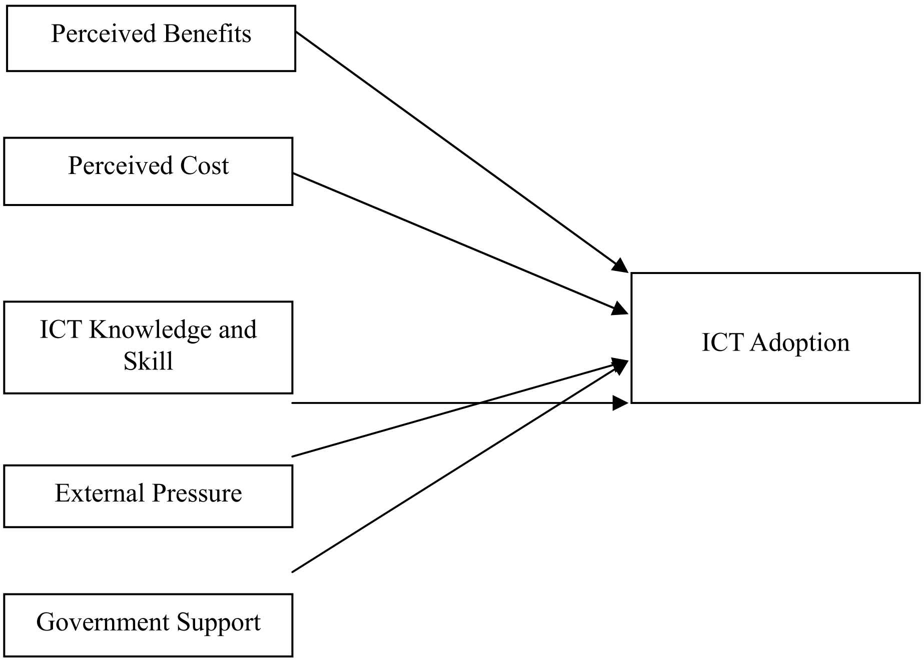

Figure 1. A Schematic diagram of the conceptual framework

Table 1. Hypotheses of this study

No	Hypothesised Relationship	HiA
1	**Perceived Benefits → ICT Adoption**	H_0A (+)
2	**Perceived Cost → ICT Adoption**	H_0A (-)
3	**ICT Knowledge and Skills → ICT Adoption**	H_0A (+)
4	**External Pressure → ICT Adoption**	H_0A (+)
5	**Government Support → ICT Adoption**	H_0A (+)

Table 2. Factor Analysis (Varimax) Showing the Combined Impacts on ICT adoption

Conditions	Factors/variables	Factors 1	2	3	4	5
Perceived Benefits	Benefit 1				**.485**	
	Benefit 2				**.684**	
	Benefit 3				**.709**	
	Benefit 4				**.564**	
	Benefit 5				**.440**	
	Benefit 6		**.511**			
Perceived Cost	Cost 1		**.618**			
	Cost 2		**.565**			
	Cost 3		**.635**			
	Cost 4		**.550**			
ICT Knowledge and Skills	Skill 1			**.507**		
	Skill 2			**.676**		
	Skill 3			**.692**		
	Skill 4			**.602**		
	Skill 5			**.431**		
	Skill 6			**.573**		
External Pressure	Pressure 1	**.456**				
	Pressure 2	**.502**				
	Pressure 3	**.533**				
	Pressure 4	**.662**				
	Pressure 5	**.662**				
	Pressure 6	**.589**				
Government Support	Support 1					**.546**
	Support 2					**.687**
	Support 3					**.677**
	Support 4					**.714**
	Support 5					**.572**

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalisation.

Table 3. General Profile of the SMEs

No	Demographic Variables	No. of Respondents	%	Cumulative %
1.	**Types of Business**			
	Wholesale and Retail	86	47.78	47.78
	Selected Services	37	20.55	68.33
	Professional firms	25	13.89	82.22
	Transportation and logistics	19	10.55	92.77
	Education and health	08	4.44	97.21
	Computer industries	03	1.66	98.87
	Telecommunication	02	1.13	100.00
2.	**Ownership of the Company**			
	Local	159	88.3	88.3
	Foreign	21	11.7	100.0
3.	**Respondents position**			
	Owner, CEO	10	5.6	5.6
	Manager	23	12.8	18.4
	Mid level manager	97	53.8	72.2
	Executive	50	27.8	100.0
4.	**Computer Ownership**			
	Yes	103	57.22	57.22
	No	73	42.78	100.0
5.	**Internet Access at business**			
	Yes	86	83.5	83.5
	No	17	16.5	100.0
6.	**Length of Internet Access**			
	Less than 5 years	59	57.28	57.28
	Above 5 years	44	42.72	100.0
7.	**Operating systems usage**			
	Windows XP	69	66.99	66.99
	Windows 2000/1998	27	26.21	93.20
	Mac OS X	02	6.80	100.0

Table 4. Regression Results

Independent variables	**Parameter estimate**	**Standard error**	**t-value**	**p**
Intercept	.351	.277	1.267	.207
Perceived benefits**	.190	.066	2.877	.005
Perceived cost	-.073	.077	-.948	.344
ICT knowledge and skill*	.189	.075	2.518	.013
External pressure	.127	.072	1.758	.080
Government support**	.431	.062	6.928	.0001
*$p \leq 0.05$; **$p \leq 0.01$; N=180 Overall model: F=40.02; $p \leq 0.0001$; R^2=0.535; Adjusted R^2=0.522				

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Evaluation on the Consumer Credit in Returns Reverse Logistics

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Abstract

In buyers' market, the returns reverse logistics caused by consumer credit can increase the management costs that enterprises spend dealing with the reverse logistics, and it can also cause bad community atmosphere. Based on the consumer's gender, age, education, occasion, position and the average monthly income, this paper establishes index system to evaluate consumer credit and uses Fischer discrimination Ⅱ to measure the credit level of consumers, which provides a reference for enterprises to establish a scientific assessment system to evaluate the consumer credit.

Keywords: Returns reverse logistics, Consumer credit, Fisher discrimination Ⅱ

1. Introduction

The return goods are the most common in the reverse logistics, and the returns reverse logistics caused by the consumer credit takes up high proportion, which seriously affects the profits and reputation of enterprises. Therefore, more and more enterprises are beginning to know the importance of evaluating the consumer credit.

2. Constructing the index system of consumer credit evaluation

Constructing the index system of consumer credit must agree with the principles such as scientific, systematic comprehensive, predictable, quantifiable, flexible and operational, and comprehensively consider the factors of credit evaluation. Then based on the classifying, collecting and sorting out, we can determine the input indexes as Table 1.

Insert Table 1 here

3. The questionnaire of consumer credit

This paper uses scoring list to create the score model of qualitative indexes to determine an evaluation criteria program of qualitative indexes. It uses 5-point score to give the score, the greater the score, the smaller the individual credit risk. In addition to the score standard, specific points and division levels refer to the methods in the practice.

Insert Table 2 here

According to the basic request of scoring list, we determine the scoring criteria of each evaluation factor, and then calculate the total score. The greater the total score, the smaller the credit risk and the better the individual credit.

This paper uses questionnaire method to collect the parameters of consumers' credit indexes. Through sorting out, there are 40 valid questionnaires, and good credit's and bad credit's are separately 20. The result of questionnaires is showed as Table 3. The category 1 stands for the consumers of good credit and the category 2 stands for the ones of bad credit. C is short for Category; M is short for Marriage; I is short for Income.

Insert Table 3 here

According to the scoring list, we score the consumer credit evaluation questionnaire to calculate conveniently and the result is showed as Table 4 (C, G, A, E, O, P, M and I are separately short for Category, Gender, Age, Education, Occasion, Position, Marriage and Income.).

Insert Table 4 here

Insert Table 5 here

4. The evaluation model of consumer credit

4.1 The theory basis of fisher discrimination

The basic ideal of Fisher discrimination is to project the multi-dimensional data onto certain direction. The principle of projection is to separate the general as far as possible. The discrimination function is determined according to the principle that the distance between categories is largest and the distance in categories is smallest. Then the type of samples is determined by the linear discrimination equation. Divided by the discrimination equation, the same samples are centered while the different samples are discrete. This paper uses Fisher discrimination II.

(1) The solution of Fisher discrimination II equation

Assuming the samples are divided into A and B, n_1 and n_2 are separately represent the numbers of sample A and sample B. the new discrimination equation is

$$y = c_1 x_1 + c_2 x_2 + ... + c_p x_p \tag{1}$$

K represents the serial number of the variable. The centers of the A and B are separately:

$$\overline{y_k(A)} = \frac{1}{n_1} \sum_{t=1}^{n_1} X_{kt}(A) \tag{2}$$

$$\overline{y_k(B)} = \frac{1}{n_2} \sum_{t=1}^{n_2} X_{kt}(B) \tag{3}$$

According to the basic ideal of Fisher discrimination, we should firstly determine how to express the distance between categories and the distance in categories. Then we use square between categories and Q to represent the distance between categories and square in categories and F to represent the distance in categories. The equations are showed as follows:

$$Q = \left[\overline{y(A)} - \overline{y(B)} \right]^2 \tag{4}$$

$$F = \sum_{t=1}^{n_1} \left[y_t(A) - \overline{y(A)} \right]^2 + \sum_{t=1}^{n_2} \left[y_t(B) - \overline{y(B)} \right]^2 \tag{5}$$

According to the basic idea of Fisher discrimination, we use the mathematical formulas to make the difference between extern-categories discrimination equation great and that between inner-categories discrimination equation small. Here we use I (the ratio that square between categories and Q to F). According to the maximum principle in differential, we make $I = Q/F$ for the partial differential and then make it equal 0. The equations are showed as follows:

$$\frac{\partial I}{\partial C_k} = \frac{F \dfrac{\partial Q}{\partial C_k} - Q \dfrac{\partial F}{\partial C_k}}{F^2} = 0 \tag{6}$$

We make the discrimination function into the partial differential equation and obtain:

$$\begin{cases} s_{11}c_1 + s_{12}c_2 + \ldots + s_{1m}c_m = d_1 \\ s_{21}c_1 + s_{22}c_2 + \ldots + s_{2m}c_m = d_2 \\ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \\ s_{m1}c_1 + s_{m2}c_2 + \ldots + s_{mm}c_m = d_m \end{cases}$$, and

$$s_{kl} = \sum_{t=1}^{n_1}\left[x_{kt}(A) - \overline{x_k(A)}\right]\left[x_{lt}(A) - \overline{x_l(A)}\right] + \sum_{t=1}^{n_2}\left[x_{kt}(B) - \overline{x_k(B)}\right]\left[x_{lt}(B) - \overline{x_l(B)}\right] \quad (7)$$

$$d_k = \overline{x_k(A)} - \overline{x_k(B)} \quad (8)$$

We adapt the equations into the matrix:

$$S * C = D\,,\quad C = S^{-1}d$$

$$S = \begin{pmatrix} s_{11}s_{12}\ldots s_{1m} \\ s_{21}s_{22}\ldots s_{2m} \\ \ldots\ldots\ldots\ldots \\ s_{m1}s_{m2}\ldots s_{mm} \end{pmatrix},\quad C = \begin{pmatrix} c_1 \\ c_2 \\ \ldots \\ c_m \end{pmatrix},\quad d = \begin{pmatrix} d_1 \\ d_2 \\ \ldots \\ d_m \end{pmatrix}$$

Finally we make the sample data into the above equations to do the solution and we can obtain a group of coefficient values of the equation $y = c_1x_1 + c_2x_2 + \cdots + c_px_p$.

(2) Classifying sample discrimination

To use the discrimination equation to classify the samples, we should firstly construct the threshold y_c :

$$y_c = \frac{n_1\overline{y(A)} + n_2\overline{y(B)}}{n_1 + n_2} = \frac{\sum_{t=1}^{n_1} y_t(A) + \sum_{t=1}^{n_2} y_t(B)}{n_1 + n_2} \quad (9)$$

If $\overline{y(A)} > \overline{y(B)}$ and $y > y_c$, category A will appear, otherwise category B will.

If $\overline{y(A)} < \overline{y(B)}$ and $y > y_c$, otherwise category B will appear, otherwise category A will.

4.2 The basic steps of Fisher discrimination analysis

The credit analysis of Fisher discrimination has four steps:

(1) Classify the original data and achieve the research on the general category of consumer credit;

(2) Analyze the category of the known sample and the record of credit loss and determine whether the sample category has the distinct influence on the lack of credit. If it pass test, we can obtain the estimate of credit loss probability;

(3) Based on the result of the analysis of classifying, do the Fisher discrimination analysis and obtain the discrimination function;

(4) Make the samples into the discrimination function, determine the category of sample according to the discriminating principle, divide the criteria by the known level of consumer credit and determine the credit level of the consumer.

5. An empirical study

According to the scoring result of consumer credit indexes, we use the SPSS 12.0 to do the solution and the result is showed as Table 6.

Insert Table 6 here

From above table we can obtain the sample total is 40 and the valid sample is 40.

Insert Table 7 here

From above table we can obtain the result of classifying statistics including mean, variance, unweighted weight and weighed weight and the category 1 represents the consumer of good credit that the mean of education is 4.15 and the variance is 0.671.

Insert Table 8 here

From above table we can see the result that test whether the mean of the same variable is the same. We can obtain the significant level of age, education, occasion, position and income is 0.000, which is far less than the popular confidence level 0.05. It shows that the mean of age, education, occasion, position and income of different category are all different.

Insert Table 9 here

From above table we can see the first step is to enter the variable education, the second step is to enter the variable occasion and the third step is to enter the variable position. The statistics value in the column of Extract F is the ratio of Variable Square to error square. The bigger the value, the smaller the value of Sig. when the value of Sig. is smallest, its corresponding variable is entered into the discrimination equation. From the result we can see the stepwise in this example eliminates the variables of gender, age, marriage and income. Only education, occasion and position are entered into the discrimination equation.

Insert Table 10 here

Table 10 shows the condition of priori probability of each category. Because this paper uses the equal probability and divides the samples into 2 categories, the priori probability of each category is 0.5.

Insert Table 11 here

We can get the coefficients from above table and use the data in above table to directly get the discrimination equation. We make a certain sample into the equation to calculate the score of each category, and then tell the category by the score and compare the score. The sample belongs to the bigger one.

The equation of good credit is: y_1=7.983*education+5.526*occasion+2.856*position-34.927

The equation of good credit is: y_2=3.839*education+2.564*occasion+0.752*position-7.340

Insert Table 12 here

According to the setting of the discrimination analysis, it can only output the discriminating analysis statistics of the first 10 samples. The "Case number" represents the number of samples; the "Actual Group" represents the actual category of each sample; the "Predicted Group" in the column of "Highest Group" represents the most likely category; the "Group" in the column of "Second Highest Group" represents the second most likely category.

Insert Table 13 here

The table shows the sample numbers of correct classification, ones of wrong classification and the rate of wrong judgment. It also cross-validates the sample numbers of correct classification, ones of wrong classification and the rate of wrong judgment. The result of the correct classification of which all the samples construct the discrimination equation is that the rate of wrong judgment in good credit is 0% and the one in bad credit is 0%. The result of the correct classification that cross-validates the discrimination equation is that the rate of wrong judgment in good credit is 0% and the one in bad credit is 0%.

A new variable is generated named Dis-1 from the original data in the data editing window. Record the result of discriminating classification of each sample generated by the discriminating equation and we can get the conclusion that the result of discriminating classification is the same as the actual category.

6. Conclusion

To evaluate the consumer credit will help the society evaluate the level of consumer credit, help enterprises reduce the cost of the returns reverse logistics and improve the operational efficiency of reverse logistics and the quality of consumers.

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Table 1. The index system of consumer credit evaluation

<table>
<tr><td rowspan="7">Consumer credit</td><td rowspan="5">Qualitative factors</td><td>gender</td></tr>
<tr><td>education</td></tr>
<tr><td>occasion</td></tr>
<tr><td>position</td></tr>
<tr><td>marriage</td></tr>
<tr><td rowspan="2">Quantitative factors</td><td>age</td></tr>
<tr><td>income</td></tr>
</table>

Table 2. Consumer credit index scoring list

Evaluation indexes	Evaluation contents	Score
gender	male	3
	female	2
age	Below 25	1
	25-35	2
	36-45	3
	Above 45	4
education	master	5
	undergraduate	4
	college	3
	high school (secondary)	2
	less than junior	1
occasion	Information technology, high-tech, finance, education, energy monopolies, corporations, hospitals, organizations	5
	Press, publishing, technology-intensive manufacturing	4
	Trade, consulting, architecture	3
	Traffic, transport, tourism	2
	technology-lower industry, catering, construction	1
position	R & D, high-level managers, teachers, doctors and other emerging post	5
	Middle managers, technicians	4
	Sales, general workers	2
	others	0
marriage	married	3
	single	2
income	≤1000 Yuan	1
	1000 Yuan -3000 Yuan (including 3000)	2
	3000 Yuan -5000 Yuan (including 5000)	3
	5000 Yuan-8000 Yuan (including 8000)	4
	≥8000 Yuan	5

Table 3. The table of consumer credit questionnaire

No.	C	gender	age	education	occasion	position	M	I
1	1	female	37	undergraduate	press	High-manager	married	5500
2	1	male	29	undergraduate	petrochemical	technician	single	3600
3	2	male	31	High school	food-manufacturing	worker	single	1000
4	1	female	48	undergraduate	hospital	doctor	married	4000
5	2	female	23	junior	restaurants	waitress	married	850
6	2	male	26	High school	construction	worker	single	1800
7	1	male	41	graduate	metallurgical-manufacturing	engineer	married	8700
8	1	female	46	undergraduate	trade	Middle-manager	single	4100
9	2	female	24	secondary	transport	worker	married	900
10	2	male	27	college	trade	sale	single	1500
11	2	female	30	High school	Textile manufacturing	worker	married	1000
12	1	male	36	undergraduate	Information technology	R&D	single	6000
13	1	female	39	Graduate	press	editor	married	3500
14	2	female	25	High school	Tourism	record	single	2000
15	2	female	20	secondary	Restaurants	Cash register	single	950
16	1	male	49	undergraduate	consulting	analyst	married	4800
17	1	female	26	undergraduate	Electronic manufacturing	Middle-manager	single	3200
18	1	male	42	Graduate	petrochemical	worker	married	3000
19	2	male	19	junior	construction	Temporary-worker	single	800
20	1	female	37	undergraduate	education	executive	single	6000
21	2	female	18	junior	Construction-installation	worker	single	1100
22	2	female	30	High school	traffic	worker	married	1000
23	1	male	44	graduate	Finance	High-manager	married	8800
24	1	female	32	college	publishing	Middle-manager	married	3500
25	2	female	26	college	cosmetics	sale	single	2800
26	2	female	39	High school	restaurants	Waitress	married	1000
27	1	male	46	undergraduate	petrochemical	High-manager	single	10000
28	1	female	38	graduate	agency	section	married	4800
29	1	male	40	college	consulting	Analyst	married	3700
30	1	male	29	undergraduate	Equipment-manufacturing	Sale	single	5200
31	2	male	22	High school	traffic	Worker	single	1000
32	1	female	37	college	Electronic-manufacturing	Technician	married	3600
33	2	female	24	primary	agriculture	farming	married	600
34	2	female	25	college	transport	Worker	married	2000
35	2	male	41	High school	construction	Worker	married	1800
36	2	female	22	secondary	department	Sale	single	1000
37	1	male	43	undergraduate	Electronic power	Engineer	married	7000
38	1	female	52	graduate	education	executive	married	3500
39	2	female	27	junior	consulting	Worker	single	1400
40	2	male	36	High school	manufacturing	worker	single	1000

Table 4. The result of consumer credit score

No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C	1	1	2	1	2	2	1	1	2	2	2	1	1	2	2	1	1	1	2	1
G	2	3	3	2	2	3	3	2	2	3	2	3	2	2	2	3	2	3	3	2
A	3	2	2	4	1	2	3	4	1	2	2	3	3	2	1	4	2	3	1	3
E	4	4	2	4	1	2	5	4	2	3	2	5	4	2	2	4	4	5	1	4
O	4	5	1	5	1	3	4	3	2	3	1	5	4	2	1	3	4	5	3	5
P	5	4	2	4	0	2	5	4	2	2	2	4	5	2	0	4	4	2	0	5
M	3	2	2	3	3	2	3	2	3	2	3	2	3	2	2	3	2	3	2	2
I	4	3	1	3	1	2	5	3	1	2	1	4	3	2	1	3	3	2	1	4

Table 5. Table 4 continuing

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
2	2	1	1	2	2	1	1	1	1	2	1	2	2	2	2	1	1	2	2
2	2	3	2	2	2	3	2	3	3	3	2	2	2	3	2	3	2	2	3
1	2	3	2	2	3	4	3	3	2	1	3	1	2	3	1	3	4	2	3
1	2	5	3	3	2	4	5	3	4	2	3	1	3	2	2	5	4	1	2
3	2	5	4	1	1	5	4	3	4	2	4	1	2	3	2	4	5	3	1
2	2	5	4	2	0	5	4	4	2	2	4	0	2	2	2	5	4	2	2
2	3	3	3	2	3	2	3	3	2	2	3	3	3	3	2	3	3	2	2
2	1	5	3	2	1	5	3	3	4	1	3	1	2	2	1	4	3	2	1

Table 6. The data of discriminating samples

Unweighted Cases		N	Percent
Valid		40	100.0
Excluded	Missing or out-of-range group codes	0	.0
	At least one missing discriminating variable	0	.0
	Both missing or out-of-range group codes and at least one missing discriminating variable	0	.0
	Total	0	.0
Total		40	100.0

Table 7. The result of classification statistics

classification		mean	Variance	weight	
				Unweighted weight	Weighted weight
1	Gender	2.50	.513	20	20.000
	Age	3.05	.686	20	20.000
	Education	4.15	.671	20	20.000
	Occasion	4.25	.716	20	20.000
	Position	4.15	.875	20	20.000
	Marriage	2.65	.489	20	20.000
	Income	3.50	.827	20	20.000
2	Gender	2.35	.489	20	20.000
	Age	1.75	.716	20	20.000
	Education	1.90	.641	20	20.000
	Occasion	1.90	.852	20	20.000
	Position	1.50	.889	20	20.000
	Marriage	2.40	.503	20	20.000
	Income	1.40	.503	20	20.000
Total	Gender	2.42	.501	40	40.000
	Age	2.40	.955	40	40.000
	Education	3.03	1.310	40	40.000
	Occasion	3.08	1.421	40	40.000
	Position	2.83	1.599	40	40.000
	Marriage	2.53	.506	40	40.000
	Income	2.45	1.260	40	40.000

Table 8. The variance analysis of univariate

	F	df1	df2	Sig.
Gender	.895	1	38	.350
Age	34.342	1	38	.000
Education	117.661	1	38	.000
Occasion	89.110	1	38	.000
Position	90.306	1	38	.000
Marriage	2.540	1	38	.119
Income	94.146	1	38	.000

Table 9. Stepwise discrimination variable enter/ eliminate list

Step	Entered	Wilks'Lambda						
		df1	df2	df3	Exact F			
					Statistic	df1	df2	Sig.
1	education	1	1	38.000	117.661	1	38.000	.000
2	occasion	2	1	38.000	91.245	2	37.000	.000
3	position	3	1	38.000	69.028	3	36.000	.000

Table 10. Priori probability

category	Prior	Cases Used in Analysis	
		Unweighted	Weighted
1	.500	20	20.000
2	.500	20	20.000
Total	1.000	40	40.000

Table 11. The coefficients of Fisher linear discrimination equation

	category	
	1	2
education	7.983	3.839
occasion	5.526	2.564
position	2.856	.752
(Constant)	-34.927	-7.340

Table 12. The statistics list of sample classification

Case Number		Actual Group	Highest Group				Second Highest Group	
			Predicted Group	P(D>d| G=g)		P(G=g |D=d)	Group	P(G=g | D=d)
				p	df			
Original	1	1	1	.927	1	1.000000	2	.000
	2	1	1	.783	1	1.000	2	.000
	3	2	2	.797	1	1.000	1	.000
	4	1	1	.783	1	1.000	2	.000
	5	2	2	.041	1	1.000	1	.000
	6	2	2	.312	1	.998	1	.002
	7	1	1	.328	1	1.000	2	.000
	8	1	1	.321	1	.998	2	.002
	9	2	2	.706	1	1.000	1	.000
	10	2	2	.058	1	.887	1	.113

Table 13. The statistics list of classification result

category			Predicted Group Membership 1	2	Total
Original	Count	1	20	0	20
		2	0	20	20
	%	1	100.0	.0	100.0
		2	.0	100.0	100.0
Cross-Validated	Count	1	20	0	20
		2	0	20	20
	%	1	100.0	.0	100.0
		2	.0	100.0	100.0

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The Customer Value Strategy in the Competitiveness of Companies

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Abstract

By the in-depth development of economic globalization in recent years, market competition has become the focus of the fight against various companies. The survival and development of companies is not only depending on its own resources, but also relying on more value-oriented consumers. For companies around the world, their tasks are not only to take a variety of measures to deal with market risk, but also to keep pace with the trend of the times and make appropriate adjustments on the strategy and tactics of the company to deal with all problems arising from the fierce competition. With the thinking of "customer-oriented" deeply rooted in the marketing field, customer value has been regarded as a new source of companies' competitive advantage. Therefore, customer value strategy has become an important part of companies' strategic development strategy. In this paper, the competitive advantages and growth advantages in the competitiveness of companies will be analyzed from the orientation, implementation and carrying out of customer value.

Keywords: Customer value, Strategy, Competitive advantage

With the rapid development of technology, new products are constantly emerging. At the same time, customers are highly expected for products and services. Companies must commit themselves to design, manufacture and deliver products, and to provide customers with value beyond the competitors, they can obtain a competitive advantage for sustainable development in the fierce market competition. From the strategic height of the company, study the issues of customer value strategy and competitiveness which match with competitive advantages and growth advantages, will contribute to the strategic decision-making of the company. In today's increasingly competitive global markets, building customer loyalty and retaining profitable customers is a critical component in any company's success.

1. The change of customer loyalty to customer value

In recent years, the dynamic changes of the global business field have always been a hot topic in management circles. People concerned about the economic globalization, strategic alliances and the Internet, they also took notice of the great changes of the customer groups, and thus to business Strategic choice arising from a profound impact.

Today's customers are no longer passive recipients of the products and services, they have more knowledge, information and skills, and even eager to learn and practice. They have initiative in selecting an increasingly broad product. As a result, companies who strive to maintain customers will be able to obtain long-lasting competitive advantage in the fierce market competition.

Since the 1970s, scholars and business managers continue to explore the new approaches which adapt to the changes in the marketing, from product-centered focus on product quality to "customer-oriented" on customer satisfaction and loyalty. Until 1990s, by putting forward the concept of customer value, marketing concept reaches a whole new level.

Compared with the traditional concept of marketing, the innovation of customer value is that the company stands in the customers' perspective of the value of products and services. This value is not determined by the company, but by the actual customer perception. In this sense, the customer value is customer perceived value. It is the balance between perceived benefits obtaining and missing. American scholar Treacy and Wiersema described Customer Value as: the proceeds customer get minus the sum of its cost on products and services. To some extent, proceeds form the value. The value refers to products or services to enhance the customer experience or performance. The cost includes the spending on purchase and maintenance, as well as the spending on extension, effort and errors on their time and energy. The visible and invisible costs offset the value. At every stage of customer satisfaction, customer loyalty to customer value, companies have focused on different aspects. Product quality, service quality, price, brand image and relations between customer and company constitute a source of customer value.

Companies which focus on customer satisfaction concern how to satisfy the customers who buy their products and services, rather than concern the competitors and their customers. This type of relationship between the company and customers is often static, say, one-sided “please". And, through this "please" to obtain loyalty to their product in existing customers. Companies which focus on the match of customer value and competitiveness tend to provide values to target customers beyond the value of the competitors based on the value of positioning themselves. And customers are more willing to maintain interaction with companies in order to obtain their largest perceived value. As a result, strive for customer satisfaction, customer loyalty is only the tactical issues in marketing, the creation of customer value is the strategic issues to obtain lasting competitive advantage. It should be noted that the customer value is not deny the customer satisfaction and customer loyalty, but to expand and develop customer satisfaction and customer loyalty in the new situation of market competition. It provides a new concept and method for companies to make its strategic choice and enhance their competitiveness. It is a new source for companies to obtain competitive advantages.

2. The orientation of customer value strategy

The basic principles of the orientation of customer value strategy and choice of suitable positioning methods are the basis of effective making and implementing the customer value strategy.

2.1 The basic principles of the orientation of customer value strategy

It is generally believed that the acquisition of competitive advantages of the cost and price and can be realized through two channels:

Firstly, the effective operation. That’s to say, to do the same things as our competitors do but do it better than them. However, the new and better approaches would soon be imitated by competitors, therefore, simply relies on effective operation can not obtain sustained competitive advantage.

Secondly, the strategic orientation. That is, to do different things as our competitors do, and transfer different values to the customers. Porter had put forward six principles of strategic positioning:

(1) Strategy should have the right objectives

(2) The value of positioning or combination of interest should be distinguished from competitors

(3) Strategic thinking should be reflected from the unique value chain

(4) In order to pursue the uniqueness in certain areas, we must give up some of the other characteristics of products, services or activities

(5)Strategy should enable the effective integration of various activities

(6) Strategy should have sustained direction

The strategic positioning of customers value should also follow these principles. Enterprises should adhere to its choice of strategic direction as the customer value to be the core. The enterprises which have no lasting direction will be very difficult for the development of unique skills, assets and a good reputation. At the same time, the value of customer orientation is not static, but dynamic development. This is mainly from two aspects: First, customer expectations are evolving. Second, the new market entrants will create new value positioning, when this new positioning be recognized by the customers, it often means some of the old paradigm or rules were broken. As a result, this requires enterprises to make rational judgments and projections of the development of the situation with forward-looking sense, and constantly improve the competitiveness and mode of operation to meet the new requirements of the customer value positioning.

2.2 The way of strategic orientation of customer value

Different customers buy different values. Enterprise, due to its own limited resources and capacity, cannot do all the things for all customers. With the value standards and expectations of customers increased, companies can stay ahead only through advance action. The special customer value needs the best mode of operation to achieve. Therefore, a successful business is always based on its selection of the target customers for value positioning. Customers can be roughly divided into three types, but for different customers have different types of customer value positioning model:

(1) Customers are interest in the up-to-date, modern products. The products of their choices reflect the fashion tastes they pursue and the desire of special technology. Enterprises which meet the needs of these customers orient the value on Product Leadership, such as Microsoft, HP, Intel, Sony, and so on.

(2) Customers prefer to cost-effective products and services, and have special requests for the convenient purchase and high quality service. The enterprises which aim at this target group of customers orient the value on Operational Excellence, such as Wal-Mart, Dell, FedEx and China's Haier Corporation, etc

(3) Customers hope to get exactly what they need, even if it was required to pay a higher price or to wait a little longer. Companies to provide products or services for these customers committed to improving Customer Intimacy, such as Honda, British Airways, and so on. They meet the special needs of customers, while customers take loyalty to the company products and services in return.

3. The orientation of customer value strategy and enterprise competitiveness

The core competencies of enterprises cannot create a profit directly, only to change it to meet the customer's needs of products and services while in the true sense. The orientation of customer value strategy needs to match with the competitiveness of enterprises. Enterprises need to engage in each of the value creation in the value chain to make the final products and services available to customers, the performance of activities constitute the basic elements of competitive advantage, while the focus of activities in different value orientation companies will be different: the leader of the products focus on innovation-oriented activities, Operational Excellence-oriented companies focus on reducing costs in the process of supply chain and internal operations, and the pursuit of Customer Intimacy company's focus is to meet customer service and delivery. However, the focus of an event does not mean the neglect of other activities. In other activities, they should at least meet the standard of their industry.

3.1 To lead the products

Enterprises must aim at the growing target market, and continue to create products of value given. Product leading companies must make innovative activities and the connotations of the enterprise innovation culture and portfolios of competitiveness in line. The ways to lead the products include:

3.1.1 The first to enter the market

Enterprises, which value positioning on Product Leadership, are always high-tech enterprises. Compared with the traditional industries, as a result of new and existing technologies drive the market in different directions, the life cycle of high-tech industry's product and technology has become shorter, market is in a rapidly changing. The product-leading company should quickly enter the market and develop appropriate pricing strategy to obtain return on their investment in a possible long time. With the rapid reduction of the product price along the product life cycle, all follow-up will inevitably carry out price competition.

The first to enter the market can get the following advantages:

(1) Taking advantage of the market share.

(2) Taking a strong initial position in the market, to improve the credibility of the leader.

(3) Gaining experience earlier than the opponent. The first companies to enter the market can achieve original experiences in areas such as customers, technology, suppliers, distribution channels, etc, so as to form their own supply and marketing network in order to grasp the major distributors and customers.

(4) Impacting on industry standards. Once the customers have a first impression of a product, then the product will increasingly become the standards of this type of competitive products, other competitors will be hard to change those standards. These standards become barriers to competitors entering the market, but also reach the purpose of extending the product life cycle.

3.1.2 Innovation of product platform

Leading product providers must through constant innovation of product platform to consolidate its leading position in the market. Customer is the resources detect can be in innovation resources, but it is always the attendant of problems. These problems can be solved through product platform especially the core technological innovation. HP is a typical product leading company, but also a leader of innovation. The company has used the latest color ink-jet printers to replace the black-and-white printer which just been launched six months ago. At that time, this black-and-white printer is creating a remarkable sales performance. HP is through this constant innovation to pre-empt new product areas in establishing market leadership as well as access to the high profit return.

3.2 Operational excellence

Enterprises which value positioning on operational excellence are to provide customers with cost-effective products and high-quality services. Their competitive platform must include an effective management of supply chain, efficient inventory and logistics management.

3.2.1 To control costs and improve quality

In order to obtain the profit based on low price, enterprises must first obtain cost advantages. The cost is arising from the activities in the value chain, and the activities which impact the cost are linked to each other. Factors that driving the cost are structural determinant of the cost of certain activity, it varies to the degree of control. Factors driving the cost determine the cost of certain activities, reflecting any contact or relationship which impacts the cost of acts. Enterprises set up its status of relative costs by cumulating each of the cost benefit in the major spreading activities. The formation of the cost advantage is due to more efficiently engage in specific activities over competitors.

In the real operating practice, many companies control the cost has not only limited to each segment of specific manufacturing process, but more in the link between each activity in the value chain.

(1) Make a wide range of survey prior to the design of new products for customers, to ensure the function of products simple but practical, so as to avoid an increase in cost but customers do not need the advanced functions.

(2) To maintain the operations simplified. Most of the Operational Excellence enterprises are the typical to resist diversification. For example, Dell in the United States avoids the broad diversification of products, but focuses on the services and logistics of small variety of goods, which can control the cost and afford the customer a lower price.

(3) Through the development of external relations, especially the relationship between the supplier to cut costs. For example, Chrysler was only to put pressure on suppliers before, require them to lower prices. Later, the company's management has changed the practice. They invite suppliers to put forward proposal of improving on cost, which focused on cost rather than price. As a result, they create win-win cooperation between the two companies and establish Supplier Cost Reduction Effort (SCORE), and the company links the supplier's recommendations and the result with their rewards. The use of SCORE method is a great success, either in cost-cutting or trust and confidence building between Chrysler and suppliers.

3.2.2 To provide quality service

In providing quality service, the Operational Excellence enterprises nowadays pay more attention to the use of information technology to provide customers with the convenience. For example, General Electric Company direct links the dealer with company’s computerized storage form. Once dealers receive orders from customers, they can direct allocate GE's storage, and within 24 hours delivery. In this way, in the eyes of the customer, dealer’s inventory is not in its "backyard", but GE's own warehouse.

3.3 Customer intimacy

Companies which committed to improving customer intimacy well aware of the importance to maintain a long-term and deep relationship with the customers, try to making continuous efforts to explore for customer relationship management. Companies to build customer intimacy mainly have the following two ways.

3.3.1 Customization

The core of customization is based on acceptable delivery times and price, to provide customers with personalized products, not only to win customers but also can effectively achieve the goal of production and sales in market competition. For customized production, most of the core is to make production and organization in accordance with the market-driven. The basic of market-driven is the details of market and market positioning, actively seeking the satisfaction and feedback of the target market, and to integrate it into every part of the production chain. Not only clear the current demand of target customers, but also clear the potential needs of customers and meet their requirements. To introduce new products and services to customers that in customized manufacturing, the cost of achieving goods information is unprecedentedly reduced, and they can have free choice and control. Customer’s requirements of difference in the product, reasonable prices, the purchase of convenience, the service attentive and so on can directly face the producers, it achieves a one-on-one dialogue, and the initiative is fully grasped in the hands of customers. After the transaction, the company still remained a variety of information with the customers, and may contact with each other at any time in order to understand customer satisfaction and requirements to obtain a clearer, more direct demand for information and feedback to update and innovate in products to lead the trend of market.

3.3.2 Brand loyalty

For customers, the brand name and brand identity can help to explain, to process, to manage and as well as to store the identification information related to products or services, and simplifying the purchase decision-making. A good brand image will help reduce customer risk, and enhance the confidence to buy. Distinctive brand can let customers get social and psychological benefits that exceed the function of the products, so as to impact on customer’s choice and preference. For the service industry, corporate brand image is more influential than the image of the packaging of product. Strong brands may help customers to make a tangible understanding of the intangible service products, and to enhance customer the trust for the intangible purchase, reduce the perceived risk of money, social and security before the purchase which are difficult to estimate, or even the value customer perceived is the brand itself.

Strong brand is which have a good adaptation to business environment and thus survive and thrive. They reached a very effective "agreement" between the customers, which cannot exceed by the competitors. to create a strong brand need a unique way to mix up all the tangible and intangible factors, that is, products or services must be of high quality and suited to the needs of customers, brand name must be attractive and in line with customer expectations on products, packaging and visual image must be attractive and distinctive, pricing and brand support and advertising must be equally attractive, suitable and different.

4. The support system of the implementation of customer value strategy

The orientation of customer value strategy once established, the management must ensure that the whole company is committed to the pursuit of its objectives, and building a support system for it.

4.1 To strengthen training and management of the core competency

The orientation of customer value strategy is based on the resources and core competencies of the company. Cognize and grasp the technology of the company and the core market can provide support for business expansion. The cultivation and management of core competency is prerequisite to ensure the strategic objectives can be achieved, strengthen dynamic management of the core competencies is needed.

4.2 To establish culture of the company based on customer value

All activities which create and transfer customer value are in the final analysis depending on the staff to complete. The extent of employee's satisfaction has a strong positive correlation relationship with the quality of service customer perceived. Satisfied employees will build a positive relationship with customers, but dissatisfied employees will pass the negative sentiment to customers directly or indirectly. At the same time, satisfied employees are willing to put forward reform and improvement recommendations, but the dissatisfied usually resist change and learning. As a result, in order to achieve the strategic objectives of the company, it is necessary to develop management culture based on customer value, to make the idea of customer value deep into the hearts of every employee, encouraging their innovative behavior. Employees will be regarded as "internal customers", and to establish mechanism which is conducive to realize their personal values and develop their potential. And also, to establish effective incentive mechanism to band the interests of employee's interests of company's and interests of its customer's together closely.

4.3 To establish a highly integrated value system

Highly integrated the value system refers to form a self-reinforcing system of company's various activities, because any of the competitors who attempt to imitate will have to copy the whole value system, so that this system not only transfer customer value, but also effectively resist competitors from copying at the same time.

4.4 To establish and improve an effective performance measurement system

In the implementation of the strategy, companies continuously measure conduct performance with goal. When the deviation occurs, it is needed to carefully analyze the reasons based on objective internal and external environmental changes to amend conduct or to adjust the target. An effective performance measurement system should include the establishment and subdivision of objectives, quantified objectives, performance measurement indicators, the ways and means of feedback, analysis and evaluation methods, as well as corrective measures and so on.

4.5 To establish the network marketing system

It is noted that as the growing and developing of network economy, network marketing concept came into being. E-commerce eliminate the barriers of time and space, its unique advantages can enhance communication between companies and customers. Then, companies can better understand customer needs, increase the sensitivity of reaction, reduce costs of transaction, and take great convenience to customers. On the other hand, customer's choice has increased. It is simpler to give up unsatisfied companies. The ways to create customer loyalty in the Internet Age is basically the same as traditional marketing, but because of the special nature of the network, the company using of e-commerce should also pay attention to the following aspects:

(1) Aim at target customers. Internet opens up a very broad market, but companies should not ignore the choice of target customer. To attract all kinds of customers with no choice will only harm the interests of the enterprise.

(2) To let customers have a sense of trust. This mainly includes protecting customer's online security, implementing contracts timely and accurately, and preventing transaction fraud, etc. The core of customer value strategy is to determine the value positioning which matches with enterprise's core competitiveness, so as to provide the customers with the value that unique and hard to imitate by the competitors. In operating practice, enterprises should first conduct a careful analysis of customers to choose the correct value positioning based on their own resources and ability. And build an effective support system with this center. Enterprises should continuously assess the situation, continuously integrate and coordinate internal and external resources to enhance core competitiveness, so as to obtain sustained growth advantages and competitive advantages.

5. Conclusion

From a theoretical point of view, the definition of customer value is not unified in the academic community. We need to do further research. In addition, we need to do research on the relationship between customer value and related concept, such as relations between customer value and customer satisfaction, customer loyalty and customer maintenance, etc. In addition, with the development of the Internet, online shopping has become a daily shopping approach. In this particular background of shopping, the difference between customer spending behavior, customer value and the traditional shopping also need to do further research in the academic community. At the same time, with the formation of global economic integration, it is also needed to do further research on whether it has impacted on perceiving customer value of different cultural background.

From time Dimension point of view, there remains a need for further research on the dynamic nature of customer value, not only limited to the research on the dynamic nature of the value of customer expectations. In the study methods, the data should be taken by tracking the customers. In the sample, the limitations of an industry should be broke through to make the results more representative.

In the application of theory, we need to combine the theory with business practice, including such topics as ‘how to reform customer-based organizational structure’ and ‘the measurement of customer value helps companies distinguish customers’, etc.

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Non-Audit Service and Audit Independence: Evidences from Iran

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Abstract

From recent years on, because of several reasons independence of auditor became undermined, so far some factors recognized that which impair independence, especially non-audit service so, in this condition may appear to affect to independence. The results of this study show that shareholders strongly agree that providing NAS by external auditors to the same clients strongly negatively affect to audit independence.

Keywords: Non-Audit Services (NAS), Auditor independence, Iran

1. Introduction

Until now, the auditor is an important element in the financial statement because the audit subjects financial statements, which are management's responsibility, to scrutiny on behalf of shareholders and creditors to whom management is accountable. The auditor is the independent link between management and those who rely on the financial statements for the decision-making. In that role, the auditor evaluates the judgments made by management in applying standards for the presentation of the financial information. Hence the audit profession, through its independent audit function, has playing an important role in enhancing a financial reporting process that facilitates the effective functioning of business environment. The public confidence in the reliability of issuer's financial statements that is provided by the programme of independent audits encourages investment in securities issued by companies. This sense of confidence depends on reasonable investors perceiving auditors as independent professionals who have neither, mutual nor conflicting interests with their audit clients. Accordingly, users of financial statements expect auditor to bring to the financial reporting process technical competence, integrity, independence, and to prevent the issuance misleading financial statements. But because of recent audit failures surrounding such as Enron, Waste Management, Cendant, Sunbeam and others, the audit practice is undermined.

Today's auditing and accounting firms also performs other accounting related services, such as tax services, and provide a wide array of non accounting and non auditing services, such as management advisory or consulting services.

Because of those services, serious questions were raised concerning the activity and accountability of auditor's performance. These questions arose in large part from a series of unexpected failures of large companies as well as disclosures of questionable and legal or illegal payment to auditors as well as non-audit services.

2. Independence

One of the key factors of the auditor's is independence, without independence users of financial statements cannot rely on the auditor's report. In short, the external system of audit, with its final product, the audit opinion, adds credibility to the financial statements so that users can rely on the information presented and, as a result, the entire system of financial reporting enhanced (Sucher et al. 2004). Furthermore, independence is the core of this system.

The concept of audit independence is fuzzy, the rules governing it are complex and burdensome, and a reexamination is long overdue (Elliott and Jacabson, 1992).

DeAngelo (1981) defined auditor independence as "the conditioner probability of reporting a discovered bridge".

Arens et al. (1999) defined "independence in auditing" as taking an unbiased viewpoint in the performance of audit tests, the evaluations of the results and the issuance of audit reports. Independence includes the qualities of integrity, objectivity and impartiality. Knapp (1985) states the independence in a different angle. He viewed it as "The ability to resist client pressure". According to Flint (1988)"Independence, therefore, is not a concept which lends itself to universal constitution prescription, but one for which the constitution prescription will depend on what is necessary to satisfy the criteria of independence in the particular circumstances".

The ISB (2000) defines independence as: Freedom from pressures and other factors that impair, or are perceived to impair, an auditor's willingness to exercise objectivity and integrity when performing an auditor is the absence of certain activities and relationships that may impair, or may be perceived to impair, an auditor's willingness to exercise objectivity and integrity when performing an audit (ISB, 2000, 44).

There are two approaches of audit independence have commonly been referred to as independence of fact and independence of appearance.

2.1 Independence: in fact and appearance

According to Mautz and Sharaf (1964) there are two aspects of independence: firstly, the real independence of the individual practitioner in the performance of his/her works and secondly, the apparent independence of auditors as a professional group. These two concepts of independence have been referred to as 'practitioner independence' and 'professional independence' respectively.

Independence may be a state of mind or a behavior. According to AUP 32, independence requires a freedom from bias, personal interest, prior commitment to an interest, or susceptibility to undue influence or pressure (AUP, 2001). This suggests that an auditor possessing the requisite state of mind will act in the correct fashion. In this context, auditors should not be independent in fact, but more importantly they should be seen to be independent in examining and attesting clients' financial statements (Stevenson 2002). Precisely, auditors are expected to be able to independently decide on reporting strategies without any influence from their clients' management (Cullinan, 2004).

Orren (1997) states that independence in fact refers to the actual, objective relationship between auditing firms and their clients whereas independence in appearance is the subjective stated of that relationship as perceived by the clients and the third parties. Church and Zhang, (2002) argue that independence in fact is necessary to enhance the reliability of financial statements. On other hand, independence in appearance is necessary to promote public confidence such that users will rely on audited financial statements.

The issues of independence in fact and appearance have also been acknowledged by the standard setting bodies. The AICPA acknowledged the importance of perceptions of auditor independence- 'Independent auditors should not only be independent in fact; they should avoid situations that may lead outsiders to doubt their independence. The current AICPA Code of Professional Conduct (1988) explicitly requires not only actual independence from audit clients but also the appearance of independence to third parties. The SEC defined independence in fact and independence in appearance as separate but equally necessary factors in establishing the auditor's objectivity and integrity when certifying financial statements filed with the commission by an issuer of securities.

According to Mautz and Sharaf (1964), there are three dimensions of auditor independence which can minimize or eliminate potential threats to the auditor's objectivity:

(I) Programming independence includes:

Freedom from managerial interference with the audit program; freedom from any interference with audit procedures; and freedom from any requirement for the review of the audit work other than which normally accompanies the audit process,

(II) Investigative independence en com passes:

free access to all records, procedures, and personnel relevant to the audit; active co-operation from management personnel during the audit examination; freedom from any management attempt to specify activities to be examined or to establish the acceptability of evidential matter; and freedom from personal interests on the part of the auditor leading to exclusions from or limitations on the audit examination.

(III) Reporting independence includes:

Freedom from any feeling of obligation to modify the impact or significance of reported facts; freedom from pressure to exclude significant matters from internal audit reports; avoidance of intentional or unintentional use of ambiguous language in the statement of facts, opinions, and recommendations and in their interpretations; and freedom from any attempt to overrule the auditor's judgment as to either facts or opinions in the internal audit report.

The immediate objective of the audit is to improve the reliability of information used for investment and credit decisions according to Elliott and Jacabson (1992) the principles of independence as follows:

Audit independence improves the cost – effectiveness of the capital market by reducing the likelihood of material bias by auditors that can undermine the quality of the audit. Therefore, they play vital role in economic sector. However, some factors may have negative affection to independence, which these factors should be identified by professionals and take sever action to reducing such a factors.

3. Factors affecting to independence

Several situations may impair the auditor's independence, such as contingent fee arrangements, gifts, auditor's with personnel or operations, non-audit services (NAS), outsourcing, opinion shopping, reporting relationships, and others.

Among the factors that affect to auditor independence that have been studied are:

(1) The effects of gifts (pany and Reckers, 1980);

(2) The purchase discount arrangement (pany and Reckers, 1980);

(3) The audit firm size (Shockley, 1981; Gul, 1989);

(4) The provision of management advisory services (MAS) by the audit firm (Shockley, 1981; Knapp, 1985; Gul, 1989; Bartlett, 1993; Teoh and Lim, 1996; Abu Bakar et al 2005);

(5) The client's financial condition (Knapp, 1985; Gul, 1989; Gul and Tsui, 1992);

(6) The nature of conflict issue (Knapp, 1985);

(7) The audit firm's tenure (Shockley, 1981; Teoh and Lim, 1996);

(8) The degree of competition in the audit services market (Knapp, 1985; Gul, 1989);

(9) The size of the audit fees or relative client size (Gul and Tsui, 1992; Bartlett, 1993; Teoh and Lim, 1996; Pany and Reckers, 1980);

(10) The audit committee (Gul, 1989; Teoh and Lim, 1996); and

(11) Practicing non-audit services (NAS) by auditors (Beattie et al, 1999).

In this paper the author only attempted to clarify non-audit services and its affection to independence of auditors.

The audit failures that have been reported have led to major criticism of the auditing profession worldwide by exposing the weaknesses of the profession in term of safeguarding shareholders' and stockholders' interests (Brandon et al, 2004, Citron, 2003, Cullinan, 20004, Fearnley and Beattie, 2004, Ghosh and Moon, 2005, Gwilliam, 2003, Higson, 2003, Krishnan and Levine 2005); thus some of this criticism arose from non-audit service practices by auditors.

4. Non-audit services

It is found out that auditors believe that the auditors' work would be used as a guide for investment, valuation of companies, and in predicting, bankruptcy. Furthermore, the third party fell that there is strong relationship between the reliability of the auditor's work and the investment decision. Also the auditor's work facilitates the process of economic development through the presentation of reliable information concerning the financial position of the companies (Whadan et al, 2005). However, in recent years some auditors practicing non-audit services; therefore, the main question that arises when auditors provide or could provide both audit and non-audit services is whether the auditors are able to conduct their audits impartially, without being concerned about losing or failing to gain additional services, and the subsequent economic implications for the audit firm (Lee, 1993). As far as globalization in accounting and assurance service has also created the multidisciplinary nature of large audit firms (Brierley and Gwilliam, 2003). These multidisciplinary firms offer audit and non-audit services to audit clients and this have become one of the major concerns regarding the potential auditor independence dilemma (Quick and Rasmussen, 2005). The idea that auditor independence may be eroded via an increase in the auditor economic bond has long been recognized. Most attention has been directed at the possible impact on auditor independence of non-audit services. Although, concerns the impact of non-audit services on auditor independence are not new (Zeff, 2003, a, b).

The economic bonding between audit firms and their clients would influence auditor independence. It may be that the level of client pressure would increase and auditor becomes less concerned with the quality of internal control (Muhamad and Karbhari, 2006).

Although there are market-based incentives for auditors to remain independent, there are also forces that potentially threaten auditor independence. Specifically, regulators are concerned about two effects of non-audit services. One is a fear that non-audit service fees make auditors financially dependent on their clients, and hence less willing to stand up to management pressure for fear of losing their business. The other is that the consulting nature of many non-audit services put auditors in managerial role (Defond et al 2002). These concerns are summarized in the following quote from the SEC regulations mandating fee disclosures (SEC, 2000). Auditor's services relationship raises two types of independence concerns. First, the more the auditor has at stake in its dealing with the audit client, particularly when the non-audit services relationship has the potential to generate significant revenues on top of the audit relationship. Second, certain types of non-audit services, when provided by the auditor, create inherent conflicts that are incompatible with objectivity.

In the United States, the Sarbanes Oxley Act of 2002 implemented a ban on nine non-audit services as follows:

1) Bookkeeping and other services related to the audit client's accounting records or financial statements;

2) Financial information systems design and implementation;

3) Appraisal or valuation services and fairness opinions;

4) Actuarial services;

5) Internal audit services;

6) Management functions;

7) Human resources;

8) Broker–dealer services; and Legal services.

In addition, a registered public accounting firms may only engage in another service if the activity is approved in advance by the audit committee.

In the view of the fact, regarding audit practices one of the fundamental importance in understanding the conflict of interest that arises from the provision of non audit services to audit clients is the fact that is so doing the audit firm is really serving two different set of clients; management consulting services and the audit committee, shareholders and all those who rely on the audited financials and the firm's opinion in deciding whether to invest in the case of audit (Levine and Kornish, 2000).

5. Review of literature

After several scandals at international and national dimensions especially after Enron Collapse professionals, academics, and researchers have focused on non-audit services. However, many writers maintain the NAS impair objectivity, as well as independence, whereas others argue that there exists no association between NAS and audit quality. In short, the findings of prior studies on impacts of NAS on audit quality are negative, positive, or have no effects.

5.1 Studies indicating negative effect of NAS on auditor independence

Several prior studies suggest that NAS has negative effects on auditor practices and auditor independence.

Antle (1984) considers auditor independence to be an auditor's freedom from management influence as desired by company's owners. He considered that since management controls the auditor's fee, an auditor can ignore independence in favor of management, unless a control mechanism is implemented.

A Survey carried out by Wines (1994) suggests that auditors receiving NAS fees are less likely to qualify their opinion than auditors that don't receive such fees, based on his empirical analysis of audit report issued between 1980 and 1989 by 76 companies publicity listed on Australian stock exchange. He found that auditors of companies with clean opinions received higher proportion of non audit fees than did auditors of companies with at least one qualification. In relation to management advisory services (MAS), Gul and Tsui (1991) conducted a survey, also using Australian companies, that provision of management advisory services affects the in formativeness of earnings. They found evidence that the explanatory power of earnings for returns is less for firms that provide MAS. Frankel et al (2002) found empirically that levels of discretionary accruals are higher for firms whose auditors provided NAS than for firms whose auditors do not provide such services.

According to Beeler and Hunton (2002) contingent economic rents such as potential non-audit revenue, increase unintentional bias in the judgments of auditors. They found experimentally that audit partner participants searched more supportively, weighted confirmatory evidence more heavily, and made more elaborate arguments in the presence of low balling and potential non-audit revenue than provision of audit, and NAS claimed that auditors would not perform their audit service objectively and that joint provision would impair perceived independence (Brandon et al, 2004; Frankel et al, 2002; Glezen and Miller, 1985; Jenkins and Krawczyk, 2001; Krishnan et al 2005; Dopuch et al 2003).

Frankel et al, (2002); Larcker and Richardson, (2004); found some evidence of potential links between NAS and earnings management measures.

Beck et al. (1988) argue that non-audit fees further increase the client auditor bond by increasing the portion of the audit firm is delivered from serving a client. Moreover further research has failed to find evidence that non-audit fees impair auditor independence where independence is peroxide for processing the propensity to issue modified auditor opinions (Defond et al. 2002), Geiger and Raghunandan 2003).

Hackenbrack and Elms (2002) revisit the ASR 250 fee disclosures and find negative association between stock returns and non-audit fees for sample companies with the highest ratio of non-audit fees. Brandon et al (2004) opponents to the Joint provision of audit an NAS claimed that auditors would not perform their audit services objectively and joint provision would impair perceived independence. Mitchel et al. (1993) believed that the joint provision of audit and NAS to audit clients would cause unfair competition due to the use of audit services to the same client.

5.2 Studies indicating no effect of NAS on auditors' independence

Several prior studies suggest that NAS has no effects on auditor practices and auditor independence.

Glezen and Millar, (1985); Corless and Parker (1987); Wines, (1994); Kinney et al (2004); AShbough et al (2003), did not find systematic evidence showing that auditors violate their independence as a result of clients purchasing relatively more NAS. According to Frankel et, al (2002) several studies have re-examined the negative effects of NAS on audit quality, and found in his study that NAS has no effect on auditors' independence. Abdel-Khalik (1990) reported no significant difference in audit fees between clients purchasing audit service only and those purchasing both audit and NAS.

Using discretionary accruals (DA) as a surrogate for auditor objectivity, Reynolds et al. (2004) find no association between NAS and DA and conclude that little evidence exists supporting the negative effects of NAS on auditor's objectivity.

O'Keefe at el, (1994) extended Davis et al (1993); using disaggregated Labor hours by rank (Partner, Manager, senior and staff) for clients of a Big six firms in 1989, and using also the percentage of tax fees to audit fees and the percentage of management consulting fees to audit fees as independent variables. They fail to find evidence that audit effort reduces in a joint provision scenario. Palmrose (1999) found that less than one percent of auditor litigation has NAS as part of the basis on which the lawsuit are founded. Jenkins and Krawczyk (2001) asked 83 Big Five and 139 Non-Big Five accounting professionals and 101 investor participants to rate their perceptions of auditor independence, integrity, and objectivity for two scenarios in which an auditor provides neither NAS to one firm, nor nominal amount of NAS (3 percent of total client revenues) nor a material amount of NAS (40 percent) to another. Although they found investor's perceptions of independence and decisions on whether or not invest were not affected by either level of non-audit service provision. Investors (a non-big-professional) did consider the 40 percent level of NAS to be significant in their investment decisions.

Sori, (2006) investigated the perception of Malaysian auditors, loan officers and senior managers of public listed companies on the effect of joint provision of audit and NAS on auditor independence. The majority of the responses agreed with the provision of NAS to audit client by the audit engagement team. Pany and Reekers (1988) described the results of a survey of loan officers and financial analysts, which suggested that NAS does not impair independence. Chung and Kallapur (2003) report no statistically significant association between abnormal accruals and the ratio of client fees to total audit firm fees.

5.3 Studies indicating positive effect of NAS on auditors' independence

Several prior studies suggest that NAS has positive effects on auditor practices and auditor independence.

Gul (1989) studied the perceptions of bankers in New Zealand and found that the effect of provision of NAS was significantly and positively associated with auditor independence. Hussey (1999) reported that the majority of the UK finance directors that participated in his study suggested that joint provision of audit and NAS to audit clients should continue to be allowed. In Malaysia Gul and Yap (1984) reported that NAS provision increased their confidence in auditor independence. Arruanda (1999, p. 165) pointed out that joint provision of audit and NAS would reduce overall cost, raises the technical quality of auditing, enhance competition. This would ultimately increase auditor independence. Carltonand and Perloff (2005) emphasize that the outcome is a more efficient allocation of scarce resources without the need to duplicate efforts to recreate the required input. Kinney et al (2004) denoted knowledge of a client's information system and tax accounting could spill over to the audit, improve the information available to the auditor and thus improve audit quality which in turn would increase the probability that problems are discovered.

Auditor's concern for reputation (Benston 1975; Dopuch et al, 2003) and legal liability (Palmrose 1988; Shu, 2000) should drive auditors to maintain their independence. Larcker and Richardson (2004) also document relation between level of NAS fees and accrual, especially for firms with weak governance. Their results suggest that auditors of firms that purchase large NAS are less likely to allow firm to make choices that lead to large abnormal accruals. They interpret their findings as suggesting that auditors working for firms with weak governance may play a more important role in the governance process in limiting choices of abnormal accruals and that enhanced knowledge through NAS has mere incremental positive effect on audit quality.

Ghosh et.al (2006) studied 8940 firm-year for observation over the (2000-2002) period and found the NAS fees ratio (ratio of NAS to total fees from the given clients) is negative associated with Earning Response Coefficients (ERC). Sharama (2006) studied the impact of audit providing NAS and audit-firm tenure on audit efficiency. He was opposed to restricting regulations on the joint provision of audit and NAS. His studies provided evidence demonstrates an increase in the amount of the provision of NAS, as a result of which the audit lag reduced. He also provides evidence that demonstrates extended audit-firm tenure reduces audit lag while shorter audit-firm tenure increases audit lag. Gore et al. (2001) report a positive association between the provision of non-audit services and earnings management in U.K companies, suggesting that auditors' reporting standards are affected by whether the auditor also provides non-audit services to the audit client. Lennox (1999) suggests that NAS increases auditors' knowledge on clients as well as the probability of discovering problems. Their empirical data, collected from UK firms, show a significant, though weak, positive relationship between NAS fees and auditors, a surrogate for audit quality.

6. Research methodology

According to the above literature the objectives of this study is reaction of auditors, and shareholders regarding to NAS and consulting services provided by the auditors to the clients. So far accurate answer to this question, the author design and developed a questionnaire based on method used in previous researchers.

The questionnaire contains two parts namely (A) bio-data and (B) this section includes 9 questions regarding to the rejection level of NAS by auditors and shareholders in Iran. The measure instrument of the statements is a Five-Point Likert type scale anchored "strongly disagree" (1) and "strongly agree" (5). To test for the significant NAS affection to audit independence between two parties of respondent, Mann-Whitney U test is used which is non-parametric equivalent to the t-test, considered appropriate for ordinal measurements, such as the Likert scales employed in this study. It tests whether two independent samples are from the same population.

To ensure comparability with prior research findings, subjects used in previous studies were selected two groups were identified: auditors, and private shareholders. All groups have legitimate interests in the role of auditors.

7. Results of the study

In this section, the authors report the empirical findings of the statistical analysis for NAS affection to audit independence. For this purpose, 227 questioners from auditors and 261 questioners from shareholders were collected, which totally became 488 useable questionnaires in Tehran on the date of 2007. The all-statistical analyses were performed with the SPSS package software.

7.1 Demographics of respondent groups

The Table 1 shows that from 227 auditors are 78% graduate, 21% master, and almost 1% PhD qualification, whereas from 261 shareholders 90% have graduate, and 10% master qualification. According to this table, the auditors have higher auditing and accounting education than shareholders.

Insert Table 1

With regard to Table 2, 98% auditors and almost 60% shareholders passed auditing courses. Also 100% auditors have accounting and auditing experience, while as the table shows 55% bankers have accounting and auditing experience.

Insert Table 2

Even though the accounting profession and the auditing standards uphold the independence of auditor, it is commonly observed that the independence of auditors is reduced because of NAS. It is generally believed that payment for non-audit services affect the independence of the auditor. In Table 3, some factors affecting auditor independence was tested. Highest mean value was assigned to financial information systems design levels with the values of 3.57 and 2.91 by shareholders and auditors respectively.

Insert Table 3

The test shows that there were significant differences between the shareholders and auditors opinions value of all the variables Z=0.000(<0.05) except Bookkeeping and actuarial services (>0.05).

Insert Table 4

Table 4 highlights the statistical results of the respondents of the sample respondents with regard to NAS affection to audit independence. The management function by external auditors was assigned the overall mean value of 3.92 by shareholders as against the auditors mean value of 3.18 resulting in the differences of 0.74. regarding to human resource shareholders belies that it will damaged audit independence by mean value of 3.94 as against the auditors not very agree with them by mean value of 3.48. Regarding statement No. 3 table 4 shareholders strongly believes that it will impaired audit independence by mean value of 3.62 as against auditors only agree with little area by mean value of 3.05.

The test shows that there were significant differences between the shareholders opinions and auditors opinions value of all the variables Z= 0.000 (<0.05).

8. Conclusion

The auditing profession is organized around central several conflicts. The client hires the auditor and pays the fees but the auditor is supposed to conduct the audit in an independent fashion adhering to the professions independence. Any factor may affect to audit independence should be eliminated. The results of this study showed that shareholders strongly believe that NAS impair audit independence. As previous studies also confirmed this results of study. For example a Survey carried out by Wines (1994) Gul and Tsui (1991) Frankel et al (2002) they got same results in different countries. According to Beeler and Hunton (2002) contingent economic rents such as potential non-audit revenue, increase unintentional bias in the judgments of auditors. Frankel et al, (2002); Larcker and Richardson, (2004); found some evidence of potential links between NAS and earnings management measures.

Beck et al. (1988) argue that non-audit fees further increase the client auditor bond by increasing the portion of the audit firm is delivered from serving a client. Moreover further research has failed to find evidence that non-audit fees impair auditor independence where independence is peroxide for processing the propensity to issue modified auditor opinions (Defond et al. 2002), Geiger and Raghunandan 2003).

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Furthermore, research results an internal separation of the auditing and the consulting function within the same audit firm is not viewed as beneficial in Iran.

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Table 1. Respondent qualification

Qualification	Auditors		Shareholders	
	Frequency	Percent	Frequency	Percent
Graduated	178	78	236	90
Master	47	21	25	10
PhD	2	1	0	0
Total	227	100	261	100

Table 2. Auditing and accounting knowledge

Auditing and accounting knowledge	Auditors		Shareholders	
	Yes	No	Yes	No
Auditing Study	98%	2%	60%	40%
Auditing & Accounting Experience	100%	0%	55%	45%

Table 3. Factors affecting to audit independence

Sl. No.	Factors Affecting Independence	Respondents	Status	Paired Samples Statistics		Paired Differences	Paired Samples Test	
				Mean	SD	Mean	Z	Sig.*
1	Bookkeeping	488	Sh	2.79	1.185	0.08	-1.496	0.135
			A	2.71	1.372			
2	Financial information systems design	488	Sh	3.57	1.095	0.66	-11.695	0.000
			A	2.91	1.420			
3	Appraisal or valuation services and fairness opinions	488	Sh	2.93	1.169	0.39	-7.170	0.000
			A	2.54	1.407			
4	Actuarial services	488	Sh	2.47	1.358	-0.04	-0.790	0.429
			A	2.75	1.374			
5	Internal audit services	488	Sh	2.51	1.256	0.26	-4.246	0.000
			A	2.49	1.392			

Table 4. Factors affecting to audit independence

Sl. No.	Factors Affecting Independence	Respondents	Status	Paired Samples Statistics		Paired Differences	Paired Samples Test	
				Mean	SD	Mean	Z	Sig.*
1	Management functions	488	Sh	3.92	1.116	0.74	-13.581	0.000
			A	3.18	1.076			
2	Human resources	488	Sh	3.94	1.296	0.46	-9.340	0.000
			A	3.48	1.099			
3	Broker–dealer services	488	Sh	3.62	1.049	0.57	-11.428	0.000
			A	3.05	1.200			

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Strategic Management
for Main Functional Areas in an Organization

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Abstract

It is argued that Strategic Management is concerned with 'The Whole Organization'. The whole organization includes four main functional areas, which are marketing, operations management, finance and human resource management. Each functional area requires strategic thinking, which is thinking for the future. What a whole organization needs is to make strategic decisions and put the strategy into action. According to the sixth edition of 'Exploring Corporate Strategy' (2002), it says a strategy is 'the long-term direction of an organization'. This essay is concerned with the strategic management of a whole organization, the relationships of different functional areas and the implementation of the strategy in an organization.

Keywords: Integrated, Interact, Strategic, Change, Innovation, NPD

Introduction

Every single organization is working properly with the basic and necessary departments. There exist many arguments about which functional area would be the most important one for the long-term development for an organization. Normally, there are four main functional areas in an organization, involving marketing, human resource, operations and finance. They are working as a whole, and they are interrelated and interacted during the course of the operation of an organization.

1. The whole organization

1.1 Marketing – the most important part of an organization

There are many arguments with respect to how different functional areas might drive each other. While some people believe human resource management drives the whole organization, others think marketing should be the most essential area of the whole organization.

For example, Armstrong, M. (1987) says human resources are the most important assets of an organization and their effective management is the key to the success. In contrast, Claire Capon (2000) says Marketing is the first department of the whole organization to be considered.

In fact, it is hard to say which functional area is the most important part of a whole organization. They always work together and interact with each other. Accordingly, the four main functional areas are integrated and interrelated.

Marketing, which is an essential department of an organization can affect on the business very deeply. Relatively speaking, marketing which is concerned with identifying customers' needs and wants drives the whole organization.

The marketing department is an internal area with regard to research, analysis, supervision and so on. Furthermore, it is related to the external environments as well. Thus, the marketing department plays important roles in both external and internal environments. What the marketing department is supposed to do is to notice every change with regard to the outside world and predict the kinds of products or services the clients may want. Moreover, marketing also has to cope with other departments of the organization with the aim to get them realized the objectives of an entire organization.

Michael Porter, a professor at Harvard Business (1980s) suggested that organizations should dominate specified markets, or segments of specified markets, and make it as hard as possible for others to enter that market. (Michael Colenso, 1998, p. 17)

What Porter said is a corporate strategy and is also the way to enhance the competitive advantages of an organization. In other words, the organization has to be so specialized in its own products and services that others do not be able to copy or imitate. It can also keep the rivals not be able to enter this particular field. The core idea of Porter's strategic thinking is to keep the cost of entering this market very high so that competitors won't be able to enter. The organization will develop very quickly as a result of carrying out such marketing strategy.

The other aspect why the marketing is important for the development of an organization has something to do with the New Product Development (NPD), namely, the innovation. As the world is ever changing and there are many unexpected factors which will have impact on businesses, innovation is a kind of means to help the organization survive the intense competitions, and it is also beneficial to the long-term development of an organization. However, there are a number of controversial views on the value of NPD to the long-term viability of organizations. Some people argue that NPD is harmful, while others disagree. And it differs from natures of industries, sizes of organizations and so forth. For example, manufacturing industry can be influenced by new technologies; and education system can be affected by new academic ideas. Consequently, as a company in the changing world, managers are required to be highly aware of changes. Moreover, managers should try to be proactive rather than reactive, which will be beneficial to long-term development of an organization. Most companies resist to changes and they prefer safety, that is, they might prefer more conservative way, entering markets when the products are nearly in their mature phase. So, these companies have no systematic method to create new products or exploit new markets, and they can only change as the environment changes. On the contrary, if these companies are creative and innovative, they can respond to changes all the time.

Marketing demands creativity and innovation, further, new product development is a method of creating, developing and keeping a competitive advantage of an organization. For example, IT industry is changing rapidly as a result of new technology, thus, businesses in this industry have to keep creating new products continuously, especially the software. Otherwise, even traditional industries could die. According to the graph of product life cycle (1994, pp. 6), it is obvious that all products go through maturity, then decline. Hence, according to the graph of forces governing competition in an industry (1994, pp. 12), if companies do not keep creating new products, they can not maintain their competitive advantages and a number of new entrants or substitute products will probably come to the market and gain the market share and profitability (1991).

As Gregory R. Elliott states, the elements of marketing concept involves customer orientation, integrated marketing efforts, resultant profitability. So, it is evident that customers, marketing strategy and profits are vital for businesses. It appears that if companies concentrate on innovation, they will provide new things continuously and create more opportunities to make profit. Indeed, sometimes, customers do not really know what they need and want, such as the movie industry, there are a great many of new movies every year with various kinds of themes. Movie companies promote new movies by using attractive posters or trailers to persuade customers to buy tickets.

It is common that people prefer safety rather than changes. Donald Trump, one of the premier entrepreneurs of the 1980s, says that he has never gambled in his life and he prefers less risk (1995). As such, David Singleton, another entrepreneur, who built a very successful newspaper chain, states that their behavior may seem to be risky, but every risk was very carefully calculated (1995). According to the article *Cost Targets and Time Pressure during NPD* (2002), we see that NPD is costly and time-consuming. Suppose a new product fails, a company would have to bear cost for the failure and suffer serious losses. That's the reason why lots of managers do not like to take risks and hold a view that NPD is too risky. It is universally accepted that risk and challenge exist at the same time and risk taking can win great developing opportunities. Innovative organizations do take risks, but the risks are prudent risks. Companies can adopt some methodologies to minimize risks. As Michael Howley suggests companies can do marketing researches carefully beforehand and employ consultancies for enquiries in order to reduce failures (2002).

As Martti Tapio Lindman states, neither small nor large companies possess any extraordinary advantages over each other in innovation. In contrast, large firms especially comprise the major source of technology and innovations, since small-to-medium sized enterprises (SMEs) lack of relevant skills and resources, which is considered as a potential weakness for innovation (2002). Additionally, as the analysis of SMEs (2002) indicates, SMEs tend to lack a long run perspective and in this respect, SMEs are reactive rather than proactive. In a word, SMEs as well as large firms have their own characteristics. Although they are different in size, both of them need innovation so as to adapt to the changing environment.

The book *Product Innovation Strategy* states: "There is no such thing as a commodity business. There is always the possibility of differentiating yourself." (1995) It appears that there is no doubt any industry has possibility of innovation. Further, any kind of products could be differentiated. As Theodore Levitt states in the article entitled "Marketing Myopia", transportation industries were product oriented rather than customer oriented, as a consequence, they lost customers; likewise, the Hollywood movie ignored the threat of television until it was almost too late because they regard themselves as cinema industry rather than entertainment business. (1960) Similarly, the view "We are in a commodity business." held by some industries is another kind of marketing myopia. Such industries ignore the changing environment they are in and rapidly developing technology, and they are internal environment oriented rather than Macro and Micro environment oriented. In sum, this view is harmful to the long-term development of organizations.

Moreover, developing a green marketing strategy is becoming a trend of innovation, which also refers to ethical issues of businesses. In order to protect the environment and keep sustainable development of businesses, it is necessary to apply a green marketing strategy. As far as the future of business is considered, companies are required to take environmental issues into account as they develop new products. Such innovation can provide a healthy environment either for industries or the nature. Obviously, the unexpected and competitive environment calls for New Product Development. And the same is true in terms of innovation for other functional areas inside an organization.

1.2 The relationship between marketing and other departments

As far as the internal environment of the organization is concerned, the four main functional areas are integrated as a whole. They do not work alone, but work together towards the overall aim to plan for the future.

1.2.1 Marketing and operations management

Operations management is about the way organizations produce goods and services. (N. Slack et al., 1998, p. 3)

Moreover, operations management is referring to satisfying customers' needs and wants. Research and Development (R&D) is the necessary step of marketing, which has a relationship with operations management about making decisions on the design of products or services and the resource inputs need. Then, costs and the sales price could be decided by operations management. Finally, marketing and operations management work together and come to a final decision on making profits according to the cost and the price.

1.2.2 Marketing and finance

Financial management is concerning raising capital for the operations and ensuring sufficient revenue is generated to cover the cost of any finance raised. (Claire Capon, 2000) Likewise, finance has a very close relationship with marketing and operations management as well. The finance department is required to make sure that there is enough money for the whole organization to run properly. On the other hand, operations management is responsible for producing the goods considering the costs. Furthermore, marketing should bring the products to the market and do the best to sell enough goods in order to make large profits for the whole organization.

1.2.3 Marketing and human resource management

Human resource management (HRM) is an integrative general management that involves identifying the organization's demand for human resources with particular skills and abilities. (Claire Capon, 2000) As for the introduction of the new products or services, it is necessary for HRM department to know about it. Once the new products or services are introduced, marketing has the responsibility to inform the HRM department punctually and sufficiently. The information for HRM department should be concerned with the new skills and experience needed for the new workers at present. In other words, HRM department should make a strategic plan in training, recruitment and selection of new staff.

2. Plan for the future

Strategic Management includes understanding the strategic position of an organization, strategic choices for the future and turning strategy into action. (Gerry Johnson and Kevan Scholes, 2002, p.16)

2.1 Managers and strategic planning

2.1.1 Macro environment and micro environment

The whole organization relates to many different fields, such as macro and micro environments. Macro environment is equal to the external environment which can be defined as PEST. PEST embraces four parts: Political, Economic, Social and Technological elements. Micro environment is concerning customers, competitors, industries, markets, etc.

Both macro environment and micro environment are likely to have impacts on the business, due to their frequent changes. So, managers are required to be highly aware of the changes which occur gradually and always think for the future in order to lead the whole organization to success. The changing environment is the very reason why an organization needs to make a contingency plan as well.

On the other hand, a good manager must know 'letting go', namely, how to delegate rather than do everything themselves.

2.1.2 Organizational culture and mission statement

As far as an organization is concerned, organizational culture as well as mission statement is crucial for the whole organization.

Culture can be identified in the internal environment of the organization. Deal and Kennedy examined hundreds of companies and find four generic cultures: tough-guy macho, work hard/play hard, bet your company and process. (Claire Capon, 2000) From above-mentioned organizational cultures, we see these cultures could assist the managers to supervise the companies more efficiently.

In addition, mission statement is the schedule of duty and aim of the organization. It is indispensable for any organization to have its own mission statement which is aiming at the future.

2.2 Strategic management in the whole organization

As far as the whole organization is concerned, each functional area has its own strategic management. Strategic management penetrates into different functional areas and help the whole organization to enhance its own competitive advantages. The application of the unique strategic management leads the organization to the final success. Accordingly, it is essential for an organization to choose proper strategies in each functional area in order to form a corporate strategic plan.

2.2.1 Strategic management in marketing

Marketing is the first department in the whole organization. It is about finding customers' needs and wants. It is very crucial to use effective marketing strategy with regard to a certain organization.

Theodore Levitt said if the growth of a certain industry is threatened, slowed, or stopped is not because the market is saturated. It is because there has been a failure of management. (Levitt, 1960)

For example, the need of the railroad declined. That did not mean the need was filled by others (cars, airplanes, buses, etc.). The main reason why the need in such area declined was that they let others take customers away from themselves. They were railroad-oriented instead of transportation-oriented; they were product-oriented instead of customer-oriented. (Levitt, 1960)

According to above-mentioned instance, it can be safely concluded customer-oriented management is a sort of effective strategic management in marketing which can keep the industry growing, even if there is no obvious opportunities.

2.2.2 Strategic management in operations management

Strategic management in operations management is very essential in an organization as well. For example, Tesco, a successful supermarket in the UK, the layout for the whole site reflects a lot of strategic thinkings. They place the meat after the vegetable on shelves, because people in the UK often do the cooking by using vegetable and meat together. In addition, they always put the profitable goods on the middle shelves where customers can reach quite easily. Therefore, to choose proper strategic management in operations management can help the organization lead to success more easily.

2.2.3 Strategic management in finance

As far as the whole organization is concerned, to think strategically is significant for the growth of an organization. As for finance, the capital is a very essential element of a certain organization. Hence, it is a good idea to issue ordinary shares to raise the capital in order to think for the future. (Claire Capon, 2000)

2.2.4 Strategic management in HRM

The recruitment of employees is crucial to an organization as well. The staff with skills and abilities can provide customers with satisfactory products and services. The recruitment of employees also helps the organization achieve its strategic goals efficiently, because recruitment process selects appropriate applicants to work together in order to realize the objectives towards the strategic direction of an organization.

2.2.5 Working together

To achieve the goal of the whole organization needs the cooperation of the four main functional areas. Via analyzing the market, applying effective strategies of each functional area and coming to an agreement of a corporate strategic plan by all these functional areas, the organization put the plan which is thinking for the future into implementation at last.

3. Conclusions

Strategic management is related to the whole organization. It is concerned with four main functional areas, which are marketing, operations management, finance and human resource management. These four functional areas are integrated and are responsible for working together so as to realize the overall objectives of the organization. Thinking for the future is the core element of strategic management. As such, a good manager is not required to think operationally, but think strategically. To sum up, planning for the future is indispensable for the development and the maintenance of any organization.

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HR Roles Effectiveness and HR Contributions Effectiveness: Comparing Evidence from HR and Line Managers

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Abstract

As the importance of human resource increases to the business, so does also the need to ensure its effective management. This study compared HR and line managers' evaluation of the effectiveness of the HR department in terms of its roles and contributions to the firm using a multi-perspective view of effectiveness. Survey responses from 108 HR and 140 line managers from 108 large manufacturing and service firms in Malaysia showed significant differences in the ratings by HR and line managers. HR managers, quite unsurprisingly, rated higher both dimensions of the HR effectiveness as compared to line managers. For a comprehensive evaluation of HRM, the study reaffirms the need for a client-centered evaluation of effectiveness given that self-assessment is always exaggerated.

Keywords: HR managers, Line managers, HR roles effectiveness, HR contributions effectiveness

1. Introduction

Even though the role of human resource (HR) in organizational success and sustained competitive advantage has been widely acknowledged, there is great degree of contention on how effective HR management (HRM) function is in any organization. Given the lack of clear metric of HR investment and performance, Legge (2005) suggested, without much success, that personnel managers re-invent the rules of HRM effectiveness. Since then, the field of strategic HRM has theorized and modeled HR's and HRM's impact on organizational outcomes especially financial outcomes (e.g., Chew & Sharma, 2005; Delery & Doty, 1996; Huselid, 1995; Huselid, Jackson, & Schuler, 1997). Despite these efforts, HR managers are still grappling with the development of a simple but clear metric of HRM effectiveness that would excite the imagination of internal stakeholders. The concept of human capital and it being a central component in the intellectual capital of a business and the need to optimally exploit it has further added to the plethora of experiments in developing new metrics for the measurement of HRM effectiveness. HRM is, like everything else, is evolving to adopt more strategic roles. Changing roles add and/or change the metrics of HRM effectiveness in organizations (Ulrich, 1997). Hence, efforts to assess the effectiveness of HRM must consider the many new roles HRM is asked to play. This paper seeks to examine the effectiveness of HRM in carrying out multiple roles using a client-self perspective.

2. Literature review

Research on multiple constituency approach to evaluate HRM effectiveness began with the research of Tsui (1984) and Salancik (1984). In particular, Tsui (1984) suggested that the tripartite framework of personnel department effectiveness need to be examined from its constituencies' perspectives. To date, information on the HRM effectiveness has been obtained primarily from HR managers (e.g., Huselid et al., 1997; Perry & Kulik, 2008; Richard & Johnson, 2001, 2004; Soltani, 2003; Teo, Ahmad, & Rodwell, 2003) with little else to confirm or deny its accuracy. This increases the likelihood of social response bias since HR managers are reporting on their HRM effectiveness. Furthermore, it was supported by Guest (2001), employer reports on the HRM effectiveness from their perspective as a manager, not from their experience of the actual practices—they are not the consumers of HRM, the employee are. Unlike many studies of HRM which are based on data supplied solely by HR managers, studies adopting the multiple constituency perspective necessarily include assessments of HRM effectiveness by non-HRM staff (Geare Edgar, & Deng, 2006; Han, Chou, Chao, & Wright, 2006; Kane, Crawford, & Grant, 1999; Mitsuhashi, Park, Wight, & Chua, 2000; Teo & Crawford, 2005; Wright, McMahan, Snell, & Gerhart, 2001). Therefore, collecting data from HR manager as well as line manager is likely to enhance the reliability of findings reported in studies on HRM.

A study conducted by Kane et al. (1999) among 549 employees, managers, and HRM staff across a wide range of types of organizations in Australia, New Zealand, the USA, the UK, and Canada revealed the use of a multiple constituency perspective on HRM was supported, with significant differences found on the basis of the respondent's position as either HRM staff, manager or employee, and their level in the organization.

Mitsuhashi et al. (2000) investigated the differences in perceptions of the importance and effectiveness of human resources practices in firms operating in the People's Republic of China. They found that line and HR executives both viewed the issue of securing, developing, and maintaining human resources as a critical issue for the execution of daily operations and long-term strategic plans. They also found that line executives perceived HR performance effectiveness as significantly lower in that functional areas as the HR executives. Therefore, they concluded that HR departments were not meeting the performance expectations of line executives.

Besides, Wright et al. (2001) analyzed data from 44 HR and 59 line executives from 14 companies in US. They questioned whether the differences exist between HR and line executives in evaluating the HR function along the two dimensions of HRM effectiveness. Result shows that HR executives consecutively rated the functions' effectiveness higher than line executives. Furthermore, they discovered that the greatest differences were observed on the important and/or strategic aspects of HR.

Geare et al. (2006) examined managers' and employees' evaluations of the importance and the effectiveness of the HRM function in New Zealand. Data were obtained from 35 public and private sector, based on matched manager-employee data sets. The results of their study show significant differences exist between how a manager views HRM compared to how the employees' view HRM across the two perceptual ratings (i.e., importance and effectiveness) used and across three of the four HRM functions examined. They suggested the need for a multi constituency approach for the evaluation of HRM.

Thus, this study sought to expand such research in a different cultural setting, one that is characterized by lower individualism, higher uncertainty avoidance, and higher power distance.

In this study, Wright et al.'s (2001) measure of HRM effectiveness was adapted which focuses on HR's effectiveness in performing various roles and HR's effectiveness of its contributions. The effectiveness of HR roles are captured the essence of the roles proposed by Ulrich (1997). These roles also resemble the kinds of activities that comprise Huselid et al.'s (1997) "strategic" HRM effectiveness. Specifically, Wright et al.'s (2001) measure it in terms of:

1) The "Strategic Partner" role focuses on HR's participation in and influence over the formulation strategy.

2) The "Tailoring Practices" role highlighted the role of HR in strategy implementation. It deals with tailoring HR practices to support the business strategy once it is formulated.

3) "Providing HR Services" encompasses HR's role in providing the basic services.

4) "Providing Change Consulting" refers to HR's role in helping line executives to effectively manage cultural and organisational change.

5) "Developing Organisation Skills and Capabilities" deals with HR's role in identifying and/or developing critical organisational core competencies or capabilities.

The second aspect of HRM effectiveness measure is on its contributions, and this served as more of an overall evaluation of the function. The HR contributions component is evaluated on how the HR function was being run and how it was contributing to the firm on different dimensions (e.g., how HR contributed to the firm's competitive position, bottom line, core competence, and human capital). These two aspects of HRM effectiveness has been used and validated in the past studies (Han et al., 2006; Mitsuhashi et al., 2000; Wright et al., 2001).

Based on the above findings, there was an expectation that there would be significant ratings differences between HR and line managers, with HR managers ratings higher than line managers ratings.

Research Question: Are HR managers ratings on the HR roles effectiveness and HR contributions effectiveness significantly higher than line managers rating?

3. Methodology

The data used in this study was collected as part of a larger study that investigated antecedents and outcome of empowerment of the line managers in HR activities. The mail survey approach was used in the study. Three sets of questionnaires were administered to the HR manager in the company. Each questionnaire was accompanied by a cover letter explaining the purpose of the study. HR manager was asked to complete the HR managers' survey himself/herself. Then, he/she was asked to distribute at least one copy of the line manager's questionnaire to the line manager that capable of completing the questionnaire and could represent the organization. HR managers could choose the line managers from any department in their organisation. The final sample size was 248 individuals (108 HR managers and 140 line managers) from 108 firms retained for the analysis.

Units of observation for this study are HR and line managers working in large manufacturing and service firms in Malaysia. Manufacturing firm included in the sample had 150 or more full-time employees, whilst, 50 or more full-time employees for the service companies. SMIDEC (2003) defined small and medium enterprises in manufacturing are enterprises with full-time employees not exceeding 150, whereas small and medium enterprises in the services sectors are enterprises with full-time employees not exceeding 50.

3.1 Measures

3.1.1 HR Roles Effectiveness

Five items of the HR roles gauged the effectiveness of the HR function in terms of the roles "providing HR services", "providing change consulting services", "being a business partner", "developing organisation skills and capabilities", and "tailoring practices to fit business needs". The roles were assessed on a seven-point scale with 1 (not meeting needs) to 7 (all needs met) scale.

3.1.2 HR Contributions Effectiveness

The 10-item the effectiveness of the HR contributions developed by Wright et al. (2001) was used to measure the overall effectiveness of the HR function. The rating was on a seven-point Likert scale, ranging from 1 = 'not at all' to 7 = 'to a great extent'.

4. Results

The aim of this paper was to examine whether there is a significant difference between HR and line managers towards the perceptions of HR roles effectiveness and HR contributions effectiveness in large manufacturing and service firms in Malaysia. A total of 108 companies responded to the survey (108 from HR managers and 140 from line managers). The organizations were classified into two main industries in Malaysia: manufacturing and services. Manufacturing firms accounted for 61.1 percent of the sample. The services firms accounted for another 38.9 percent of the sample.

As shown in Table 1, reliability estimates using Cronbach's alphas for the HR roles effectiveness and HR contributions effectiveness measures were 0.82 and 0.94, respectively. All of the final HR effectiveness scales have acceptable internal reliability according to Nunnally's (1978) 0.7 criterions.

As can be seen in Figure 1, HR and line managers differ with regard to their perception of the extent to which the HR function is adequately fulfilling its various roles. HR and line managers agreed with regard to what role HR is best fulfilling (providing HR services) and least is (business partner). However, significant differences were observed for all five roles, with HR managers giving between 0.22 and 0.60 scale points higher ratings on these items relative to the line managers.

With regard to the HR contributions, as can be seen in Figure 2, there were also significant differences between HR and line managers in the rated effectiveness of the overall contributions of the HR function. HR managers gave the highest effectiveness ratings on the items of providing timely HR information (mean = 5.58), while value-added contributions (mean = 4.56), enhancing competitive position (mean=4.60), performing the expected job (mean=4.64) and maintaining firm's core competence (mean = 4.69) received the four lowest ratings from line managers.

To test whether differences in "Position" affect HR effectiveness differently, an independent-samples T-test was conducted for responses from HR and line managers using SPSS. Table 2 shows that the mean values on the construct of HR roles effectiveness for HR and line managers are 5.19 and 4.80, respectively, with T value of 3.15 and significance level of less than 0.01. Meanwhile, the mean value on the HR contributions effectiveness measure for HR managers is 5.35, while line managers are 4.82. The T value is 4.50 at the significance level of less than 0.01. Thus, there is significant difference between HR and line managers in respect to the two dimensions of HRM effectiveness.

5. Discussion

The aim of this study is seek to find the differences on the perceptions of HR roles effectiveness and HR contributions effectiveness among 108 HR managers and 140 line managers in the 108 Malaysian large manufacturing and service firms. In general, the findings showed significant differences between HR and line managers. HR managers were rated higher for both dimensions of the HR effectiveness as compared to line managers. The results of this study are congruent with the finding of previous studies related to differences in perceptions of the HR effectiveness where line executives do not rate HR effectiveness as highly as HR executives (Mitsuhashi et al., 2000; Wright et al.. 2001).

On the HR manager's side, this finding can be explained in two ways. First, they may be positioned at the senior committee level but if they are not committed to understanding the HR department, their contribution is devalued accordingly. If they can show that they have run a business, it is possible that they will have credibility in the HR department. Secondly, the difference in perceptions have been found to occur because of a tendency for [HR] team members to overestimate the effectiveness of their performance as compared to ratings from internal customers (Gilbert, 2000; Phelps, 2002). Thus, the above mentioned reasons provide support for the notion that HR managers have higher assessment in their perceptions of the effectiveness of the HR department.

On the side of the line managers, the differences may be due to HR-line conflict. Line managers did not an express in taking on more HR responsibilities and view it as a having as critical a relationship to firm success as the line function. In addition, previous research by Phelps (2002) concludes that non-HR managers have a negative view of the function, and relates findings about the performance of HR professionals on a range of people-related processes as 'consistently failing to meet the requirements' of non-HR managers'. Given this, it is not surprising that they would have a tendency toward evaluating HR department as not being overly effective.

One technique for Malaysian organisations to reduce the HR effectiveness gap is to form partnerships between HR managers and line managers. This partnership allows HR better understand the manager's business needs, which in turn, enables HR to be a more value-added resource. This partnership has been valuable for two main reasons. First, the HR staff now understands what drives their business; therefore, if a change is required, HR now knows from the line manager's position what is driving the need for that change. Secondly, HR managers gain a more balanced view of the business; therefore, they are better able to balance business needs with employee needs.

Perhaps, the emerging concept of 'strategic partner' (Bhatnagar & Sharma, 2005; Buyen & de Vos, 2001; Lawler & Mohrman, 2000; Ulrich, 1997; Wright, Dyer & Takla 1999) contends that HR departments should help line managers resolve business issues and align HR interests with the achievement of organizational goals. Line managers are important for successful policy implementation in organizational change situations, as vital communication link between senior management and team members (McHugh, O'Brien, & Ramondt, 1999). Therefore, close collaboration between HR and line managers can determine the most effective evaluation of the HR department as well as can create synergies, which add value to the company.

6. Conclusion

In conclusion, this study contributes toward the literature on the effectiveness of the HR departments. This study is the first one undertaken in the Malaysian manufacturing and service firms with emphasis on the differences in the perceptions of HRM effectiveness between HR and line managers. This study has covered the first part. Building on the work of earlier researchers in the field, such as Wright and associates, it has analyzed the extent to the differences of HRM effectiveness is applied in Malaysian organisations and has helped to evaluate the present scenario.

Further, access to HR and line managers' perceptions of the effectiveness of the HR department has been a useful first stage in the measurement and management of HC as a high level strategic issue within the two large organizations in Malaysia. HRM effectiveness, as an area of academic research is relatively recent, however is an organizational issue in Malaysia (particularly in large manufacturing and service firms) that will attract increasing attention for the foreseeable future. Potential areas for future academic research could include an exploration of how Malaysia firms are actually reporting on their HC of measuring HRM effectiveness which, over time, would add a significant contribution to more conceptually and empirically based research in this emergent area.

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Table 1. Reliability coefficients

Variables	Number of Items	Cronbach's Alpha
HR Roles Effectiveness	5	.82
HR Contributions Effectiveness	10	.94

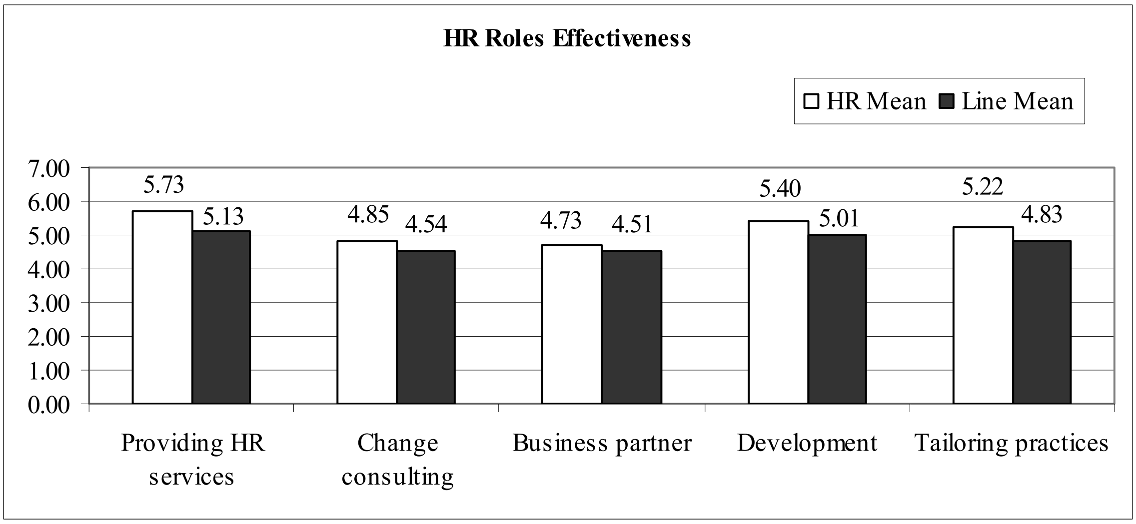

Figure 1. HR Roles Effectiveness

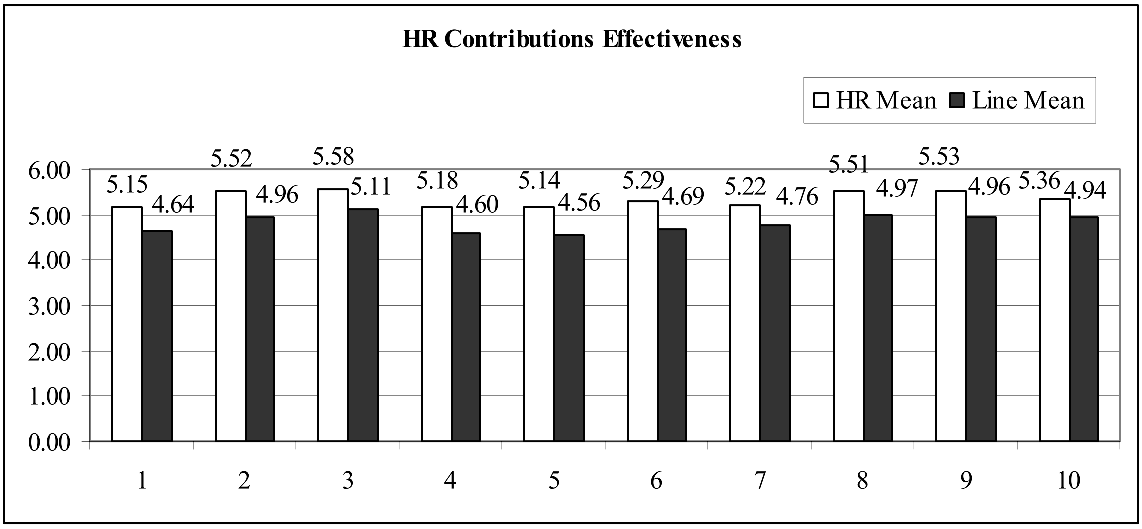

Figure 2. HR Contributions Effectiveness

Notes: 1 = Performing the expected job; 2 = Responsive to front-line managers' and employees' needs; 3 = Provide timely HR information; 4 = Enhancing competitive position; 5 = Value-added contribution; 6 = Maintaining firm's core competence; 7 = Source of competitive advantage; 8 = Policies, practices, and procedures helps employees; 9 = Developed a well coordinated policies, practices, and procedures; 10= Support firm's business plan.

Table 2. Differences in the HR effectiveness measure by HR and Line managers

Variables	HR Manager (Mean)	Line Manager (Mean)	t-value
HR Roles Effectiveness	5.19	4.80	3.15**
HR Contributions Effectiveness	5.35	4.82	4.50**

*p<0.1, **p<0.01

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