



Indian Institute of Management Indore



# IMPACT

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## **IMPACT**

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# Editorial

Managerial excellence comes out of a pursuit for perfection fuelled by strategies to overcome obstacles and make organizations to adapt themselves to the emerging paradigms. The Darwinian theory of competition that validated the rules of the jungle has come to stay in the corporate warfare in many forms, sizes and with varied speed. What were built over centuries have been over come by a completely new thought, practice and process in such a small period of time that organizations have failed to realize that mere existence does not guarantee success. I quote "*Mere longevity is a good thing for those who watch life from the sidelines. For those who play the game, an hour may be a year, a single day's work an achievement for eternity*" (Gabriel Heatter). The blend of papers in this issue reflect the new directions in practice and thought in contemporary management

As said by great British philosopher Bertrand Russell; 'all human activity is prompted by desire', and the manifestation of our desire to carve a niche in the publication, brought out the inaugural issue of the IMPACT, which was released in December 2006. The issue was a resounding success and the overwhelming responses received from the readers are attributed to the quality of papers placed in the Journal.

Contrary to the popular belief that getting authentic scholarly research papers from academics and management practitioners is a real dilemma, IMPACT has succeeded in attracting a number of submissions in original research from its contributors. I thankfully acknowledge all the authors who have contributed to the journal. I assert here that without the support of authors, the publication of this journal would not have been possible. Regarding the induction of some of the new sections as assured in the previous issue, we could not live up to the promises made due to the negative review of papers received in the particular sections. Owing to space constraints, all the reviewed papers could not be incorporated in the journal. The remaining reviewed papers will be included in the subsequent issues. The current issue comprises of seven research papers and two case studies.

The opening paper of the journal by Neeraj Dwivedi captioned, **Determinants of Board Effectiveness: Evidence from Large Indian Firms** discusses the complementarities of various theories in understanding the determinants of board effectiveness and from the objective evaluation of data from various Indian enterprises, the paper tries to provide an innovative outlook to the phenomenon of board effectiveness in emerging economy, notwithstanding the dearth of research studying the linkage of board effectiveness and corporate performance, that precluded the researchers from assessing various recommendations of the code in the Indian context.

The second paper, **Employees' Data Mining Readiness in the Malaysian Insurance Industry:A Preliminary Study**, authored by T. Ramayah, Noornina Dahlan and Ruzi Panjang Adni, takes up the subject of employees' readiness in implementing data mining in insurance sector on the basis of results analysis through a questionnaire survey on 200 employees working in 12 insurance companies in Penang and Kuala Lumpur. Out of the four variables viz. skills and experience, business strategy, cultural factors and data quality, only the former has an impact on employees' readiness and other three variables do not have any considerable influence on readiness of employees in adopting data mining technologies.

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The third paper titled, **Cross Border Investments – Imputing Financial Shape to Uncertain Business Situations – The Use of Real Options and the Lessard APV Approach - A Discussion**, focuses on the advantages of cross-border investment opportunities as well as the risk implicated, which is not the same from the domestic scenario to a large extent. Attributable to different reasons varying from uncertainty to estimation difficulties, it is observed that cross border investment is more strategic than regular investments.

The fourth paper, **Emotional Contagion and Team Effectiveness: A Conceptual Model**, is an attempt to develop and provide a model to study the relationship between emotional contagion and team effectiveness with the assumption that the personal, interpersonal and contextual factors influence the spread of emotions in a team. This conceptual model provides substantial scope of applying the concept of emotional contagion in various management related fields; hence, linkages suggested in the model need to be empirically tested by future researchers to establish the validity of the proposed model.

The fifth paper, **Quality of Management Education in India: Development of a Conceptual Framework** analyses the key challenges confronted by B-Schools in India in maintaining the quality of management education. According to authors, owing to the participation of various stakeholders, measuring quality of an educational service is a complex process. Therefore, a conceptual framework for measuring quality of management education in India is proposed in the paper.

The sixth paper, **Behavioural Considerations of Cost Allocation in Indian Industry: An Empirical Examination** imparts insights into the behavioural aspects of cost allocation which tend to influence the behaviour of the participants within the system, in spite of certain limitations identified in this study. After the investigation of literature on cost allocation and analysis of data collected from managers responsible for cost allocation with the utilization of 2\*6 factorial ANOVA, the present study finds that there are significant differences in the effect of considerations between the manufacturing and service sectors. It is relevant to develop a more comprehensive understanding of the behavioural aspects of cost allocation, as its essentiality is felt in the manufacturing and service industries, especially in Indian companies

The seventh paper of the journal, **Internet Banking Usage: A Customer's Perspective**, illustrates the major factors affecting the usage of internet banking services and the impact of technology in the service encounters of financial institutions. The wide-ranging effect of technology acts as a great stimulant in the decisiveness of customers in choosing the banking services. The usage of internet banking is also affected by individual, organizational and technological factors significantly and in comparison to telephone banking and the ATMs, Internet enabled banking is way ahead due to the bestowment of multi - dimensional advantages.

The Journal concludes with two case studies; first case study, **Positioning a State as a Tourism Destination - A Case Study of Jharkhand**, appraises the latent tourism potential of Jharkhand, one of the new states of Indian union. The state abounding in forests, wild life, and natural resources with rich cultural heritage has immense potential to become the major tourist destination of India. Authors suggest specific measures for the development of tourism; acclaimed as world's largest industry, in the state. The second case study, **IDBI Bank—A Case of Fluctuating Brand Design and Corporate Identity Impact on Customer Loyalty and Satisfaction**, underlines the importance of brand identity and brand

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logos or trade marks in upholding the uniqueness of an establishment. The establishments employ uncompromising strategies to protect and also to enhance the brand value to win customers. Through the study of a financial establishment and its shifting brand identity, paper finds that the brand design is an important agency that provides the customers a message about the institution's culture and its endeavors to reinvent, reposition and refurbish itself over a time period.

I welcome suggestions for improving the content and spirit of IMPACT. I extend my thanks to Ambika Harikumar and Mukesh Choudhary at Research & Publications office for their assistance and cooperation towards the publication of the Journal.



**Dr. Tapan K. Panda**

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# Contents

<b>Determinants of Board Effectiveness: Evidence from large Indian Firms</b> <i>Neeraj Dwivedi</i>	01
<b>Employees' Data Mining Readiness in the Malaysian Insurance Industry: A Preliminary Study</b> <i>T. Ramayah                      Noornina Dahlan                      Ruzi Panjang Adni</i>	18
<b>Cross-Border Investments Imputing Financial Shape to Uncertain Business Situations the Use of Real Options and the Lessard APV Approach -A Discussion</b> <i>N.R.Parasuraman</i>	28
<b>Emotional Contagion and Team Effectiveness: A Conceptual Model</b> <i>V. Vijayalakshmi                      Sanghamitra Bhattacharyya</i>	35
<b>Quality of Management Education in India: Development of a Conceptual Framework</b> <i>Shahaida P                      H. Rajashekar                      R. Nargundkar</i>	45
<b>Behavioural Considerations of Cost Allocation in Indian Industry: An Empirical Examination</b> <i>Ajay Kumar Pillai</i>	56
<b>Internet Banking Usage: A Customer's Perspective</b> <i>Rajeev Kumra</i>	67
<b>Case Study</b> <b>Positioning a State as a Tourism Destination - A Case Study of Jharkhand</b> <i>Saumya Singh                      Pramod Pathak</i>	77
<b>IDBI Bank - A Case of Fluctuating Brand Design and Corporate Identity Impact on Customer Loyalty and Satisfaction</b> <i>Soniya Billore                      Gautam Billore                      Ashish Sadh</i>	85

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# Determinants of Board Effectiveness: Evidence from Large Indian Firms

Neeraj Dwivedi\*

## Abstract

*Although the importance of an effective board has generally been accepted, the characteristics that lead to board effectiveness and the mechanism of their action have been topics of debate in business research. The literature in this field is both fragmented and multi-disciplinary in nature, with few attempts to consolidate the same and evolve a holistic view. Most literature of board of directors focuses on Anglo-Saxon system and there is a general dearth of studies relating to emerging economies like India, which have peculiar governance and financial structures. The paper identifies and classifies the board characteristic variables and hypothesizes a conceptual, holistic, governance model of firm performance and tests it using the data from large, listed, Indian firms incorporating firm-level and industry-level control variables. It examines the association of these variables to market-based and accounting-based measures of firm performance.*

**Key Words :** Dependent Variables, Market-based Measure, Accounting-based Measures, Conceptual Governance Model, Duality, Firm Performance

## Introduction

Effectiveness of a firm's corporate governance has become a matter of great concern following the collapse of some globally reputed and respected corporations the world over. Business press and the academic works highlight the importance of practicing good corporate governance (Maher and Andersson, 1999; Coombes and Watson, 2000; Orgill, 2003). There is ample evidence of correlation between good governance

practices and firm performance, leading to shareholder value creation (Felton et al., 1996; Coombes and Watson, 2000; Nowell and Wilson, 2002).

A well functioning board of directors is the key to good corporate governance. Board of directors has been recognized as an important institution in corporate governance of firms (Felton et al., 1995, 1996; Ram Charan, 1998; Garrat, 1999; Lawler III, 2002). A board essentially represents a group of people, selected for



their expertise and reputation, which come together to add value to the organization they lead. While boards are theoretically and legally responsible for the affairs of the company, in practice, management has the expertise, control and time to manage the company. Literature on board of directors recommends several ways by which boards can be empowered or their interests aligned with the shareholders rather than being rubber stamps of the management (Demb and Newbauer, 1992; Firstenberg and Malkiel, 1994; Felton et al, 1996; Garrat, 1999, Hambrick and Jackson, 2000). These include modifying board attributes such as size, diversity, independence, leadership structure etc. to board ownership and compensation.

Though the importance of an effective board has generally been accepted, what characteristics constitute an effective board, and in what way they can be manipulated to improve board effectiveness have been topics of debate in business research (Dalton et al, 1998a; Goilden and Zajac, 2001; Hermalin and Weisbach, 2001). The literature in this field is fragmented and often inconclusive (Bhagat & Black, 2000). The reasons being a poor understanding of the underlying mechanisms, context dependence of the phenomenon, and presence of endogeneity causing methodological problems in establishing clear linkages. The literature having remained confined to different disciplines like economics, finance, organization behaviour, strategic management and few attempts have been made to consolidate the same and evolve a holistic view. Moreover, the existing research outcomes, which mainly relate to Anglo-Saxon countries, may not be valid for a country like India since the governance and financial structures are substantially different from those of the Anglo-Saxon countries. Some key distinguishing features of the Indian system include - concentrated shareholdings, family ownership, institutional and bank ownership, non-existence of an active takeover market and the degree of control of judicial and oversight institutions.

This paper aims to gain insight into attributes of the board of directors that contribute to effectiveness of corporate governance of a firm and hence its performance in the Indian context. The study identifies and classifies the board effectiveness variables and hypothesizes a conceptual, holistic, governance model of firm performance and tests it using data from large, listed, Indian firms incorporating other firm level and industry level control variables. The rest of this paper is divided into five sections. The second section describes the theoretical foundations of corporate governance and the implication that different theories have on structure and functioning of board of directors. The third

section reviews the present literature in this area and develops the hypotheses. The fourth section describes the research design and the nature of the data and variables. The fifth section presents the results of the study and discusses their implications and the final section draws out the conclusions, and enumerates the limitations and scope for further research.

## Theoretical Foundations

Literature on corporate governance and board of directors is broadly based on two distinct theoretical foundations. On the one hand is the Agency theory, which assumes separation of ownership and control leading to transaction costs required to monitor the agents. Stewardship theory on the other hand assumes alignment of interests of owners and managers in the long run. Other theories such as the Resource dependence or the Resource based theory, Managerial hegemony theory and theories of group behaviour are also sparingly used to explain the structure and functioning of board of directors.

From the Agency perspective, critical functions of the Board are monitoring and evaluation of decisions made by CEOs and executive directors in terms of company performance and protection of shareholders' value. The effectiveness of these monitoring and control functions is usually related to such structural factors as board size, proportion of outsiders on the Board, CEO/Chairman roles held jointly or separately, etc. (Shleifer and Vishny, 1997). Agency and organizational economics theories predict that when the CEO also holds the dual role of chair, then the interests of the owners will be sacrificed to a degree in favour of management, that is, there will be managerial opportunism and Agency loss. Similarly, Agency theory also favours boards to be comprised of majority of outside directors from the similar logic.

Stewardship theory (Davis and Donaldson, 1997) suggests that depth of knowledge, commitment, access to current operating information and technical expertise are important requirements enabling a company to be run effectively. Prescriptions from Stewardship theory are hence mostly opposite to those based on the assumptions of Agency theory. Hence the implications on board structure include preference of insiders on the board rather than outsiders or independent directors. Since inside directors or executive directors are mostly involved in the day to day operations of the firm and are also associated with the firms for longer periods of time, their understanding of the firms business and its environment is superior than the outside directors and so they can make better informed decisions. Outside directors will lack knowledge, time and resources to

monitor management effectively. Also inside directors tend to take decision with a long-term view considering their association with the firms (Donaldson and Davis, 1991). Similarly researchers on Stewardship theory consider dual leadership structure of the board instead of separating the roles of board chair and CEO. It is argued that the economic performance of a firm increases when power and authority are concentrated in a single executive (i.e. a dual CEO / Chairman), who is not distracted by external non-executive directors.

From the perspective of the resource-based theory (Penrose, 1959; Barney, 1991; Wernerfelt, 1984), the board of directors of a firm is considered an essential link between the firm and the resources that it needs for a superior performance. Boards are thus viewed as a potentially important resource for the firm considering its links with external environment. The ability of the board to provide links to critical resources has been considered important in fulfilling its role in strategic planning and implementation (Zahra and Pearce, 1989). Key resources for boards can provide access and which are reported in literature include - information, capital, links to key suppliers, customers and other significant stakeholders. The links that directors have with the firm's environment can be used in obtaining financial resources needed for effective restructuring, or restructuring expertise (Pearce and Zahra, 1991). These links are directly related to Board diversity measured in terms of Board size, the number of outside directors, and the number of outside directorships ('interlocks') each individual Board member holds in other organizations both within the industry and outside (Dalton et al, 1998b; Zahra and Pearce, 1989). The characteristics of the board such as size, diversity and director interlocks are expected to be linked to the effectiveness of the board, and thus associated positively with performance.

The managerial hegemony theory holds that most complex modern organizations boards mainly play a passive or rubber-stamp role and manager in reality control these corporations, because they have the requisite expertise, time and resources to really control what happens in corporations. The boards are assumed to be dominated by the management and hence are ineffective in alleviating Agency conflicts (Herman, 1981). According to this theory, the board's lack of attachment is a result of management's control over the selection of outsiders on the board, which is said to induce the co-optation of compliant directors, who are expected to rubber-stamp management's policies (Wolfson, 1984). Directors, for the fear of jeopardizing board seat and its associated benefits, refrain from overt criticism of management's behaviour. Thus, boards are

depicted as ineffective governing institution due to outside directors' lack of independence from the management (Kosnik, 1987).

## Literature Review and Hypotheses

In the economic and strategic management literature, boards are considered as the institutions to mitigate the effects of Agency problem existent in the organizations. Empirical literature on board of directors pertains to finding the linkage between some characteristics of the board to a measure of firms' performance. Van-Ees and Postma (2002) describe an input-throughput-output model of corporate performance as affected by board characteristics. According to this model, board characteristics influence the strategic decision-making and task performance of the board, which in turn influence corporate performance. However, Hermalin and Weisbach (2001) point out toward the problem of endogeneity in such a relationship. As per them such empirical studies are plagued by the problem of most variables of interest being endogenous. That is the structure of the board itself is likely to be influenced by the performance of the firm.

The evidence linking characteristics of board of directors and their relation to board effectiveness and performance can be classified into three distinct groups, based on the variables considered in these studies:

- **Board Demography:** This includes variables related to the composition of the board such as size, independence, presence and structure of committees, leadership structure, diversity and tenure
- **Board Ownership and Remuneration:** This evidence is related to studies on board ownership, CEO and board remuneration.
- **Board Activity:** The evidence in this group relates to actual decision-making process of the board and the variable included here are board meeting frequency, attendance and director interlocks etc.

In the following discussion, the literature relating the individual characteristics of the board, which are usually considered in isolation, is reviewed and relevant hypotheses presented. The approach in formulating hypotheses in this study is to take the dominant theoretical foundation as the base in case there are conflicting results in the existing research. Hence the hypotheses developed in this section are based on the Agency theory perspective and Resource based view, as most of the existing research has similar assumptions. The idea is to start with these assumptions, and if the data did not support the

hypotheses, to explain the same with alternative theoretical assumptions.

#### *Board Size*

In the economic and strategic management literature, boards are considered as the institutions to mitigate the effects of Agency problem existent in the organizations. As boards are considered to be large decision-making groups, size can affect the decision-making process and effectiveness of the board. Ideal size of the board has been an issue of debate over the years. There are extreme variations in board size across countries. The average board size of a British company in 1996 was 7, where as, on the other extreme some of the Japanese companies were having around 60 directors on their boards (Balasubramanian, 1997).

There is mixed evidence in the empirical literature linking board size to corporate performance. One group of researchers predicts board size to have a positive association with firm performance (Pearce and Zahra, 1992), the other group a negative relationship (Yermack 1996; Eisenber et al., 1998; Hermalin and Weisbach, 2001) and yet another group and non-linear or an inverted 'U' shaped (Vafeas, 1999; Goilden and Zajack, 2001). Bigger boards will have representation of people with diverse backgrounds and thus expected to bring knowledge and intellect to the board. Size is thus assumed to be associated with the breadth of perspectives in the planning process, presence of more outsiders, who foster more careful decision-making policy in firms since the reputation cost if the firm fails is likely to be high in comparison with their private benefit if a project turns out to be profitable. On the flip side larger groups also suffer from a problem of diffusion of responsibility or social loafing, wherein individuals discount the likelihood that others will detect their poor contributions. Based on the above review, it is, hypothesized that:

*H1: Board size has a positive influence on firm performance for smaller boards and negative influence for larger boards.*

#### *Board Independence*

An important feature of board of directors in most countries is the presence of independent or outside directors. Apart from bringing in rationality in appraising board performance, as resource-rich individuals, outside directors bring valuable information, connections, and resources to the firm. On the other hand inside directors are considered as an important source of firm-specific information and their inclusion in the board can lead to a more effective decision-making process (Rosenstein and Wyatt, 1997).

There is ample evidence in favour of outsiders on board in the financial literature, which associates percentage of outside directors with lower probabilities of paying greenmail, lower probability of adopting poison pills, enabling board to perform monitoring function in case of a powerful CEO etc. Proportion of outsiders is also found to influence the process of CEO selection (Borokhovich, 1996) and it is more likely that an outsider is selected as CEO in case of firms with a majority of outside directors. Rosenstein and Wyatt (1990) found that the addition of an outside director on the board resulted in positive abnormal returns. Lee et. al. (1992) found that boards that have majority of outside directors performed better than those dominated by insiders on returns to shareholders. Director share ownership is found to moderate the relationship between the composition of the board and firm financial performance (Hambrick and Jackson, 2000; Rosenstein and Wyatt, 1997). Furthermore, Dalton et al. (1998), and Hermalin and Weisbach (2001) report no relationship between board composition and a firm's financial performance based on either review or meta-analysis of earlier empirical findings in this area.

*H2: The proportion of independent directors has a positive association with firm performance*

#### *CEO Duality*

CEO duality (also referred to as combined leadership in literature) refers to a board leadership structure wherein one individual holds the positions of board chairman and the CEO. As per one school of thought, CEO duality is considered as an inappropriate way of designing one of the most critical power relationships in the board. According to this school of thought, if CEO also holds the board chair, it will result in concentration of power within the board and then it is very likely that the CEO takes decisions in his own self interest rather than considering shareholder value creation in mind (Jensen, 1993; Coles et al. 2001).

The advantages of CEO duality include providing a check and balance to the CEO's self interests and enhancing the effectiveness and independence of the board. The disadvantages are divided authority, costs of potential rivalry between the heads, added bureaucracy and information transfer costs (Kwok, 1998). Despite limited empirical evidence, duality has been blamed, in many cases, for the poor performance and failure of firms to adapt to a changing environment. However, Baliga et al (1996) report of insufficient evidence to show that firms opting for independent leadership outperform the firms with CEO-duality. There is contrasting evidence on the issue of CEO duality, which is also an important issue of board structure (Rechner and Dalton,

1991; Donaldson and Davis 1991).

*H3: Presence of CEO duality (position of CEO and board chair being occupied by same individual) has a negative influence on firm performance. (Alternatively, firms having CEO duality would under-perform firms that do not.)*

#### *Institutional Investors and Nominee Directors*

Empirical evidence does not show direct linkage on the presence of institutional nominees on board and its effect on corporate governance but there are studies on role of institutional shareholders. Institutional shareholders are considered as powerful outsiders that are able to encourage risky restructuring decisions and to prevent managerial efforts to preserve the status quo (Hill and Snell, 1989). Research from a resource dependence perspective has also emphasized that outside institutional investors play a crucial role in providing the firm with the resources needed to survive and function efficiently (Pfeffer, 1972; Pfeffer & Salanick, 1978; Wagner et al, 1998).

Financial institutions, which are government controlled in India, control a large amount of equity in most Indian firms. They are also significant lenders to most companies. On account of these they have their representatives nominated in many Indian companies' boards. The directors are privy to unpublished price-sensitive information and this leads to a conflict of interests in case they represent institutions, which have equity exposures. It is thus hypothesized that presence of such directors on company boards would affect the decisions made in favour of long term shareholder value maximization and thus would contribute adversely to firm performance.

*H4: Presence of nominee directors representing financial institutions is negatively associated with firm performance. (Alternatively, firms having nominees of financial institutions on their boards would under-perform firms that do not have such nominees.)*

#### *Executive Compensation*

There are several studies relating to CEO and Executive compensation and firm performance. Murphy (1985), based on study of 461 executives in a panel of 73 firms during 1964-1981, found that managers' remuneration was positively related to stock market performance. The study was based on linear regression of the change in the logarithm of total compensation to firm stock performance and firms' sales growth. Mehran (1995) analyzed the relationship between compensation structure and firm performance and found that firm performance (proxied by Tobin's q and return on assets) was positively related to the percentage of executive

compensation that was equity based and to the percentage of equity held by managers. Most companies in India pay only a sitting fee to the non-executive directors for attending board and committee meetings. The Companies Act has prescribed an upper ceiling for the sitting fee paid to the non-executive directors. Some companies do offer performance-linked bonuses to non-executive directors.

*H5a: Executive directors' remuneration is positively related to firm performance.*

*H5b: Linking non-executive director compensation to some measure of performance is positively related to firm performance. (Alternatively, companies which have non-executive director remuneration linked to some measure of performance outperform the ones that do not.)*

#### *Board Meeting Frequency and Attendance*

Board meeting frequency is considered to be an important determinant of board activity and hence contributing to firm performance (Vafeas, 1999). But there are conflicting views regarding the effect of board meetings on firm performance. One view suggests that board meetings are beneficial to shareholders (Conger et al., 1998). According to this view board-meeting time is an important resource in improving effectiveness of a board. It is assumed that the directors in boards that meet more frequently are more likely to perform their duties in accordance with shareholders' interests. The other conflicting view maintains that board meetings serve as a fire-fighting device rather than as a proactive measure for giving direction on policy matters. This is also because almost invariably CEO's set the agenda for board meetings and the outside directors who often don't interact with each other fail to discuss and exchange ideas without any prior homework. Vafeas (1999), however, maintains that firms use board meeting as effective governance mechanisms and it is much easier and less costly for a firm to adjust the frequency of its board meeting to attain better governance than to change the composition of the board.

*H6: Number of board-meetings in a year and attendance at these meetings as a proxy for board activity are positively associated with firm performance.*

#### *Extent of Directorate Networks*

Usually the outside directors hold directorships in a large number of companies. Though the code of corporate governance in India does not limit external directorships by directors, it recommends that a director should not be a member in more than 10 committees or act as chairman of more than five committees across all

companies in which he is a director. Outside board memberships of directors are often referred to as directors 'social capital' (Geletkanycz, 2001). Empirical evidence shows that external ties of the directors play a critical role in shaping strategy, as well as overall firm performance (Eisenhardt and Schoonhoven, 1996; Geletkanycz and Hambrick, 1997). Directors' networks give the following strategic benefits to firms:

- Help to reduce the level of uncertainty surrounding external resource dependencies
- Provide greater access to strategic information and opportunities
- Confer important legitimacy and status benefits

Directors having large number of directorship are considered resource-rich individuals, which bring valuable information, connections, and resources to the parent organizations. It is also argued that the directors holding directorships in a large number of companies are not able to devote their time and effort in effective strategic planning and monitoring of one company (Harris and Shimizu, 2004). Combining the two argument it is hypothesized that:

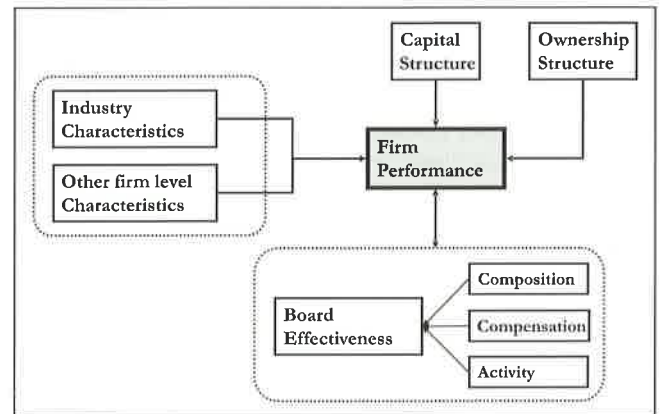
*H7: The extent of directorate networks is positively related to firm performance at a lower level while negatively at a higher level*

## Research Design and Methodology

This paper attempts to integrate all board characteristics and other governance, industry and firm characteristics in one holistic model of firm performance. Such a model enables the examination of the tradeoff involved among the choice of board characteristics as Agency control mechanisms. The study takes shareholder value maximization as the sole purpose of the corporation and an Agency theory perspective, that firms employ various mechanisms to align the interests of managers with shareholders and the hypotheses are developed with this basic view.

It is maintained in this paper that the characteristics of board of directors are often complementary to each other and also are influenced by the presence and effectiveness of other mechanisms of corporate governance. For example, the relation of board of directors to corporate performance would depend on the ownership structure of the firm as well as the legal environment of the country in which the firm operates. Also the relationship between one board characteristic variable and firm performance would again depend on the presence and intensity of the other board characteristic variables. For example a firm may decide to alleviate Agency problems by either increasing the

number of independent directors on its board or by splitting the position of board chairman and CEO. In a board dominated by majority of independent directors, it is more probable that the board would like to split the position of chairman and CEO. Also, the effect of duality on performance would also be different for a board dominated by inside directors as compared to one with majority of independent directors.



**Figure 1 : The Conceptual Governance Model of Firm Performance**

Similar is the case with board meetings. Following a poor performance, a firm may decide to either change board composition by bringing in more outsiders on board, or decide to split the chairman and CEO roles, or just make the board meet more often and take an active part in strategic management of the firm. A firm may also take a decision that involves a combination of the above mechanisms. Thus it becomes all the more important to study the board characteristic variable in conjunction with each other rather than in isolation to gauge their effect on performance. Further, presence of external governance mechanisms such as capital and ownership structure would moderate the influence of board characteristics and performance and should be controlled for in the model. The paper develops an empirical model of firm performance based on the conceptual model as given in Figure 1. As the problem of endogeneity is found to be an important methodological problem by many of the researchers a simultaneous equations approach is attempted to counter this problem.

### Variable Description

The variables used are broadly classified into three distinct classes - the dependent variables of firm performance, the independent variables of interest and control variables. The control variables are introduced in the model to improve the overall predictive power of the model. These variables are used to explain the variation

in corporate performance not explained by governance variables. The variables are as described below:

### **Dependent Variables for Firm Performance**

The measures of firm performance used in the literature can be broadly classified as the accounting based (Profitability, ROE, ROCE, EVA etc.) and market based (Shareholder returns, MVA, Market to book value ratio, Tobin's Q). These have been alternatively used by empirical researchers in this area (Kaplan and Reishus, 1990; Mehran, 1995; Rosenstein and Wyatt, 1997; Vafeas, 1999; Coles et al., 2001). EVA, MVA and Tobin's Q appear to be most promising indicators of firm performance considering shareholder value creation as the main purpose. In this paper one accounting based measure (ROCE) and one market based measure of performance (MV/BV) has been taken to see if market perceptions of board effectiveness variables significantly affect valuation. This measure of firm performance is also important in the sense that it represents the value the investors put on the firms shares above the total value of the assets of the firms and thus represents investor confidence, which in turn is one of the indicators of the effectiveness of the corporate governance mechanisms of the firm.

Return on capital employed (ROCE) has been taken as the ratio of net profit after taxes earned by the firm during the year under review and the average total capital employed during the year. In case of market to book value ratio, the market value of equity is calculated by multiplying the average closing price per share by the number of shares outstanding. The book value of the equity is obtained by adding equity capital and reserves and subtracting the revaluation reserve. Since the concern here is the long-term value creation to the shareholder, the short-term fluctuations in share prices have been avoided by taking average of daily closing prices during the last quarter of the year under consideration as the average market price of the share.

### **Independent Variables of Interest**

#### **Board Size:**

Board size refers to the number of sitting directors in the company's board. The corporate governance section in the annual reports of listed companies mentions the names of the directors of the firm at the end of the financial year and also the changes taken place in the board during the year. A variable representing square of board size is thus included in the regression model, to check for presence and significance of any non-linearity in this relationship.

#### **CEO Duality:**

A dummy variable is used for the presence of CEO

duality in the board of a company. The dummy variable assumes a value of 1 if the company has CEO duality, that is, in cases where the position of CEO and board chairman is held by the same individual. In case a particular board does not have a chairman, then also the variable assumes a value of 1. This is under the assumption that in such cases the CEO would be the most powerful individual on the board and the conditions would be similar to one in which the CEO-chair position is joint. In cases of fully non-executive board where both chairman and CEO are not there the variable CEO duality takes a value 0.

#### **Board Independence:**

The variable board independence represents the number of independent directors on the board as a percentage of board size. Most of the companies also report the nominees of financial institutions on the boards as independent directors. But for our purpose we have excluded such directors while arriving at the number of independent directors. These directors represent institutions, which are either major shareholders or major lenders to the firm and hence cannot be treated as independent directors.

#### **Intensity of Directorate Network:**

Intensity of the directorate network is defined as the average number of external directorships per director. The external network of the directors is expected to bring in access to information and other resources to the firm. However, it is proposed in this study that if the directors' network extends too much it may limit the time and effort the directors can put in the strategic management and control of the firm. Thus a squared term is included to examine if the variable has diminishing effect on performance after certain level.

#### **Number of Board Meetings:**

The variable represents the number of board meetings held during the year under consideration. A squared term of this variable is also included in the model to account for any non-linearity in the relationship with firm performance.

#### **Attendance at Board Meetings:**

This variable represents the average number of directors attending the board meetings during the year, expressed as a percentage of total number of directors. It is thus the average attendance at the board meetings. If 'N' board meetings were held for a particular firm during the year, and if  $A_i$  is the percentage attendance at the  $i$ th meeting, then the value of the variable attendance is calculated as  $\sum A_i/N$ . Attendance of alternate directors in case of companies which had such directors was also considered while calculating the

value of average attendance.

#### **Executive Directors' Remuneration:**

The variable for this is the total remuneration per executive director of the firm. This is arrived at by dividing the total remuneration paid to the executive directors (in Rs. Lakh) by the number of executive directors.

#### **Non-executive Directors' Remuneration:**

Non-executive directors' compensation plan has been captured by the use of a dummy variable. In case of non-executive directors, a dummy variable is used, which assumes a value of 0 if a company pays only sitting fee to the directors. The dummy variable assumes a value of 1 for the companies who, in addition to paying sitting fees, either pay a commission on profits or have a component in the remuneration that is linked to some measure of performance.

#### **Presence of Nominee Directors:**

This characteristic of the board is also captured by a dummy variable. The dummy variable assumes a value of 1 if a particular board has at least one nominee director representing financial institutions. In other cases the dummy variable assumes a value of 0.

#### **Control Variables**

Firm Size (Murphy, 1985), R&D Intensity (Kotabe, 1990; Pearl, 2001), Advertising and Marketing Intensity (Andras and Srinivasan, 2003), Fixed Asset Intensity, Financial Leverage and Extent of Public Shareholding are introduced as control variables to control for the effects on non-governance variables. Also, since industry effects explain typically between 17 to 20% of firm performance (Rumelt, 1991; Powell, 1996), to control for these effects, the firms were divided into 13 broad industry groups. All diversified companies were clubbed into one industry type and industries where there were only up to 3 companies were clubbed together in others category. Dummy variables for these industry groups were introduced while running the regression analysis.

#### **Sample Selection**

The data for financial performance of firms and other control variables were taken from the 'Prowess' database of the Centre for monitoring Indian Economy (CMIE). The data on board characteristics of listed firms were collected from the annual reports of companies. In India, from the year 2000-2001 onwards, the listed companies were required to disclose important information on board characteristics (viz. CEO duality, memberships of other boards, proportion of non-executives, compensation, and presence of board

committees) and board activity in a separate section on corporate governance in their annual reports. However, in the introductory phase the compliance rate was poor and not many companies had included this information in their annual reports, and the companies which had made the disclosure was also partial and incomplete due to lack of definitional clarity from the side of the regulator. Hence, only two years' data was available, that is 2001-2002 and 2002-2003. There were overall 300 companies, which were common across the two years.

Of the target 300 companies, many companies had data missing for one or more variables included in this study, these companies were excluded from the sample. This finally resulted in a set of 228 companies. This sample was subjected to two screening criteria that eliminated financial institutions and banks as well as public sector companies considering the regulated market in which these companies operate in India. This finally resulted in a sample of 195 firms.

Multivariate regression model of firm performance was developed based on the conceptual model as presented in Figure 1. However, since some variables in the model were suspected to be endogenous, a simultaneous equations approach was employed. It was hypothesized that while board characteristics had a bearing on performance of the firms, performance of the firm itself may precipitate changes in the board. For example, a poorly performing firm may induct more outside directors on the board and cut down on executive remuneration and a better performing firm may pay higher remuneration to its executive directors. Also, boards of poorly performing firms may meet more often during the year to discuss the poor performance as a fire fighting mechanism (Vafeas, 1999). Similarly larger boards might require meeting more often to arrive at decisions to mitigate the problems associated with decision making in bigger groups.

However, since the practice of alteration in boards in India is not very common, only 'executive director compensation' and 'number of board meetings' were considered to be endogenous variables. The system of simultaneous equations as described below assumes that the performance variables (that is, MV/BV and ROCE), 'Executive director compensation' and 'Number of board meetings' are endogenous:

1. ***Firm performance = f(Variables of interest, Control variables, Industry dummies)***
2. ***Executive director compensation = f(Firm performance, firm size, CEO duality, Industry dummies)***

### 3. Number of board meetings = $f(\text{Firm performance, board size, board independence, CEO duality, Industry dummies})$

However, before resorting to a simultaneous equations model, the system was tested to check whether the simultaneity problem was at a significant level. It is reported in literature that using a simultaneous equations approach in case where problem of simultaneity is not significant can result in estimators that are consistent but not efficient (Gujarati, 1995). Hausman Specification test (Hausman, 1976) was used to detect the presence of simultaneity in the model. It was concluded that there was no severe simultaneity bias in the model. The model was thus treated to be totally exogenous and an Ordinary Least Square (OLS) regression method was employed in all further analyses. In the absence of longitudinal data, the regression was run on the cross-section of 195 firms for the year 2001-2002 and the same was repeated with the data from 2002-2003 to check for temporal stability of the model.

The overall model was checked for presence of multicollinearity of variables by examining the tolerance and variance inflation factors (VIF) of the variable for the overall model for 2002-2003.

The collinearity statistics are given in the appendix. Only the squared terms of the variable were found to be correlated at a significant level. Presence of heteroscedasticity was not a problem in the data set considering that the sample consisted mainly of bigger firms (Average sales of Rs.1454 crore in 2001-2002 and Rs.1675 crore in 2002-2003) and hence large variations in firm characteristics were not present. However, the presence of heteroscedasticity was ruled out using White's test. (Cross products of variable were not taken as the number of variables was large)<sup>1</sup>.

## Results and Discussion

The sample of 195 companies represented 4% of the total number of listed companies. However, these companies accounted for almost 30% of the total sales of all the listed companies taken together and also accounted for 38% of the total market capitalization in the year 2002-03, thus representing the companies having a powerful impact on the overall Indian economy. Other key characteristics of the sample, for the years 2001-2002 and 2002-2003, are presented in Table I. The detailed descriptive statistics is presented in the appendix.

There were 65 firms, which either had combined position of CEO and board chair or had no board chair, while 130 firms had separate positions. The number of firms was similar for both the years under consideration. It was found that the firms with CEO duality outperformed the firms without it on both market to book value ratio and return on capital employed. The number of firms having at least one nominee of a financial institution on their boards in 2001-2002 was 75 and it reduced to 71 firms in the same sample in 2002-2003.

Table I: Key Characteristics of the Sample

Parameter	2001-2002	2002-2003
Number of firms	195	195
Mean Sales (Rs. Crores)	1454.06	1675.48
Mean Market Capitalization (Rs. Crores)	1719.94	1617.03
Mean MV/BV	1.97	1.64
Mean ROCE (%)	20.19	21.11
Firms with CEO duality	65	65
Firms having at least one nominee of FI on board	75	71
Firms having non-executive director compensation linked to performance	86	92
Firms with fully non-executive boards	11	9
Mean board size (No. Of directors)	9.56	9.71
Mean percentage of independent directors	50.59	50.27
Intensity of directorate network (Mean directorships per director)	4.91	4.63
Mean number of meetings in a year	6.45	5.97
Mean attendance at board meetings (%)	75.35	76.03
Mean total remuneration per executive director (Rs. Lacs)	50.72	60.49
Mean public shareholding (%)	22.16	21.51

<sup>1</sup>White's test is considered a superior test for detecting heteroscedasticity as it does not rely on the assumption of normality and also does not require testing each dependent variable separately. The test statistic being  $nR^2$  which asymptotically follows a Chi square ( $\chi^2$ ) distribution with degrees of freedom equal to the number of regressors in the auxiliary regression. 'n' is the sample size and  $R^2$  is the coefficient of regression for the auxiliary regression.

$nR^2 \sim \chi^2$

Auxiliary regression is the regression between the squared residuals from the original equation and the original regressors, squares and cross products of the regressors of the original equation.



An independent sample t-test showed that firms, which had nominees of financial institutions on their board (Dummy variable takes a value 1 for such companies), had performed poorly on both the performance measures as compared to firms, which did not have such nominees. Another t-test for independent samples showed that companies that had non-executive director remuneration linked to some measure of performance outperformed the ones that did not. The results of t-test are presented in the appendix.

The results of the overall regression model are presented in Tables II and III. The summary regression output presented here does not report the coefficients and their significance level for the industry dummies as they were used to improve overall explanatory power of the model and are not much relevant to the discussions here.

The regression results did not provide support to Hypothesis-1 as the coefficients of the both the variables 'board size' and 'board size squared' was statistically insignificant, thus, implying that number of directors on boards is not related to corporate performance for large Indian firms. This also

corroborates an earlier finding in the Indian context (Dwivedi & Jain, 2005) The result could be explained by the fact that Indian corporate boards are comparatively larger (Average board size >9.5 for the present sample) compared to the British and U.S. boards, from where most of the empirical evidence comes. Apart from the context difference, it is very much evident that researchers who have found a positive relationship between board size and performance would have examined companies with smaller boards, that is, boards that are not so large as to diminish their decision making abilities.

Similarly, there is no evidence in favour of hypothesis 2. This result suggests that Stewardship theory is better able to explain the relationship between board independence and corporate performance than Agency theory. An Agency theory viewpoint would have preferred to have more outsiders (independent directors in case of India), as these directors would have monitored the management better. However, in Indian context as family or promoter ownership is much higher compared to Anglo-Saxon countries from where the evidence supporting Agency theory comes.

Table II: Overall Regression Model for 2001-2002

	Dependent Variable MV/BV			Dependent Variable ROCE		
	Coefficient	t-statistic		Coefficient	t-statistic	
(Constant)	-1.055	-0.253		4.221	0.145	
Firm Size (log(Sales))	0.466	1.912	**	0.297	0.175	
Advt & Mktg. Intensity	0.263	2.359	**	1.046	1.347	*
R&D Intensity	0.160	0.602		-1.670	-0.899	
Fixed Asset Intensity	-0.006	-1.553	*	-0.061	-2.393	***
Financial Leverage	-0.076	-0.681		-0.664	-0.858	
Board Size	-0.340	-0.796		-0.378	-0.127	
Board Size Squared	0.013	0.615		-0.010	-0.073	
Board Independence	-0.018	-1.383		-0.037	-0.405	
Presence of CEO Duality	1.295	2.729	***	7.494	2.264	**
Extent of Directorate Network (EDN)	0.446	1.779	*	4.296	2.456	***
EDN squared	-0.044	-2.177	**	-0.311	-2.224	**
Number of meetings	0.161	0.377		2.272	0.762	
Number of meetings squared	-0.026	-1.014		-0.193	-1.089	
Percentage Attendance	-0.004	-0.252		-0.033	-0.278	
Presence of Nominee Directors	-1.013	-2.114	**	-3.051	-0.912	
Executive Director Remuneration	0.006	2.380	***	0.049	2.731	***
Non_exec Director Remuneration	0.856	1.901	**	6.212	1.978	**
Public Shareholding	-0.031	-1.577	*	-0.110	-0.803	
R2		0.450			0.382	
Adj. R2		0.345			0.264	
F-Statistic		4.302			3.250	
Significance		<1%			<1%	

Asterisks indicate following significance levels  
 \*\*\* 1%  
 \*\* 5%  
 \* 10%

Table III: Overall Regression Model for 2002-2003

	Dependent Variable MV/BV			Dependent Variable ROCE		
	Coefficient	t-statistic		Coefficient	t-statistic	
(Constant)	-1.172	-0.408		-3.028	-0.120	
Firm Size (log(Sales))	0.218	1.313		0.540	0.369	
Advt & Mktg. Intensity	0.292	3.540	***	1.197	1.644	*
R&D Intensity	0.114	0.755		-1.724	-1.295	
Fixed Asset Intensity	-0.002	-1.049		-0.074	-3.705	***
Financial Leverage	-0.003	-0.053		-0.416	-0.807	
Board Size	-0.300	-0.939		0.935	0.332	
Board Size Squared	0.012	0.782		-0.049	-0.373	
Board Independence	-0.013	-1.183		-0.163	-1.691	*
Presence of CEO Duality	0.797	2.195	**	9.319	2.912	***
Extent of Directorate Network (EDN)	0.477	2.557	***	3.238	1.969	**
EDN squared	-0.044	-2.635	***	-0.349	-2.368	***
Number of meetings	-0.099	-0.231		2.193	0.582	
Number of meetings squared	-0.005	-0.171		-0.213	-0.828	
Percentage Attendance	0.009	0.769		-0.034	-0.329	
Presence of Nominee Directors	-0.561	-1.475	*	-0.382	-0.114	
Executive Director Remuneration	0.004	2.317	**	0.044	2.926	***
Non_exec Director Remuneration	0.552	1.731	*	6.483	2.307	**
Public Shareholding	-0.024	-1.686	*	-0.150	-1.209	
R2		0.435			0.437	
Adj. R2		0.327			0.330	
F-Statistic		4.046			4.086	
Significance		<1%			<1%	

Asterisks indicate following significance levels  
 \*\*\* 1%  
 \*\* 5%  
 \* 10%

There is strong evidence against hypothesis 3 relating to CEO duality. The variable CEO duality is found to have a positive association with both accounting based and market based measures of performance. This finding supports the Stewardship theory viewpoint on the effect of CEO duality. Having the same person occupy the board chair and CEO position, leads to concentration of power and authority. Since such person in most of the firms that have dual positions is usually from the founding family, he sees himself as an extension of the firm. This leads to decisions, which are more directed towards enhancing firm value and hence leads to superior performance.

There is little support for hypothesis 4 in case of MV/BV performance measure. This shows a negative association of presence of institutional investor on performance. As directors are privy to unpublished price-sensitive information, this leads to a conflict of interests in case they represent institutions, which have equity exposures. As hypothesized that presence of such directors on company boards would adversely affect the decisions made in favour of long term shareholder value maximization and thus would contribute adversely to firm performance.

The regression results strongly support hypothesis 5a and 5b relating to executive and non-executive director compensation. The coefficients of the variable 'Executive Director Compensation' are positive and statistically significant in case of both performance measures and the relationship is stable over both the financial years. Similarly, the coefficient of the variable 'Non-executive Director Compensation' are positive and significant at 5% level in case of both performance variables, except in case of MV/BV ratio for the year 2002-2003 where it is significant at 10% level. This supports the viewpoint that remuneration systems that link managerial remuneration with some measure of firm's financial performance may motivate managers to take decisions that result in an increase in that particular financial performance measure.

The multivariate regression results do not support hypothesis 6, as coefficients of both the variables 'Number of meetings' and 'Percentage Attendance' were insignificant in all the cases. As an ex-post analysis we also tried to investigate if the boards which met more often were also the ones which were large and hence had to meet more often to arrive at decisions. The data for 2002-2003 supported this argument. The mean

value of board meetings during 2002-2003 was about 6 and the mean board size was 9.7. However, companies whose board met more than 8 times a year had an average board size of 11.2.

As per hypothesis 7, the extent of directorate networks is positively related to firm value at a lower level while negatively at a higher level. The extent of directorate network is represented by the variable 'Outside Directorships per director', while a squared term was introduced to check for the presence of non-linearity or inverted 'U' type relationship as hypothesized. The results show support for this hypothesis. The coefficients for the variable are positive while the coefficients for the squared terms are negative and both are significant for both the performance measures. The level of significance is, however, different in different cases. This result supports the resource-based view of the firm. As per this view, a firm's performance is contingent upon external resources and environmental contingencies. Boards of directors are viewed as links to external environment and the firm, thus bringing linkages and resources to a firm resulting in reduced environmental uncertainty and reduced transaction costs associated with environmental interdependency.

The extent of directors' external network is thus expected to bring in access to information and other resources to the firm. However, if the directors' network extends too much it may limit the time and effort the directors and put in the strategic management and control of the firm. Thus, beyond a certain level, the extent of directors' external networks may hamper directors' availability in board deliberations. The significant negative coefficient of the squared term supports this argument.

Most of the control variables have their expected signs except for the R&D expenditure, whose coefficients were insignificant. This, however, could be due to the fact that R&D expenses as a percentage of sales in Indian companies are too low (For our sample the mean value is only 0.5% and a median value of 0.1%, also 67 firms did not spend on R&D at all). Public shareholding was used as a control variable to take care of ownership concentration. It was assumed that a higher public shareholding could be a proxy for fragmentation in shareholding. Since fragmentation in ownership leads to dispersion of control from the shareholders, it contributes negatively to performance. The negative sign of the coefficients of this variable in all four cases reinforces this fact. However, this coefficient is significant only in case of MV/BV ratio at less than 10% level. This indicates that the level of public shareholding influences the market perceptions more than the accounting performance of the firms.

## Conclusions and Scope for Future Work

The results showed a great deal of disagreement from the earlier research that focuses on European companies and US and takes an Agency theory viewpoint. The major factors influencing the performance of the firms were CEO duality having a significant positive impact on performance, presence of FI nominees having a significant negative impact on performance, the extent of directorate networks having a significant inverted 'U' shaped relationship with performance, the proportion of non-executive directors having a weak positive relationship with performance. The effect of board size, proportion of independent directors, number of board meetings and attendance at these meetings, however, could not be ascertained with confidence in overall model.

Figure II shows the empirically validated conceptual model of firm performance showing only the variables that were found to have significant influence on firm performance. A plus sign on the line showing relationship of a particular variable with firm performance shows that the variables contributes positively to performance while a minus sign indicates the converse. In case of industry effects, since industry dummies were used, the effect of dummy variable had a varied influence on performance. It may be noted, however, that the model is only indicative and does not show the significance levels of relationship of these variables with firm performance and the same are given in detail in the regression results. Also there is some variation in the relationships with the measure of firm performance used.

Most of the evidence supported the Stewardship theory and the Resource based view of the firm, in view of the peculiarities of Indian governance system. Indian industry is dominated by diversified family run businesses (Business Today, 1999). An earlier study showed that 80% of the 500 biggest companies in India were family owned (Dutta, 1997). It may be noted that in our sample of 195 firms, 79 firms belonged to the top 50 business houses and 132 belonged to large business groups. Piramal (1996), in a study of Indian business groups, also showed domination of most firms by business groups and families. As high promoter shareholding and promoters having representation on boards characterized the firms in the sample, Stewardship theory view supported the positive relationship of presence of CEO duality and proportion of non-executive directors with corporate performance. The non-linear positive relation of extent of directorate network with performance also supported the resource

dependence theory view of corporate boards.

The study gives a fresh view to the phenomenon of board effectiveness from the perspective of an emerging economy where corporations often have family dominated boards. Apart from generating new evidence on the relationship with respect to the Indian context, this study develops a holistic model of firm performance using a limited number of variables that affect board performance. The study also points out towards the complementarities of various theories in understanding the determinants of board effectiveness. Our results show that no one theory in isolation can explain the relationship of various board-attributes to its effectiveness. Alternative theoretical explanations help us understand the contribution of various attributes of a decision making body to its effectiveness. For example, while Agency theory explains the positive association of directors' remuneration with corporate performance, Stewardship theory explains the relationship between board independence and duality with corporate

performance and Resource-based theory explains the association of the directorate network with corporate performance.

This research has policy level implications in evaluating the effectiveness of the regulations and codes of corporate governance relevant to board structure and practices. The corporate governance codes in India were introduced in the year 2000 and are still in an evolutionary phase. The codes lay a great emphasis on the structure and functioning of the board of directors. The present codes are based, to a great extent, on the Anglo-Saxon codes, without considering the peculiarities of Indian companies and their legal, regulatory, and institutional environments. Lack of research exploring the linkage of board effectiveness and corporate performance prevented us from evaluating various recommendations of the code in the Indian context.

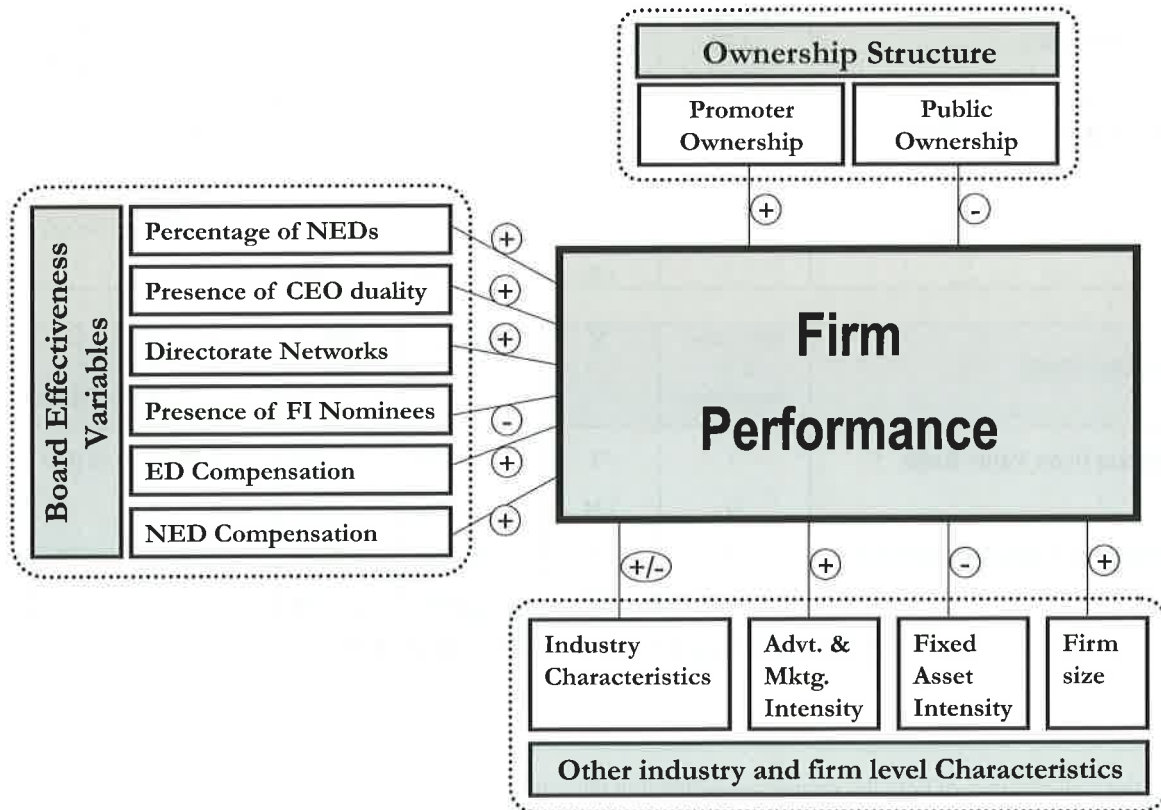


Figure II: The model of firm performance showing influence of variables

## Appendix

Independent Sample t-test for Presence of CEO Duality<sup>2</sup>

For 2001-2002	Presence of CEO Duality	N	Mean	Std. Dev.	t	Sig. (2-tailed)
Market-Book Value Ratio	1	65	3.078	4.990	2.607	0.011
	0	130	1.415	1.774		
Return on Capital Employed	1	65	26.117	30.945	2.198	0.031
	0	130	17.229	14.494		

For 2002-2003	Presence of CEO Duality	N	Mean	Std. Dev.	t	Sig. (2-tailed)
Market-Book Value Ratio	1	65	2.165	3.256	1.839	0.070
	0	130	1.380	1.568		
Return on Capital Employed	1	65	26.084	25.640	2.135	0.035
	0	130	18.620	16.545		

## Independent Sample t-test for Presence of FI Nominees

For 2001-2002	Presence of FI Nominees	N	Mean	Std. Dev.	t	Sig. (2-tailed)
Market-Book Value Ratio	1	75	0.785	1.049	-5.047	0.000
	0	120	2.709	3.961		
Return on Capital Employed	1	75	13.528	11.805	-4.039	0.000
	0	120	24.356	25.286		

For 2002-2003	Presence of FI Nominees	N	Mean	Std. Dev.	t	Sig. (2-tailed)
Market-Book Value Ratio	1	71	0.849	1.370	-4.399	0.000
	0	124	2.096	2.584		
Return on Capital Employed	1	71	15.983	15.721	-2.965	0.003
	0	124	24.042	22.006		

## Independent Sample t-test for NED Compensation

<sup>2</sup> An unequal variance of both the samples is assumed in the t -test. The significance levels are generated by the software itself. The calculated  $t_{\text{exp}}$  value is obtained by the following formula. Where  $S_{AB}$  is the pooled variance of the two samples,  $n_A$  and  $n_B$  is the sample size of sample A and B respectively.  $X_A$  and  $X_B$  are the means of two samples.

$$t_{\text{exp}} = \frac{|\bar{X}_A - \bar{X}_B|}{S_{AB} \sqrt{\frac{1}{n_A} + \frac{1}{n_B}}}$$

<b>For 2001-2002</b>	<b>NED_Comp. Linked to Performance</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Market-Book Value Ratio</b>	1	86	3.040	4.496	3.800	0.000
	0	109	1.124	1.441		
<b>Return on Capital Employed</b>	1	86	27.526	27.071	4.083	0.000
	0	109	14.405	14.023		

<b>For 2002-2003</b>	<b>NED_Comp. Linked to Performance</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
<b>Market-Book Value Ratio</b>	1	92	2.365	3.021	4.153	0.000
	0	103	0.996	0.994		
<b>Return on Capital Employed</b>	1	92	27.915	22.049	4.585	0.001
	0	103	15.028	16.416		

## References

- Andras, T. L., & Srinivasan, S. S.** (2003). "Advertising intensity and R&D intensity: Differences across industries and their impact on firm's performance", *International Journal of Business and Economics*, 2(2), 167-176
- Balasubramanian, N.** (1997). "Towards excellence in board performance", *Management Review*, January-March, 67-84.
- Baliga, B. R., Moyer, R. C., & Rao, R. S.** (1996). "CEO duality and firm performance: What's the fuss?" *Strategic Management Journal*, 17, 41-43.
- Barney, J. B.** (1991). "Firm resources and sustained competitive advantage", *Journal of Management*, 17(1), 99-120.
- Bhagat, S., & Black, B.** (2000). "Board independence and long term firm performance", Columbia Law School Working Paper No. 188.
- Borokhovich, K. A., Parrono, R., & Trapani, T.** (1996). "Outside directors and CEO selection", *Journal of Financial and Quantitative Analysis*, 31(3), 337-355.
- Business Today**, (1999). "Fathers, Sons and CEOs", Cover Story, June.
- Coles, J. W., McWilliams, V. B., & Sen, N.** (2001). "An examination of the relationship of governance mechanisms to performance", *Journal of Management*, 27, 23-50.
- Conger, J. A., Finegold, D., & Lawler III, E. E.** (1998). "Appraising boardroom performance", *Harvard Business Review*, January February, 136-148.
- Coombes, P., & Watson, M.** (2000). "Three surveys on corporate governance", *The McKinsey Quarterly*, 4, 74-77.
- Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L.** (1998a). "Meta-analytic reviews of board composition, leadership structure, and financial performance", *Strategic Management Journal*, 19(3), 269-290.
- Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L.** (1998b). "Number of directors and financial performance: A meta-analysis", *Academy of Management Journal*, 42(6), 674-686.
- Davis, J. H. & Donaldson, L.** (1997). "Toward a stewardship theory of management", *Academy of Management Review*, 22(1), 20-47.
- Demb, A., & Neubauer, F. F.** (1992). "The corporate board: Confronting the paradoxes", *Long Range Planning*, 25(3), 13.
- Donaldson, L. & Davis, J. H.** (1991). "Stewardship theory or agency theory: CEO governance and shareholder returns", *Australian Journal of Management* 16(1), 49-64.
- Dutta, S.** (1997). "Family Business in India", New Delhi: Response Books.
- Dwivedi, N. & Jain, A. K.** (2005). "Corporate governance and performance of Indian firms: The effect of board size and ownership", *Employee Responsibilities and Rights Journal*, 17(3), 161-172.
- Eisenberg, T., Sundgren, S., & Wells, M. T.** (1998). "Larger board size and decreasing firm value in small firms", *Journal of Financial Economics*, 48, 35-54.
- Eisenhardt, K. M. & Schoonhoven, C. B.** (1996). "Resource-based view of strategic alliance formation: Strategic and social explanations in entrepreneurial firms", *Organization Science*, 7, 136-150.
- Felton, R. F., Hudnut, A. and Heeckeren, J. V.** (1996). "Putting a Value on Board Governance", *The McKinsey Quarterly*, 4, 170-174.
- Felton, R. F., Hudnut, A., & Witt, V.** (1995). "Building a Stronger Board", *The McKinsey Quarterly*, 2, 162175.
- Firstenberg, P.B., & Malkiel, B. G.** (1994). "The twenty-first century boardroom: Who will be in charge?", *Sloan Management Review*, 36, 27-35.
- Garratt, B.** (1999). "Developing effective directors and building dynamic boards", *Long Range Planning*, 32(1), 28-35.
- Geletkanycz, M. A., Boyd, B. K., & Finkelstein, S.** (2001). "The strategic value of CEO external directorate networks: Implications for CEO compensation", *Strategic Management Journal*, 22, 889-898.
- Geletkanycz, M. A., & Hambrick, D. C.** (1997). "The external ties of top executives: Implications for strategic choice and performance", *Administrative Science Quarterly*, 42, 654-681.
- Golden, B. R., & Zajac, E. J.** (2001). "When will boards influence strategy? Inclination x Power = Strategic change", *Strategic Management Journal*, 22, 1087-1117.
- Gujarati, D.** (1995). "Basic Econometrics, Singapore", McGraw-Hill Book Company.
- Hambrick, D. C., & Jackson, E. M.** (2000). "Outside directors with a stake: The linchpin in improving governance", *California Management Review*, 42(4), 108-127.
- Harris, I. C., & Shimuzu, K.** (2004). "Too busy to serve? An examination of the influence of overboarded directors", *Journal of Management Studies*, 41(5), 775-798.
- Hausman, J. A.** (1976). "Specification tests in econometrics", *Econometrica*, 46, 1251-1271.
- Hermalin, B. E., & Weisbach, M. S.** (2001). "Boards of Directors as an endogenously determined institution: A survey of economic literature", NBER Working Paper, 8161.
- Herman, E. S.** (1981). "Corporate Control, Corporate Power", New York: Cambridge University Press.
- Hill, C.W.L., & Snell, S.A.** (1989). "Effects of ownership and control on corporate productivity", *Academy of*

Management Journal, 32, 25-46.

**Jensen, M. C.** (1993). "The modern industrial revolution, exit, and the failure of internal control systems", *Journal of Finance*, 48, 831-880.

**Kaplan, S. N., & Reishus, D.** (1990). "Outside directorships and corporate performance", *Journal of Financial Economics*, 27, 389-410.

**Kosnik, R.** (1987). "Greenmail: A study in board performance in corporate governance", *Administrative Science Quarterly*, 32, 163-185.

**Kotabe, M.** (1990). "The relationship between offshore sourcing and innovativeness", *Journal of International Business Studies*, 21(4), 623-39.

**Kwok, J. S. Y.** (1998). "Does CEO duality matter: An integrative approach", Dissertation submitted to the Faculty of the Virginia Polytechnic Institute and State University

**Lawler III, E. E., Finegold, D., Benson, G., & Conger, J.** (2002). "Adding value in the boardroom", *MIT Sloan Management Review*, Winter: 92-93.

**Lee, C. I., Rosenstein, S., Rangan, N., & Davidson III, W. N.** (1992). "Board composition and shareholder wealth: The case of management buyouts", *Financial Management*, 21, 58-72.

**Maher, M., & Andersson, T.** (1999). "Corporate Governance: Effects on Firm Performance and Economic Growth", Organization for Economic Co-operation and Development.

**Mehran, H.** (1995). "Executive compensation structure, ownership and firm performance", *Journal of Financial Economics*, 38, 163-184.

**Murphy, K.** (1985). "Corporate Performance and managerial remuneration: An empirical analysis", *Journal of Accounting and Economics*, 7, 11-42.

**Orgill, B.** (2003). "Good governance gives competitive advantage", *The Business Times*, Singapore, Nov. 20, (2003)

**Pearce, J.A., & Zahra, S.A.** (1991). "The relative power of CEOs and boards of directors: Associations with corporate performance", *Strategic Management Journal*, 12, 135-153.

**Pearce, J. A. & Zahra, S. A.** (1992). "Board composition from a strategic contingency perspective", *Journal of Management Studies*, 29, 411-438.

**Pearl, J.** (2001). "Intangible investment, tangible results", *Sloan Management Review*, 43(3) 13-14.

**Penrose, E.** (1959). "The Theory of the Growth of the Firm Press", New York: Oxford University

**Pfeffer J.** (1972). "Size and composition of corporate boards of directors: The organisation and its environment", *Administrative Science Quarterly*, 17.

**Pfeffer, J. & Salancik, G.** (1978). *The External Control of Organizations: A Resource Dependence Perspective*, New York: Harper & Row.

**Piramal, G.** (1996), *Business Maharajas*, New Delhi: Penguin.

**Powell, T. C.** (1996). "How much does industry matter? An alternative empirical test", *Strategic Management Journal*, 17(4), 323-334.

**Ram Charan.** (1998). "Boards at Work: How corporate Boards Create Competitive Advantage", San Fransisco: Jossey-Bass Publishers.

**Rechner, P. L., & Dalton, D. R.** (1991). "CEO duality and organizational performance: a longitudinal analysis", *Academy of Management Executive*, 32, 141-143.

**Rosenstein, S., & Wyatt, J. G.** (1990). "Outside directors, board independence, and shareholder wealth", *Journal of Financial Economics*, 26(3).

**Rosenstein, S., & Wyatt, J. G.** (1997). "Inside directors, board effectiveness, and shareholder wealth", *Journal of Financial Economics*, 44, 229-250.

**Rumelt, R.** (1991). "How much does industry matter?", *Strategic Management Journal*, 12(3), 167-185.

**Shleifer, A., & Vishny, R. W.** (1997). "A survey of corporate governance", *The Journal of Finance*, 2, 737-783.

**Vafeas, N.** (1999). "Board meeting frequency and firm performance", *Journal of Financial Economics*, 53, 113-142.

**Van-Ees, H., & Postma, T.** (2002). "On the equilibrium relationship between board size and corporate performance", EURAM 2nd Annual Conference, Stockholm.

**Wagner, J. A. III, Stimpert, J.L., & Fubara, E.I.** (1998). "Board composition and organizational performance: Two studies of insider/outside effects", *Journal of Management Studies*, 35(5), 655.

**Wernerfelt, B.** (1984). "A resource-based view of the firm", *Strategic Management Journal*, 5, 171-180.

**Wolfson, N.** (1984). "The Modern Corporation: Free Market versus Regulation", McGraw-Hill, New York.

**Yermack, D.** (1996). "Higher market valuation of companies with smaller board of directors", *Journal of Financial Economics*, 40, 185-211.

**Zahra, S.A., & Pearce, J.A.** (1989). "Boards of directors and corporate financial performance: A review and integrative model", *Journal of Management*, 15, 291-334.



# Employees' Data Mining Readiness in the Malaysian Insurance Industry: A Preliminary Study

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## Abstract

*This paper addresses the readiness of employees in the insurance industry to adopt data mining technologies by looking at the influence of four predictor variables namely clarity of business strategy, user's skill & experience, data-driven culture, and data quality. Questionnaire survey on 200 employees working in 12 insurance companies in Penang and Kuala Lumpur reveal that the employees are non-committal to embrace data mining. This result is simply attributed to the newness of the technique, which has not caught on in Malaysia. A further analysis shows that the readiness level is only influenced by the users' skills and experience whereas clarity of business strategy, data-driven culture, and data quality has no influence on their readiness level. These findings suggest that readiness highly influenced by self-efficacy as reflected by skills and also past experience of using technology related products. Implications of the findings are further explored.*

**Key Words :** Data Mining Readiness, Employees, Insurance Industry, Malaysia, Survey

## Introduction

The twenty-first century is the age of Information and Knowledge. It is a century that is characterized by knowledge as the important resource that gains competitive advantage for companies. To acquire all these knowledge and information, organizations must rely on the data that they store. Data, the basic element, is gathered daily from different input sources. Information is extracted or learned from these sources

of data, and this captured information is then transformed into knowledge that is eventually used to trigger actions or decisions (Anonymous, 1999a). By and large, organizations do not have any problem of not having enough data because most organizations are rich with data. The problem however is that many organizations are poor in information and knowledge (Anonymous, 1999c). This fact translates into one of the biggest challenge faced by organizations that is, how to

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transform raw data into information and eventually into knowledge, which if exploited correctly provides the capabilities to predict customers' behavior and business trends?

Today, the secret of success of many profitable businesses lie in their ability to process the data using advanced analytical methods. The business of information management encompasses more than just storing the data. It also covers data 'mining' or acquiring information by processing data using a new form of business intelligence (Anonymous, 1999a). Hence, organizations need to invest in data mining techniques (aided by statistical analysis, visualization and neural networks) to uncover hidden patterns, discover new knowledge, and as a consequence gain more insight into the current business situation. For example, a typical report is able to identify the best-selling product in a supermarket. However, a report aided by data mining or business intelligence, is not only able to identify the best-selling product in a supermarket but the report is also able to explain the reasons why the product is the best. This ability of knowing 'why' will therefore empower the organization to make the necessary strategic changes. For example, the organization should capitalize on the newfound knowledge by building a stronger, one-to-one relationship with its customers (Anonymous, 1999b). The application of data mining is wide-ranging, from market analysis to fraud detection (credit card business) to product development (say, pharmaceutical industry). It can also be used by manufacturing industries in determining the variety of production factors that influence the quality of the end product. In the financial industry, insurance companies and banks use data mining for risk analysis. For example, an insurance company may search its own databases to uncover relationships between personal characteristics and claim behavior (Basu, 1997). Usually the company is interested in the characteristics of insureds with a highly deviating claim behavior. According to META Group, Inc. a Connecticut-based market research firm, data mining application is expected to grow one hundred fifty percent from 1999 to 2000 (Bauer, 2000). Additionally, the report suggests that applications of data mining in insurance industries will grow at a steady rate of six percent during that period.

## Data Mining and Insurance Industry

Dramatic changes have taken place; mergers and acquisitions together with deregulation and globalization have left their mark on the insurance industry (Anonymous, 1999c). The competitive landscape is also changing. Key competitors namely,

banks and other financial institutions, are aggressively competing in the race for Internet success. As customers become more educated about the available options, they are more likely to choose the new marketing channels. In addition to the market situation, customers' needs are also changing. Customers now demand products to meet their needs or requirements. Thus, they are no longer interested in the traditional insurance products but are now demanding for 'financial solutions'. For example, EON CMG Life Assurance Berhad's Chief Executive Officer, Craig W. Dunn stressed that as the country develop economically, more people would realize the benefits of investing in the correct insurance plans (The STAR, 1999).

As the insurance industry is becoming more information-centric, the wealth of the companies is based on the available data and the information accessed. Whether it is risk management, claims administration, underwriting or sales, all these services share a common trait they are all generated and managed by the client databases. In order to survive and to ensure sustainability, insurers therefore need to shift their focus from mere processing of insurance transactions to managing and exploiting information (Anonymous, 2000). In general, insurers need to realize the importance of quality information in their business and the advantages of having the ability to use this information to its advantage. In this evolving business, information becomes a strategic asset because the bulk of the data is available internally. Access to information in a timely manner is critical in order to enable the correct decisions to be made at the right time. However, most insurance companies are challenged to find the most efficient way to gain access to information. The interest in data mining within the insurance industry is widely spreading. Data mining technology has become an enzyme that enables data to be processed faster, better and cleaner (Anonymous, 1999a).

## Research Objectives

This study explores the contributing factors to the adoption of data mining technology, and focuses on both the organizational issues as well as those related to the employees. The main purpose of this study is to uncover the relationship (if any) between the factors identified and the employees' data mining readiness. Two main research questions are addressed:

- What is the level of data mining readiness of the employees in the insurance industry in Malaysia?
- What are the factors that may affect the employees' readiness level?

## Literature Review

### Employees' Readiness in Adopting Data Mining

Adopting a new technology is not an easy task. Foremost, the employees are humans who are naturally fearful of the uncertainty of change. This fear is often translated to resistance to change. Additionally, the design of high-tech products sometimes fails to account for the way the users adopt and react to the technology. As suggested by Eby et al. (2000) understanding employees' readiness is crucial. The main question now is how to measure employees' readiness? Parasuraman and Rockbridge Associates (1996) develop a multiple-item scale in measuring readiness to embrace new technologies. The Technology Readiness Index (TRI) is designed to identify the propensity of a customer, an employee or even a manager to adopt new

**Table 1 : Components of Technology Readiness Index (TRI)**

Category	Definition
Optimism	the degree to which individuals believe that technology can benefit their lives and give them more control over their lives
Innovativeness	a natural desire to acquire and experiment with the newest technologies, as well as to be a thought leader
Discomfort	a feeling of lacking control over technology and lacking confidence in making it work properly
Insecurity	a need for assurance that a technology-based product, service or process will operate reliably and accurately

Optimistic individuals enjoy the control and freedom that technology provides. They also find technology to be mentally stimulating. On the other hand, pessimistic individuals have concerns in dealing with computers over people in conducting business. Naturally, innovative individuals are keen to keep up with the latest technological developments. However, individuals who prefer not to innovate usually do not have any interest in adopting new technology; especially so when the old technology still meets their expectations. Generally, employees with high discomfort level in using technology, often feel overwhelmed about the knowledge and skills required to operate the new technology. Often, they feel that technology is not only too complicated to be useful, but they also feel insecure of technology's ability to operate properly and safely. In contrast, employees who are comfortable with technology not only feel in control of the technology, but they also believe that computers are more reliable and

consistent when performing a task than a person. Therefore, employees with high readiness level should exhibit optimism and innovativeness because they are comfortable using technology and they require little assurance on the performance level of the technology being used. The implication here is the applicability of TRI in measuring the employees' data mining readiness. In this study, TRI is used as a reference in assessing the employees' data mining readiness. Two components namely Optimism and Discomfort are used as a base in developing the data mining readiness assessment.

### Factors Affecting Data Mining Readiness

David (1998) points out that being successful in business demands for continuous attention to changing external and internal conditions. Many business leaders do not fully understand the nature of the benefits that data mining technology can provide (Anonymous, 2000). Though some insurers have enjoyed notable success, many have failed. These initiatives are strategic; often they do not directly address an immediate need. Thus, as far as the business strategies are concerned data mining stands at a low priority. Without a strategic context, a company will not know which data to focus on, how to allocate analytic resources, or what it is trying to accomplish in transforming data to knowledge. A clear business strategy will help provide the data and analytic capabilities required by the organizations (Davenport et al., 2001). These arguments are aligned to those made by Armenakis et al. (1993), and Ivancevich et al. (1999). Revised policies, procedures, as well redefined roles and responsibilities of the employees are indeed crucial when organizations face new changes. Seybold (1998) suggests "advancement in the insurance industry has been hampered by lack of investment industry-wide in data warehousing and data mining technology". In addition, Seybold states that in the absence of the investment, product (policy) designers work with limited data about policyholders and claims. They mostly rely on data summarization supplemented by intuitive hunches to guide their new policy development. This is an example when the organization does not budget appropriate resource in moving strategically. This is also a case where the business strategy is not data-driven. Davenport et al. (2001) report that two-thirds of the companies surveyed are challenged with concerns on recruitment, development and retention of highly skilled employees. Thong (1999) also agrees that the importance of employees' knowledge on a system lies in adopting the system itself. Fox, Ellison and Keith (1988)

as cited by Armenakis et al. (1993) propose "effective management practices (such as planning, delegating, and communicating) influenced employee cooperation and perceived equity. These were associated with higher employee readiness for implementing improvements in procedures and problem solving". Further, Corrado (1994) suggests that employees are highly motivated and contribute the most to the business when there is full and open communication at work.

In short, organization should promote data-oriented culture through establishment of policies, procedures and excellent communication system. One of the critical success factors in maintaining manageable and profitable information systems is through its data quality (DQ). DQ is defined as data that is fit for use by the users (Huang, Lee, & Wang, 1999). Among commonly identified data quality include accuracy, timeliness, completeness and consistency (Xu, Nord, Brown & Nord, 2002). DQ is an important aspect during the system conversion process as well as when providing users with quality findings. Thong (1999) emphasizes the relevance of the intensity of information available to the organizations in adopting IT.

## Research Model and Hypotheses

This study aims to understand the contextual factors in the insurance organizations that influence employees' data mining readiness index (DMRI). The theoretical framework is adapted from the Model for Building an Analytical Capability (Davenport et al., 2001), which states that the more analytically capable the individual, the higher the readiness. Fig. 1 illustrates the dependent variable (employees' DMR) and the independent variables (business strategy, users' skills and experience, data-driven culture, and data quality).

### Clarity of the Business Strategy

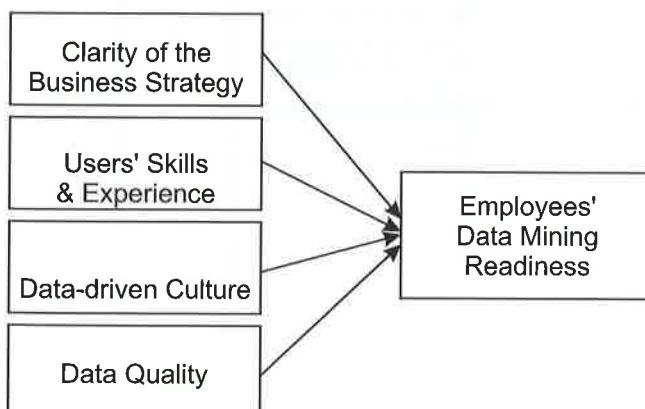


Figure 1 : Conceptual Framework

Clarity of the business strategy requires the top management to convey a clear definition of the purpose for change, to continually improve, and to align the core processes with organizational goals (Hassan, 2000). Additionally, change must be top-down to provide vision and create structure and it must also be bottom-up to encourage participation and support. The clearer and more detailed the business strategy, the more obvious what data and analytical capabilities the organization requires. Thus, the first hypothesis:

*H1 : The clearer the business strategy's definition, the higher the employees' data mining readiness*

### Users' Skills and Experience

Users skills and experience are accounted by the level and structure of skills needed to support data analysis capabilities (Davenport et al., 2001). As for the requisite skills that are aligned to the business strategy, four dimensions are proposed: technology management skills, business functional skills, interpersonal skills, and technical skills (Bryd & Turner, 2001). Empirical evidence reveals that tech-savvy employees are likely to use more innovations (Thong, 1999), and there is a positive link between computing technology experience and outcomes such as affinity towards computers and computing skill (Agarwal & Prasad, 1999). Thus, the second hypothesis:

*H2 : The better the users' skills and experience in analytic capabilities, the higher the employees' data mining readiness*

### Data-Driven Culture

A CEO's characteristic plays an active role in the allocation of resources and is crucial to the organization's technological direction (Thong, 1999). For example, sixty-two percent of the managers responding in an informal survey indicate that organizational and cultural factors are the greatest barriers to the returns on system investments (Davenport et al., 2001). A major concern is creating a data-driven culture that requires for the logistics and systems' support to be part of strategic policy (Schneider & Bowen, 1993). As culture dictates acceptance of all organizational change, issues such as policies and practices dictate individual's actions and interactions within a culture (McNabb & Sepic, 1995). Any large-scale change should involve the reshaping of the organizational culture in ways that will motivate its employees to care for the business as their own (Moran & Avergun, 1997). For example, in investigating the impact of organizational resources on innovation adoption, adaptors and innovators are identified as the

two extreme ends of the innovativeness continuum (Kirton, 1980). To ensure successful analytical capability, the entire organization needs to value data-based analysis and to adopt a data-driven culture. Thus, the third hypothesis:

*H3 : The higher the data-driven culture, the higher the employees' data mining readiness*

## Data Quality

The quality of the data used for data mining-related activities is crucial to successful data mining because quality data must be organized into an accessible and extendible data warehouse. The data must be of the right age and richness (depth) for the task (Baker & Baker, 1998). Without good quality data, data mining loses its central function of providing managers with meaningful patterns and trends. In other words, the dynamic nature of business data affects the quality of information retrieved. The technology underlying analytic processes includes the hardware and software used in the data capture, cleaning, extractions, and analysis, as well as the networking and infrastructure capabilities needed to transfer data and provide end-user access (Davenport et al., 2001). As a result, the technological infrastructure conducive for an analytic capability to succeed is critical to get the data-driven organization to the goal of converting data-to-knowledge-to-results. Thus, the fourth hypothesis:

*H4 : The better the data quality, the higher the employees' data mining readiness*

## Methodology

Data is collected using e-mail questionnaire. The questionnaires are mailed to selected employees working in the insurance industry. The questionnaires contain multiple measurement items relating to each of the constructs in the theoretical framework. For the independent variables (the contextual factors of the organization namely: clarity of the business strategy, users' skills and experience, data-driven culture, and data quality), these are based on reviews of relevant literature (Davenport et al, 2001; Eby et al., 2000; Thong, 1999). For the dependent variable (employees' DMR), it is adapted from Parasuraman's Technology Readiness Index (Parasuraman, 2000).

## Results of Study

A total of 200 questionnaire sets were mailed and distributed personally. A total of 114 sets were returned giving a response rate of 57%. However 11 sets were rejected due to significant omissions. As such the useable response rate is 51.5%. A total of 114

employees from 12 insurance companies responded to this study. The sample profile is as shown in Table II. Insurance is a service industry; thus it is not surprising to note that more than two-third of respondents is from the Sales or Marketing department and Customer Service (51.5% from the former department while 17.5% from the latter).

## Goodness of Measures

### Factor Analysis

A factor analysis with varimax rotation was done to validate how the respondents perceived the dependent variable of data mining readiness. The results showed a two factor solution with eigenvalues greater than 1.0 and the total variance explained was 60.22% of the total variance. KMO measure of sampling adequacy was 0.657 indicating sufficient intercorrelations while the Bartlett's Test of Sphericity was significant ( $\chi^2=188.765$ ,  $p < 0.01$ ). We used the criteria used by Igbaria et al. (1995) to identify and interpret factors which were: each item should load 0.50 or greater on one factor and 0.35 or lower on the other factor. Table III shows that result of the factor analysis. These results confirm that each of

**Table II : Summary Profile of the Respondents**

Variable	Category	Respondents	
		Number	Percentage
Gender	Male	59	57.3
	Female	44	42.7
Race	Malay	35	34.0
	Chinese	59	57.3
	Indian	7	6.8
Education Level	Other	2	1.9
	Post graduate	16	15.5
	Undergraduate	21	20.4
	Diploma	34	33.0
	Certificate	8	7.8
Position	Secondary	24	23.3
	Clerical	24	23.3
	Lower level management	22	21.4
	Middle level management	31	30.1
	Top level management	3	2.9
Job Function	Others	23	22.3
	Finance/ Accounting	7	6.8
	Sales/ Marketing	53	51.5
	Customer Service	18	17.5
	Administration	9	8.7
	Operation	14	13.6
	Information Technology	1	1.0
Others	1	1.0	
Age	Less than 21 years	3	2.9
	21 - 30 years	46	44.7
	31 - 40 years	37	35.9
	41 - 50 years	12	11.7
	more than 50 years	5	4.9
Length of Service	Less than 1 year	8	7.8
	1 - 5 years	55	53.4
	6 - 10 years	30	29.1
	more than 10 years	10	9.7

these constructs is unidimensional and factorially distinct and that all items used to measure a particular construct loaded on a single factor.

**Table III: Rotated Components of Dependent Variables**

Items	Factor 1	Factor 2
<b>Optimism</b>		
Optimism4	0.581	-0.294
Optimism6	0.792	-0.007
Optimism7	0.794	0.007
Optimism8	0.808	-0.003
Optimism9	0.698	-0.009
<b>Discomfort</b>		
Discomfort8	0.004	0.829
Discomfort9	-0.161	0.812
Eigenvalue	2.764	1.451
Variance (60.22%)	39.482	20.734
Cronbach Alpha	0.792	0.561
Mean	3.91	3.51
Std. Deviation	0.54	0.62

\* 5 items were dropped due to low anti image correlation

Another factor analysis with varimax rotation was done to validate how the respondents perceived the independent variables. The results in Table IV show a four factor solution with eigenvalues greater than 1.0 and the total variance explained was 60.33% of the total variance. KMO measure of sampling adequacy was 0.736 indicating sufficient intercorrelations while the Bartlett's Test of Sphericity was significant ( $\chi^2=1449.335$ ,  $p<0.01$ ).

## Multiple Regression Analysis

The multiple regression output in Table V shows that there is a significant linear model. The F statistic produced ( $F=12.258$ ) is significant at the 0.01 level. It shows an adequate model. The R<sup>2</sup> value of 0.333 reveals that the model is able to explain 33% of the variations in data mining readiness. This result indicates that among the four independent variables, the skills and experience ( $\beta=0.563$ ) are the most important variables in explaining the variance in DMRI. The positive beta value indicates that as the skills and experience increase the higher will be the data mining readiness. The other three variables (clarity of business strategy, data-driven culture and data quality) are not found to be significant in explaining the employees' data mining readiness. Thus hypotheses H1, H3 and H4 on clarity of business strategy, data-driven culture and data quality were not supported; but supported the H2 hypothesis:

**Table IV: Rotated Components of Independent Variables**

Items	Factor 1	Factor 2	Factor 3	Factor 4
<b>Clarity of Business Strategy</b>				
Strategy2	0.275	-0.007	0.004	0.767
Strategy3	0.002	0.003	0.144	0.787
Strategy4	0.010	0.008	0.009	0.745
Strategy9	0.157	0.556	0.278	0.514
<b>User's Skills and Experience</b>				
Skills1	0.691	-0.267	0.007	0.147
Skills2	0.746	0.167	0.001	0.117
Skills3	0.791	0.009	0.106	-0.006
Skills4	0.879	0.010	-0.002	-0.005
Skills5	0.787	0.004	0.005	0.203
Skills6	0.771	0.183	0.265	0.176
Skills7	0.687	0.269	0.104	0.135
<b>Data Driven Culture</b>				
Culture3	0.003	0.645	-0.005	0.404
Culture4	0.227	0.634	0.001	0.232
Culture5	0.003	0.627	0.333	0.000
Culture6	0.009	0.664	0.214	0.000
Culture7	0.008	0.854	0.181	0.004
Culture8	-0.004	0.607	0.234	-0.146
Culture9	0.135	0.609	0.395	-0.202
Culture10*	0.002	0.126	0.812	-0.009
Culture11*	-0.002	0.230	0.839	0.007
Culture12**	0.120	0.457	0.353	0.006
<b>Data Quality</b>				
Data3	0.155	0.216	0.716	0.191
Data4	0.168	0.253	0.535	0.219
Data7	0.217	0.310	0.613	0.288
Eigenvalue	4.429	4.150	3.274	2.627
Variance (60.33%)	18.453	17.293	13.641	10.946
Cronbach Alpha	0.749	0.893	0.829	0.627
Mean	3.838	3.394	3.695	3.576
Std. Deviation	0.540	0.682	0.468	0.585

\* Item Culture10 and Culture11 was dropped because it loaded on a different factor

\*\* Item Culture12 was dropped due to high cross loading

\*\*\* Other items dropped due to low anti image correlations

**Table V: Multiple Regression Analysis (Summary Output)**

Variables	Std. Beta
Clarity of Business Strategy	-0.007
User's Skill & Experience	0.563**
Data-Driven Culture	0.146
Data Quality	-0.107
Multiple R	0.577
R <sup>2</sup>	0.333
Adjusted R <sup>2</sup>	0.306
F value	12.258**

\*\*  $p < 0.01$

We further examined whether data mining readiness differed by race, educational level, position and job function by using a one-way ANOVA analysis, by sex using a t-test analysis and by age, service length using a Pearson correlation analysis. The results show that data mining readiness does not differ across the variables examined.

Additionally, we examined the descriptive statistics for DMRI and two DMRI components. As shown in Table VI, the mean value for both optimism and discomfort is high. This means that although the employees are optimistic, they are also experiencing high discomfort.

**Table VI: Descriptive Statistics for Data Mining Readiness Index (DMRI)**

Components	Mean	Standard Dev.	Skewness
Optimism	3.91	.54	-.11
Discomfort	3.50	.62	-.20
Overall DMRI	3.27	.45	-.59

**Note:** The overall DMRI was calculated after reverse coding the discomfort index.

## Discussion and Conclusions

### Employees' Data Mining Readiness Index

A total of 103 employees of different insurance companies (based on the DMRI) indicate that generally they feel neutral when asked of their readiness in adopting data mining technology. A DMRI mean of 3.27 explains this situation. Zooming in to the components of the data mining readiness, the mean of about 4.0 suggests that in general employees are optimistic about data mining. Nonetheless, from the mean of discomfort which is about 3.5 indicate that they also experience a considerable amount of discomfort. Additionally, the findings of this study also corroborated that of Parasuraman (2000). As he suggested, people are generally optimistic about technology and yet they also experience a considerable amount of discomfort in handling technology. He also pointed that even optimists and innovators apparently experience technology-related anxieties. This is similar to those experienced by employees' who are less enthusiastic about technology.

### Factors Affecting Data Mining Readiness in Insurance Industry

A recent study on bank employees reveals that the higher the users' skills and experience and data-driven

culture, the higher the employees' data mining readiness (Dahlan, Ramayah and Koay, 2002). In contrast, a study involving telecommunication employees suggests that the clearer and well-defined the business strategy, the higher the readiness in technology adoption and the greater ability to understand requirements such as data and analytical capabilities required in technology adoption (Dahlan, Ramayah and Looi, 2002). In this study, the regression analysis results show that only one variable has a significant impact on employees' data mining readiness, which is the skills and experience variable. The strongest link is also shown by this variable. This confirms that the more skills and experience that the employees possess, the higher their readiness levels are. These findings corroborate with works done by Davenport et al. (2001) and Thong (1999). Davenport et al. (2001) state that two-thirds of the companies they studied shows the major challenge faced by them is in recruiting, developing, and retaining highly skilled employees with analytic capabilities (transforming data to knowledge). The employees here are referred to all the users of the data mining systems. There are different users which require different skills and experience in handling the data mining related works. Users can be the administrators who deal with data extraction or decision makers who use data to develop the business strategy. The skills and experience ranges from ability to extract data, managing data quality, to data visualization. Inadequacy of skills and experience will be a stumbling factor for the organizations in getting full value from its transaction data. Thong (1999) suggests that employees who are more knowledgeable about systems are more like to be ready in adopting the systems.

The business strategy factor explains the importance of strategic context in managing the data to knowledge process. Davenport et al. (2000) highlight that the clearer a firm business strategy, the more obvious what data and analytic capabilities it requires. However, this study is not able to conclude as Davenport et al. (2000) because the scope of organizational and cultural factors is wide. Thus, organizations seeking to put more emphasis on using data to make strategic decisions need to start from the top management. However top management involvement alone will not suffice. The users at all levels should be involved according to their needs, roles and responsibilities with regards to managing data. The dynamism and interaction between and among the users also are affected (Eby et al. 2001).

In addition to the above, this study does not reveal any significant relationship between the cultural factors and readiness level. This is not consistent with Eby et al.

(2001) who suggest that creating conducive conditions will help ensure success. Further, the findings do not agree with the other studies done on technology acceptance. For instance, Armenakis et al. (1993) reveal that organizations are most likely to be successful when they have the characteristics that support and creates conducive climate for change to happen. This is also supported by Davenport et al. (2001) who conclude that organizational and cultural factors are the greatest barrier in achieving significant return upon their data-to-knowledge related investment.

It was interesting to find that data quality factors do not have any significant impact on readiness. This result disagrees with Davenport et al. (2001) that emphasizes the importance of maintaining high levels of data quality to ensure data is acceptable for analysis and reporting. Another study on data quality related matters also stresses the criticality of quality data to an organization's success (Xu, 2002). Further, Xu proposes that inaccurate and incomplete data may adversely affect the organization success.

## Implications

The DMRI value indicates that the employees are optimistic and yet experience discomfort in handling data mining. Parasuraman et al. (1993) highlight the feeling of technology-related anxieties experience by the employees who are optimistic about technology is similar to those experienced by those who are less enthusiastic. Indirectly, organizations need to identify who these people are and in which categories they belong to. Therefore, organizations should consider strategically, different sets of system or structure that needs to be in place to tackle the different levels of employees' readiness. The organization may also need to establish a system or structure that can motivate the employees to adopt data mining technology. As a consequence, the relevant resources (such as human and budget) needed to be in place even before attempting to adopt the technology.

As skills and experience are identified to be positively correlated to employees' readiness, the insurance companies should focus on issues pertaining to the human resources management (HRM), specifically on the quality of the current and future workforce. The implication here is on the IS and IT personnel regardless of whether the organization uses the internal experts or outsource, because the IT personnel needs to acquire the necessary skills and knowledge of data mining in order to strategically and effectively manage the data mining technology in the organization.

Other studies have shown that the clearer the business

strategy, the higher the readiness in technology adoption and the greater ability to understand requirements such as data and analytical capabilities required in technology adoption. Since this study does not prove such situation, potentially it may be caused by the employees' lack of awareness of the business strategy. Therefore, they may not see the relevance of clear business strategy to the categories of data that they need to focus on. The implication is the organization may need to revisit its techniques, and perhaps the communication channels in propagating its business strategy.

Data quality is also identified as an important factor in the adoption of IS and IT related technology. However, this study does not conclude as such. Nonetheless it is worth highlighting the criticality of the data captured and the data quality. Quality data extraction begins with quality data warehousing. Perhaps at this juncture most of the insurance industries have not exercised most of the data captured in making strategic decisions. Perhaps the conventional way of establishing rapport with customers is still the main way of marketing to customers. This implies the need for the organizations to shift their paradigm from purely customer-based relationship to data-driven culture as well as strategy. Establishing data-driven strategy will force the organizations to manage a better data quality.

## Conclusion

The DMRI results suggest that in general employees are optimistic about data mining, but they also experience a considerable amount of discomfort in handling this technology. In addition it also highlights the employees' neutral feeling towards adoption of data mining. The findings also show that skills and experience has an impact on employees' readiness. It appears that the other three variables namely business strategy, cultural factors and data quality do not have a significant impact on readiness.

## References

- Adams, A.**, (2001). Data Warehousing: To Buy or To Build, A Fundamental Choice for insurer, SQLiaison Inc.[On-line] Available <http://www.sqliaison.com>.
- Anonymous** (1998a). Emerging markets: The Insurance industry in the face of globalization, Swiss Reinsurance Economic Research and Consulting.
- Anonymous** (1998b). Press Release: Dialogues Sessions with Insurance Companies, Bank Negara Malaysia Public Announcements. <http://www.bnm.gov.my>.



- Anonymous** (1999a). Data mining and statistics: Gain A Competitive Advantage, SPSS Inc. [On-line] Available <http://www.spss.com>.
- Anonymous** (1999b). Making Personalized e-relationships a reality: Data mining makes the differences, SPSS Inc. [On-line] Available <http://www.spss.com>.
- Anonymous** (1999c). The Insurance Industry in the Information Age, SQLiaison Inc. [On-line] Available <http://www.sqliaison.com>.
- Anonymous** (1999d). The Challenge of Business Intelligence Access for the Insurance Industry, SQLiaison Inc. [On-line] Available <http://www.sqliaison.com>.
- Anonymous** (2000). Data Warehousing and Data Mining in the Insurance Industry: Floods of Information, Fountains of Knowledge [On-line] Available <http://www.conning.com>.
- Anonymous** (2002a). Historical Aspects of Insurance, Malaysian Insurance Industry News Brief. [On-line] Available <http://www.insurance.com.my>.
- Anonymous** (2002b). Policies and developments, Bank Negara Malaysia Publications. [On-line] Available <http://www.bnm.gov.my>.
- Armenakis, A.A., Harris, S.G., Mossholder K.W.**, (1993). Creating Readiness for organisational Change. Human Relations, New York.
- Aziz, Z.A. (speaker)**. (2002). Governor's Statement at the BNM 2001 Annual Report Press Conference, Kuala Lumpur.
- Basu, S.**, (1997), Data Mining. Unpublished manuscript, Georgia State University, USA.
- Bauer, C.L.**, (2000). Data Mining Digs In, High Tech Careers, Washington Post.
- Dahlan, N., Ramayah, T., and Koay, A.H.** (2002). Data Mining in the Banking Industry An Exploratory Study. In the Proceedings of the International Conference 2002 Internet Economy and Business. 17 to 18th, September, 2002, Kuala Lumpur, Malaysia.
- Dahlan, N., Ramayah, T., and Looi, L.M.** (2002). Readiness to Adopt Data Mining Technologies: An Exploratory Study of Telecommunication Employees in Malaysia. In the Proceedings of The 4th International Conference on Practical Aspects of Knowledge Management, Austria, Vienna, 2-3rd December 2002.
- Data Intelligence Group**, (1995). An Overview of Data mining at Dun & Bradstreet.
- Davenport, T.H., Harris, J.G., De Long, D.W., Jacobson, A.L.**, (2001). Data to Knowledge to Results: Building an Analytic Capability, California Management Review, 43 (2), pp 117-138.
- David, F.R.**, (1998). Strategic Management: Concept and Cases, 7th Edition, USA, Prentice Hall.
- Davis, F.D.Jr.**, (1985). A Technology Acceptance Model for Empirically Testing New End-User Systems: Theory and Results, Unpublished doctoral dissertation, Massachusetts Institute of Technology, USA.
- Dishaw, M.T., Strong, D.M.**, (1999). Extending the Technology of Acceptance Model with Task-Technology Fit Constructs, Information & Management, 36, pp 9-21.
- Eby, L.T., Adams, D.M., Russels, E.A.**, (2000). Perception of Organisational Readiness for Change: Factors related to Employees' Reactions to the Implementation of team-based selling, Human Relations, 53 (3), pp 419-442.
- Fox, D., Ellison, R., Keith, K.**, (1988). Human Resource Management: An Index and Its Relationship to Readiness for Change, Public Personnel Management, 17(3), pp 297-302.
- Goodhue, D.L.**, (1988). Supporting Users of Corporate Data: The Effect of IS Policy Choices, Unpublished doctoral dissertation, Massachusetts Institute of Technology, USA.
- Hasan, M.M.**, (2000). Effects of Change Management on Implementation of Total Productive Maintenance, USM MBA Thesis, School of Management, Universiti Sains Malaysia, Penang.
- Huang, H.T., Lee, Y.W., Wang, R.Y.**, (1999). Quality Information and Knowledge, Prentice Hall, PR. .
- Ivancevich, J.M., Matteson, M.T.**, (1999). Organisational Behavior and Management, International Editions, Singapore, McGraw-Hill.
- Lewin, K.**, (1951). Field Theory in Social Science, New York: Harper and Row.
- Offering Financial Solutions, Not Just Products.** (1999, November 1). The STAR.
- Parasuraman, A.**, (2000). Technology Readiness Index (TRI), Journal of Service Research, 2 (4), pp 307-320.
- Report: Insurance Prospects in Asia Bright.** (2000, July 18). The STAR.
- Rogers, E.M.**, (1983). Diffusion of Innovations, 3rd Edition, New York: Free Press.
- Ruquet, M.E.**, (2000). Data Mining Challenges Cited, National Underwriter, 104 (49), pp 3-16.

**Sekaran, U.** (2000). *Research Methods for Business: A Skill-Building Approach*, 3rd Edition, New York, John Wiley.

**Seybold, M.**, (1998). Data Warehousing in the Insurance Industry, A Strategic Advantage: Mining the Insurance Data Warehouse, *DM Review*.

**Thong, Y.L.**, (1999). An Integrated Model of Information System Adoption in Small Businesses, *Journal of Management Information Systems*, 15 (4), pp 187-214.

**Xu, H., Nord, J.H., Brown, N., Nord, G.D.**, (2002). Data Quality Issues in Implementing an ERP, *Industrial Management & Data Systems*, 102 (1), pp 4758.

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# Cross-Border Investments Imputing Financial Shape to Uncertain Business Situations - The Use of Real Options and the Lessard APV Approach - A Discussion

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## Abstract

*Cross Border investments have risk considerably different from the domestic scenario. Firms are under compulsion to indulge in cross border investments as a strategic imperative arising out of growth constraints and value-creation difficulties. The first task for the firm before embarking upon such a venture would be to quantify uncertainty to the extent possible and find ways for factoring this into a valuation model. Uncertainty itself can be classified in different ways and once the firm recognizes its level, either the Real Options Approach or the Lessard model of Adjusted Present Value for international capital budgeting can be used to evaluate the project. The Real Options approach enables the firm to convert the threat of uncertainty into an opportunity, while the Lessard model takes a systematic approach to dissecting the various aspects of cross country investment and weave these into a tangible model. While firms will have their strategic non-financial imperatives in going in for cross country investments, the use of a model like the one discussed in this paper will enable it to plan the uncertainty better.*

**Key Words :** Abandonment Analysis, CFO, Lessard APV Approach, Real Options, Option Theory

## Introduction

One of the great developments over the last 15 years has been the opening up of foreign investment avenues in many developing countries. In India, right from 1992 when the liberalization movement was launched, the controls and checks in respect of foreign investments have been eased gradually. This has resulted in a

situation where the investing countries and entities can look at risk-return balance aspects in isolation as in a domestic investment before embarking upon the scheme.

Cross border investments have many perspectives. The perspective we are going to examine in this paper is from the angle of Indian conditions, where there are

number of clear uncertainties, but quite intermingled with clarity in certain areas. For instance the foreign entity will know the areas where the investment can expand to in future and the tax regime is more or less fixed and transparent. What is more, the amount of repatriation and transfer of know-how are all regulated with well-defined rules. The flip side to this has been the slow enforcement mechanism for giving relief in respect of breach and consequently many foreign investors have been averse to the idea of protracted legal battles for enforcing rights.

The economic framework for cross border investments comes out of the saturation of domestic demand and the need to expand and grow to keep creating value for the stakeholders. With every progressive investment the foreign entity will assume greater risk and correspondingly expect a higher rate of return. The higher risk arises out of having all the risk inherent in a domestic scenario coupled with the country-specific risk attributable to default and business risk in alien centers.

In this paper we look at three learned propositions on uncertainty and its handling. They refer to different concepts and hence may not be universally applicable all together. All the same, their value lies in their seeking a totally logical (and not abstract) interpretation to handling of uncertainty especially in situations like cross-border investment.

## Uncertainty Framework

Courtland, Kirkland and Viguier (1997) have outlined three levels of uncertainty in their famous HBS article. The challenge before the CFO comes when the scenario is not only unclear but cannot be quantified also. These are typical strategic situations where the happening of one series of events might result in a set of figures and the happening of a different set of events might change the set of variables altogether. In fact, coping with uncertainty is such a raging topic now that a number of theories have been propagated and scores of articles written on it. The paper suggests a methodology for determination of a specific level of uncertainty for each situation and then to form generic strategies for it. For this the author divides the levels of uncertainty into the following categories:

- Clear enough future where the relevant facts are already available or capable of being gathered.
- Alternative futures consisting of a set of discrete scenarios of future uncertainty.
- Range of futures where the uncertainty does not fall into a clear bracket but might assume a range of events.

- True ambiguity wherein the scenario is uncertain and needs to be blindly forecast.

The article suggests a number of generic postures and actions to counter these levels of uncertainty. These would involve:

- Shaping the future Whereby the company aggressively launches a course of action, which would hopefully herald the way the industry functions in future.
- Adapt to the future Whereby the company sizes up the situation and plans its actions to suit the role model.  
And
- Reserve the right to play Whereby the company steps in for the purpose of keeping an option to be a participant in the future. As regards specific actions or moves, the paper suggests no-regret moves, options and big bets for various levels of uncertainty depending on the strategic posture of the company.

Until recently, most companies were merely following strategic initiatives and not fully translating their expectations into numbers. Thus a decision say to introduce a new sub-brand abroad at a lower cost segment and launch it by a strong advertising campaign might be taken without necessarily looking at the scenarios of possible sales and possible benefits from the strategy. The reason why financial projections did not form part of a strategic working paper could be attributed to the fact that the uncertainties were so high that to quantify these into any form would have been highly difficult. Further, Finance did not have enough models and risk reduction measures to counter uncertainties, in any case. Things have changed dramatically in recent years. The paradox for a CFO now lies in the fact that it is the uncertainty that will be the greatest opportunity for a strategic advantage. Presently, he has enough ammunition like tools of quantitative estimation, models of value determination and a plethora of customized derivative instruments, which could considerably bring down the risk of specific transactions and also act as a means of asset value enhancement. Simultaneously, thanks to improved regulatory mechanism markets have become more and more efficient, thereby resulting in quick corrective arbitrage to prevent market imbalances.

So coming to the Cross-border investment scenario, the first step will be the obvious one of collecting as much data as possible to make the uncertainty as "certain" as possible. The possible discrete scenarios say like governments changing, regulatory policies suddenly undergoing changes and inflation levels needs to be drawn up to make further analysis easy. The bigger

question of country risk and the possible ways of repatriation or investment channeling needs examine, similar to any other international business situation.

Eun (2001) classifies political risk as Macro risk and Micro risk. In the former, all foreign currency operations are affected by adverse political developments; while in the latter only selected areas of foreign businesses are affected. Based on the nature of the influence of these factors, political risk consists of transfer risk (arising from uncertainty about cross-border flows of capital, payments and know-how), operational risk (arising out of vagaries of policy of the host country) and control risk (arising out of regulation regarding ownership of local operations)

### The Real Options Approach

Among all the tools in his control, the CFO would be well advised to use the Option Theory in most of the uncertain situations. An Option contract derives value from uncertainty. If the outcome is more or less certain, there is no great value in holding an option to use it. But if the outcome is highly uncertain, the option assumes significance in that it could be used if the conditions are favorable or otherwise simply discarded. So the Option way of thinking could be brought into management and specific decision-situations could be thought of as options. If it was sufficiently worthwhile to have an option to play, then it would be a much better alternative for the CFO than taking the full plunge. The price one has to pay for keeping the option will afterward become the only important consideration. These options in capital budgeting decisions could be in the form of the Option to Abandon, Option to Wait and Option to Time. An Option to abandon gives the company the right to go all out on a project and back out if the going is not good enough. The payoff, if such abandonment does take place after a brief period of time, when reckoned with the other flows, will tell us how important the right to back away is. As a corollary, the more valuable this option, the more we may be prepared to pay for having the option. Thus, an abandonment analysis will help the CFO in deciding upon the amounts to be foregone in order to retain the choice. The Option to Wait gives the company more time to decide whether to plunge into the project. Obviously, this will apply only to cases where the circumstances of business would not change dramatically in the interim. For example, in specific mining contracts, if a company is given some time to decide whether to take up a contract or not, that would enable it to study the market conditions and environment before taking the plunge. The CFO would be prepared to pay a price for the right to wait and this could then be thought of as an option premium. The

Option to Time is not necessarily one that is given by the counter party. Based on a study of the market conditions the company can decide the best period to strike. But for this, the infrastructure and other wherewithal must be in place. This is brought about by the option for which the CFO will be prepared to part with a premium.

While conceptually, Real Options are a very interesting possibility in corporate capital budgeting, difficulties have been experienced on two counts valuation of such options and the question of maximum investment in such options. Valuation of Real Options cannot be as straightforward as the valuation of an equity option. This is because inherently a corporate decision-making situation involves a number of other levels of uncertainty than contemplated by the five inputs to the share option model. Attempts have been made by academics in recent years to correlate the inputs of a share option with that of the real option. In the process, the following similarity could be reached: India were contacted to participate in the survey. The survey was distributed either as a postal mail or as a web survey. Total responses received were 176, which constitutes a response rate of 17.6%. After deleting the responses, which could not fulfill minimum competency, total responses retained were 156. Table-1 shows detail demographic profile of respondents participated in the survey.

If data analysis could be done on the above lines, the Black Scholes Model itself could be directly used to give a first estimate of the value of the option. Alternatively, in case, the uncertainty boils down to the happening of one of only two possible events, the Binomial Option Pricing Model could be used to determine the right price of the option.

But, importantly, it is the question identification of the existence of Options that is of greater significance to the CFO. Once identified, these options could be valued by using one or more of the above models. But how do we spot an option-like situation from the strategic perspective?

Luehrman (1998) in his paper *Investment Opportunities as Real Options* gives a framework for identifying whether a real option exists at all in a given situation. According to this framework, the two principal requisites for a situation to be called an option are the existence of a modified NPV (called NPV<sub>q</sub>) and the presence of considerable cumulative variance of returns. The modified NPV (NPV<sub>q</sub>) is calculated as the NPV of inflows divided by the PV of outflows. In other words, the expected inflows are not discounted but the outflows are. If the NPV<sub>q</sub> > 1, it shows that the project is having a

Time to Maturity	The time that can be taken before exercising the right to opt. For instance, if an option to plunge ahead could be deferred for a maximum of two years and could be exercised any time in that period, this would be tantamount to an American call option for two years.
Share Price	This is the value of the investment its NPV if undertaken now. Obviously, if the NPV is already good, we have nothing to discuss, but if the NPV is not quite good or even negative now, but likely to turn positive on the happening of specific set of incidents, then we have a real option in hand. The present NPV is the equivalent here of the current share price
Risk Free Return	Academics are divided as to whether one should take the risk free return itself for the purpose of analysis of real options or should take the WACC of the firm. Either way, this is easily determinable.
Exercise Price	The investment that the company will have to finally make to embark upon the project or capital budgeting decision
Variance of Returns	This can be easily substituted with the variability of the NPV under various scenarios. Again, it has to be borne in mind that the higher the variability, the better the value of the option.

positive potential. Both NPV<sub>q</sub> and cumulative variance must be present together for a real option to be worthwhile. If the modified NPV is greater than 1, but there is no cumulative variance present, it means that the outcome is more or less certain, which in turn makes the option unattractive. Similarly, if there is considerable cumulative variance, but this is not accompanied with a NPV  $q > 1$ , it means that although there is considerable uncertainty, this does not work out to the favor of the organization, because whatever the circumstances, the NPV cannot be positive. The author also highlights specific situations wherein there could be a borderline case where either the modified NPV or the

cumulative variance is not presently attractive, but could be strategically nurtured to become so. This is so when a major technological change is expected to take place, or the opening up of an economy is likely to result in an uncertain demand scenario in the future.

All in all, Real Option theory presents a very exciting opportunity to the CFO to give financial meaning to strategic alternatives. The only factor that has to be kept in mind is that too much of investment into these options would result in a definite erosion of capital, unless some of them fructify. The analogous situation is an investment in share options continuously. The company must have a positive strategy for these options and also have a rough upper ceiling of amounts that could be locked up in these ventures.

In India, there are number of recent examples of corporate strategy in the cross-country area. These strategic initiatives could be translated into the Real Options framework by the CFO so that the financial imperatives and consequences of the moves could be better understood. We have to, of course, remember that the theory of Real Options is still young and as more and more empirical studies are undertaken, new models would emerge. There is no doubt, however, that the Options way of Financial Management does give the CFO new vistas of strategic planning and companies would be richer for it.

While the models make an over simplistic way of solving the issue, the fact remains that uncertainty by itself is not a bad thing for an investment, provided the investor can point in time his outlay and has the choice of coming out of the plan itself. This is especially valuable in a foreign exchange investment and that is why in a modified way, the basic Real Options model can be usefully used. The greater the uncertainty, the greater the potential benefit provided the investor is able to afford the initial "Option price". Here lies the strategic imperative of having to decide on the extent of such possible outlays and a probability distribution of possible inflows.

The age-old theory of synergy can be re-written using the Real Options approach. While synergy is the easy way of thinking about the justification of an investment and making  $2 + 2 = 5$ , the Real Options gives an even wider vista by saying that it can be much higher than 5 or sometimes lower than 4 itself, but you plunge into it only if the scenario suggests it going to the upward region and discard it on the other scenario. Of course, as stated earlier, this requires a small outlay for getting the "right to play".

## Factoring in Uncertainty the APV Model

Conventionally, the Adjusted Present Value Method (APV) factors in various aspects of flows and analyzed each by taking individual discount rates into account. The great benefit of an APV approach is that it gives a strategic framework to decision-making by analyzing the parts of the whole and seeing how they contribute to the whole. In doing so, we discounts the different parts differently based on the respective risk and so what we finally get is the correct net position.

This approach has been adapted to suit the cross-border investment phenomenon by Donald Lessard (1985). His model uses the APV framework for analysis but more importantly factors in a number of special features of multinational investment. So much so, the model will have the advantages of all the other models of evaluating foreign investment projects, and gives a lot more insight.

The Lessard model is a special approach to view foreign capital expenditure. It uses the basic APV framework to factor in all the elements of uncertainty and arrive at a pattern for analyzing the flows. The model accepts the postulate that the flows will be denominated in a foreign currency and will then have to be converted to a parent uniform currency. The following special aspects need consideration:

A project may have a positive APV from the parent's angle and negative APV from the subsidiary's angle, or vice versa. This can arise because of laws that prevent free repatriation and transfer pricing for shielding higher taxes in one country.

- Under the model, cash flows are assumed to be denominated in foreign currency and converted to the parent currency at the spot rate.
- The marginal tax rate for the computation will be the larger of the domestic or foreign tax rates.
- Only the operational cash flow that can be legally remitted to the parent is considered.
- Only the incremental costs or revenues afar considering the opportunity costs should be considered.

Calculations in respect of concessional loans are to be specially made. The benefit to the investing entity is the difference between the loan amount converted into the parent currency; and the flows of interest and principal repayment discounted at the parent's nominal rate

In ascertaining the Weighted Average Cost of Capital (WACC), the parent should not consider the investment

capital structure in isolation. The results are always better with a target capital structure.

Sometimes foreign governments allowing freeing of accumulated funds, if the project is undertaken. That is the investor now has the facility of freeing up his accumulated funds from other projects in the country if the new project is undertaken. This should be taken as an opportunity item from the APV angle

Since capital budgeting necessarily involves estimation of future expected flows, the Purchasing Power Parity theory (or any other well-defined postulate) can be taken as the basis for predicting exchange rates for the purpose of evaluation. Of course, it is possible to simulate this data with a range of possible exchange rates for getting more reliable results.

Like any other capital budgeting model, the Lessard approach involves estimation of various flows, discount rates and the exchange rate. To that extent the model is only as good as the estimates. However, given reasonably reliable estimates, the strategic vision of the project as a whole and its various components are better visible under this approach than in conventional capital budgeting.

The steps involved in this procedure can be summarized as follows:

Estimate the operation profits, depreciation tax shields and interest tax shields separately and if there is a concessional loan that has been sanctioned for the project, the tax shields arising out of the concessional loans need to be analyzed separately.

Estimate the exchange rate for conversion of foreign flows into domestic currency. Use the spot rates for the purpose of current conversion and then apply the 'Purchasing Power Parity theory' to get an estimate of foreign exchange rates for conversion in the future, given the inflation estimates.

Determine a target capital structure for the company and find the corresponding WACC. It must be remembered that strategically the company is embarking upon this project only for enhancing the value to its shareholders. Hence it does not make a sense to view the project in isolation and have its separate capital structure and cost of capital used for evaluation.

Any concessional loan that the foreign country provides is to be viewed from the angle of first estimating the extent of concession and then evaluating tax shields on interest payments. The present value of interest and principal repayments for the loan at the regular rate gives the value of the loan. The full value of the loan

minus this present value is the value of the concessional loan. How this contributes to the acceptance of the project can be analyzed for further negotiation regarding enhancing this component or for reducing the interest rates.

For calculating tax shields the higher of the two countries' tax rates are to be taken and only cash flows that can be legally and promptly repatriated must be reckoned. The Operating Cash flows are to be discounted at the Cost of Equity, Depreciation Tax shields at the WACC and the interest tax shields at the cost of debt. The concessional tax shields are to be discounted at the concessional cost of debt. As stated earlier in evaluating the concessional loan the discounting of flows are to be done at the regular cost of debt.

## The Price to Pay

Ultimately, a cross border investment too has to satisfy the risk-return matrix of the organizations. The higher risk has to be compensated with the higher expected return. But in a cross border investment, factors like money market hedge of revenues, the peculiar economic exposure or general transactions exposure to which the firm is subjected will also play a role in determining a policy. Sometimes tax considerations and enabling of multinational netting will also influence this decision. However, a financial framework is certainly required before one can strategically view individual opportunities.

Another dilemma in cross border investments arises out of peculiar conditions within the industry. When organic expansions become the only way to survive severe competition and growth constraints, as in the pharmaceutical industry, it becomes sometimes necessary to assume greater risk. Here again, a financial framework on the above lines will bring out the extent of risk taken up and the corresponding return level.

## Empirical Evidence

We see some research on the subject below that emphasizes in one way or the other the need for a financial framework:

Bailey, Chung and Kang (1999) study, "the impact of barriers to international capital flows with stock price data from 11 countries whose stock markets feature shares restricted to locals and otherwise identical shares available to foreigners. Large price premiums for unrestricted shares relative to matching restricted shares are typically observed. Although basic notions of international asset pricing offer a straightforward

explanation for the price premiums, we find little evidence that the price premiums are explained by lower foreign required returns. Alternative concepts and theories centering on foreign investor demand and the supply of shares explain some of the time-series and cross-sectional variation of price premiums. More specifically, premiums for unrestricted shares are positively correlated with foreign investor demand in the form of international mutual fund flows, sentiment implicit in matching closed-end country fund premiums, market liquidity, and information reflected in press coverage, country credit rating, and firm size."

Portes and Roy (1999) follow a different approach by taking the cross border equity flows as between 14 countries in the period 1989-1996. They conclude, "We find that the geography of information heavily determines the pattern of international transactions. Our model integrates elements of the finance literature on portfolio composition and the international macroeconomics and asset trade literature. Gross asset flows depend on market size in source and destination country as well as trading costs, in which both information and the transaction technology play a role. The resulting augmented 'gravity' equation has equity market capitalization representing market size and distance proxying some informational asymmetries, as well as a variable representing openness of each economy. But other variables explicitly represent information transmission (telephone call traffic and multinational bank branches), an information asymmetry between domestic and foreign investors (degree of insider trading), and the efficiency of transactions ('financial market sophistication')."

Vihang and Ettiene (1989) examine the capital flow restrictions in cross border investment patterns. The authors state as follows in their abstract, "This paper investigates the impact of capital flow restrictions on the pricing of securities, on the optimal portfolio composition for investors of different nationalities, and on their welfare. Under capital flow controls, the equilibrium price of a security is determined jointly by its international and national risk premiums, and investors acquire nationality-specific portfolios along with a market-wide proxy for the world market portfolio. Removal of investment barriers generally leads to an increase in the aggregate market value of the affected securities, and all investors favor a move toward market integration. Introduction of different types of index funds in the world market generally increases world market integration and investor welfare."





## Conclusion

Cross border investment is more strategic than regular investments for a number of reasons ranging from uncertainty to estimation difficulties. However, the imperative arises out of the firm's need to grow or perish. The alternatives before the firm can then be viewed in a number of ways. Ultimately a financial framework is required to make the investment conform to financial policy and to be consistent with the firm's financial goals. The risk is that the firm takes up on

## References

- Ang, James S and Tsong-Yue Lai** (1989), A simple rule for Multinational Capital budgeting, *The Global Finance Journal*, (1989), pp 71-75
- Courtney, Kirkland and Viguerie-** (1997), *Strategy under Uncertainty* (1997) Harvard Business School Press, Nov-Dec, 1997, ;75(6):66-79.
- Damodaran Aswath** (1999), *Corporate Finance* Wiley Press 1st edition
- Eun Cheol and Resnick Bruce** (2002), *International Financial Management*, Tata Mcgraw Hill, 2002 1st edition.
- Harris, Robert and David Ravenscraft** (1991), "The Role of Acquisitions in Foreign Direct Investment: Evidence from the US Stock Market" *Journal of Finance*, 46,(1991) pp.345-371.
- Lessard, Donald R** (1985), *Evaluating International Projects: An Adjusted Present Value approach*", *International Financial Management: Theory and applications*, 2nd edition. New York, Wiley, 1985, pp.570-84.
- Luenberger, David G** (1998), *Evaluating Real Investment Opportunities*, *Investment Science*, New York, Oxford University Press, 1998, pp.337-43.
- Luehrman**, (1998) *Investment Opportunities as Real Options* , *Harvard Business Review* Jul-Aug.1998.
- Morck, Randall, and Bernard Yeung** (1991), "Why Investors value Multinationality", *Journal of Business* 64 91991), pp 165-187.
- Portes Richar, Rey Helene** (1999), *The Determinants of Cross Border Equity Flows*, Working paper, [www.nber.org/papers/w7336](http://www.nber.org/papers/w7336)
- Regazzione, Giorgio** (1973), *Theories of Determinants of Direct Foreign Investment*, *IMF Staff papers* 20 (1973) pp.471-98.
- Vihang Errunza and Etienne Losq** (1989), *Capital Flow Controls, International Asset Pricing, and Investors' Welfare: A Multi-Country Framework*, *Journal of Finance*, Vol.44, No.4 (Sept.1989), pp 1025-1037.
- Yair Aharoin** (1966), *The Foreign Investment Decision Process*, *Harvard Business Review*, 1966.

# Emotional Contagion and Team Effectiveness: A Conceptual Model

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## Abstract

*Emotional Contagion is increasingly being recognized among researchers as crucial variables in the context of team functioning. Based on findings from existing literature, the paper proposes a conceptual model using individual, interpersonal, and contextual variables that are hypothesized to (a) affect the level of emotional contagion in organizations, and (b) have an impact on team effectiveness. Several hypotheses have been put forth for future analysis. The paper concludes by suggesting scope for future research in the area of emotional contagion vis-à-vis personality - related variables, team dynamics and team effectiveness.*

**Key Words :** Emotions, Emotional Contagion, Emotional Valence ,Team Effectiveness, Relationship Satisfaction

## Introduction

*"We are used to contrasting the intellect with our passions. The mistake is in thinking of the passions merely as occasional contents of life. They are the defining structures of our existence..."*

— Solomon, 2004

Organizations have traditionally believed that a logical and rational approach towards institutional functioning

is the most effective way of maturing. But, recent events have demonstrated that emotions can be very powerful factors in organizational functioning. Until recently, the topic of emotion as an area of study had received very little attention from organizational researchers (Fineman, 1996). This inattention has been a result of long-standing emphasis on cognition and rationality in organizations. However, during the last decade, the concept of emotions in the workplace has been receiving greater focus, owing to the influence of several

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psychological and sociological studies on emotions (Domagalski, 1999).

With team work beginning to play a focal role in many of the organizations, an individual's mood or emotion has been found to have a bearing on the team's emotional state (LaFasto and Larson, 2002). The ability to identify, manage and control one's emotions has gained enormous significance in the management field. Since more and more organizations have transformed into team-based entities, each individual member carries a responsibility of bringing into the team positive sets of emotions, which can spread to the others, and thereby enable a conducive and a nurturing climate of work. The spread of emotions (mostly involuntarily) from an individual to others forms the basis for the current research.

## Emotions in Organizations

Emotions have long been thought of as a potent constituent in effective communication in securing successful relationships (Hatfield, Cacioppo and Rapson, 1994). Not only do they play a vital role wherever people are involved, they can be extended to an organizational setting too. However, given the apparent role that emotions play in our everyday life, they have not been given their due recognition in organizations (Fisher and Ashkanasy, 2000). Robbins (2004) provides two explanations for this: (a) emotions were being thought to be antithesis of rationality and researchers strove to achieve "emotion-free" organizations, and (b) emotions were believed to be harmful and disruptive to the functioning of organizations

In order to reduce destructive emotional episodes and enhance constructive emotional episodes, we need to know the story and the nature of each emotion (Morgan, 1977). By understanding the triggers of each emotion, we may be able to lessen their impact, or at least learn why some of the emotion triggers are so powerful (Ekman, Friesen, and Ellsworth 1982). In addition to this, science is still delving into the ways when each of us experiences emotions the explanation as to why some of us have more intense emotional experiences, or tend to become emotional more or less quickly. It is hard to overestimate the importance of emotions in our lives. Tomkins (1962) said that emotions are what motivate our lives. We organize our lives to maximize the experience of positive emotions and minimize the experience of negative emotions. People want to be happy, and most of us do not want to experience negative emotions like fear, sadness and disgust unless it is in the safe confines of a theatre or between the covers of a novel. We cannot live without these

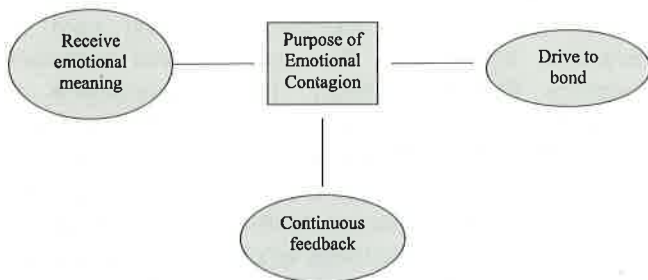
emotions; the learning here is about how to live better with them (Ekman, 2004).

Emotional management is considered as a prerequisite for performing significantly in any task. Employees bring an emotional component with them to work everyday and they draw on their emotions during times of interaction with others, while introspecting within themselves or at any time of decision-making. Thus, the field of organizational behavior would remain incomplete without considering the role of emotions in workplace behavior (Greenberg and Baron, 2003).

## Emotional Contagion and Group Processes: A Review of Literature

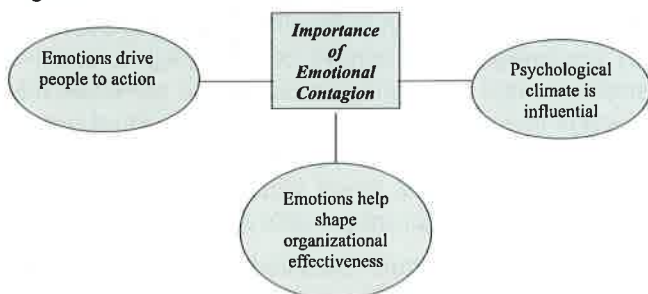
'Man is a social animal'... said Aristotle. In the present context of work psychology, individuals exist not by themselves but as members of particular groups. In today's world of synergistic team-work and group membership, it is a known fact that two minds working together achieve better results than a single individual's effort, provided that there is equal effort put in by all the team members. This fact makes the field of emotional contagion more significant to organizations emphasizing group task and accomplishment. There is an increasing emphasis on individuals being good team players who can build and maintain cordial relationships with others. Apart from each member's individual emotional state, a concept that has been increasingly emphasized in organizations recently is that of synergy. When the collective effort of the team exceeds the individual efforts put in by the team members, positive synergy is said to be present. And when individuals come together in a team, it is expected that there will be differences in their emotional states, perceptions and attitudes. In this regard, the spread of emotions occupies a central position. Today, one of the most important criteria for recruitment is the ability of candidates to have tolerance for one another and engage in adaptive interpersonal behaviors. And since human beings are supposed to be rational as well as emotional, the concept of emotions in the workplace has profound significance, more so because of the very nature of competitive business dealings. Along with these lines have been conceptualized an interesting concept known as emotional contagion that can be applied to any social setting. Since organizational success depends not on any individual but on a group as a whole, and there is enough evidence that emotions spread across people and situations (Hatfield et al., 1994), the concept of emotional contagion assumes a great deal of significance to the individuals in an organizational context. Several schools of thought have emerged to explain the diffusion of emotion between

persons. The theory of classical conditioning looks at conditioned and unconditioned aspects of emotions where an emotional state of a person is communicated to another, based on the nature of association between a particular stimulus and the consequent response. Cognitive theory tries to explain emotions from a conscious cognitive perspective, highlighting the importance of processing incoming information. Here, one imagines and simulates the emotional state of another and 'feels' with the person. This is often referred to as empathy (Morgan, 1977). Another premise is that of mimicking and harmonizing the body movements of the other, thereby matching both the movements and the resultant emotional experiences (Hatfield et al., 1994). Further, it is believed that not all individuals have the ability to influence others by their emotional state, nor are all persons equally susceptible to being emotionally infected (Domagalski, 1999). People with heightened awareness and higher emotional expressiveness are said to have greater susceptibility to others' emotions than otherwise. According to Kinicki and Kreitner (2003), emotional contagion has been thought to serve three purposes: (i) to receive emotional meaning, (ii) to enhance the emotional bonding between individuals, and (iii) to obtain continuous feedback of behavior. This is represented in Figure I.



**Figure I : Purpose of Emotional Contagion (Kinicki and Kreitner, 2003)**

As per Hatfield and her colleagues (1994), three factors reinforce the importance of investigating the nature of emotional contagion, which has been presented in Figure II.



**Figure II: Importance of Emotional Contagion (Hatfield, 1994)**

Most organizational leaders and managers have today accepted that collaborative teamwork is an effective tool for managing complex tasks in a rapidly changing environment (LaFasto and Larson, 2002). Recently, researchers have investigated the extent to which individual affect, mood, or emotion of team members combines into a collective process that influences how teams operate. Researchers, who have addressed collective affect, propose different viewpoints on how this process occurs. De Rivera (1992) defines emotional climate as the emotional relationships between members of a nation. Paez, Asun, and Gonzalez (1994) posit that an emotional climate is based on shared emotions, beliefs, and social representations, and that it represents a collective phenomenon that is not just an aggregation of individual emotions. Using Hatfield and colleagues' (Hatfield et al., 1994) definition of emotional contagion (a process of unconscious and automatic mimicry of other's nonverbal behavior), Barsade (2002) studies emotional contagion in work groups. Bartel and Saavedra (2000) define collective mood as the mood shared by group members. George (1990) defines affective tone as consistent affective reactions within the groups. Totterdell, Kellett, Teuchmann, and Briner (1998) define mood linkage as similar to interpersonal mood that operate within work teams. While individual processes are important, the onus will be to discover how emotions combined in a collective dynamic process can impact the effectiveness of teams. As organizations increasingly evolve towards a greater team orientation, it appears relevant to better understand shared processes, whether emotions or other team processes. Therefore there is a need to comprehend the mechanisms of how emotions spread across people and situations.

Barsade's (2002) comprehensive work covers several aspects of group orientation such as the mechanism by which mood transfer occurs in groups, specifically through two factors (i) emotional energy displayed and (ii) emotional valence, which could be either positive or negative. Another interesting proposition put forth by Barsade (2002) is the possibility of applying the concept of emotional contagion as an organizational tool or intervention for effective organizational processes like organizational culture, socialization, and leadership processes and concludes by saying that emotional contagion affects the feelings, cognitions and behavior of group members. For a healthier organizational climate, the concept of emotional contagion has to be harnessed and nurtured.

## Emotional Contagion and Organizational Functioning

In the light of organizational functioning, there are studies linking emotional contagion with power, leadership, and empathy. Hsee, Hatfield and Carlson's (1990) study of whether people experience others' feelings and moods was tested and findings revealed clear presence of emotional contagion in the participant sample. Halverson (2004) suggests that the concept of 'affect' is influential in its dealings with leadership, especially charismatic and transformational leadership. It was observed that leaders expressing positive affect elicit more positive follower attributions and better performance. At an individual level, Omdahl and O'Donnell (1999) have established that three emotional communication variables, namely emotional contagion, empathic concern and communicative effectiveness affected an individual's ability to cope under stress. However, a similar linkage is yet to be tested in a group context.

### Gaps in Literature

A review of the past literature thus yields the following key findings:

- emotions, moods and affect are conceptually different
- team mood is influenced by moods of individual members
- mood congruence in teams is proportionately related to emotional valence
- individual differences exist in the levels of susceptibility to others' emotions
- powerful people can be expected to be more sensitive to others' emotions
- emotional contagion influences follower affect and performance in the context of leadership
- interpersonal trust, group composition, cohesiveness, and interpersonal congruence influence the spread of emotions in groups, and thereby affects group performance, and
- mood transfer occurs across groups through emotional valence and energy levels

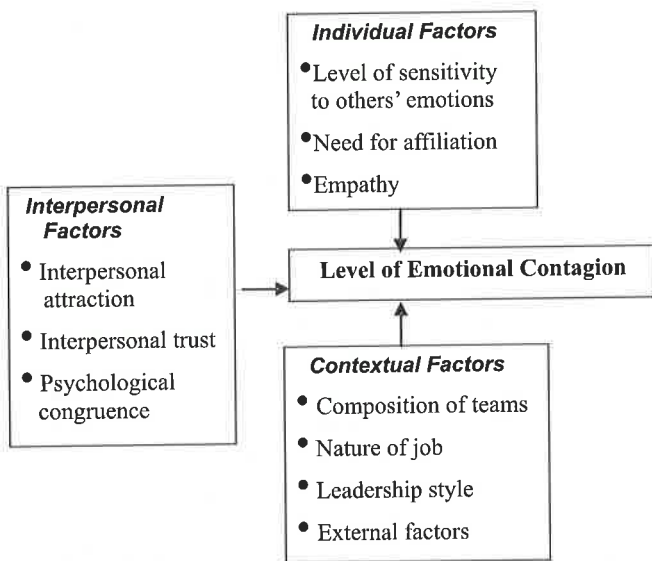
Past research has revealed that certain personal variables like susceptibility to others' emotions (Doherty, 1997), empathy (Omdahl and O'Donnell, 1999; Doherty, 1997), and the affiliation factor (Gump and Kulik, 1997; Doherty, 1997) affect the level of emotional contagion. In addition, interpersonal variables such as emotional bonding between individuals (Hess and Blairy, 2001),

the extent to which people know each other well (Barsade, 2002), and trust (Omdahl and O'Donnell, 1999) have been found to have an influence on emotional contagion. Apart from these individual and interpersonal variables, there are certain factors outside the purview of an individual that can also affect the level of emotional contagion, which are the contextual factors. Some of the external variables that have been studied include team composition and its influence on emotions (Kelly and Barsade, 2001; Keinan and Koren, 2002), nature of job characteristics in relation to emotional aspects (Fisher and Ashkanasy, 2000), leadership and its effect on emotional contagion (Halverson, 2004), and psychological climate (Isaksen and Lauer, 1998).

Until recently, work on emotional contagion and related areas have focused predominantly on a cause and effect relationship between emotional contagion and several variables such as morale, cooperativeness, conflict, emotional valence (positive or negative), emotional energy (high or low), power, leadership, stress, empathy, organizational commitment, communication, service quality and customer perceptions. Even though emotional contagion is both individual and an interpersonal phenomenon, no studies are centering on these issues jointly. Furthermore, implicit attention has been paid to collective emotion in the organizational behavior literature (Barsade, 2002). The advancement of literature in psychology relating to emotions has also allowed for a more focused and explicit examination of collective emotion. George (1989, 1990), George and Brief (1992) have established that not only do group emotions exist, but also these emotions, which they call group affective tone, can influence work outcomes. Emotional contagion can also serve as a method for infusing individuals and groups with more positive or negative moods, which in turn, can influence cognitions, behaviors, and attitudes (Lazarus, 1991; Damasio, 1994). Literature has already established that collective emotion influences individuals' emotions. This provides both academicians and practicing managers a fulcrum around which they can build a healthy organization by (a) encouraging the spread of constructive, positive emotions, and (b) helping employees to constructively manage their negative emotions. If an individual comes to work with a disruptive emotion (like anger, jealousy), in all probability, that mood would get transmitted to others, resulting in an unfavorable working climate

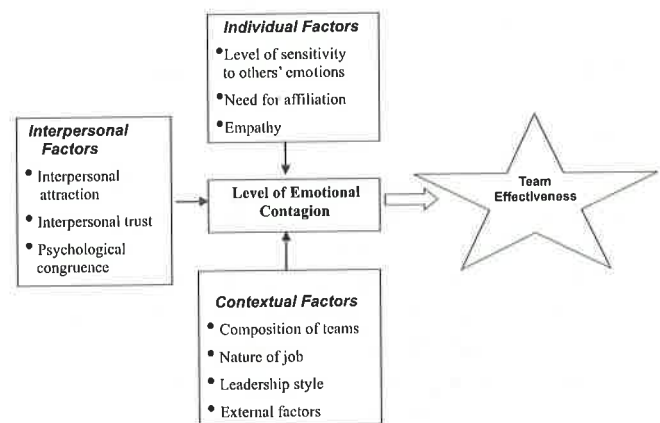
Drawing from the gaps identified from literature, and given these evidences, it is seen that several individual, interpersonal variables influence the level of emotional contagion. But a collective approach to establish a

cause- effect relationship with individual, interpersonal and some contextual factors are yet to be made. Furthermore, review of prior literature has not revealed significant efforts toward making use of emotional contagion as a tool for bringing about better team functioning through spread of constructive, positive emotions. Along these lines therefore, a conceptual model has been proposed in the following sections, deriving its source from theory, past research, and an exploratory in-depth interview conducted with certain select teams. This model can be best appreciated in the context of team-based organizations and team members working together on projects. The first stage of the conceptual model is presented in Figure III as follows.



**Figure III : First stage of the Conceptual Model**

In the present study, the extent of spread of emotions in a team is therefore proposed to be affected by a combination of individual, interpersonal, and contextual factors and that the contagion of emotions is expected to result ultimately in enhanced team effectiveness. There have been several studies, applying a variety of approaches measuring team effectiveness, some of them being Cohen and Bailey (1997), Mathieu, Gilson and Ruddy (2006), Rajendran (2005). In the model, team effectiveness includes two sets of measures- objective and subjective approaches that will be elaborated in the following sections. Therefore, incorporating the above intervention and construct in the proposed model, the final model is represented in Figure IV as given below:



**Figure IV : The Proposed Conceptual Model**

The model proposes to address two key issues. Firstly, the level of emotional contagion is expected to be affected by three factors, namely (a) Individual (b) Interpersonal, and (c) Contextual. Secondly, the level of emotional contagion present in a team is expected to affect team effectiveness.

## Variables in the Model

### Individual Factors

Individuals bring in their own sets of emotions, thoughts and perceptions into the workplace and these states cannot be perceived as independent of the team or the organization. Three variables, namely the extent to which an individual is sensitive to others' emotions, the need a team member has to relate to others in his or her team/ organization (Gump and Kulik, 1997; Doherty, 1997) and empathy (Omdahl and O'Donnell, 1999; Doherty, 1997) are seen as predictors to the level of emotional contagion present in a team.

- **Sensitivity to others' emotions:** It has been observed that certain people are more attuned to others' emotional states, and sometimes even to the slightest change in their moods, than others (Feldman, 1994). Therefore, it may be easier for some to understand, and therefore better equipped to build strong interpersonal relationships. It is thereby postulated that individuals who are more sensitive to others' emotions would influence the level of emotional contagion more than people who are not.

- **Need for affiliation:** As is believed by most, individuals cannot lead islands of existence (Barsade, 2002). We are interdependent at both physical and emotional levels. And it is only human to want to connect with others, to please others and synchronize ourselves to others (Hatfield et al., 1994). In order to establish and

maintain healthy relationships with others, we normally try to mimic and bring in congruence in relation to others moods (Hatfield et al., 1994). And the theory of need for affiliation can be thought of as one of the sources for the level of emotional contagion.

(c) Empathy: In organizations, there will be certain individuals who, by their sheer ability to listen and 'feel' with the other person, gain their confidence and trust. Therefore, these people are provided with several opportunities (as part of these informal counseling sessions) to catch the positive or (and) negative moods of others. This can act as a powerful tool for emotional contagion to occur (Omdahl and O'Donnell, 1999; Doherty, 1997).

## Interpersonal Factors

The concept of emotional contagion can be best visualized in connection with exchanges of emotional states between people. Understandably, this concept cannot exist in individualistic situations. The spread of emotions, therefore, would involve a combination of factors, which might be hypothesized to affect how much of emotional contagion is present in a particular team.

The variables thus thought to be influential to the level of emotional contagion are:

(a) Interpersonal attraction: Baron (2003) has mentioned an interesting point in their observation of how people (team members in this context) get attracted to one other. Depending on the strength of each person's affiliation motivation, they may be more or less motivated to establish a relationship (Byrne, 1961). Specifically, in this context of emotional contagion, when a group or a team of people feel comfortable and like the company of others, there may be a high probability that efforts are taken by the members to synchronize their responses in relation to the other person, thus leading to a high degree of spread of emotions.

(b) Interpersonal trust: Trust can be operationally defined in this study as the degree to which one believes that the other person will protect him/her and not cause any harm-be it physical or psychological (Newstrom and Davis, 2002). This construct may be more intense than attraction because of the security and confidence people attach to the concerned other that can act as a motivator to the person to engage in harmonizing activities like imitating the other's moods and matching it with the others.

(c) Psychological Congruence: It is often seen that people get more affected by those they are emotionally

bonded in respect to words, feelings, and actions than with those who are just acquaintances (Hess & Blairy, 2001). This term is especially customized to this study. In a particular team, there may be dyads or cliques who are more close to each other than to others. And it is likely that they are more susceptible to their friends' emotional states than to the other team members. And because of this aspect of psychological or emotional attachment to another person, there are higher chances of catching the other person's mood. On the contrary, there may be individuals who are immune to their team members' moods and are either totally unaware or unaffected by their emotions, thus not 'helping' the spread of emotions.

## Contextual Factors

Issues concerning human beings' cognitive, affective and conative aspects can give rise to a nature-nurture debate. Whether the level of emotional contagion would change due to factors outside the purview of individual members is an aspect yet to be explored. This issue is dealt with in the model by three variables that are hypothesized to affect a team's level of emotional contagion as explained below.

- Composition of teams: Several studies on team composition, its effect on emotions (Kelly and Barsade, 2001), and its link to team effectiveness have been explored (Keinan and Koren, 2002). Team members have to be chosen in a manner conducive to effective functioning of the team. Aspects such as homogeneity and heterogeneity, size of the team, degree of similarity of factors like level of intelligence, nature of personality, experience, educational qualifications, socio-economic status and the like can all influence the extent to which emotional contagion is present in a team.

- Nature of tasks: Organizations today are increasingly going in for team-based work, and hence need individuals with the aptitude or at the least the willingness to work with others. There have been few studies in the past that have linked emotions and job characteristics (Fisher and Ashkanasy, 2000).

- Leadership: The style of leadership followed in a team has been specifically addressed in respect to transformational leadership (Halverson, 2004). It provides us with opportunities to determine whether other leadership styles also have an influence on the level of emotional contagion. In addition, in-depth interviews conducted by the authors during the exploratory surveys also reinforced the importance of leadership in the context of team functioning.

- External factors: Apart from the above mentioned contextual factors, there have been other situational

aspects, namely (i) psychological climate, and (ii) physical atmosphere that are proposed to affect the extent to which there is spread of emotions in a team.

## Level of Emotional Contagion

Let us consider a situation when a team achieves a high level of emotional contagion. A valid question arises as to whether spread of even negative emotions is to be considered here. Obviously, it is harmful to a team's morale if members of a team spread disruptive emotions onto others. That brings us to the issue of the valence of emotions and whether the concerned emotion is favorable or unfavorable to the team's psychological climate. On these lines, if a team scores high on the emotional contagion scale, the results would have to be cautiously interpreted. Therefore it would benefit organizations to not only encourage constructive, positive emotional states in team members but also provide them with the means to manage negative emotions.

## Team Effectiveness

Success stories of teams that have found a place in history may not have achieved extraordinary results quantitatively (although it is an important criterion of success in most organizations) but as a team it would have shown exemplary spirit of synergy and team work. There have been several studies in the past that have linked related constructs of emotions such as emotional intelligence and team performance (Jordan and Troth, 2004). The present study proposes to establish that the level of emotional contagion would be affected through individual, interpersonal, and contextual factors which in turn would result in better team functioning in terms of certain objective factors like number of projects undertaken, the timeliness of completion of the projects etc., and few qualitative factors like degree of morale in the team (Barsade, 2002; Lindsay, Manning and Petrick, 1992), involvement to the team's tasks (Cohen, Ledford Jr. and Spreitzer, 1996), and commitment to work (Cohen, and Bailey, 1997). The intention of this study would be to show that the supposedly abstract construct such as emotions and emotional management could be crucial variables in a team's performance. Keeping in mind the theory and review of past work, we have come up with certain propositions, which are mentioned below.

## Hypotheses

Drawing from work done in the past, the following hypotheses have been framed under three categories, namely individual, interpersonal, and contextual.

### Individual Factors:

- Omdahl and O'Donnell (1999) have studied emotional contagion in relation to empathy and stress issues at the individual level. In the event of studying emotional contagion in the context of team functioning, the following hypothesis has been framed.

*P1: The level of empathy will affect level of emotional contagion more than the level of sensitivity to others' emotions and need for affiliation.*

- The construct of affiliation has been studied by Gump and Kulik (1997) in relation to emotional contagion and stress at a personal level. Extrapolating this concept to an organizational setting, the following is hypothesized.

*P2: Level of sensitivity to others' emotions will affect level of emotional contagion more than need for affiliation.*

### Interpersonal Factors :

Hess & Blairy (2001) have brought out an aspect of emotional bonding, when they studied the situations under which imitation and mimicry occurred. Along these lines, the authors propose to relate the concept of psychological congruence and emotional contagion in the following hypothesis.

*P3: Psychological congruence will affect level of emotional contagion more than interpersonal attraction and interpersonal trust.*

- The interpersonal variable of attraction has been studied in detail by Baron and Byrne (2004), although more in the social milieu. The following idea has been hypothesized to be tested in an organizational team-based setting.

*P4: Interpersonal attraction will affect emotional contagion more than interpersonal trust.*

### Contextual Factors:

- Gender differences in relation to mimicry and imitation have been studied by Helland (2001). Results relating to the evidence of mimicry in women are not conclusive, and therefore the authors have framed the following hypothesis to be tested with reference to the spread of emotions in an organizational team setting.

*P5: Women will have more susceptibility to others' emotions than men.*

- Studies by Bradner and Mark (2003) showed positive effect of team size on team participation, commitment, goal awareness, improved rapport with other members of the team, and enhanced understanding of other members' personalities and communication styles. In order to establish a link between team sizes to emotional contagion, the following hypothesis has been



framed.

*P6: A smaller sized team will evidence a higher level of emotional contagion than a larger sized team.*

- In continuation with the demographic factors of team composition, personality issues like type A and type B personalities have been studied by Keinan and Koren (2002). Results revealed that members of a team were more satisfied when teamed with same-type members than a mix of different personality types. Kelly and Barsade (2001) have focused on team composition concerning homogeneity and heterogeneity of team members. Nevertheless, a direct link between emotional contagion and homogeneity and heterogeneity of team members has not been established. The following hypothesis attempts to establish a relationship.

*P7: A homogenous team will have a higher level of emotional contagion than a heterogeneous team.*

- The question of whether job characteristics are related to affect has been studied by Saavedra and Kwun (2000). Results revealed that perceptions of select job characteristics explained the variance in pleasant and unpleasant affect. Perceiving complexity of job tasks as an important aspect of job characteristics, a direct link to emotional contagion has been attempted by the authors in their model, with the following hypothesis.

*P8: The extent of complexities in a job task will affect the level of emotional contagion.*

- Halverson (2004) has focused predominantly on transformational and transactional leadership styles and its relation to emotional contagion. Whether the other styles of leadership affect the level of emotional contagion is a question that is expected to be answered by the following hypothesis.

*P9: The style of leadership will affect the level of emotional contagion.*

- Tsai's (2001) study provides the basis for linking nature of climate in an organization to emotional valence. They have established that there is a positive relationship between psychological climate of friendliness and employees' displayed positive emotions. To test whether there exists any relationship between the psychological climate of a team and the level of spread of emotions can thus be established using the following hypothesis.

*P10: A favorable psychological climate will affect the level of emotional contagion more than an unfavorable climate. (Wei-Chi, 2001)*

In addition to the individual, interpersonal, and contextual factors, few ideas have been framed to be

tested, keeping in mind certain findings from past literature. They are presented below:

- Interpersonal factors such as relationship satisfaction and commitment have been studied by Abdul-Muhmin (2005), who has focused on these in the context of industrial markets. The question of whether certain other interpersonal factors such as interpersonal attraction, psychological congruence can affect the level of emotional contagion is expected to be answered by framing in the following hypothesis.

*P11: Interpersonal factors will affect level of emotional contagion more than individual and contextual factors.*

- Miao-Ling Fang (2006) and Chiaburu and Tekleab (2005) have studied a set of individual factors such as training motivation and employee performance, goal orientation and their effect on effectiveness. Deriving the idea from this, the following hypothesis has been framed.

*P12: Individual factors will affect level of emotional contagion more than contextual factors.*

## The Road Ahead

The present paper has attempted to introduce the conceptual model developed by the authors based on the review of literature in the area of emotional contagion. Several studies have been undertaken abroad in the area of psychology of stress, group processes, organizational functioning, and the like. The nature of mood transfer across organizational teams has been examined and paves way for future examination in this area. Individual attributes such as type of personality, level of susceptibility to emotions, need for affiliation and power, have not been studied in the past, specifically in relation to emotional contagion, though extensively in other related areas. This presents opportunities for further research in these topics. In addition to the personal variables that may affect the extent of spread of emotions, interpersonal factors such as the nature of relationship and degree of trust between individuals also provide scope for further investigation. Since emotional contagion is an interpersonal phenomenon (Hatfield et. al, 1994), there is need for more research in this aspect.

## Managerial Implications

On an institution - wide basis, culture and socialization are topics that lend themselves to exploration. In the field of customer relations, the mechanism of how employees of an organization influence customer affect via their emotional expressions have been studied in detail. In addition to this, how customers perceive service providers with regard to the nature of service

they received from the employees have also been dealt with. Important organizational issues like leadership and power have been linked to emotional contagion. Nevertheless, a large gap exists in studying emotional contagion in a collective manner in order to understand the factors contributing to the spread of emotions. Each individual's emotions, expressed in a group, can spread that particular emotion to the others too. Not stopping with just certain areas of social networking, this would gradually be expected to permeate all aspects of social functioning soon. It is expected that organizations would recognize the emotions that individual members of teams bring to and spread in the workplace. Institutions would need to ensure that only positive, constructive emotions spread across team members, thus resulting in effective performance. People do not live in emotional islands; rather, group members experience moods at work, these moods ripple out and, in the process, influence not only other group members' emotions but their group dynamics and individual cognitions, attitudes, and behaviors as well. Thus, emotional contagion, through its direct and indirect influence on employees' and work teams' emotions, judgments, and behaviors, can lead to subtle but important ripple effects in groups and organizations (Barsade, 2002). Organizations would need to be aware and proactive in managing this phenomenon.

## References

- Abdul-Muhmin, A.G** (2005). "Instrumental and Interpersonal Determinants of Relationship Satisfaction and Commitment in Industrial Markets", *Journal of Business Research*, 58 (5), 619-628.
- Baron, R.A** (2003). *Psychology*, New Delhi: Prentice-Hall.
- Baron, R and Byrne, D** (2004). *Social Psychology*, New Delhi: Pearson Education.
- Barsade, G** (2002). "The Ripple Effect: Emotional Contagion and its Influence on Group Behavior", *Administrative Science Quarterly*, 47 (4), 644-675.
- Bartel, C. A and Saavedra, R** (2000). "The Collective Construction of Work Group Moods", *Administrative Science Quarterly*, 45 (2), 197-231.
- Bradner, E, Mark, G and Hertel, T.D** (2003). "Effects of Team Size on Participation, Awareness, and Technology Choice in Geographically Distributed Teams", Thirty Sixth Annual Hawaii International Conference on System Sciences (HICSS'03) - Track 8, 271a.
- Byrne, D** (1961). "Interpersonal Attraction and Attitude Similarity", *Journal of Abnormal and Social Psychology*, 62, 713-715.
- Chiaburu, D.S and Tekleab, A.G** (2005). "Individual and Contextual Influences on Multiple Dimensions of Training Effectiveness", *Journal of European Industrial Training*, 29 (8), 604-626.
- Cohen, S.G and Bailey, D.E** (1997). "What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite", *Journal of Management*, 23, 239-290.
- Cohen, S.G, Ledford, G.E Jr., and Spreitzer, G.M** (1996). "A Predictive Model of Self-Managing Work Team Effectiveness", *Human Relations*, 49, 643-676.
- Damasio, A. R** (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*, New York: Avon Books.
- De Rivera, J** (1992). "Emotional Climate: Social Structure and Emotional Dynamics", *International Review of Studies of Emotion*, 2, 197-218.
- Doherty, R.W** (1997). "The Emotional Contagion Scale: A Measure of Individual Differences", *Journal of Nonverbal Behavior*, 21 (2), 131-154.
- Domagalski, T. A** (1999). "Review Article - Emotion in Organizations: Main Currents", *Human Relations*, 52 (6), 833-852.
- Ekman, P** (2004). *Emotions Revealed: Understanding Faces and Feelings*, London: Phoenix.
- Ekman, P, Friesen, W. V and Ellsworth, P** (1982). *Research Foundations: Emotion in the Human Face*, Cambridge: Cambridge University Press.
- Feldman, R. S** (1994). *Essentials of Understanding Psychology*, New Delhi: McGraw Hill.
- Fineman, S** (1996). "Emotion and Organizing", in Clegg, S, Hardy, C, and Nord, W (Ed.), *Handbook of Organization Studies*, London: Sage Publishers.
- Fisher, C.D and Ashkanasy, N. M** (2000). "The Emerging Role of Emotions in Work Life: An Introduction", *Journal of Organizational Behavior*, 21, 123-129.
- George, J. M** (1989). "Mood and Absence", *Journal of Applied Psychology*, 74, 317-324.
- George, J. M** (1990). "Personality, Affect, and Behavior in Groups", *Journal of Applied Psychology*, 75, 107-116.
- George, J. M and Brief, A. P** (1992). "Feeling Good-Doing Good: A Conceptual Analysis of the Mood at Work-Organizational Spontaneity Relationship", *Psychological Bulletin*, 112, 310-329.
- Greenberg, J, and Baron, R. A** (2003). *Behavior in Organizations*, New Delhi: Prentice Hall.
- Gump, B.B, and Kulik, J. A** (1997). "Stress, Affiliation and Emotional Contagion", *Journal of Personality and Social Psychology*, 72, 305-319.

- Halverson, S. K** (2004). "Emotional Contagion in Leader-Follower Interactions", Unpublished Dissertation, Department of Psychology and Management, Rice University.
- Hatfield, E, Cacioppo, J.T and Rapson, R.L** (1994). *Emotional Contagion-Studies in Emotion and Social Interaction*. Cambridge: Cambridge University Press.
- Helland, S** (2001). "Gender Differences in Facial Imitation", Unpublished dissertation, University of Lund, Sweden.
- Hess, U, and Blairy, S** (2001). "Facial Mimicry and Emotional Contagion to Dynamic Emotional Facial Expressions and their Influence on Decoding Accuracy", *International Journal of Psychophysiology*, 40, 129-141.
- Hsee, K, Hatfield, E, Carlson, G and Chemtob, C** (1990). "The Effect of Power on Susceptibility to Emotional Contagion", *Cognition and Emotion*, 4 (4), 327-340.
- Isaksen, S.G, and Lauer, K. J** (1998). "The Relationship between Cognitive Style and Individual Psychological Climate: Reflections on a Previous Study", *Creativity Research Unit - Monograph No. 306*, The Creative Problem Solving Group, Inc. Buffalo, New York.
- Jordan, P.J, and Troth, A.C** (2004). "Managing Emotions during Team Problem Solving: Emotional Intelligence and Conflict Resolution", *Human Performance*, 17, 195-218.
- Keinan, G, and Koren, M** (2002). "Teaming up Type As and Bs: The Effects of Group Composition on Performance and Satisfaction", *Applied Psychology*, 51, 425.
- Kelly, J. R, and Barsade, S. G** (2001). "Mood and Emotions in Small Groups and Work Teams", *Organizational Behavior and Human Decision Processes*, 86, 99-130.
- Kinicki, A, and Kreitner, R** (2003). *Organizational Behavior-Concepts, Skills and Practices*, New Delhi : McGraw Hill Companies.
- LaFasto, F, and Larson, C** (2002). *When Teams Work Best*, New Delhi: Sage Publications.
- Lazarus, R. S** (1991). *Emotion and Adaptation*. New York: Oxford University Press.
- Lindsay, W.M, Manning, G.E, and Petrick, J. A** (1992). "Work Morale in the 1990s", *SAM Advanced Management Journal*, 57.
- Mathieu, J.E, Gilson, L.L, and Ruddy, T. M** (2006). "Empowerment and Team Effectiveness: An Empirical Test of an Integrated Model", *Journal of Applied Psychology*, 91 (1), 97-108.
- Miao-Ling, F** (2006). "Evaluating Ethical Decision Making of Individual Employees in Organizations - An Integration Framework", *Journal of American Academy of Business*, 8 (2).
- Morgan, C.T** (1977). *A Brief Introduction to Psychology*, New Delhi: McGraw Hill.
- Newstrom, J.W, and Davis, K** (2002). *Organizational Behavior-Human Behavior at Work*, New Delhi: Tata McGraw Hill.
- Omdahl, B. L, and O'Donnell, C** (1999). "Emotional Contagion, Empathic Concern and Communicative Responsiveness as Variables Affecting Nurses' Stress and Occupational Commitment", *Journal of Advanced Nursing*, 29, 1351-1359.
- Paez, D, Asun, D, and Gonzalez, J. L** (1994). "Emotional Climate, Mood and Collective Behavior: Chile 1973-1990", in Riquelme, H. (Ed.), *Era in twilight*, Foundation for children/Horizonte Ed, Hamburg/Bilbao, 141-182.
- Rajendran, M** (2005). "Analysis of Team Effectiveness in Software Development Teams Working on Hardware and Software Environments Using Belbin Self-perception Inventory", *Journal of Management Development*, 24 (8), 738-753.
- Robbins, S** (2004). *Essentials of Organizational Behavior*, New Jersey: Prentice-Hall.
- Saavedra, R, and Kwun, S. K** (2000). "Affective States in Job Characteristics Theory", *Journal of Organizational Behavior*, 21, 131.
- Solomon, V** (2004). *The Extraordinary Relationship between the Great Composer and the Brutal Dictator*, New York: Alfred A. Knopf.
- Tomkins, S. S** (1962). *Affect Imagery Consciousness*, New York: Springer.
- Totterdell, P, Kellett, S, Teuchmann, K, and Briner, R. B** (1998). "Evidence of Mood Linkage in Work Groups", *Journal of Personality and Social Psychology*, 74 (6), 1504-1515.
- Wei-Chi, T** (2001). "Determinants and Consequences of Employee Displayed Positive Emotions", *Journal of Management*, 27, 497-512.

# Quality of Management Education in India: Development of a Conceptual Framework

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## Abstract

*The growth of B-schools in India has been phenomenal in the past decade. Unprecedented growth (1400 B-schools) has raised concerns about the quality of management education imparted in Indian B-schools. Various challenges faced are, dearth of quality faculty, infrastructure, funding, research and development, quality of students, global competition, admissions process etc. Measuring quality of an educational service is complex because of the various stakeholders involved- namely, students, faculty, corporates, parents, society etc. Quality is extensively researched in the manufacturing industry and some models of quality in higher education have been proposed but a specific measure for quality is not available for B-schools. We propose a conceptual framework for measuring quality of management education in India.*

**Key Words :** Pedagogy, TQM, Stakeholder, Industry Interface, Top Management Philosophy

## Introduction

The Indian B-school scenario has witnessed numerous changes in the recent past. 1. 91 lakh students appeared for the CAT examination, conducted by Indian Institutes of Management (IIMs) in November 2006. 55 institutions offered post graduate programs in management in 1989-90, today; industry estimates suggest that there are 1400 B-schools in India. Gupta, Gollakota and Sreekumar (2003) have attributed three reasons for studying quality

of B-school education in India- First, outside of the U. S. A, India now trains largest number of MBAs with about 75,000 degrees annually. Second, the Indian government has liberalized the business education market over the 1990s, resulting in a rapid growth of business schools offering programs at both undergraduate as well as graduate levels. Third, Indian business schools have sought to replicate the US-based organizational, pedagogical, curricula, industry-

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interface, and academic research models, but are struggling to introduce several adaptations because of the differences in the work culture.

Various scholars (Leavitt, 1989; Pfeffer and Fong, 2002; Pfeffer and Fong, 2004; Ghoshal, 2005; O Toole, 2005) have highlighted different, often conflicting, reasons for postgraduate management education in the US becoming rudderless. An underlying idea, emerging from these scholars is that, pressures from various sources like media, stakeholders like students, have forced management institutions to adopt practices that may make sense in the short run but are likely to have serious negative effects in the long run.

The B-school scenario in India is very diverse and there are different types of B-schools in the country. The role models are the autonomous Postgraduate programs offered by the IIMs. There are reputed autonomous programs offered by IMT Ghaziabad, FMS Delhi, Symbiosis Pune etc. Various Indian universities offer MBA courses, where the entire course framework is decided by the respective university offering the course; private colleges affiliated to universities also offer MBA courses. There are also a few private universities like-ICFAI, Hyderabad, deemed universities like Madurai Kamaraj etc offering MBA Programs. The degree of autonomy, course content, curriculum design, role of faculty, grading, evaluation pattern, tuition fees charged, admissions process etc vary widely among the different types of B-schools.

### Quality in B-School Education

Quality is an elusive and indistinct construct (Parasuraman, Zeithaml and Berry, 1985).

Quality is a complex and difficult construct to measure in service sectors. The ISO (1986) definition "The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". The words 'characteristics' and 'satisfy needs' in the definition imply two important points, which are also in line with TQM principles: (a) quality is what satisfies customer's needs (b) quality is a set of characteristics that can be measured qualitatively or quantitatively.

Quality has been defined in business as- conformance to specifications (Scrabec, 2000). Garvin (1984) has given attributes of quality in product/service models (TQM) in business, they are, performance, features, reliability, conformance, durability, serviceability and perceived quality.

Spanbauer (1995) defines TQM in education, as "TQM is a management philosophy which puts systems and processes in place to meet and exceed the expectations

of customers. It is a relentless quest for continuous improvement through documentation and the use of tools in a problem-solving atmosphere that features team action and good leadership practices"

In application to higher education, both market-orientation and measurement pose arguments. While some authors believe that, because of the complex, dynamic and intangible outcomes of education, an objective measurement of quality is very difficult or impossible (Tofte, 1993; Sayed, 1993), many view it as essential if quality improvement is to be monitored (Seymour, 1992; Morris & Haigh, 1993; Burkhalter, 1993). The terms 'customer' and 'market' have also met with resistance from some educationalists, who argue that they are applicable only to commercial environments (Sallis, 1993; Corts, 1992).

### Critique of Adopting TQM in Academics

Spanbauer (1995) raises a very pertinent question, to whom the education is intended to benefit? Students are primary customers but the customer relationship is somewhat different from a customer in a restaurant or bank.

In both the industrial and general service sectors, the customers are well defined whereas in a university, as Madu and Kuei (1993) suggest, the definition of customers is quite broad. While students are accepted as the primary customers by many authors (Sallis, 1993; Corts, 1992; Hittman, 1993), other potential customers like parents, employers, government and society, should also be considered.

Another complexity arises from the dynamic and interactive nature of higher education is; "While students are prime customers of colleges and universities, they are also their raw material, suppliers, co-processors, and products" (Harris, 1992). For this, a clarification is necessary for specifying customers and prioritizing or reconciling their different requirements based on a university mission (Taylor & Hill, 1993; Sallis, 1993).

Extant literature review shows that treating students as customers may compromise on course content and rigors of learning. Treating students as products, characterizes students as too passive and accepting. Treating students as partners would be assuming that students are self-directed and are willing to share the responsibility of learning, along with faculty on the same level. A student may be viewed as a stakeholder ; a stakeholder who has vested interest in acquiring higher education. Student's needs will be given utmost priority by faculty in all aspects of curriculum design and delivery.

Faculty will be the final decision maker, by virtue of acquired knowledge and meaningful real world experience (Shahaida, Rajashekar and Nargundkar, 2006).

While considering Quality of B-school education, it is necessary to incorporate the expectations of many stakeholders, students, faculty, government, employers, board of directors and society etc. The TQM philosophy centers on continuously exceeding customers' expectations. In higher education, specifically in B-schools, which have many stakeholders to satisfy, applying TQM like processes (like in manufacturing industry) seems impractical. "The number of institutions that have actually implemented TQM successfully in any meaningful way is comparatively small, and the gains generated in these institutions often appear to be overshadowed by the time and effort" (Koch and Fisher, 1998)

## The Purpose of Education

The government, students and industry consider different attributes as the purpose of education. Montmore and Stone (1990) opine that industry's view about purpose of education is to produce graduates who can communicate, cooperate, solve problems and work in a team effectively. The student views purpose of education as a means to improve earnings and further career prospects. The government's perspective about purpose of education may be to enhance student achievement in the aggregate. Wicks (1992) proposes other purposes of education such as, acquisition of knowledge, building a value system in the individual, against which to make personal, social and moral judgments etc. Faculty may perceive imparting subject knowledge and honing the conceptual skills of the students as the purpose of education. The board of directors' viewpoint of purpose of education could be three fold : to instill a sense of discipline, to impart effective teaching and to provide good infrastructure etc. The opinions of various stakeholders are diverse and also highly subjective. Different stakeholders of a B-school also perceive quality of education differently. Montmore and Stone (1990) suggest that there is no uni-dimensional measure of quality and it is possible to discuss the quality of different components of education.

Adam Smith referred to quality of teaching as quality of education. Smith's notion of educational quality adheres to consumer's perception of quality, J. S. Mill contested this opinion by pointing out that consumers of educational service are often unaware about the quality of the service they are buying.

Bose (2006) raises another major concern with respect to the quality of education provided by 'for-profit' and 'non-profit' providers of education. The resources available at an institute can also be a measure for quality of education. Whether the institute is government funded or private funded has an impact on both, the quality of education and the tuition fees charged. For government-funded institutions, the pressure to increase number of students and satisfy the preferences of the median voter is less intense (Bose, 2006). Students' achievements during the course (ranks, awards) and after the course (placements, professional success) may also be considered as another indicator of quality of education rendered in the institute.

Epple and Romano (1998) and Basu (1989), propose that a better peer quality implies superior quality as assured by 'students' achievements. Profit maximizing behavior determines quality of a school as assessed by its peer quality (Basu, 1989). A profit maximizing school chooses the quality of students, to maximize profit. Consumers should be willing to pay a higher price if a school is offering better quality. The school would like to fill-in as many seats as possible so long as the number is less than or equal to the 'size' of the school, or governed by government rules. A profit seeking school would like to fill in all seats with students who are both rich and clever. If the number falls short, then the rest of the seats can be filled by (a) some clever- poor students or, (b) some mediocre rich students or, (c) some of both (Bose, 2006). The presence of clever-rich and clever- poor students will enhance quality, there by raising the willingness to pay by all students and hence the profit. The price that the mediocre rich are willing to pay will compensate for the lower price that the clever yet poor students pay. Rothschild and White (1995) state that this kind of price discrimination internalizes the externality that clever-poor and mediocre- rich students create within the school. Assuming that public schools admit all students, hence government is not concerned about the quality of public schools, as long as they provide education, Epple and Romano (1998) assert that profit maximizing schools will be of better quality.

However, this assumption is not true in the B-school scenario in India. The most sought after MBA program, regarded as having the best quality, is from the IIMs, which are government funded. However, with the spurt in the number of private B-schools, there is an increasing difference in the quality of business education provided by different providers. Gupta, Gollakota and Sreekumar (2003) cite various reasons for the existence of wide differences in quality such as there is no uniform entrance test for admission to an MBA program, CAT,

MAT, XMAT, etc. The Government of India tried to introduce a common admission test for the B-schools but the Supreme Court of India rejected that attempt. The Court ruled, "Private educational institutions have a personality of their own, and in order to maintain their atmosphere and traditions, it is necessary that they have the right to choose and select the students who can be admitted" (Goswami, 2003). The entrance tests are in English, which handicaps, an otherwise brilliant student from a rural background. India does not have a body like AACSB (The American Assembly of Collegiate Schools of Business) in USA. The apex body, AICTE (All India Council for Technical Education) is responsible for defining the basic framework for quality of the business-education and approving entry and expansion of all institutions, there are in practice, many problems that undermine its effectiveness. (Gupta, Gollakota and Sreekumar, 2003)

There are many areas like, infrastructure, teacher-student ratio, number of Ph. D faculty in an institute, etc which feature only in plans, to get AICTE approval. It is reported that many business schools got AICTE approval on the basis of attractive project plans, which never got implemented, so that some of them operated "virtually from sheds and garages" (Raghunath, 1998). AICTE has launched NBA (National Board of Accreditation) using a benchmarking system with regard to factors such as physical infrastructure, quality of inputs, and faculty training. However, falling standards of schools approved by AICTE dropped its credibility (Gupta, Gollakota and Sreekumar, 2003). In 1998, All India Management Association (AIMA) used ISO 9000 to develop a quality assurance system, known as QBS 1000. QBS 1000 program determined and assessed B-school's quality and processes and certified their capacity across crucial and desirable parameters. The QBS 1000 system was intended to evaluate quality at 100-plus institutions associated with AIMA (Raghunath, 1998). Presently, there is no specific, universally accepted accreditation. India needs a professional body that provides accreditation to management institutes. The management schools could be classified under four distinct classes: Research based Schools, Specialized Schools, General MBA Schools and Practice Oriented and Industry linked. (Bowonder and Rao, 2005)

Many education professionals believe that TQM directed at academics is not the answer. They note that higher education is a very humanistic area where autonomy and academic freedom are highly valued, where specialized faculties avidly protect their turf (Satterlee, 1996). The meaning of quality is personal, strongly influenced by previous experiences, Students, faculty, university,

society, top management, and corporates could all have different perceptions and expectations about B-school quality. Quality has to be researched from the perspectives of all the different stakeholders.

## Literature Review

Quality is difficult to implement and capture in a meaningful sense. Given the forces that place intense, sometimes conflicting pressures on the providers of MBA programs, it becomes incumbent upon us to reflect on what quality means in today's world. (Rapert et al, 2004).

Studies conducted in U. S higher education institutions have shown mixed response about the effectiveness of adopting TQM (Total Quality Management)-type quality processes. A study of 32 higher education institutions found that administrators believed that their TQM programs were making a great contribution to organizational effectiveness, and benefits were greater than costs (Elmutti, 1999). Out of the 32 higher education institutions, 12 institutions had given up on TQM programs after a 3years trial, citing reasons such as, detrimental effects on creativity, threats of standardization and uniformity and lack of appropriate rewards. Very few institutions have meaningfully made a success of in implementing TQM programs (Koch and Fischer, 1998).

Despite various issues involved in the implementation of TQM type programs, many higher education institutes are using it to improve academic administration, teaching and learning. The AACSB is supporting the use of continuous process improvement programs to improve teaching and learning (Vazzana, Elfrink and Bachmann, 2001). In 2001, Vazzana, Elfrink and Bachmann, carried out 2 surveys in 400 colleges and universities throughout U.S.A taken three years apart using the following typology- TQM in the curriculum, TQM in nonacademic functions, TQM in academic administration and TQM in the core learning process. The major findings were the percentage of schools that included TQM in the curriculum increased from 78% in 1995 to 86% in 1998. 38% in 1995 to 50% in 1998 was the increase in the use of TQM in administrative and academic activities. The use of TQM in core learning processes is increased from 52% in 1995 to 57% in 1998.

The major problems facing universities today relate to curriculum, experiential learning, funding, the allocation of faculty time, teaching versus research, faculty status and tenure, student access, distance learning and the use of technology, the pricing of higher education, restraining cost increases, relationships with business and government, governance and leadership

arrangements, faculty compensation and intercollegiate athletics (Koch and Fisher, 1998). Koch and Fisher (1998) state that TQM has little to contribute to the solution of fundamental questions of value, direction and resource allocation. TQM can be of assistance in improving administrative service areas (registration, mail service, maintenance, billing, etc.), and that it has been used to enhance certain quasi-academic areas such as library services.

Widrick, Mergen and Grant (2002) have measured three quality dimensions (quality of design, quality of conformance and quality of performance) in higher education. They have developed a set of measurement parameters used in evaluating the quality

of research and curriculum development and the tools/techniques necessary for evaluating them.

Scrabec (2000) has proposed attributes for performance measures of quality education, they are, standardized national tests, certification of educational institutions, student satisfaction measures, industry feedback, international text and quantitative measures, national indices such as patents, government of independent audits to set standards and student evaluations.

Vazzana, Elfrink and Bachmann (2001) have suggested the following framework of TQM use in educational institutions- TQM in the curriculum, TQM in nonacademic functions, such as administration, human resources management, support functions, maintenance etc. TQM in academic administration and TQM in the core learning process, treating classes as micro organizations proposed by Gilbert et al (1993), core competencies such as interpersonal skills, communication skills, decision making skills and the criteria used to measure them are identified (Mullin and Wilson, 1995)

## Determinants of Quality of B-School Education in India

Extant literature review has revealed that applying industry-type, quality programs in education may be very difficult to implement and measure. TQM in academics has been found practical for processes like, admissions, quality of teaching-learning, administrative practices etc. There is a need for a holistic perspective for measuring quality of management education, which considers all aspects- academic, nonacademic, admissions process, placements, perspectives of different stakeholders, government, external bodies, etc.

Laha (2002) has identified the following determinants of management education

- Academic environment- library facilities, journals

available, computer facilities etc.

- Intellectual capital- number of faculty, books and journal articles published, seminars and conferences attended etc
- Physical infrastructure- classrooms, laboratories, campus, hostels etc
- Industry interface- number of MDPs (Management Development Programs), in-company programs, consultancy projects, industry professionals visiting campus etc
- Placements- percentage of students recruited through campus selection, average salary offered etc
- Stakeholder satisfaction and perception- Faculty, student and recruiter's perception and satisfaction
- Innovation- Courses modified, updated, new innovative courses launched etc

Gupta, Gollakota and Sreekumar, 2003 have proposed five yardsticks to measure quality of business education in India they are, (1) Quality of students including the admission process, (2) Pedagogy, (3) Placement (4) Faculty development and (5) Infrastructure.

Rao (2006) has proposed a model for achieving continuous quality enhancement and global standards for B-schools. The parameters of the proposed model are, (1) Academic curriculum- benchmarking, responsiveness and orientation to shifting corporate needs, (2) Internal branding (3) Leadership and institutional governance, (4) Forging international alliances and alignments (5) Global admissions and internships (6) Benchmarking for global accreditation.

## Conceptual Framework of Quality for Management Education in India

The suggested conceptual framework (Fig-01) for measuring quality in a B-school has three constructs, quality in inputs, quality in processes and quality in outputs /outcomes. This framework represents 15 criteria; each one of the 15 criteria will lead to continual and sustained improvement towards building the quality of a B-school. The framework covers the 15 criteria and their relationships in an illustrative graphical perspective. Rather than just elucidating determinants of quality of B-school education, an attempt has been made to capture the inherent complexity of B-school education, and presents a meaningful, measurable structure that can be statistically tested for significance.

The 15 criteria have been drawn from literature review on quality in education (including higher education and MBA education), in-depth interviews with academicians,



students, faculty of B-schools and industry representatives.

Inputs are the first dimension, consisting of two levels. Level 1 criteria are basic in nature, affecting the formation and continued existence of the B-school. Level 1 has three criteria, top management philosophy, competitive structure and external regulation.

## Inputs Level 1

**1.0 Top Management Philosophy-** The vision and goals of the top management of B-schools will have a bearing on the entire process of imparting education. Effective leadership is essential for the success of any organization, including a B-school. In the case of Government funded institutions like IIMs, it could be the Director and Board of directors of the B-schools, In the case of universities; policy-making officials like Vice chancellor, heads of departments and other committees are involved. In private B-schools, the chairperson, board of directors, promoters are involved. Top management philosophy guides all practices in the B-school, degree of autonomy given to administrators and faculty, curriculum design, etc.

**1.1 Competitive Structure -** The global management education market is estimated to be US \$22 billion (Friga, Bettis and Sullivan 2003). It is growing at about 10-12 percent per annum. US is the largest market. International competition in management education is very much a reality today. Harvard business school, Stanford and Yale University have set up research centers in India. Even India's elite institutions - the IITs and IIMs - will find it increasingly difficult to attract and retain excellent faculty members in the face of attractive offers from foreign universities, research institutes and multi-national corporations. So, there is a substantial risk that Indian universities and their students could end up as serious losers in the global higher education "game" (Arnold, 2001). The other side of the coin is the increasing number of students from India. About 2½ Indian graduates write MBA tests every year, but almost 2/3rd of them do not get any seats because of the paucity of seats. The number of Indian students studying in the U. S. grew by more than 46 percent from 1990 to 1999 (Arnold, 2001). In this highly competitive era, Indian B-schools have to face global and Indian competition (1400 B-schools) to retain both good faculty and match the standards of international B-schools.

**1.2 External Regulation -** AICTE is the formal body that gives recognition to management institutions except those institutions under universities. In India, recognition is given to institutions as a whole and not for specific

courses. In other countries, accreditation is used most as a quality tool and is done for courses independently. Again, the recognition in India is based on facilities, faculty and infrastructure. Research and industry interaction do not find a place in recognition. The recognition is not sufficient to ensure that the quality norms are met with. India needs a professional body that provides accreditation to management institutes (Bowender and Rao, 2005).

AICTE requires at least 1,200 contact hours for the MBA program, in addition to 6-8 weeks of summer internship and field projects, divided over 2 years for the full-time format, and 3 years for the part-time and distance learning formats. The applicants are admitted based on a national or regional level written test to assess their aptitude and preparedness for learning of management, performance in group discussion and interview, behavioral and personality trait tests for professional aptitudes, and prior academic record and work experience. AICTE case studies, group and individual exercises, class assignments, project work and presentations, role-play, and management games. Each core faculty is expected to teach up to six courses a year, with an additional four course load equivalent time devoted to research, executive development programs, academic administration, and consulting. Recommended faculty-student ratio is 1:60. Each institution is required to have a minimum of 7 core full-time faculty, who then serve as anchors for the part-time, visiting or guest faculty equivalent to at least three additional full time faculty. There are other requirements such as library facilities, computer facilities, instructional technology and aids. Academicians have criticized these requirements. The parameters and their attendant weightages seem to "have frozen in time" and become anachronistic. They do not reflect the compulsions of the contemporary times in terms of needs, challenges, aspirations and realities (Rao, 2006).

There are many instances where, institutions have not adhered to the norms prescribed by AICTE; some private institutions perceive that growth is hindered because of certain norms. The central government and various state governments have recognized the entrepreneurial efforts of the private B-schools, and have begun granting deemed or private university status to several private B-schools that have excellent brand names and resource infrastructure. These forces have created a very positive climate for the growth of B-schools, albeit heightening the challenges of ensuring a consistent quality of education at the national level (Gupta and Gollakota, 2004)

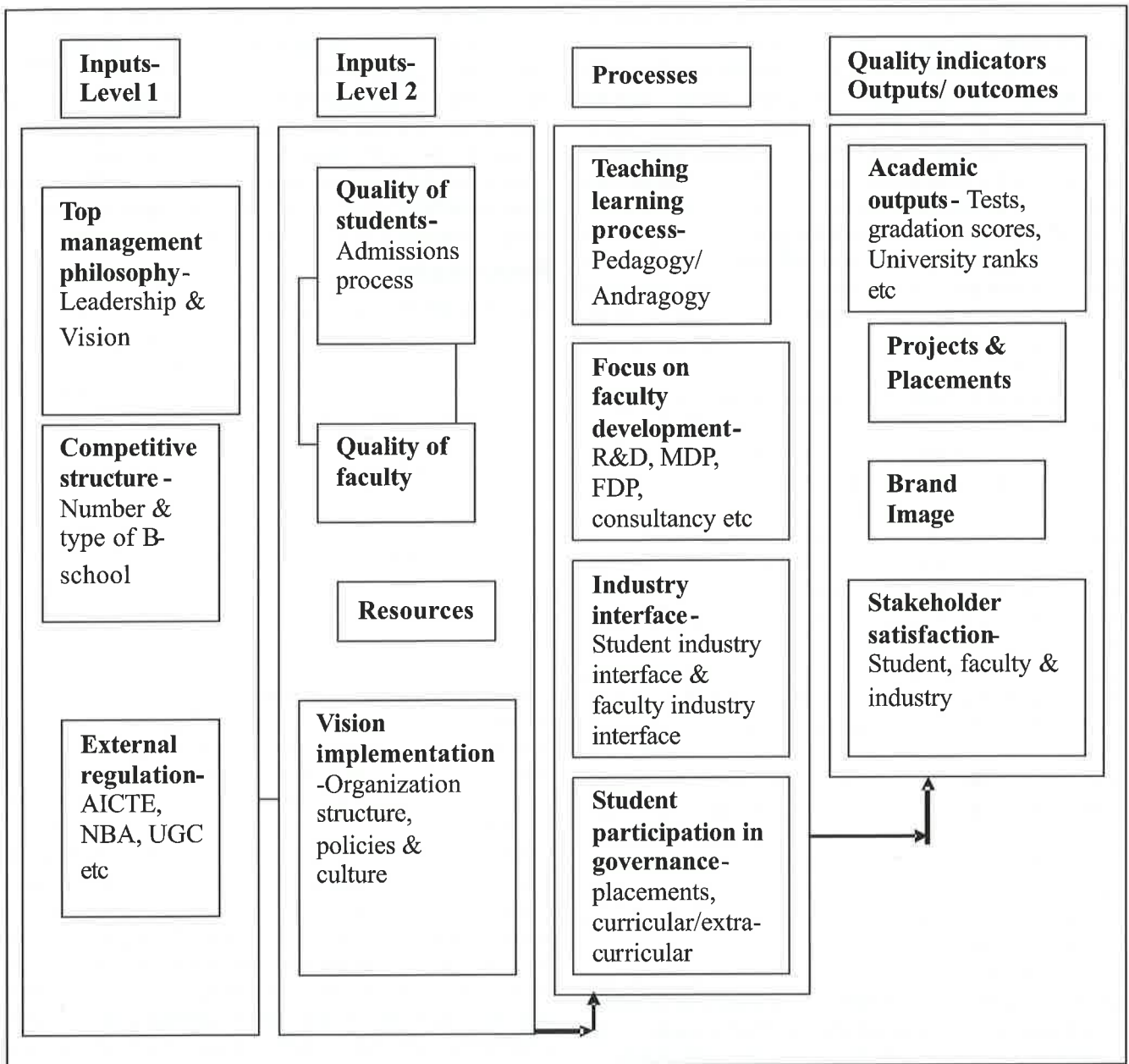


Figure I : Conceptual Framework of Quality for Management Education in India

Inputs Level 2 has four criteria, quality of students, quality of faculty, resources and vision implementation.

**Inputs Level 2**

**2.0 Quality of students** - Different institutions enroll students based on different entrance tests. This poses a problem for evaluating quality of students. The IIMs have been ranked at the top in several surveys in the Asia-Pacific region. The student quality is excellent as there are 1400 seats only, across all the IIMs. Apart from the IIMs, there are 15 other institutions, which are ranked in most surveys among the top 20, which retain high student quality such as, MDI, Gurgaon, ISB, Hyderabad, IMT,

Ghaziabad etc. The same does not hold true for all the B-schools. The demand for B-school degrees far outweighs the availability, and private players cash in on this demand. As a result, student quality across a cross section of B-schools fluctuates from excellent to very poor.

The admissions process uses different admission tests and procedures by different business schools, unlike the US where GMAT is used as a standard test score. The Government of India tried to introduce a common admission test for the b-schools but the Supreme Court of India rejected that attempt. The merits of a common entrance test are debatable and proponents will feel

there is a need to develop some measures of equivalencies among scores of different admission tests, so that the quality of the inputs can be isolated from the quality of the academic process while making comparisons among different b-schools. While some tests (CAT), and selection processes (group discussion and personal interview) are very tough, some others are easy. Most of the MBA students in India are relatively young, and they enter the graduate program straight after their undergraduate education. Although many of the Indian institutions give some extra weight for work experience, a majority of students are without work experience. The situation same in both the top ranked and second tier schools.

**2.1 Quality of Faculty** - Although majorities of faculty in most Indian business schools do not have a Ph.D., many faculties in top ranking schools have Ph.Ds. There exists considerable gap between the desire for a comprehensive mission based on research and multi-functional multi-sectoral disciplinary education, and the ground realities (Gupta, Gollakota and Sreekumar, 2003). A survey showed that while 550 out of a total of 773 full-time faculty, or 73%, at the top 15 business schools in India had a Ph.D. degree, only 1,181 out of 2,361 full-time faculty, or 50%, at the top 100 business schools had a Ph.D. degree in 2003 (Cosmode Management Research Centre, 2003). About 70% of Indian business schools do not have even a seven-member faculty, and the faculty they have generally does not have a Ph.D. degree (Zachariahs, 2003). The estimated demand for Ph.D. faculty members at the nation's business schools is 7,200 (Cosmode Management Research Centre, 2003). Most B-schools have faculty with MBA or equivalent degree, a considerable majority in reputed B-schools have industry experience.

**2.2 Resources** - The term resources include physical and financial resources. If a B-school invests in excellent infrastructure, including residence dorms, state of art classrooms and library facilities, backed with initiatives for faculty development such as, statistical packages, online databases for research, etc the cost and resource limitations are quite high. The reputed B-schools do provide all these facilities, but there are many among the 1400 odd B-schools, which fall short in this area. Financial resources here, indicate the willingness of the top management to invest funds for physical resources and other initiatives to build the quality of B-school such as, offering remuneration to faculty and staff, on par with the best in the industry, providing healthcare and other benefits, implementing incentive linked salary packages etc.

**2.3 Vision Implementation** - leading, motivating and managing a group of highly qualified, talented and accomplished faculty present a unique and a formidable

HR challenge (Rao, 2006). This criterion includes organization structure adopted, policies, procedures, processes, governance systems and work culture developed in the organization. Emphasis has to be placed on aligning individual goals with organization goals to ensure shared vision. Considering the "mindsets" and overarching goals, faculty faculties have to be generally coaxed, motivated and cajoled in order to bring in cherished institutional reforms (Rao, 2006)

## Processes

**3.0 Teaching-Learning Process** - Few business schools take an integrative approach to management education. Almost everything happens in terms of functions (marketing, finance, human resources management, operations, systems and so on), be it teaching, curriculum design, recruitment or for that matter research, in Indian B-schools (Kaul and Ahmed, 2005).

Most business schools claim a dual mission: to educate practitioners and to create knowledge through research. Historically, business has emphasized the former at the latter (Warren and O'Toole, 2005). Business schools embraced the scientific model of physicists and economists rather than the professional model of doctors and lawyers. Although few B school faculty members would admit it, professors like it that way. Business school professors using the scientific approach often begin with data that they use to test a hypothesis by applying such tools as regression analysis. Instead of entering the world of business, professors set up simulations (hypothetical portfolios of R&D projects, for instance) to see how people might behave in what amounts to a laboratory experiment. Those methods are useful, necessary, and enlightening. However, because they are at arm's length from actual practice, they often fail to reflect the way business works in real life. When applied to business essentially a human activity in which judgments are made with messy, incomplete, and incoherent data- statistical and methodological wizardry can blind rather than illuminate (Warren and O'Toole, 2005).

There is a need to bridge the gap between faculty needs vis a vis market needs (Business practice). Academics need to examine research frameworks to assess their relevancy in the face of the revolutionary changes now taking place. Academics must work to prepare students to be successful in the 21st century business reality. Indian business schools rely on textbooks that are used in the US and based on research done in an American context. The reason for this is the paucity of research in Indian business schools. (Gupta and Gollakota, 2005). Most B-schools in India have affiliations with the state universities. The syllabus and other norms imposed by most universities tend to be restrictive and degenerative,

as they do not allow flexibility to respond to the local conditions and do not build competencies for quality teaching, service, and scholarship (Gupta and Gollakota, 2005). The evaluation techniques adopted in a majority of B-schools still employ traditional grading methods by relying on term end examinations for awarding the degree. The teaching techniques, in most B-schools are lecture-based approaches, though there is increasing popularity of more experiential learning exercises like case study analysis, projects, internships etc. Business education has come under criticism for not training students to meet the needs of business (Doria et al., 2003). Many companies had to put "re-education" programs in place, to reorient the graduates to the industry they were recruited to (Gupta, Gollakota and Sreekumar, 2003). The entire MBA curriculum must be infused with multidisciplinary, practical and ethical questions and analyses reflecting the complex challenges business leaders face (Warren and O'Toole, 2005).

Teaching-learning criterion includes factors such as, andragogy versus pedagogy; focus on experiential learning, relevance to Indian context, and academic curriculum- responsiveness to changing market needs.

**3.1 Focus on Faculty Development** - According to a joint survey conducted by COSMODE Management Research Center and Business World-India (COSMODE-B.W.), in 2002 there were only 3,600 Ph.D's in Indian B-schools. "What they really need is 11,000," the survey said. "The gap is not going to be closed anytime soon: the Top 100 B-schools produce around 110 doctorates annually while an additional 20-24 come from overseas every year Faculty in most B-schools do not have a doctorate degree. This criterion includes focus on Research and development, Management development programs, Faculty development programs, consultancy projects, articles published in National and International Journals, books authored, conferences and seminar paper presentations etc.

**3.2 Industry Interface** - Literature review indicates that MBA programs have not met the requirements of industry. Student interface with industry in terms of projects, internships, guest lectures, seminars, conferences etc. Faculty interface in terms of R&D, consultancy etc. are not adequate.

**3.3- Student Participation in Governance-** This criterion includes curricular and extra-curricular involvement of students such as placements, competitions, inputs for teaching-learning etc.

## Quality Indicators- Outputs/ Outcomes

**4.0 Academic Outputs** - This criterion includes number and rigors of tests, grading patterns, in terms of

presentations, case study analysis, group projects, individual projects assignments, term papers, university ranks etc.

**4.1 Non Academic Outcomes, Placements** - Consistently successful placement indicates that the school is meeting the needs of the industry (Gupta, Gollakota and Sreekumar, 2003). Many institutes emphasize on projects and internships for experiential learning. This criterion includes, number of students placed, average salary offered, effort taken by the B-school to help train students in attending placement interviews and facilitating placement opportunities.

**4.2 Brand Image** - Opinion is divided regarding brand image of an educational service like a B-school. Certain institutionalized actions and initiatives sometimes visibly and at other times subtly impact the "brand equity" of a B-school (Rao, 2006). These actions could be, recognition from a body like AICTE, NBA, ratings and rankings in B-school surveys conducted by various magazines, international alliances, with American, British, Australian Universities, advertisements, unique courses offered, program offerings in the form of MDPs/ FDPs/ EDPs, collaborative research, consultancy projects etc. These actions collectively build the "Brand image" in the minds of prospective students, faculty, industry and society. This criterion includes both internal branding (students, faculty and staff) and external branding (industry, society and media)

**4.3 Stakeholder Satisfaction** - Literature review indicates that the major stakeholders of a business school are students, faculty and industry. The expectations and perceptions of the major stakeholders are indicative of quality.

## Conclusions

Quality in a B-school is multi dimensional, we have proposed a conceptual framework, which incorporates all the factors that act as inputs, drive processes and result in quality indicators. The 15 criteria proposed to measure quality of a B-school have been drawn from literature review and in-depth discussions with, the major stakeholders, students, faculty and industry professionals.

The authors propose to test the conceptual framework of quality in management education in India, using Structural equation modeling. We are in the process of developing an instrument to test and validate the relationships defined in the conceptual framework.

We believe that such a model will help define quality in a holistic perspective for B-schools in India; it could evolve as a quality measurement tool for self-assessment to aid continuous quality improvement.

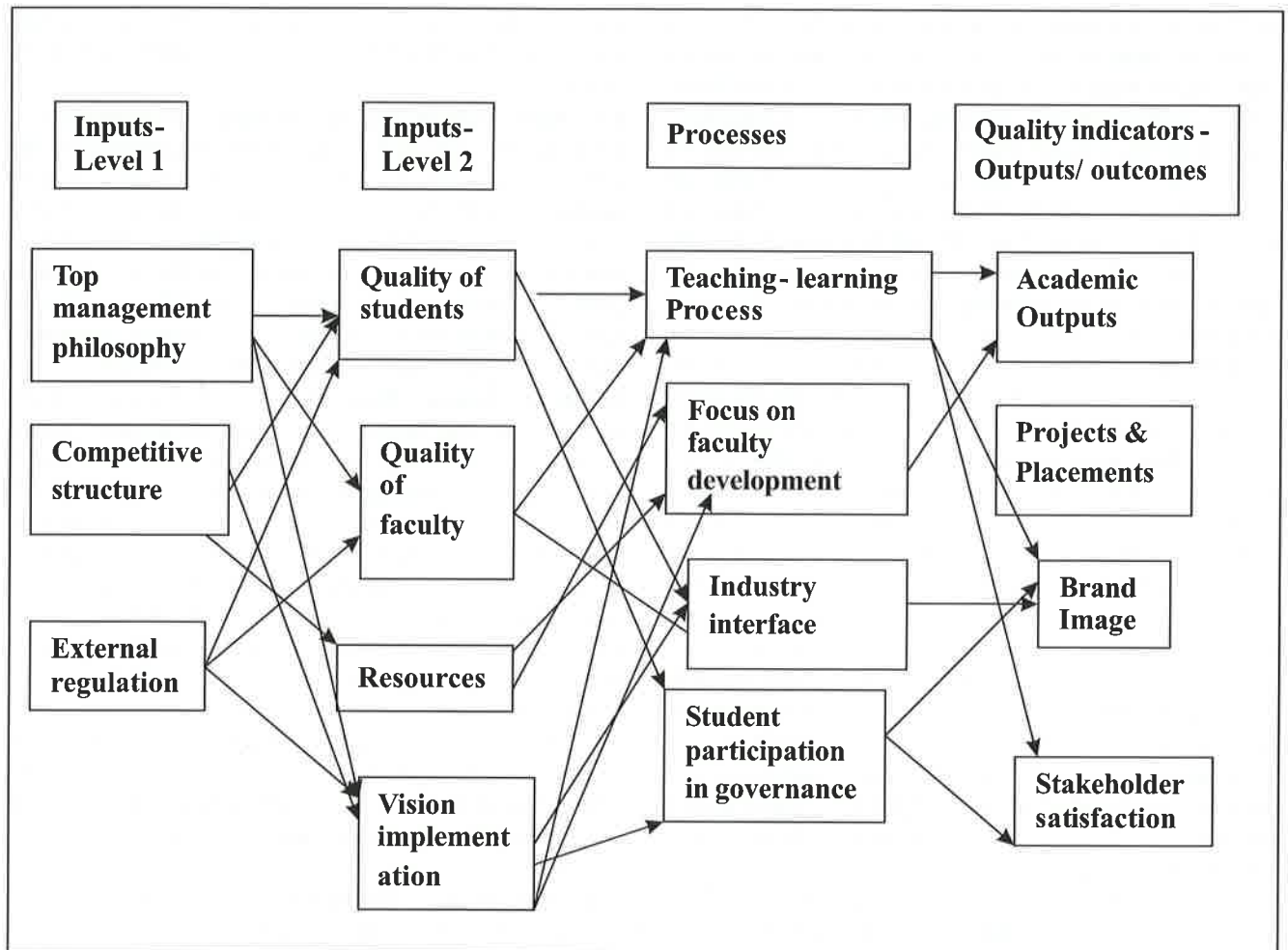


Figure II : Conceptual Framework of Quality for Management Education in India  
-Proposed Structural Equation Model

## References

- Arnold David Institute of International education, round table on Internationalization of Higher Education in India, Bangalore, Karnataka, Feb 26- 28. 2004
- Basu, Kaushik** (1989). "Theory of Association: Social Status, Prices and markets", Oxford Economic papers, New Series, 41 (4), 653-671.
- Bennis G, and O'Toole** (2005). "How Business Schools Lost Their Way", Harvard Business Review, May.
- Bose, Arundati Sarkar** (2006). "Is the Free Market Appropriate for Education?" IMPACT, International Journal of Management and Contemporary Thought, 1(1), 66-85.
- Bowonder B, Rao S L** (2005). "Management Education in India- its evolution and some contemporary issues", All India Management Association.
- Burkhalter B** (1993). "The evaluation of a quality management process in a university setting", EEC Seminar in Total Quality in Education, Denmark.
- Corts T E** (1992). "Customers: you can't do without them", In: J.W. Harris & M. Baggett (Eds) Quality Quest in the Academic Process (Birmingham, Samford University).
- Elmutti, D Kathawala, and Y Manippallili M** (1996). "Are Total Quality Management Programmes in Higher Education Worth the Effort? International Journal of Quality and Reliability Management, 13 (6), 29-45.
- Epple and Romano** (1998). "Competition between Private and Public Schools, Vouchers and Peer Group Effects", American Economic Review, 88 (1) 33-62.
- Friga, Paul N, Richard A. Bettis and Robert S. Sullivan** (2003), "Changes in Graduate Management Education and New Business School Strategies for the 21st Century" Academy of Management Learning and Education, 2003, Vol. 2, No. 3, 233-249.
- Garvin, David** (1984). "What Does Quality Really Mean?" Sloan management Review, 26(1).
- Ghoshal S** (2005). "Bad management theories are destroying good management practices", Academy of Management Learning and Education, 4(1) 75-91.
- Gilbert J P Keck, K L and Simpson R D** (1993). "Improving the process of education TQM for the college

classroom", *Innovative Higher Education*, 1 65-85

**Goswami, U.A.** (2003) "Common entrance tests could be history", *Economic Times*, Jan 30

**Gupta V, Gollakota K and Ancheri S** (2003). "Quality in Business Education: A Study of the Indian Context, Paper presented at the Business Education and Emerging Market Economies: Trends and Prospects" at Conference, Technology Square, Atlanta, Georgia, USA, November 7.

**Gupta V and Gollakota K** (2004). "Business education in India: The quality dialogue", *IBAT Journal of Management*, 1(2) 1-18.

**Harris JW** (1992), "Key concepts of quality improvement for higher education" In: J. W. Harris & M Baggett (Eds) *Quality Quest in the Academic Process* (Birmingham, Samford University).

**Hittman J A** (1993), "TQM and CQI in post secondary education". *Quality Progress*, 26, pp. 77-80.

**Kaul V and Ahmed H** (2005). "What Ails Indian B-school education", *Business*, accessed on 11/25/2005.

**Koch, James V and Fisher, James L** (1998). "TQM and Higher Education, *Total Quality Management*, 9(8), 1998, 659-668.

**Laha Arnab Kumar** (2002). "Quality in Management Education: A Meta- analysis of B-school Surveys", National Conference on quality of Life organized by IAPQR and Vishwa-Bharati at Shantiniketan, West Bengal, November.

Leavitt H J (1989). "Educating our MBAs: On teaching what we haven't taught", *California Management Review*, 31(3) 38-50.

**Madu C N & Kuei C** (1993). "Dimensions of quality teaching in higher education", *Total Quality Management*, 4, 325-338.

**Montmore and Stone** (1990). "Measuring Educational Quality", *British Journal of Educational Studies*, 39 (1), 69-82

**Morris D S & Haigh R H** (1993). "Introducing TQM into the student service department of a College of further education in the UK", *EEC Seminar in Total Quality in Education*, Denmark.

**Mullin R and Wilson G** (1995). "Quality in education: A new paradigm and exemplar In CQI Making the Transition to education" (2nd ed) Maryville, MO Prescott Publishing.

**Parasuraman A, Valarie A, Zeithaml and Leonard L Berry** (1985). "A Conceptual Model of Service Quality and Its Implications for Future Research", *Journal of Marketing* 49 41-50

**Pfeffer J and Fong C T** (2002). "The end of business schools? Less success than meets the eye", *Academy of Management Learning and Education*, 1(1) 78-95.

**Pfeffer J and Fong C T** (2004). "The business school e-business: Some lessons from the US experience", *Journal of Management Studies*, 41(8) 1501-1520.

**Raghunath R** (1998). "Quality standards for business schools" *Financial Express*, Nov 25.

**Rao Asoke U K** (2006) "Adoption of a self- Adaptive and Self-Sustainable Model A Tool to Achieve Continuous Quality Enhancement and Global Standards in B-schools" *FOCUS, The International Journal of Management Digest*, II (2) 34-45

**Rapert Molly Inhofe, Scott Smith, Anne Velliquette and Judith A. Garretson** (2004). "The Meaning Of Quality: Expectations Of Students In Pursuit Of An MBA", *Journal of Education for Business*, 17-24

**Rothschild and White** (1995). "The Analytics of pricing of Higher Education and other Services in Which the Consumers are Inputs", *Journal of Political Economy*, 103 (3) 573-652.

**Sallis E** (1993). "Total Quality Management in Education" (London, Kogan Page).

**Sayed Y** (1993). "A perspective on quality in education, Quality Assurance in Education", 1 35-39.

**Satterlee B** (1996). "Continuous Improvement and quality implications for higher education", *Viewpoints*, ED399845.

**Scrabec Quentin** (2000). "A Quality Education is Not Customer Driven", *Journal of Education for Business*.

**Seymour D T** (1992). "On Q: Causing Quality in Higher Education" (New York, MacMillan).

**Shahaida P, Rajashekar H and Nargundkar R** (2006). "The B-School Student as a Stakeholder: An alternative Perspective", *FOCUS, The International Journal of Management Digest*, II (2) 28-33.

**Stanley J. Spanbauer** (1995), "Reactivating higher education with total quality management: using quality and productivity concepts, techniques and tools to improve higher education" *Total Quality Management*, Vol. 6, Nos 5&6, pp 519-537.

**Taylor A W & Hill F M** (1993). "Issues for implementing TQM in further and higher education" *Quality Assurance in Education*, 1 12-21.

**Tofte B** (1993). "A theoretical model for implementation of total quality leadership in education", *EEC Seminar in Total Quality in Education*, Denmark.

**Vazzana, Gary, John Elfrink and Daune P Bachmann** (2001). "A Longitudinal Study of Total Quality Management Processes in Business Colleges", *Journal of Education for Business*.

**Wicks** (1992). "Peer Review and Quality Control in Higher Education", *British Journal of Educational Studies*, 40(1) 57-68.

Widrick, Stanley M, Erhan Mergen & Delvin Grant (2002). "Measuring the dimensions of quality in higher education", *Total Quality Management*, Vol. 13, NO. 1, 2002, 123- 131

**Zachariahs C** (2003). Quantity battles quality test, *The Times of India*, October

# Behavioural Considerations of Cost Allocation in Indian Industry : An Empirical Examination

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## Abstract

*The behavioural aspects of cost allocation has been discussed and debated extensively in management accounting literature. Since cost allocation methods are components of the overall performance evaluation system, cost allocation tends to influence the behaviour of the participants within the system. Building upon this behavioural reason, this study investigates behavioural considerations influencing cost allocation. For this purpose data was collected from finance managers from manufacturing and service companies. The study then presents the interaction effects of behavioural considerations across the two sectors. The findings are in agreement with the literature and major studies conducted around the world. However, it is the first time that such a study has been attempted in reference to Indian companies.*

**Key Words :** Cost Allocation, Behavioural Factors, ANOVA, Cost Consciousness

The problem of how to deal with cost allocation in manufacturing and service companies has been recognized for decades, and a controversy over the best approach continues till today. The traditional academic perspective was that considerable caution should be observed in this respect since cost allocations were considered to be arbitrary in nature.

Empirical observations have however revealed that companies do allocate costs for a variety of reasons and

that there are arguably certain behavioural benefits associated with such practices. The proponents of cost allocation have generally emphasized the advantages of allocating costs for decision-making, motivational or behavioural purposes (Modell, 2002). One of the widely cited reason for cost allocation in the literature is that such allocation can make the managers aware that such costs exist and must be covered by profits (Drury and El-Shishini, 2005).

So, what is cost allocation? Companies that manufacture more than one product or provide more than one service have indirect costs because resources are shared by the products and services. Because indirect costs associated with shared resources cannot be directly traced to products or services, some means of assigning them must be developed (Jiambalvo, 2001). The process of assigning indirect costs by manufacturing and service companies is referred to as cost allocation.

Why allocate costs? Across the entire value chain, managers need accurate cost information in order to effectively plan and control operations. The proportion of total costs that are indirect has increased in most companies and as a result, the need for accurate and timely cost allocation has also increased.

An issue of particular importance to management accountants as well as designers of cost allocation and performance evaluation system is whether cost allocation for the purposes of performance evaluation is useful in influencing the behaviour of the subordinate managers in such a way that they will be motivated to take interest in the best interests of the company as a whole (Ramadan, 1985). However, cost allocation system designers often fail to recognize the need to address the behavioural dimensions which influence cost allocation.

Many companies now recognize the importance of non-financial measurements. Even though financial information plays a very important role, a company maintains control best by taking into consideration behavioural dimensions like motivation and goal congruence.

While there is an extensive economic and accounting literature on cost allocation (Horngren et al., 2005) and on behavioural aspects of cost allocation (Bodnar and Lusk, 1977; Morse and Zimmerman, 1997; Drury and El-Shishini 2005) the literature offers no guidance on the comparison of the behavioural responses by the different sectors of the industry. This paper attempts to identify the important dimensions which influence cost allocation in manufacturing and service industries.

## Previous Research

Modell (1996) notes the increasing interest in management accounting research in manufacturing and service organizations. However, he further notes that a review of the previous research reveals an over-emphasis on structural accounting implications at the expense of the behavioural side of accounting and control. Today this trend is very much visible in reference to Indian industries.

Research relating to management accounting within the service sector still lags behind the research that has been undertaken in the manufacturing sector (Drury and El-Shishini, 2005). However, there is some evidence to suggest that the characteristics of service companies differ from those of manufacturers on a number of criteria including average number of employees (Lowry, 1990). Probably this must be the reason for the gap in research between the two sectors.

Behavioural considerations were introduced to the cost allocation process by Bodnar and Lusk (1977) who proposed a conditioning model to generate allocations in a manner sensitive to organizational behavioural considerations. Cost allocations arise when decision-making responsibilities are assigned to and vested in various individuals within a firm (Zimmerman, 1979) and this induces managers to behave in an appropriate way (Rajan, 1992).

Building upon this behavioural reason for allocating costs several arguments have been put forth to support the potential role of the behavioural factors in implementing a cost allocation system. Researchers have addressed issues such as the incentive and motivational aspects of cost allocation (Pavia, 1995).

During recent years, investments in resources have grown dramatically resulting in managers becoming increasingly concerned with the efficient utilization of resources. A cost allocation system which ignores the resource consumption may lead to problems. According to Ramadan (1985), although the issue that allocations encourage optimal utilisation of resources may be appreciated, it has not been empirically examined.

Managerial accounting books (Horngren et al., 2005) and surveys of company practice (Fremgen and Liao 1981; Atkinson 1987; Ramadan 1989) document the widespread practice of common cost allocation to induce appropriate consumption of corporate resources. For example, if divisions were not allocated any corporate costs, they may have adverse incentives to overconsume such common resources.

In cost allocation literature, the use of cost allocations is mostly investigated in a principal-agency framework (Wouters, 1993). Whenever a person delegates authority to another person to act on behalf of the former, an agency relationship is created. Agency theory is a widely accepted behavioural perspective (Cohen et al., 2000).

Agency models seek to reduce goal incongruence between the principal and agent by using cost allocation schemes (Sridhar and Sanders, 1993). Management accounting researchers are interested in agency theory because it provides a model from which uses of



managerial accounting information and managerial accounting systems can be derived and studied. Agency models of cost allocation take place in single-agent as well as in multi-agent settings.

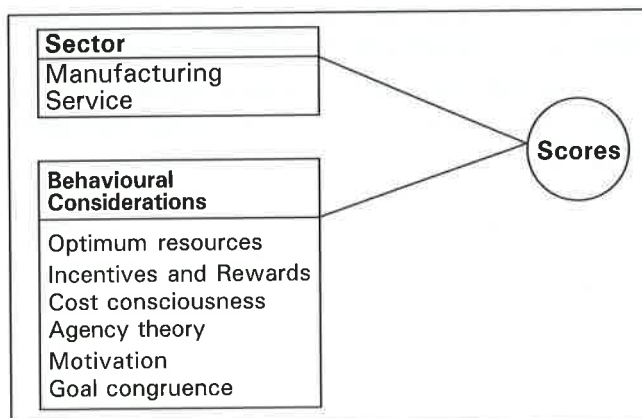
The principal provides the work and the incentive and rewards, which the agent does not, but the agent has the ability to do the work which the principal does not. Zimmerman (1979) has shown that allocation of costs may affect the incentives of a manager. The effect of this incentive function on the manager's behaviour is an important behavioural consideration while allocating costs.

Cost allocation is not a purely technical exercise since as mentioned earlier allocations can have both intended and unintended consequences. Therefore choosing how to calculate costs should not be based solely on technical merits (Hansen and Mowen., 1999). The way to allocate costs depend more on the behaviour of managers and staff employed in that department.

Cost allocation systems contribute in raising the cost consciousness with the ultimate benefit of maximising system efficiency (Abbas and Abd-Allah, 1999). Cost consciousness is a very important concept and managers must be aware of it while allocating costs. The literature on cost allocation has not explored this dimension in depth.

A thorough review of the literature on cost allocation indicates that, across different studies offering a multitude of behavioural approaches, motivation is seen by many as being fundamental to the process of cost allocation.

Behavioural factors associated with successful applications of cost allocation system include optimal use of resources, linkages to incentives and rewards, cost consciousness, agency theory, motivation and goal congruence. While there is broad agreement that cost allocation is associated with behavioural factors, a



**Figure 1 : Dependent and Independent Variables**

difficulty exists in developing hypotheses as existing theories do not relate specifically to Indian companies. In this study, six key multidimensional constructs of behavioural factors based on existing dimensions in the cost accounting literature are considered for this study.

The above figure shows the independent and dependent variables for this study. The two independent variables (or factor variables as they are referred to in ANOVA) are the sector and the behavioural considerations. The scores are the dependent variable. The second part of this research attempts to study how behavioural considerations of cost allocation affect industries. The main aim here is to find out the level of interaction of the six considerations in the manufacturing and service sectors.

## Methodology

Since behavioural dimensions should be a prominent consideration in designing cost allocation systems, any systems, checklists, questionnaires, or criteria should explicitly include an appraisal of the behavioural influences of the system under review (Horngren et al., 2005). This study used a questionnaire to conduct an appraisal of the behavioural influences of the cost allocation system.

Drury and El-Shishini (2005) have highlighted the difficulty of posing a single survey for manufacturers and different types of service organisations. This problem was solved to a large extent by designing the questionnaire in such a way that it is applicable to both manufacturing and service organisations. A draft questionnaire was developed based on the review of literature and circulated to a group of experts as part of a pilot study. A few members from professional institutes were also contacted. Based on their suggestion the questionnaire was revised. The final questionnaire on behavioral considerations of cost allocation consisted of six main questions with sub-parts.

Data for the survey were collected from finance managers. The survey asked the managers to respond on a five-point Likert scale (ranging from 1 = highly disagree to 5 = highly agreed). One hundred and twenty questionnaires were sent to finance managers in both manufacturing and service sectors. Sixty questionnaires were returned. Out of which 10 were incomplete and had to be rejected. Thus, fifty companies constituted the sample for deriving inferences for the present study. The respondent companies consisted of manufacturing companies like engineering and automobiles and service companies which included banks, IT companies and even few consulting firms. The industry composition of the sample is as below :

**Table I : Industry composition**

Industry	Sample Size	Sample Proportion (%)
IT Services	11	22
Engineering	7	14
Automobiles	7	14
Construction	5	10
Chemicals	4	08
Tyres	2	04
Telecom	3	06
Banks	5	10
Consultancy	2	04
Others (Airline, healthcare etc)	4	08
<b>Total</b>	<b>50</b>	<b>100</b>

The industry categories were collapsed into two categories, manufacturing and service, for analysis. Each category consisted of 25 companies ensuring that proportionate representation is there.

For the purpose of this study, equal amounts of sample was assigned to one of the two categories of sectors. Factorial ANOVA was conducted with two independent variables: sector and behavioural considerations. The dependent variable is consideration scores (measured on a scale of 1 to 5). Each observation is uniquely coded.

**Table II : Coding of Independent Variables**

SECTOR	CONSIDERATIONS
Manufacturing = 1	Optimum usage of resources = 1
Service = 2	Rewards = 2
	Cost consciousness = 3
	Agency theory = 4
	Motivation = 5
	Goal congruence = 6

For each pairing of SECTOR and CONSIDERATIONS, there are 25 observations. That is, 2\*6 conditions by 12 observations per condition results in 300 observations, which were coded. Each participant was classified into two groups based on whether they belonged to the manufacturing or service industry. Factorial ANOVA was employed, using a .05 criterion of statistical significance.

Factorial ANOVA yields three F-ratios which are computed to determine how much of the variance in the dependent variable can be attributed to each of these

three effects:

- Variance due to the main effects of first factor (sector)
- Variance due to the main effects of second factor (considerations)
- Variance due to the A \* B (sector \* consider) interaction factor

A main effect is the direct effect of an independent variable on the dependent variable. If  $p < .05$  for the main effect of a particular factor, then there is a significant effect for that factor. An interaction effect is the joint effect of two or more independent variables on the dependent variable. If the F-value for the interaction is significant ( $p < .05$ ), then the null hypotheses is rejected (Rutherford, 2001).

In this study Factorial Analysis of Variance (ANOVA) is used to determine whether sector and behavioural considerations interact to affect scores on cost allocation. For this purpose, the following hypotheses are formulated:

#### Main Effect of Type of Sector

$$H_0: \mu_{\text{Manufacturing}} = \mu_{\text{Service}}$$

$$H_1: \text{not } H_0 \text{ (where } \mu \text{ is the mean of the scores received)}$$

This hypothesis asks if the mean of scores received for the sector is different for the manufacturing companies and the service companies.

#### Main Effect of Considerations

$$H_0: \mu_{\text{Consider for manufacturing}} = \mu_{\text{Consider for service}}$$

$$H_1: \text{not } H_0 \text{ (where } \mu \text{ is the mean of the scores received)}$$

This hypothesis asks if the mean of the scores received for considerations is same for manufacturing companies and service companies.

#### Interaction Effect of Type of Sector and Considerations

$$H_0: \mu_{\text{Manufacturing, Consider}} = \mu_{\text{Service, Consider}}$$

$$H_1: \text{not } H_0 \text{ (where } \mu \text{ is the mean of the scores received)}$$

This hypothesis asks if the effect of considerations is the same in the manufacturing sector as it is in the service sector.

#### Analysis

After conducting a factorial ANOVA, one typically inspects the results of that ANOVA and then decides what additional analyses are needed. Researchers have often recommended that this take place in a top-down fashion, inspecting the highest-order interaction term first and then moving down to interactions of the next lower order.

The output of the analysis gives the descriptive statistics followed by the standard ANOVA table, which includes the Degrees of Freedom, Sum of squares and the mean square for the model and for random error. This is followed by the graph showing estimated marginal means of score and post-hoc 1-way ANOVAs of simple effects.

**Table III : Descriptive Statistics**

Score	Considerations	Sector	Mean	Std.	N
			Deviation		
Optimum use of resources		Manufacturing	4.96	.20	25
		Service	4.48	.51	25
		Total	4.72	.45	50
Incentives & rewards		Manufacturing	3.72	.84	25
		Service	4.16	.75	25
		Total	3.94	.82	50
Cost Consciousness		Manufacturing	4.60	.50	25
		Service	4.96	.20	25
		Total	4.78	.42	50
Agency Theory		Manufacturing	3.88	.73	25
		Service	3.60	.91	25
		Total	3.74	.83	50
Motivation		Manufacturing	4.92	.27	26
		Service	4.50	.51	26
		Total	4.71	.46	52
Goal congruence		Manufacturing	4.63	.49	24
		Service	4.96	.20	24
		Total	4.79	.41	48
Total		Manufacturing	4.45	.73	150
		Service	4.44	.74	150
		Total	4.45	.73	300

In terms of descriptive comparison it can be observed from the above table that the manufacturing sector has a slightly higher mean than the service sector. The next section investigates whether this difference is statistically significant.

The next table "Tests of Between – Subjects Effects" is also referred to as summary or source table and it lists the values for the sources of variance (between and within groups, and total sum of squares) that were computed. As explained earlier, interpreting this table involves examining the three F-values associated with the two main effects and the interaction effect.

From the above table, it can be seen that the factorial ANOVA revealed no significant main effect for sector. However, the main effect for behavioural considerations (consider in the table) reveals a significant main effect. There is also a significant interaction between these variable. This is revealed by the p-value of (CONSIDER \* SECTOR) as being less than .05. Results are presented in terms of how effect of one factor varies with the level of the factor. If interaction is significant, the next step is to follow-up ANOVA with post-hoc 1-way ANOVAs of simple effects. However, before that it is necessary to facilitate this interpretation and this done by generating the graph for estimated marginal means of score.

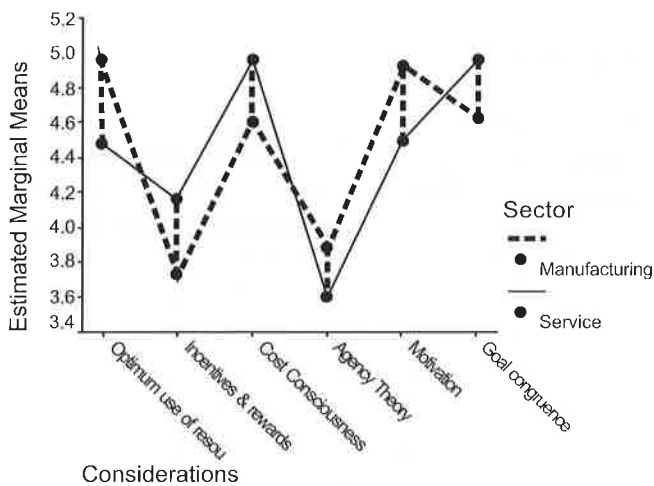
In the above figure, the thick dashed line represents the range between the manufacturing and service means. The lines representing the two sectors are not parallel and when the lines are not parallel, there is an intersection. When both lines have positive slope the

**Table IV : Tests of Between-Subjects Effects**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power <sup>a</sup>
Corrected Model	68.017 <sup>b</sup>	11	6.183	19.329	.000	212.624	1.000
Intercept	5930.111	1	5930.111	18537.734	.000	18537.734	1.000
CONSIDER	56.457	5	11.291	35.297	.000	176.486	1.000
SECTOR	5.152E-03	1	5.152E-03	.016	.899	.016	.052
CONSIDER * SECTOR	11.547	5	2.309	7.219	.000	36.096	.999
Error	92.129	288	.320				
Total	6092.000	300					
Corrected Total	160.147	299					

a. Computed using alpha = .05

b. R Squared = .425 (Adjusted R Squared = .403)



**Figure II : Graph showing Estimated Marginal Means of Score**

interaction is monotonic. However, in the interaction above one line has positive slope and the other has negative slope so the interaction is nonmonotonic. This means the lines represent opposing effects and this type of interaction is called disordinal (Hair et al., 2006). Since the interaction is disordinal the main effects are not considered. The graph above only exhibits the pattern of interaction but do not tell where the interaction is significant. For this simple effects analysis tests have to be performed. This involves conducting one-way ANOVA and Post-hoc Tukey tests.

**Follow up One-way ANOVA**

Once there is a significant interaction, the independent variables have to be recomputed to make it look as if only one IV is there. Once things have been configured that way, a one-way ANOVA is conducted to see if the different means obtained are significantly different from one another

**Table V : ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
Score	Between Groups	56.457	5	11.291	32.015	.000
	Within Groups	103.690	294	.353		
	Total	160.147	299			

A one-way Analysis of Variance of score according to sector found consider level to be highly significant  $F(5,294) = 6.907; p < 0.001$ . Thus, there appear to be a significant difference overall in the behavioural considerations according to the two sectors. The purpose of a Multiple comparison test such as Tukey's HSD Test is – having established from the interpretation of the ANOVA table that there is a significant difference overall between the six behavioural considerations- to go on to identify which particular pairs of sub groups can be judged to be significantly different (Klockars and Gilbert, 1986).

**Post Hoc Tests**

The Tukey HSD test detected significant differences in mean of score between four groups – optimum resources with motivation, cost consciousness with motivation and goal congruence, motivation with optimum resources and finally goal congruence with cost consciousness. All remaining possible comparisons were found to be non-significant (see table VI).

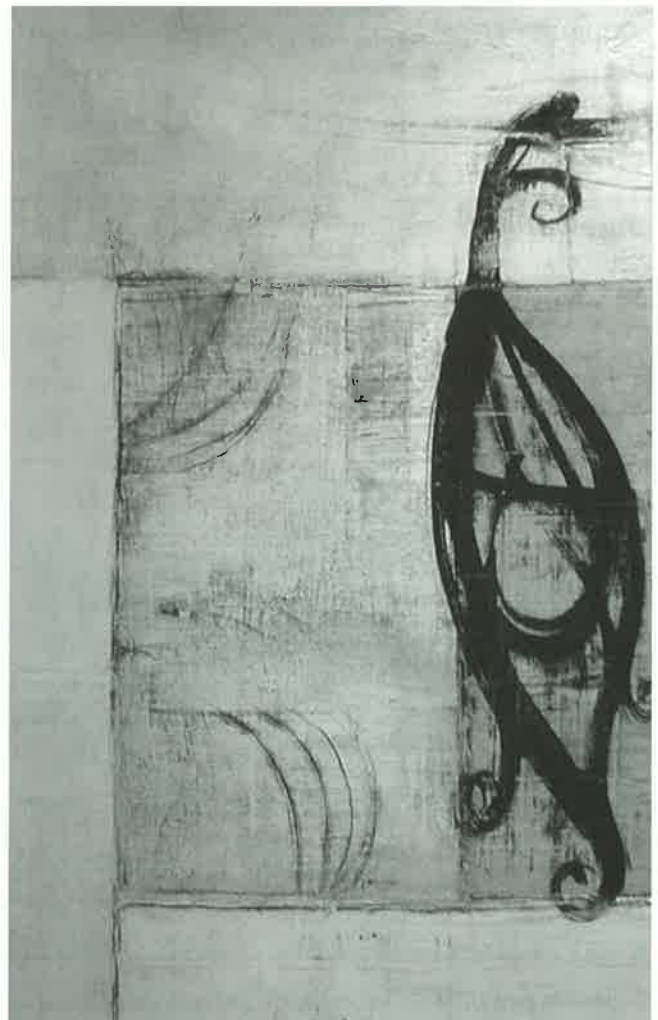


Table VI : Multiple Comparisons

Score HSD		Mean Difference	Std. Error	Sig.	95% Interval	
(I) GROUP	(J) GROUP				Lowe Bound	Uppe Bound
Optimum use of resource	Incentives reward	.78 *	.119	.000	.44	1.12
	Cos consciousne	-6.00E-	.119	.996	-.40	.28
	Agency \ Theory	.98 *	.119	.000	.64	1.32
	Motivation	8.46E-	.118	.995	-.33	.34
	Goal congruenc	-7.17E-02	.120	.991	-.41	.27
Incentives & reward	Optimum use resource	-.78 *	.119	.000	-1.12	-.44
	Cos consciousne	-.84 *	.119	.000	-1.18	-.50
	Agency	.20	.119	.543	-.14	.54
	Motivation	-.77 *	.118	.000	-1.11	-.44
	Goal congruence	-.85 *	.120	.000	-1.19	-.51
Cost consciousness	Optimum use resource of	6.00E-	.119	.996	-.28	.40
	Incentives reward	.84 *	.119	.000	.50	1.18
	Agency	1.04 *	.119	.000	.70	1.38
	Motivation	6.85E-	.118	.992	-.27	.40
	Goal congruence	-1.17E-	.120	.993	-.35	.33
Agency theory	Optimum use resource	-.98 *	.119	.000	-1.32	-.64
	Incentives reward	-.20	.119	.543	-.54	.14
	Cos consciousne	-1.04 *	.119	.000	-1.38	-.70
	Motivation	-.97 *	.118	.000	-1.31	-.64
	Goal congruence	-1.05 *	.120	.000	-1.39	-.71
Motivation	Optimum use resource	-8.46E-	.118	.990	-.34	.33
	Incentives reward	.77 *	.118	.000	.44	1.11
	Cos consciousne	-6.85E-	.118	.992	-.40	.27
	Agency	.97 *	.118	.000	.64	1.31
	Goal congruence	-8.01E-	.119	.985	-.42	.26
Goal congruence	Optimum use resource	7.17E-	.120	.991	-.27	.41
	Incentives reward	.85 *	.120	.000	.51	1.19
	Cos consciousne	1.17E-	.120	.900	-.33	.35
	Agency	1.05 *	.120	.000	.71	1.39
	Motivatio	8.01E-	.119	.985	-.26	.42

\* The mean difference is significant at the .05

## Summary of the Results

A 2\*6 factorial ANOVA was employed, using a .05 criterion of statistical significance. There were no significant main effects for the first factor 'sector' but the second factor 'consider' reported significant effects. The interaction between the two variables (sector \* consider)

was also found to be significant. This significant interaction was further tested by one-way ANOVA. Since the probability, .000, is less than the .05 alpha criterion level, the null hypothesis is rejected and it can be concluded that there is a significant difference in the effect of considerations between the manufacturing and service sector.

**Table VII : Summary of Results of Hypotheses Tested**

Main effect of sectors	Main effects of consider	Interaction effects of sector and consider
<p>H<sub>0</sub>: <math>\mu_{\text{Manufacturing}} = \mu_{\text{Service}}</math> H<sub>1</sub>: not H<sub>0</sub></p> <p>This hypothesis asked if the mean received for the first factor (sector) is different for the manufacturing and service companies.</p> <p>In this case, the p value is equal to .016 which is greater than .05 (<math>\alpha</math>) so there is insufficient evidence that the manufacturing and the service means are different</p>	<p>H<sub>0</sub>: <math>\mu_{\text{considerformanufacturing}} = \mu_{\text{considerforservice}}</math></p> <p>These hypotheses asked if the means received for consider is the same for both sectors. In this case, the p value is .000, which is less than .05 so H<sub>0</sub> cannot be rejected.</p> <p>There is sufficient evidence to conclude that the consideration means for manufacturing and service sector is different.</p>	<p>H<sub>0</sub>: <math>\mu_{\text{Manufacturing,Consider}} = \mu_{\text{Service,Consider}}</math></p> <p>These hypotheses asked if the effect for considerations is same in the manufacturing sector as it is in the service sector.</p> <p>In this case, the p value is .000 which is less than .05 so H<sub>0</sub> cannot be rejected. When the interaction is significant the main effects are ignored and the next step is to follow-up ANOVA with post-hoc 1-way ANOVA of simple effects.</p>

## Discussion and Implications

The strength and limitation to this study should be kept in mind before discussing the results. First, the study used participants from both manufacturing and service sectors which included companies from different background like banking, automobiles and consultancy. Second, today the dynamic and changing nature of the industry has redefined the traditional classification of sectors into manufacturing and sector. These limitations suggest that care should be exercised when generalizing the result.

An important strength of this study is that most managers considered the set of behavioural reasons provided in the questionnaire important in the cost allocation decision. This becomes clear from the pattern

of responses received (overall mean for manufacturing is 4.45 and service is 4.44) and it agrees with the view advocated in the literature, that cost allocations are made to influence the behaviour of managers.

But as this study shows, there is a clear difference how the behavioural considerations of cost allocation are perceived across the manufacturing and service sectors. Probably this must be the reason for the difference in mean scores for each of the considerations between the two sectors. For instance, the mean for motivation in the manufacturing sector is 4.92 and in the service sector it is 4.50.

The motivation for this research came from one of the recent studies conducted by Drury and El-Shishini (2005), who stated in context of cost allocation, that a comparison of responses by different sectors would be

an interesting area for future research. The first reason provided in the questionnaire related to the optimum use of resources. The costs of most manufacturing companies are linked to resources physically and often allocations are perceived as being likely to encourage optimum utilisation of resources. However, the costs of a service firm are typically professional labour and indirect costs in support of the labor.

The service sector is often considered to be that part of industry or business which deals with intangible products rather than physical goods. This probably explains the reason why optimum use of resources has a higher mean in the manufacturing sector (4.96) than in the service sector (4.48). In fact, this particular dimension has the highest score when compared to all others in the manufacturing sector.

Incentives and rewards form the second set of reasons are provided in the questionnaire. It is interesting to note that unlike the previous case, this dimension is rated higher in the service sector (4.16) than the manufacturing sector (3.72). A likely reason for this is as human resource is a very important part of this sector service firms increasingly use features of incentive plans. This trend is visible in many IT firms in India. In this study, IT firms form around 22% of the total sample.

Cost consciousness is also rated high (4.96) in the service sector but surprisingly in the manufacturing sector it had a lower score (4.60). However, most companies generally place great importance on cost consciousness when designing and implementing their cost allocations. Today's modern manufacturing firms incorporate much greater automation. This has changed the traditional cost consciousness and cost reduction practices and this fact has substantially altered the cost allocation practices in many manufacturing companies.

The literature explained the importance of agency studies in cost allocation but such studies cannot always address cost allocations across different sectors. Though they have been identified as an important dimension influencing cost allocation there is common agreement among researchers that they have not been very successful in explaining the behavioural aspects of cost allocation. The same holds true in this case also. This becomes clear by the responses received by the managers in the manufacturing sector (3.88) and in the service sector (3.60). When compared to the others, this set of considerations had the lowest score.

Managers in the manufacturing sector considered motivation to be the second important factor (4.96) after optimum use of resources while the service sector did not give it much importance (4.50). The literature states

that cost allocations are useful devices for controlling and motivating managers. However, this aspect has not been explored in the context of manufacturing and service companies. Often motivation is the desire to attain a selected goal which results in goal congruence. This forms the last set of reasons provided in the questionnaire.

Along with incentives and rewards, the managers from the service sector rated goal congruence (4.96) as the most important dimension in cost allocation. It does appear that congruence across industries was supported by managers from both sides. Managers from the manufacturing sector did acknowledge the importance of this dimension (4.63) even though they did not give it a very high rating.

The service sector firms assign more importance to incentives, cost consciousness and goal congruence while manufacturing firms consider optimum use of resources, agency theory and motivation to be important factors while allocating costs. One common theme which emerges from the above discussion is that behavioural considerations are important while allocating costs.

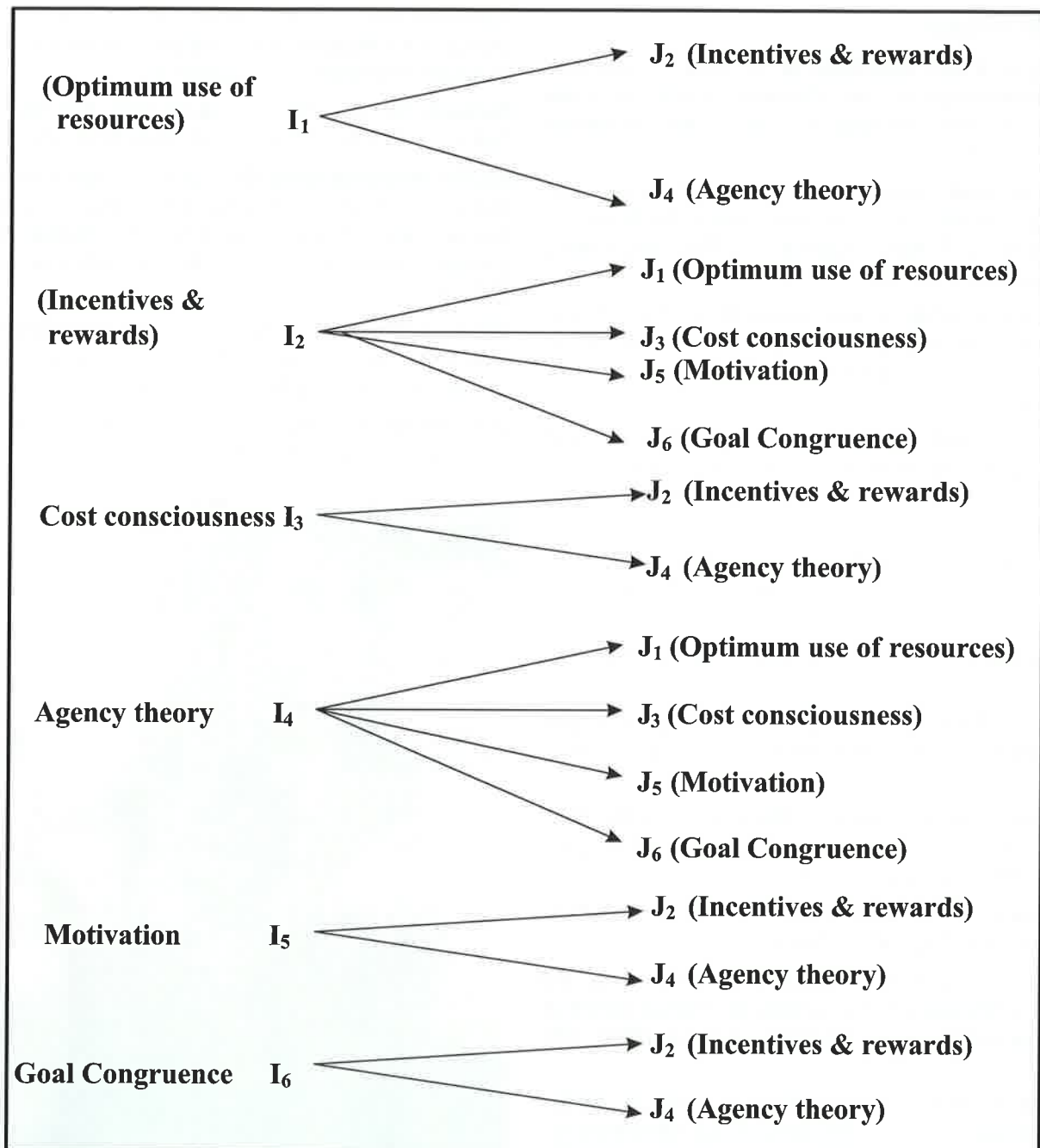
Based on the Tukey HSD test, it was found that there were significant variables between groups (see figure III). For the first group I1 (optimum use of resources), the significant variables in group J were J2 (incentives & resources) and J4 (agency theory). The most number of significant variables were in group I2 (incentives & rewards) with group J. Almost four significant variables were identified which included optimum use of resources, cost consciousness, motivation and goal congruence.

For the cost consciousness group (I3), the significant variables were incentives and rewards (J2) and agency theory (J4). This same trend was observed in case of motivation (I5) and goal congruence (I6), which were found to be significant with incentives and agency theory.

Agency theory, like incentives and rewards, had the same four significant variables. Even though they had the same set of significant variables, both were not significantly related to each other. Another important observation made regarding these two considerations was that they had the lowest mean scores when compared to the other considerations.

## Conclusion

The findings of this study is in agreement with the literature and the findings of major studies. Even though most of these studies were conducted a few decades back it shows that the findings are still relevant today.



**Figure III : Significant Means Between Groups**

Several authors have suggested that an important obstacle to successful outcome of cost allocation systems is a lack of attention to behavioural factors during implementation. In reference to Indian companies, there has been very little empirical research that explains why attention to behavioural factors during implementation improves the likelihood of successful cost allocation system.

The relevance of developing a more comprehensive understanding of the behavioural aspects of cost

allocation is becoming important in the manufacturing and service industries especially in reference to Indian companies.



## References

- Abbas K. A and Abd-Allah M. H** (1999). "Estimation and assessment of cost allocation models for main transit systems operating in Cairo", 19(4), *Transport Reviews*, 353-375.
- Bodnar and Lusk E.J** (1977). "Motivational Considerations in Cost Allocation Systems: A conditioning Theory Approach", *The Accounting Review*, 52(4), 857-868.
- Cohen J R, Pant L and Sharp D** (2000). "Project Earnings Manipulation: An Ethics Case Based on Agency Theory", *Issues in Accounting Education*, 15(1), 89-104.
- Drury C and El-Shishini H** (2005). "Divisional Performance Measurement: An Examination of the Potential Explanatory Factors", *CIMA Research Papers*, 1-65.
- Fremgen J M and Liao S S** (1981). *The Allocation of Corporate Indirect Costs*, New York: National Association of Accountants.
- Jiambalvo J** (2003). *Managerial Accounting*, New York: John Wiley & Sons.
- Hair J F, Black B, Babin B and Anderson R E and Tatham R L** (2006). *Multivariate Data Analysis*, New York: Prentice Hall.
- Hansen D R and Mowen Maryanne** (1999). *Cost Management Accounting and Control*, Oklahoma: South-Western College Publishing.
- Klockars, A J. and Gilbert S** (1986). *Multiple comparisons*, CA: Sage Publications
- Lowry J F** (1990). "Management Accounting and Service Industries: An Exploratory Account of Historical and Current Economic Contexts", *Abacus*, 26(2), 159-184.
- Modell S** (1996). "Management accounting and control in services: structural and behavioural perspectives", *International Journal of Service Industry Management*, 7(2), 57-80.
- Modell S** (2002). "Institutional perspectives on cost allocation: integration and extension", *The European Accounting Review*, 11(4), 653-679.
- Morse D C and Zimmermann J L** (1997) *Managerial Accounting*, Chicago, Irwin McGraw Hill.
- Pavia M T** (1995). "Profit Maximizing Cost Allocation for Firms Using Cost-Based Pricing", *Management Science*, 41(6), 1060-1072.
- Rajan, M.V.** (1992). "Cost Allocation in Multiagent Settings". *The Accounting Review*, 527-545.
- Ramadan S** (1989) *The Rationale for Cost Allocation: a study of UK Divisionalised Companies*, *Accounting and Business Research*, 20(77), pp 31-37.
- Rutherford, A** (2001). "Introducing ANOVA and ANCOVA: A GLM approach", CA: Sage Publications
- Sridhar M and Sanders G L** (1993). "A Contingency for Mapping Chargeback Systems to Information Systems Environment", *Proceedings of the 1993 conference on computer personnel research*, St Louis, Missouri, USA, 206-213.
- Wouters M** (1983). "The use of cost information by managers when making short-term decisions", *The European Accounting Review*, 432-436.
- Zimmerman J** (1979). "The Costs and Benefits of Cost Allocation", *Accounting Review*, 54(3), 504-521.



# Internet Banking Usage : A Customer's Perspective

Rajeev Kumra\*

## Abstract

*Globally, information Technology has brought about far-reaching changes in banking industry. Through detailed analysis of various findings and review of related literature with respect to internet banking, the present study shows that relative benefit, security concern, decision-making capability, observability, gender and age group are the major factors affecting the usage of Internet bank services. To expand internet banking services, banks must aim younger customers than older customers. Moreover, internet banking attracts males more than females, irrespective of income level, due to its relative advantage over traditional banking. Equipped with information on customers who have accepted internet banking or likely to adopt the same, banks will be able to identify the market segments that should be targeted.*

**Key Words :** Demographic Variables, Internet Banking, Observability, Regression Results, Tele Banking

Today banking without information technology is unthinkable, not only in developed countries, but also in many developing countries. Worldwide, Information technology is constantly changing the landscape of the banking industry. Banking sector is one area, where the technological revolution has brought sweeping changes in the medium of delivery and offering of banking services. The range of services provided by the internet enabled banking includes; electronics fund transfer (EFT), electronics clearance services (ECS), internet banking, ATMs, tele-banking, mobile banking, point of

sales terminal (Kiosk banking) and electronic data interchange EDI. Internet enabled banking offers multi-dimensional advantages over traditional banking channels. Internet enabled banking performance outcome in terms of revenue and cost productivity are unmatched. Some studies done earlier substantiated that the cost of service per customer reduces drastically when bank uses technology. For instance, it has been estimated that while it costs nearly US \$1.07 per transaction using the normal means on the internet the costs comes to mere a 'cent'. Even when compared with

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telephone banking (5 cents) and the ATMs (2.7 cents), the internet seems to have an edge. Also, Internet banking makes work less labour intensive and reduces the wage bill of the bank. For example, non-automated bank branch employs 25 employees where as automated bank branch employs only 5 employees for the same job (Indian Bank Association (IBA), Bank Survey, 2003). At customer end also internet banking generates enormous benefits by understanding the customer's need better. It is possible for the banks to personalize communication and customize their products. This helps in generating cross sell, up sell and greater degree of customer's loyalty and satisfaction of customers. As bankers feel that internet banking customer keeps 2.5 times higher bank balance and has 4 to 5 times lower attrition rates as compared to branch banking customer (Business world).

### Rationale for the Study

The first blueprint of internet enabled banking was laid by the two reports of Rangarajan Committee submitted to RBI, in 1984 and 1989. The committee recommended for a system of teller-operated on-line terminals that would be linked to central locations mainframes. Based on the report, initially technology was introduced in the banks by installing only memory machines at the bank branches, which was named as Advanced Ledger Posting Machines (ALPM) since then unprecedented growth has taken in this area. As per the data collected by us on March 2006 from various bank websites, there are 51 fully transactional websites along with 18600 ATMs and 38 banks are offering telebanking and mobile banking services.

Despite this our banks productivity is estimated to be only 12 percent of the US banks productivity level, though it has the potential to reach upto 90 percent (McKinsey, Retail Banking Report). As per McKinsey consultancy, the main reasons for this productivity gap between the Indian banks and the US banks have been attributed to (Table I) the factors like overstaffing of branches, the slow judicial system, lack of credit rating information, inadequate technological automation, low penetration of new channels such as internet, ATMs and call centers, the lack of centralization of back office operations due to less automation, and a payment mix that is biased towards cash transactions. Same report highlights that if two important inter-linked factors viz. inadequate technological automation and low penetration of new channels are improved upon, then these have the potentiality of increasing the banks' productivity by 38 percent (Table I).

**Table I : Operational Reasons for Productivity Gap**

S. No.	Operational Reasons	% Contribution to Productivity Gap
1.	Low penetration of new channels	23
2.	Inadequate technological automation	15
3.	Viable automation (channels and clearing)	15
4.	Scale in transaction volumes	12
5.	Poor credit rating mechanism	8
6.	Unviable automation (channels and clearing)	7
7.	Payment mix	3
8.	Over staffing of branches	2

Index; US in 2002=100, Source: Organisation of functions and tasks, Retail Bank Survey; McKinsey Analysis.

The foremost thing required for this to happen is more usage of internet enabled channels compare to branch banking by customers. At present online population in India is increasing and expected to reach 70 million by 2015 but the total number of internet banking users are estimated to be at 2 million. However, these numbers need to be adjusted for dormant users and multiple accounts (A user having accounts with more than one bank). After this adjustment, India has a little less than a million active Internet banking users. This is just 0.096% of the total population, but it represents 15% of the Internet user population. This indicates that the concept of Internet banking is surely catching on but at present it is in nascent stage. Whereas, if we compare this with US standards, it is abysmally low number of users, 'Table II' is just an indicative number of online customers of US top banks. Thus, it is crucial for banks to understand the factors that can lead to the increased usage of internet enabled banking by the customers and ultimately the bank productivity.

**Table II : Online Customers at Major US Banks**

Banks in US	Number of Customers (Million)
Wells Fargo	3.9
Bank of America	3.7
Wachiova	3.5
Fleet Boston	1.8

There can be number of exogenous and endogenous variables that can lead to the customers' preference for internet enabled banking. This study focuses only on the issue that,

1. *Whether the variables that influence the customer usage of new product or services are they pertinent in technology based settings?*
2. *To suggest a conceptual model for enhancing the usage of Internet banking based on the empirical study?*

Earlier studies have simply defined the usage of Internet banking on the basis of the variables such as age, education and income of the customers. Ramaswami, Strader and Brett (2001), stress that demographic variables alone cannot explain in depth why a customer uses Internet enabled banking.

There is a great deal of research yet to be done in this area to cover this issue. Review of the literature suggests that there is no particular study, which addresses these issues in Indian context. The present study is therefore a humble attempt to empirically study the factors that are responsible for the usage of Internet banking from the customer perspective. The results of this study can aid the banks in, prospecting, segmenting, targeting and positioning Internet banking services.

## Review of Literature

The existing literature in the area of marketing offers a number of conceptual arguments with regard to the factors governing product use. The newly emerged Internet banking services represent high technology innovation as a medium of service delivery. Customer usage of innovation is based on three major attributes; product, firm and market related. Further, Roger (1995), has stated that evaluating the innovation involves constructs such as; relative benefits, complexity, observability and risk. The present study uses the MAO (motivation-ability-opportunity) framework introduced by MacInnis, Moorman, and Jaworski (1989), augmented with the usage research of Roger. The MAO framework is useful for capturing customers' tendencies to perform any specific behavior of consumption. It is worth discussing how researchers define motivation, ability, and opportunity along with their components. Motivation has been defined as the drives, urges, wishes, or desires which initiate the sequences of events known as Behavior. Different customer motivations may be relevant for the use of Internet banking, but this study is restricted to the relative benefit and risk of using Internet banking. Relative benefit is the benefit to the bank customers that they perceive

superior compared to the branch banking. Risk in Internet banking is derived from the fear that channel use may result in unfavourable economic loss, combined with privacy concerns associated with this channel. Thus, risk will be a function of customers' perception of relative security in Internet banking. Ability refers to the customers self perception about - a quality that enables an individual to perform an act, solve a problem, or make an adjustment. Ability refers to potential performance or certain skills or knowledge at a given time. Two factors contribute to the self-perception of the ability; knowledge of the Internet banking and confidence in one's own decision-making capacity. Customer's knowledge is dependent on the level of information that customer possesses or acquires. Literature on uncertainty suggests that uncertainty consists of uncertainty of information and of decision-making. These two are separate factors. Even with adequate knowledge, some people may lack confidence in their ability to make the right decisions. Confidence is defined as the "degree of accuracy of one's judgment". Typically, consumers use the information at their disposal to form judgments. If the judgments result in appropriate choices, the consumers' level of confidence increases. To gain confidence, consumers need feedback relating to their choices. No feedback is possible if no choices are made. Consumers who lack confidence find themselves in a state of indecision rising from their inability to choose among rival alternatives. Both the factors put together, would reduce the complexity of the Internet banking.

MacInnis explains that the term "opportunity", despite its somewhat negative connotations, still refers to - a favourable set of conditions that limit barriers or provide rewards. Opportunity would include the variable observability that is, the extent to which internet enabled banking use is visible to the other members of the society.

## Hypotheses

### I. Motivation

- **Relative Benefit**

Banks by opening ATMs at many locations, by providing Internet and Tele-banking at customer house create a convenience of location and time. Banks by providing Internet banking actually reduce the cost. Customers view these banks as competent and remain with them. Additionally, online banking is mainly based on computer technologies that by the help of software perform error free banking related works. Morgan and Hunt (1984), posit that customers who receive superior benefits from their

partnership will be more committed. Thus, we posit that:

Ho : There is an insignificant relationship between online benefit and customer's use of Internet banking.

H1 : There is a positive relationship between online benefit and customer's use of Internet banking.

- **Security Concern**

The literature on innovation of usage suggests that innovators and early adopters are more willing to try new innovations than late adopters and laggards. The risk is derived from consumers' fear that using the on-line channel may result in unfavorable outcomes. The potential for economic loss, combined with privacy and security concerns associated with this channel, make its use untrustworthy. The traditional literature on consumer behavior suggests that customer always engage in risk reduction. According to Milne and Boza's (1999) findings suggest that security concern is negatively related to the direct marketing use. Thus, we posit that,

Ho : Security Concern is insignificantly related to the usage of Internet banking.

H2 : Security Concern is negatively related to the usage of Internet banking.

## II. Ability

### Level of Information

Zaltman, Duncan, and Holbeck, (1973), point up an important attitudinal dimensions related to an innovation is whether one is willing to consider its use or not. Further, Romano and Fjermestad, (2002), stressed that technology based approach to service delivery (such as Internet banking) has the effect of reducing the use of this channel, because online financial decision-making is complex and involves serious economic risk. However, the underlying reason is information asymmetry. As, online banking is high-involvement in nature, this encourages consumers to get as much information as possible about the channel. Literature on traditional consumer behavior suggests that high involvement generates intense efforts by the consumer to attend to and search out sources of information. The search process may involve activities such as browsing websites for financial information, evaluating service alternatives, reviewing information about service providers, and exchanging information with others. In turn,

information obtained gives them an opportunity to experience the channel and attain a certain level of comfort before they are ready to conduct transactions. Engaging in activities of this kind makes the consumer more comfortable with the medium and, thereby increasing the use of Internet banking. Thus, we posit,

Ho : The information search on the online bank significantly influences the use of Internet banking.

H3 : The information search on the online bank insignificantly influences the use of Internet banking.

## Decision Making Capability

As, even with adequate knowledge, some people may lack confidence in their ability to make right decision. Consumers who lack confidence find themselves in a state of indecision rising from their inability to choose among rival alternatives.

Ho : Customers' decision-making capacity insignificantly influences the use of Internet banking.

H4 : Customer decision-making capacity significantly influences the use of Internet banking.

## Opportunity

### Observability

The lack of tangibility in service products may present some problems, even though in this case the service delivery medium, ATM, telephone, Kiosk, and mobile phone may enhance physical evidence of the Internet banking.

Ho : Observability insignificantly influences the customers' use of Internet banking.

H5 : Observability significantly influences the customers' use of Internet banking.

## Methodology

In order to achieve objectives of this study, a detailed questionnaire has been prepared. The questionnaire prepared to collect the data required for our analysis, has been divided into six sections, each representing one variable. The questionnaire has been administered in four sections to avoid the possibility of the fatigue factor and has been rotated to avoid order bias (except for the background information section). Each variable consists of a Likert-type interval scale items on five-point rating, ranging from 5 to 1. Each item pertained to

one of the attitudinal dimensions of trust determinant. The variables are assessed at the individual customer's level. Questionnaire has been designed to elicit the following information :

Section I of the questionnaire, pertains to the collection of background information of the respondents such as their age, gender, formal years of education, present job status, family income, total number of family members, preferred bank, contact method, and frequency of contact. This has helped us to analyze the use pattern of Internet banking.

Section II measures the relationship benefits. Relative benefits have been measured by using twenty items scale. These items have been drawn from the twenty items developed by Berry, Parasuramam and Zithmiel (1995). Based on 12, focus group interviewed in retail banking, credit card, security brokerage, product repair and maintenance service categories; they listed twenty items. In our study, the respondents have asked whether they receive superior benefits from their bank, relative to other banks. This is based on the concept of Anderson and Narus (1990), who professes that performance outcome (benefits) should be measured in comparison to what alternatives customers have? The score of the items correlated significantly per se and with the total score. The content validity of the items is found to be highly significant and the alpha coefficient comes out 0.7 (Table III).

Section III deals with the measurement of the security concern of the customer. It has been measured in terms of security concern scale developed by John (1984). Each item has been measured by using three-item scale on five point Likert's scale ranging from strongly agree (5) to strongly disagree (1). The score of the items correlated significantly per se and with the total score. Thus, there exists the content validity. The alpha reliability for security concern is found to be 0.78 (Table III).

Section IV contains questions relating to the measurement of about the level of information and decision-making capability. For this we have used Achorl and Stern's (1988), seven items measure. Four items measure the uncertainty about the information. These items have been measured on a five point scale ranging from information is adequate (5) to information is inadequate (1). The remaining three items measure the uncertainty about the decision-making. The items have been measured on a five-point scale ranging from complete confidence (5) to no confidence (1). The score of the items correlated significantly per se and with the total score. The content validity is found to be significant but the alpha reliability for uncertainty items is found to

be only 0.60. Still, these items have been retained because of their importance in the study (Table III).

**Table III : Reliability and Validity Results**

Construct	Number of Items	Alpha	Correlation of score with score	Each item total item
			Minimum	Maximum
Relative Benefit	12	.81	0.58**	0.64**
Security Concern	3	.78	0.43**	0.73**
Information Level	4	.75	0.54**	0.79**
Decision Making Capability	3	.6	0.48**	0.77**
Observability	4	.74	0.49**	0.62**

\*\*p < 0.05

The draft questionnaire has been used for exploratory research for gathering opinions from bank customers and managers. For this, we have conducted the pilot study and have administered questionnaire on the forty bank customers, selected from ICICI bank, Noida branch. Moreover, for the purpose of construct validity, we have shown the questionnaire to the managers of the banks including ICICI bank manager. At this stage we requested the respondents to identify the points of vagueness in the questionnaire and suggest what more could be added or deleted from it. Keeping in mind the research objectives of our study, we have incorporated the respondents' suggestions in the final questionnaire. To test the content validity of the questionnaire, we have conducted the item-wise analysis of the questionnaire on the three bases: the item intercorrelation, the correlation of the item with total score and the discriminating power of the item. Item having high correlation (.9 and above) with other items has been checked conceptually for the content validity and following this, the item with lesser degree correlation with total score has been dropped from the questionnaire.

## Sampling Framework

Many individual, organizational and technological factors have their impact on the usage of Internet banking. This makes it more difficult to identify and control all the moderating variables. To minimize these problems and make the sample as homogeneous as possible, the potential respondents have been selected by adopting the following criteria: -

- Respondents must be the account holder and/or should be availing the services of bank (such as fixed deposits, depository services, mutual funds

etc.)

- All respondents must be using the Internet banking services.
- The respondents must have attained, the 18 years of age and are independent decision makers. The adult retail bank customers have been selected from the Delhi & NCR region.

The retail customers consist of the sample units of this study. Out of total 200 questionnaires distributed to the respondents, we found 162 (one hundred and sixty two) questionnaires were completed in all respects. Therefore, incomplete questionnaires have been deleted from the study.

## Results

### *Socio-Demographic Profile: Income*

Results reveal that high household income group customers (in the range of Rs 2.4 to 3.6 lacks per annum) compare to other income groups prefer technological channel more for banking transactions. On the contrary, correlation analysis points out that there is an insignificant ( $r = 0.238$ ,  $p > 0.05$ ) relationship between the income and usage of technological channel. This means that in addition to income some other socio- demographic factor should be analyzed.

### Education

It is found that in the technological channel-preferring customers, 33.57 percent have education up to undergraduate level and 62.43 percent have up to graduation level. Further analysis suggests, technology-preferring customers have more years of education (mean=16.16 years) and hence are more qualified (Table 4). Similarly, when correlation has been computed, it is found that there is a significant relationship ( $r = 0.452$ ,  $p < 0.05$ ), that is, preference for technological channel increases with the increase in the education level. This can be explained by the Lee and Moray (2002), research. They found that whether the customer uses a computer system is dependent on the customers' understanding of the underlying characteristic and processes that govern the computer system's behavior. But, the problem is that the technology is so complicated that it could not be explained in simple terms to uneducated customers. This can be concluded that education has significant influence on the uses of the Internet banking.

**Table IV : Technology Preferring Customers Socio-demographic Characteristics (N=162)**

Mean & Range	Age	Number of Family Member	Household Income (p.a)	Years Spent in Education
Mean	32.48	3.53	2.23	16.16
Min. 20	1.00	2.00	14.00	
Max. 48	5.00	4.00	20.00	
S.D. 8.7	1.87	1.49	4.02	

Note : Income(per annum)More than Rs.1.2 lakh = 1, More than Rs.2.4 lakh = 2, More than Rs.3.6 lakh = 3, More than Rs.4.8 lakh = 4

### Age Group and Gender

To test whether the preference for technological channel is similar among the different age groups and gender or does it differ significantly, average number of times the technological channel used per month has been computed across the various groups of age and gender. Further, F-ratio has been calculated to test the significance level of the variation (Table V). Studies done earlier have also seen differences in how men and women use the internet (e.g. Hiroshi Ono and Madeline Zavodny, 2003), their online communication styles (eg. Herring, 1993; Witmer and Katzman, 1997). McCormick et. al. (1993), suggests that the computer has no inherent gender bias, but computer culture is socially constructed as male. For example, men are more interested than women in experimenting and playing with the technology.

**Table V : Technological Usage Pattern Across Various Age Groups**

Age-wise

Age Group	(<21)	(21-25)	(26-30)	(31-35)	(36-40)	(41-45)	(46-50)	(51-60)	(>60)
IT Channel usage*	0.67	2.99	3.07	2.47	2.28	2.1	1.62	2	2.30

\*Average number of technological channel usage per month for banking transaction

F-ratio (Age-wise) = 3.428,  $p < 0.05$

### Technological Usage Pattern Across the Gender

Gender-wise

Gender	Male	Female
IT Channel usage*	4.32	2.45

\*Average number of technological channel usage per month for banking transaction

Two independent samples

t-test (gender-wise) = 4.377,  $p < 0.05$

Results reveal that there is a significant variation among the age groups. More particularly, usage of technological channel is found to be high in the 21-25 years age and 26-30 years age. Followed closely by the age groups of 31-35 years and 36-40 years. High F-ratio for gender implies that technological channel usage is polarized towards male. Amazingly, no correlation was found in 'other' socio-demographic category. In a nutshell, it can be concluded that it is the socio-demographic traits (except income) of the customers, which determines the technological channel usage.

The correlation analysis has been applied to find out the impact of relative benefit, security concerns, level of information, decision-making capability, and observability on the customer use of internet banking. The correlation results [Table V] reveal that customer's use of Internet banking is significantly positive correlated with relative benefit ( $r = 0.432$ ,  $p < 0.01$ ), level of information ( $r = 0.335$ ,  $p < 0.01$ ) and decision making capability ( $r = 0.515$ ,  $p < 0.01$ ) and significantly negative with the security concerns ( $r = -0.258$ ,  $p < 0.05$ ). Also, there is insignificant correlation between observability ( $r = 0.133$ ,  $p > 0.05$ ) and use of internet banking.

Further, regression analysis brought these findings into sharp focus. As expected, there is a significant positive influence of relative benefit ( $= 2.354$ , 't' value = 3.467,  $p < 0.01$ ) [Table VI] on use of Internet banking. Thus, the null hypothesis (H0) that, there is an insignificant relationship between online benefit and customer's use of internet banking, stands rejected and alternate hypothesis (H1) stands accepted.

We found a significant negative influence of security concern ( $= -0.342$ , 't' value = -1.986,  $p < 0.05$ ) [Table VI] on use of Internet banking. Thus, the null hypothesis (H0) in Internet banking that 'security concern is insignificantly related to the use of internet banking' has been rejected and the alternate hypothesis H2 has been accepted.

Also, there is a significant positive influence of level of information ( $= 0.515$ ,  $t = 4.840$ ,  $p < 0.05$ ) [Table VI] on



use of Internet banking, though, it has been observed so at significance level of  $p < 0.05$ . Thus, the null hypothesis (H0); that the information search on the online bank, significantly influences the use of Internet banking, has been rejected and alternate hypothesis (H3) has been accepted.

Also, there is a significant positive influence of consumer decision-making capacity ( $= 2.418$ ,  $t = 4.840$ ,  $p < 0.05$ ) [Table VI] on use of Internet banking, though, it has been observed so at significance level of  $p < 0.05$ . Thus, the null hypothesis (H0) in Internet banking, that customers' decision-making capacity insignificantly influences the use of Internet banking, has been rejected and alternate hypothesis (H4) has been accepted.

Also, regression analysis results confirm that these five variables i.e. relative benefit, security concerns, level of information, and decision-making capability together explains significantly 47.3% ( $r^2 = 0.473$ ,  $F = 12.442$ ,  $p < 0.01$ ) of the variance in customer's use of Internet banking. In our analysis, we observed the following regression equation of customer's use of Internet banking:

$$\text{Internet Banking Usage} = 37.109 + 0.033 \text{ Relative Benefit} + 0.418 \text{ Level of Information} + \text{Decision making capability} - 0.342 \text{ Security Concerns} \{S.E.: 4.774\}.$$

### Model for the Internet Banking Usage

Based on the above-discussed findings of the survey and the reviewed literature, a model of the factors influencing use of internet banking services is proposed as follows (Figure 1). The most significant predictors of usage in this case turned out to be relative benefits, security and trust concern and level of information of the services. The proposed model is not intended to be fully comprehensive or universally applicable, but rather it should be viewed as one of the insights into use of internet banking services.



**Table VI : Intercorrelation Results of Internet Banking Usage and its Determinants**

n =192

	Relative Benefit	Security Concerns	Level of Information	Decision making capability	Observability	Internet Banking Usage
Relative Benefit	1.000					
Security & trust Concerns	-0.377**	1.000				
Level of Information	0.413**	-0.247*	1.000			
Decision making capability	0.637**	-0.414**	0.482*	1.000		
Observability	0.248**	0.342**	0.211	0.165	1.000	
Internet Banking Usage	0.432*	-0.258**	0.335*	0.515*	0.133	1.000

\* p < 0.05 (Two-tailed test), \*\* p < 0.01 (Two-tailed test)

**Table VII : Regression Results of Internet Banking Usage on Relative Benefit, Security Concerns, Level of Information, Decision-Making Capability, and Observability**

Dependent Variables →  
Independent Variables ↓

n =192

	Relative Benefit	Security Concerns	Level of Information	Decision making capability	Observability
Internet Banking Usage	2.354**	-0.342**	0.512**	2.418**	0.145*

\*p < 0.05 (Two-tailed test), \*\* p < 0.01 (Two-tailed test)

Age is negatively correlated with the use of internet banking services. Contrary to the popular believe, our study points that there is no relationship with the income.

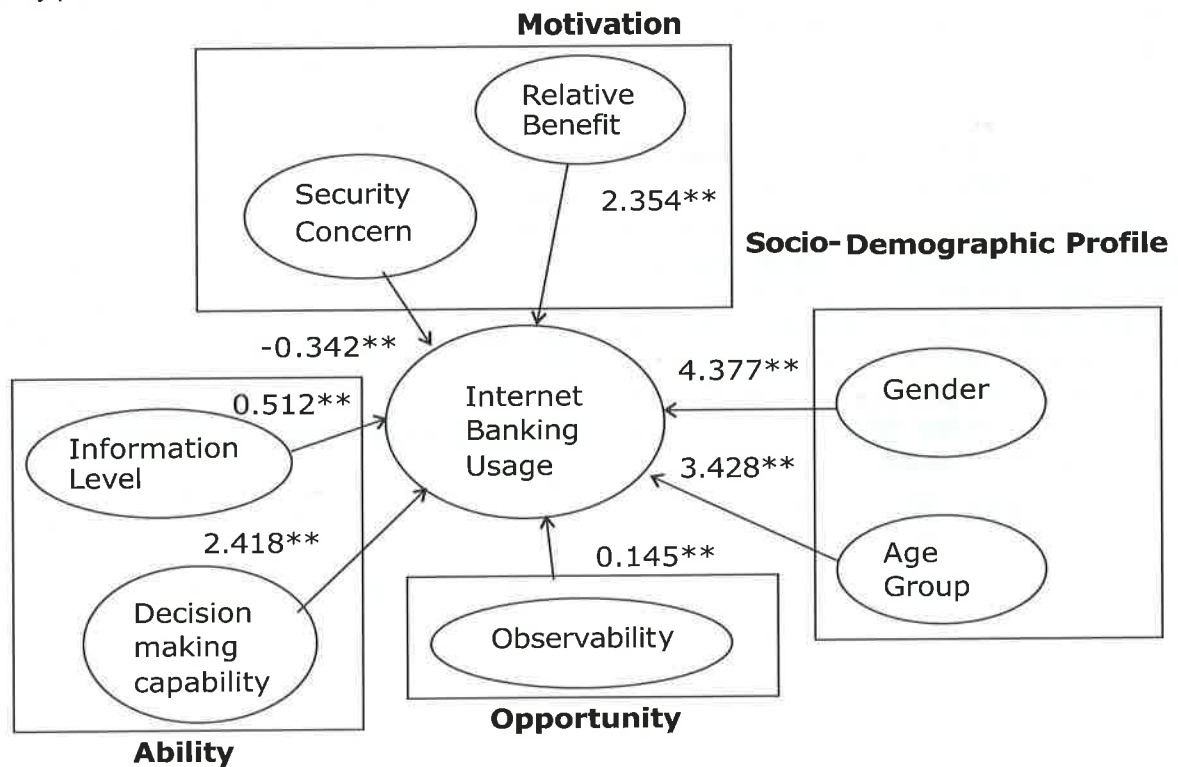


Figure I

## Managerial Implications

This study showed that relative benefit, security concern, decision-making capability, observability, gender and age group are the major factors affecting the usage of Internet bank services. The factors identified are in line with findings reported in previous studies mentioned earlier in the paper.

Banks must target younger customers for the internet banking services. Younger customers are generally less risk averse than elder customers. Also males are using more internet banking than females. However, income is not the indicator of internet usage. Interestingly it is a myth that higher income profile customers should be targeted. Most of the data on the explanatory variables, such as the demographic and social economic indicators can be readily found in the database of customers. Hence, financial institutions will be able to construct the profile of their own customers. Equipped with information on customers who already adopt internet banking or likely to do so, banks will be able to identify the market segments that should be targeted. They can then introduce banking products and services that better suit the needs and wants of the customers in the segment.

Technologically enabled electronic delivery channel do not constitute service offering and create value alone, but service contents (e.g. funds transfer or stock trades and quotes) have to function properly and ways of usage have to be known. Evidence also indicates that there are greater promotional efforts on the part of banks to create greater awareness of Internet banking and its benefits is important for the success of Internet banking services patronage. As observability is also linked with the usage of internet banking. Thus, the level of such promotional activities by banks at present is not surprising.

Technology has infused to the service encounters of financial institutions. Knowledgeable and demanding customers assume that banking service providers acting in technology driven environment will continue to keep up with the development; apply technological innovation further in service offerings and consequently ease up the everyday lives of the customers. As customers are using the internet banking due to its relative advantage over traditional banking.

Specifically, the concern about the security of doing online banking (for example, security of providing credit card information and other financial information) and lack of privacy on internet must be taken care of. To reassure customers that the information they provide will not be misused and their privacy will be respected. A

number of banks now provide guarantees on their sites confirming their adherence to a code of conduct relating to the security of information. Also adhering to the policy of permission marketing, would reduce the perception of opportunistic behavior.

Bank should help in the decision-making capability of customer, say, by providing online financial advisor. Also customer should be provided easy accessibility to information. Reasons could be; most consumers will conduct information searches on the on-line channel before using it to buy financial products. Because of the associated risks, financial decision-making is highly involving. The risks are derived from consumer fear that using the on-line channel may result in unfavorable outcomes. The potential for economic loss, combined with the privacy and security concerns associated with this channel, make its use a high-involvement decision. The high-involvement nature of the context encourages consumers to get as much information as possible about the channel. Literature on traditional consumer behavior suggests that high involvement generates intense efforts by the consumer to attend to, and search out sources of information. The search process may involve activities such as; browsing Web sites for financial information, evaluating service alternatives, reviewing information about service providers, and exchanging information with others. In turn, information obtained gives them an opportunity to experience the channel and attain a certain level of comfort before they are ready to conduct transactions. Engaging in activities of this kind makes the consumer more comfortable with the medium and less inclined to see it as risky.

## References

- Anderson, J. C. and J. A. Narus** (1984), "A model of distributor's perspective of distributor-manufacturer working relationships." *Journal of Marketing*, 48 (Fall): 62-74.
- Deborah J. MacInnis, Christine Moorman, Bernard J. Jaworski** (1989), "Information processing from advertisement towards an integrative framework" *Journal of Marketing*, Vol. 53, No. 4 (Oct.), pp. 1-23
- Hiroshi Ono and Madeline Zavodny**. Gender and the Internet. *Social Science Quarterly* Volume 84 Page 111 - March 2003, Issue 1.
- Herring, Susan C.** (1993). "Gender and democracy in computer-mediated communication." *Electronic Journal of Communication* 3(2).
- Jones, Rainie** (2003), "Gender Online", for *The Internet and American Life*, ed. Howard, Thousand Oaks, CA: Sage.

**John, G.** (1984). "An empirical investigation of some antecedents of opportunism in a marketing channel." *Journal of marketing Research*, 21, 278-289.

**McCormick, N.B. and J.W. McCormick.** (1992). "Computer friends and foes: Content of undergraduates' electronic mail." *Computers in Human Behavior* 8, 379-405.

**Milne, G.R. & Boza, M.E.** (1999), 'Trust and concern in consumers perceptions of marketing information management practices', *Journal of Interactive Marketing*, 13(1), 5-24.

**Morgan, Robert M. and Shelby D. Hunt** (1994), "The commitment-trust theory of relationship marketing." *Journal of Marketing*, 58 (3): 20-39.

**Nicholas C. Romano, Jr. and Jerry Fjermestad,** *Electronic Commerce Customer Relationship Management: A Research Agenda. Information Technology and Management, Volume 4 , Issue 2-3 (April-July 2003), Pages: 233 - 258 .*

Organisation of Functions and Tasks, Retail Bank Survey; McKinsey Analysis 2002

**Ramaswami, Sridhar N.; Troy J. Strader; and Karen Brett** (2001), "Determinants of Online Channel Use for Purchasing Financial Products", *International Journal of Electronic Commerce Summer, Vol. 5, No. 4, pp. 155157*

**Robert Duncan,** (1972) *Characteristics of Perceived Environments and Perceived Environmental Uncertainty, Administrative Science Quarterly* 17, 1972 Indian Bank Association (IBA), Bank Survey.

**Rogers, Everett M** (1995). *Diffusion of Innovations.* 4th ed. New York: Free Press.

**Witmer, D., & Katzman S.** (1997). On-line smiles: Does gender make a difference in the use of graphic accents? *Journal of Computer-Mediated Communication*, 2 (4).

**Zaltman, G., Duncan, R., and Holbeck, J.** (1973). *Innovations and Organizations*, New York: Wiley & Sons.



## Positioning a State as a Tourism Destination - A Case Study of Jharkhand

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### Abstract

*Even though the true potential of the tourism sector, not only as a revenue generator to the country but also as a major employment generator, has been recognized by different sections of the society, the necessary measures to remedy this situation fall short of expectations. The scenario can be remedied by initiating certain measures. Creating a better infrastructure, communicating right information, utilization of existing resources and creating a secured environment are expected from the Government. Inculcating a sense of responsibility to behave well with tourists and encourage them to revisit the rich cultural heritage sites are crucial. The importance of tourism, though being realized by various states has still not created the will that can really make them realize the potential. Jharkhand state in the Eastern part of the India is one such state that can do a lot with its tourism potential but still it is lagging behind. The present study has been carried out to underscore what the State's potential in tourism sector and how to enable it to achieve that.*

**Key Words :** Tourism Industry, Effective Positioning, Jharkhand, Heritage, Emerging Economies

### Introduction

Travel is today developing as one of the world's largest industries according to the World Travel and Tourism Council. It has been estimated that 10% of all jobs and GDP is contributed by this sector globally. Worldwide, travel and tourism sector encompassing transport, accommodation, catering, recreation and services for visitors is the highest priority industry and is emerging as

one of the largest employers. The industry is human resource intensive capable of creating quality jobs across the full employment spectrum accounting for 8.7% of global employment. In 2005 the industry garnered revenues to the tune of \$6tn. Today there are 76.7 million travel and tourism industry jobs and 234.3 million jobs in the travel and tourism economy and these will raise to 89.5 million Travel and Tourism Industry jobs

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and 279.3 million travel and tourism economy jobs by 2016.

India is fast becoming a popular tourism destination with record growth of 13% in year 2006 in comparison to year 2005 as 4.43 million people visited India from various countries against 3.93 million. It has its direct impact in foreign exchange earnings. In duration of one year (2005-2006) there was a phenomenal increase of 14.6 percent from US\$ 6,569.34 million as against US\$ 5,730.86 million. Though these are encouraging signals about the Indian tourism sector, there is another side to this story. There is a huge gap between the untapped potential and the reality. If we make a comparison with our Asian neighbour, we will find significantly larger volume of International visitors in these small countries such as Singapore, Thailand and Malaysia. Singapore could successfully attract 8.94 million tourists and generated revenue of \$10.8 billion, Thailand hosted 15.3 million tourists and generated more than 5, 25,000 million Bhats, while Malaysia attracted 16.43 million tourists in 2005 and generated revenue of Ringgit 31,954.1 million. Further, even neighboring China have a share of 4.3% of world tourism's earnings, India, with an comparable diverse culture and heritage, has a share of only 0.89% in world tourism's earnings.

This discernible difference and the huge untapped potential provide opportunities to both the government and other stakeholders of the tourism industry. This less return of true tourism potential is often attributed to a lack of promotion of its tourism destinations.

Tourism has been a neglected area hitherto in our country. Of late, though, the Government has identified the revenue earning potential of tourism as an industry and has stated giving some real improvements. The 'Atithi Devo Bhav' campaign of Ministry of Tourism is slowly but surely picking up, yet, lot has to be done. Against this backdrop the present study aims to carry out a strength analysis of Jharkhand, one of the newer states of the country which has potential but it is not able to capitalize on that.

## About the State

On 15th November 2000, the Jharkhand state was formed by carving out 18 districts of the erstwhile southern region of Bihar commonly known as Chotanagpur plateau into a separate block. Some other areas were also included in this but by and large districts falling in Chotanagpur region comprise the state. Today the state has 22 districts and its capital is Ranchi, the place which earlier used to be the summer capital of Bihar.

As the name Jharkhand implies, this new state has large

stretches of forest and greenery. In fact, in a way the division of Bihar has worked to the advantage of Jharkhand as the state consists of 46 percent of the land area of erstwhile Bihar while taking around 33 percent share of the population. Land locked by Bihar, Orissa, West Bengal, Madhya Pradesh and Uttar Pradesh, the state has a total area of 79, 714 square kilometers which is pre dominantly Rural, 79 percent of united Bihar now fall in Jharkhand. It is one of the few states, which have a surplus budget.

When Jharkhand was a part of Bihar, the region was known for rich mineral deposits and rulers from Patna were only interested in exploiting the mineral wealth of the Chotanagpur plateau. No attempt, what so ever, was made to promote the natural beauty that was so bountiful here - the rich forests, the beautiful hills, the lush green ambience, the pleasant weather, and the variety of vegetation. Whatever tourism was taking place it was in the name of religion. So Baidyanath Dham the famous temple of lord Shiva and Parasnath, the seat of Jain Tirthankar Parshwanath were the two most celebrated tourist attractions that attracted largely religious crowd. There was no attempt to promote pleasure or vacation tourism. In fact, few were aware, that the region had tremendous potential for eco-tourism, the in thing today.

With the formation of the new state, tourism potential of the state can be exploited to the hilt. 'Beauty' as is popularly said is in the beholders eye", and is largely perceived and suggestive. One of the World's most famous waterfalls is Niagara falls and it is only around 175 feet high. Compare this with world's highest cascade; Venezuela's Angel falls at 3200 feet or even our own Indian one, the Jog falls of Karnataka, at 830 feet. This is what marketing does. And this is what the state needs to do - aggressive marketing.

## Tourism Potential of the State

The state has a tremendous potential for tourism. Its tourism strength lies in several areas. There are some very famous Pilgrimage sites that attract people from all over the world. Parasnath situated some 45 kilometers from the industrial town ship of Dhanbad attracts Jain devotees from the entire globe. However the interesting fact is that it is a fantastic site for pleasure tourism as well. The seat of famous Jain Tirthankar Parshwanath, the place has temples of all the Jain Tirthankars situated at the top of the Parasnath hills, a group of hillocks that attracts crowds loving hiking and adventure seeking trekkers in big numbers. For the families, too, the place has tremendous attraction. So from tranquility and divine peace to mundane pleasure, the place is a hot spot. With some effective marketing it can become an

internationally acclaimed tourist attraction.

Baidyanath Dham, the famous abode of Lord Shiva, is well known. Popularly called Baba Dham, the place is the seat of one of the twelve jyotirlingas of Lord Shankar and the legend has it that Demon King Ravana established it. A world famous pilgrimage for the Shaivites. Baidyapath Dham is situated in Deoghar town which is well connected with rail as well as road. However, apart from pilgrimage, it is a beautiful place for pleasure tourism. Today Baidyanath Dham is famous for the huge crowd of Lord Shiva's devotees popularly called 'Kanwarias' who come all the way from their respective places to carry the water from the River Ganges at Sultanganj and pour it on the Shivalingam at Babadham. Many of these Kanwarias make a journey of around a hundred kilometers on foot. All dressed in saffron they present a wonderful sight.

There are two very famous abodes of Goddess Durga in the state that attract devotees from all over India. Maithan near Dhanbad and Rajrappa near Ramgarh are two very important Pilgrimages. The interesting coincidence is that these places too have tremendous potential for pleasure tourism.

The state thus has the potential to attract tourists of every hue and colour. The only requirement is to market its tourism potential aggressively. An analysis of the tourism potential of the state is carried out in the ongoing lines to present a clear picture.

## Jharkhand's Rich Heritage

Jharkhand has the potential to become a very popular tourism destination given the various tourist attractions it can offer. In fact there is something for every kind of tourism in the state-right from pilgrimage to eco-tourism. Jharkhand has places, which are famous pilgrimage sites. Apart from Baidyanath Dham and Parasnath mentioned earlier there are a number of religious places, which can be developed into very important pilgrimage sites.

While Rajrappa, Maithan are well known many more such places are there that can attract devotees in large numbers. In fact many of these places can be popular heritage sites also, given the history. Near Dhanbad, around a distance of 25 kilometers there is a small town Nirsa. In Pandra village of this town there is Kapileshwar temple that has a history of thousands of years. This temple of Lord Shiva is also called Panch Pandeshwar temple as it is supposed to be built by Pandavas (famous heroes of the Mahabharat era in the Dwapar Yuga according to Hindu Mythology). The legend goes that the Pandavas spent some time here during their forced exile after the famous defeat in the great gamble

with Duryodhana. This temple has five Shiva lingas established by the five Pandava brothers.

Another important religious site is Litori Sthan, the temple is an incarnation of Goddess Durga. It is situated at around 12 kilometers from Dhanbad. The place attracts pilgrims from near by regions. This temple also has an old history of hundreds of years.

There is another important Pilgrim site near Topchachi some 30 kilometers away from Dhanbad. This is the Mazar (Grave) of a Fir (saint) called Baba Hazrat Abdul Shah. Many people flock here for boon. Though Baba was a Muslim the devotees who throng here every day cut across religion. With a bit of marketing this place can be developed into a popular site.

In fact, there are several such places, which have a long history and were built by legendary rulers. Basukinath, near Baidyanath Dham is another important place that attracts pilgrims who come to Baidyanath Dham. This is also a temple of Lord Shiva. In fact, Shiva and Durga temples are more common in the region and the erstwhile rulers built these temples taking into account the popular psychology of the people. The interesting thing is that these sites are situated in remote areas and can become important centers for pleasure tourism given the ambience. Most of the famous temples are surrounded by beautiful hills or are atop a hill or near a river or in a forest. With a lot of packaging and marketing they can easily become centers of tourist attraction.

Some of the important tourist attractions of the state are given below:

- Religious places - Baidyanath Dham, Parasnath, Rajrappa, Maithan, Basukinath, Litori sthan, Shakti Mandir, etc.
- Pleasure sites - Parasnath, Basukinath, Trikut hill, Nandan hill, Maithan Dam, Panchet Dam, Tilaiya Dam, Rajrappa, Ramgarh, Hundru falls, Jonha falls, Usri falls, Gautam Dhara, Dimna Lake, Dasham falls, Topchanchi, Masanjore Dam, etc.
- Health resorts/retreats -Netarhat, Ramgarh, Ghamaria, Parasnath, Angada, Ghatshila, Hazaribagh, etc.
- Wild life/forests - Ghatshila, Hazaribagh, Koderma, Chaibasa, Gumla etc.
- Eco-tourism - Netarhat, Hazaribagh, Chaibasa, Ghatshila, Rajmahal hills etc.
- Miscellaneous - Central Institute of Mining and Fuel Research, Indian School of Mines, Indian Lac Research Institute, BIT Mesra, BIT Sindri, Coal Mines, Forests etc.

The above-mentioned list is suggestive and not

exhaustive. The places mentioned above are already popular and with aggressive marketing these can grow into well-known national tourist sites. Another important aspect is that there are lesser-known sites that can be developed into important sites with the help of customized marketing.

Generally, it is effective to market a particular site as a package i.e. offering different things to different class of tourists. For example, Parasnath. This hill complex can be packaged as a site for pilgrimage, heritage, eco-tourism, health resort, adventure etc. Most of the sites in Jharkhand are of this category.

Apart from these sites for different classes of tourists, Jharkhand, contrary to popular belief is not just barren, hilly and fruitless forests. It is culturally very rich and if the right packaging is provided the state can be an attractive destination for cultural tourism. In addition heritage sites, depicting life and styles of indigenous people, the tribal, can be developed. Folk songs and Folk dances of Jharkhand are significant culturally and can compete with the other popular dances like Kathakali and Bharatnatyam, etc., of Southern India. The 'Chhou' Dance Ceremonially inaugurated on the last day of Chaitra (a month in the Hindu Calendar coinciding with March-April) is a case in point. This dance is performed at the open courtyards attached to shrines of village Gods.

The State has some thing to offer to the historians, the naturalists, the anthropologists as well as the Indologist. The region is extremely important from anthropological point of view. The basic population comprises four principal groups, viz., the Bhumij, who call themselves Sardar, the Mura, generally known as Mundas, the Santhal, and, the Kurmi, known also as Mahato or Kurma Kshatriya. They are all independent groups of people who in most cases show cultural affinities.

The Mura worships the Sun God in the name of Sing Bonga, the same God who is worshipped in the name of Dharam by the Bhumij. Sing Bonga is the Supreme God of the Mura. There are other Gods lower in rank like Marang Buru, the Mountain God.

The Mura of Manbhum is most ardent participants in Chhou dance. With practically no education and social advancement the members of this community have been performing this art, which is based on the episodes of Ramayana and the Mahabharata and the Indian classical literature most faithfully, in some cases, for generations. Mura is the trainer of the "Ostad" in many cases. Sometimes the entire village, however poor, inhabited exclusively by the Mura, sacrifices its hard-earned resources for the cause of organizing Chhou dance parties. Their passion for dance and eagerness

to preserve its character considering it to be a very sacred duty of each of them is indeed very remarkable. The episodes are being handed down through the generations only orally and each performer of the dance considers it his sacred duty to preserve the tradition. But their day-to-day life is otherwise hard.

The ruins of the Jain and the Buddhist temples scattered throughout this region bear testimony of a very ancient culture of this area. Here Buddhism followed Jainism as is evident from a large number of temples. This region played an important role in history during the period of ascendancy of Jainism and Buddhism in India.

That Chhou dance of Manbhum has a very ancient origin can also be guessed from a comparative study of the origin and development of two other ancient forms of Indian dance -Manipuri and Kathakali. Both these forms were integrated in the socio-cultural life of the people of the respective regions of their origin and they developed with the progress of the socio-cultural life there. Manipuri dance had advanced the cause of India's cultural integration, on the one hand with Burma, and, on the other hand with Bengal, on the basis of its own tribal character. The Kathakali has also a homologous history. It has also incorporated into it -tribal, folk and classical cultural elements, in the course of the development of the country's cultural life. The Chhou dance is not an exception, and therefore, unless the ancient history of Manbhum is explored to some national extent, the story of its origin and development will be difficult even to guess.

Showcasing these through cultural fests can go a long way in development of Jharkhand as a tourist destination. But before all this can be done it is very important to address the weaknesses of the state that discourage tourism. First and foremost is the image of the state as ill-managed, terrorist infested unsafe state where travel is highly risky. This may be true in certain measure in some areas but it cannot be generalized for the whole state. The state also is known for poor infrastructure that includes power shortage, communication road connectivity and other basic facilities. This image again is a dampener. It is important for the state to promote the state as a safe and comfortable destination.

The state government needs to act fast. The boom period of tourism is here and it is prudent to catch up with the mood and wallet of the middle class whose propensity for fun and enjoyment, pleasure and adventure is growing by the hour.

Timely action needs to be taken as threat in the form of competition from other states is intensifying. Even governments of Bihar and West Bengal have gone for

aggressive marketing of their respective states as tourist destination. Uttranchal, Chattisgarh are other contenders who are eyeing for a share in the growing tourism market. In addition the established tourist destination like Goa, Kerala, Himachal Pradesh, Madhya Pradesh and Rajasthan have gone for the kill. These are no mean threats and image building of the state has to begin in the right earnest and right now. When Rajasthan can think of promoting tourism in rural areas one can well imagine the kind of competition that is there in the tourism market.

## Tourism in Jharkhand

Tourism can be a major source revenue and economic sustenance for not only the country but various states, too. Particularly the ones that enjoy bounty of the nature. Kerala has already done it. Himachal is doing it. Even states like West Bengal are aiming at it. With the Government of India loosening its purse-strings for the first time to spend \$ 2 million on an electronic media campaign aimed at luring tourists to India, it will be interesting to see how tourism is being harnessed by States.

The Jharkhand State comprising 22 districts of mineral rich Chotanagpur Plateau of the erstwhile southern region of Bihar has been endowed with bountiful natural resources. In fact, it has the 90 percent of the mineral reserves of the whole country. These facts, however, are well known. But, what is not known is the reality that Jharkhand State has the potential to become a highly attractive tourism destination. This has to be marketed.

Given the number of beautiful tourist spots that the state has, if the Jharkhand Government takes proper steps tourism can be developed into a major revenue earner for the state's kitty, creating income generation opportunities in primary, secondary and tertiary sectors.

With the creation of a separate state of Jharkhand on November 15, 2000, tourism is being viewed as an important department of the government. In the erstwhile Bihar, southern region comprising the Jharkhand was only important for minerals. But the Jharkhand government is now realizing that the state can become an attractive tourist destination.

Tourism is now viewed as one of the key sectors of economic growth and development in the state, both from the point of view of income and employment generation as well as a source of revenue for the state.

It may be pointed out that in a very short duration after the formation of the state, the government of Jharkhand analysed the potential for developing the state and took some concrete steps to promote and develop tourism in

the state. It had announced a forward-looking tourism policy, which clearly recognizes the strengths and weakness and potential of tourism in the state. This tourism policy is not merely a policy statement but is an attempt to analyse the tourism potential and strengths, of Jharkhand along with the weakness and challenges, which lie ahead.

The strengths and assets of Jharkhand clearly are pilgrimage, cultural tourism, heritage, eco-tourism, adventure tourism and wellness.

The challenges are the augmentation of infrastructure facilities with particular focus on improving air, rail and road connectivity, and development of new tourist destinations, enhanced private sector participation, an aggressive and well planned publicity and marketing strategy, a more action-oriented tourism administration and management, year round tourism and the more active participation of local host communities.

On the basis of the analysis, a road map for the development of tourism in the state is being drawn up. The first and the foremost step taken was to abolish the tourism directorate (which was an age old bureaucratic organization totally out of tune with the latest trends and development in the tourism sector) and replace it with Jharkhand Tourism Development Board (JTDB), through an Act. This board was to have the benefit of experts from the tourism sector who would advice and guide the government in tourism related matters. The JTDB was supposed to work professionally to look after divisions pertaining to projects formulation, finance and investment, and publicity and marketing. However, the progress is still very tardy.

In order to ensure planned development and growth, a master plan approach needs to be adopted. Though the state government did initiate several steps to improve the air, rail and road connectivity a lot still needs to be done. Air connectivity of the state is poor and Ranchi is the only city having an airport that connects to some states and cities of the country.

## What Needs to be Done

True, the state government has realized that tourism can be a major revenue earner for the state. But a lot needs to be done.

What is required is to get the basics right first. Specifics can follow. Moreover, once the basics are taken care of the strategies for promoting tourism at various sites can be dealt on case-to-case basis.

The tourism product is different from other products. A tourism product is the combination of tourism services and offerings being provided by the different



constituents of the tourism industry. The landscape, Lush Greenery, Wildlife adventure, stay in hotel, traveling, festival, tradition and culture of the host country/destination, etc. constitute the invisible and intangible structure of the tourism product. These must be identified and properly classified.

The government of Jharkhand should first study the prospects of tourism in a scientific way. The following issues are important-

- Understanding the tourist needs, wants, tastes and attitudes
- Achieving sustainable growth in tourist arrivals
- Increasing tourist traffic during lean seasons
- Attempting to increase the length of stay of the tourist
- Dispersing tourist to new destinations and
- Enhancing image and popularity, etc of tourism destinations.

### **Some Major Areas Where Action is Required**

So, what are the hurdles that need to be overcome for promoting tourism in Jharkhand. First of all Tourism in Jharkhand has not yet received the focus of a state activity. Tourism Development in Jharkhand is also affected by the fact that awareness and sensitivity about the potential of tourism has not percolated to all sections of the society.

The following ground realities should be kept in mind about the state.

- Inadequate & poor quality of infrastructure
- Carrying capacity by air, road and railways
- Clean and comfortable lodging facilities at reasonable prices
- Trained guides and tourist amenities of international standard
- Adequate entry points
- Positive image building abroad
- The need to preserve the heritage and natural resources
- Safe and secure tourism,

Now keeping these ground realities in mind, what should be the action plan for Jharkhand? The future action programme should revolve around creating adequate infrastructure of international standard to make arrivals easy and a pleasurable experience.

### **Conclusion**

In little over a decade, India has become one of the significant emerging economies. Its economy is growing at over 8 per cent a year, making it the fastest growing free-market democracy. Indian industry is ticking along at double digits, while services sector continues to lead the overall growth surge. It is tourism, however, which has recorded the highest levels of growth - more than 15 per cent per annum over the last three years.

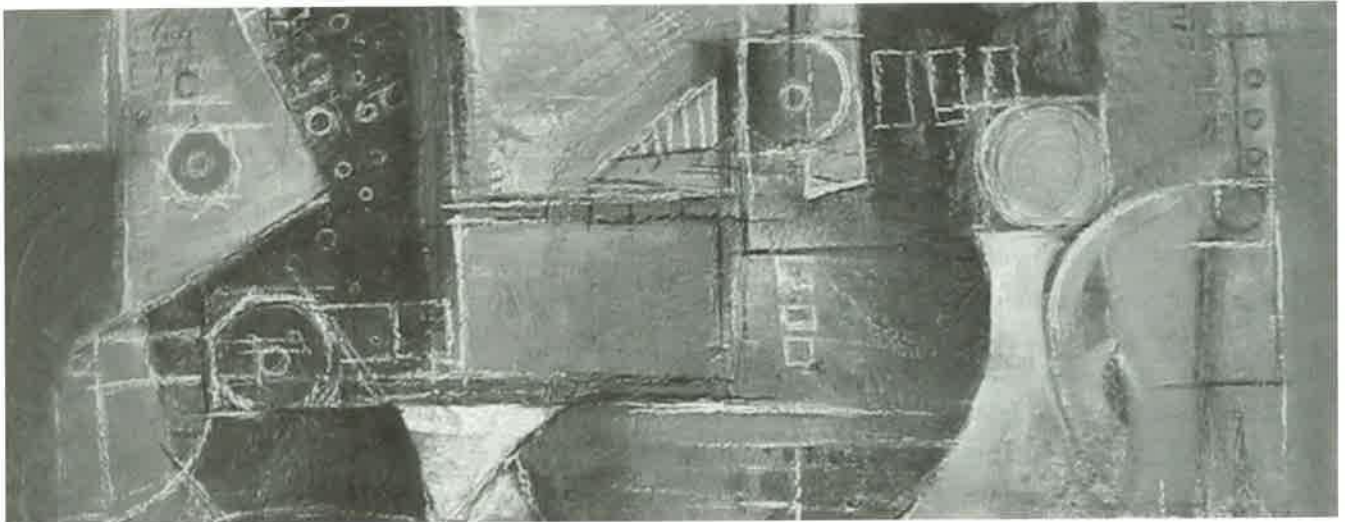
It is now recognised that India's economic growth has to be employment-driven and blend with social equity. Tourism has the capacity to capitalize on the country's success in the services sector and provide sustainable economic growth over the long term. It can stimulate most economic sectors through backward and forward linkages and cross-sectoral synergies. A recent study by National Council for Applied Economic Research reveals that tourism's contribution towards GDP (both direct and indirect) is 5.9 percent, and towards employment (both direct and indirect) 8.78 percent.

Opening up of the skies and a successful branding and positioning campaign 'Incredible India' have driven the growth of tourism in India. Air transport is a driver of economic development. The economic stimuli of airlines, airports and direct affiliates beyond their direct impact can be expressed using output and employment multipliers. The states, too, need to pick up their cues.

The new policy initiatives have led to emergence of low-cost carriers for the benefit of consumers. Tourism has benefited from private Indian carriers operating on international routes. A major development, for instance, has been direct operations of international flights to smaller cities such as Varanasi and Gaya. Something similar needs to be done for Jharkhand. The need is the creation, development and management of an international brand - a powerful brand that cuts across boundaries and cultures with ease.

While it is easy to position and brand a single destination like Maldives, Mauritius and Seychelles, it was extremely difficult to establish a clear identity for a multi-product, varied destination like India. India is bigger than 23 countries of Europe and every single state of India is unique. Incredible India has to be the mother brand with states establishing their own brand entity and emerging as sub-brands. Incredible India captures the underlying spirit of the country; its culture and spirituality.

There can be little doubt that Jharkhand state has the potential to become an exciting tourist destination. But the important point is that the policy makers will have to consider a variety of approaches to ensure that the state is showcased properly. The state needs to be positioned



properly and in this endeavour the support of travel agents, tour operators, travel writers, representatives of travel and hospitality industry associations, experts in the tourists and cultural sectors, diplomats, journalists and other opinion leaders is crucial.

Effective positioning depends on a number of factors that together determine the attractiveness of the tourist destination. Positioning must promise the benefit the customer will receive, create the expectation and offer a solution to the customer's problem.

Positioning as the first step should identify and select markets or segments that represent business potential. This must be based on thorough knowledge of needs, wants and perceptions of the target market along with the benefits offered by the destination. A few crucial questions must be answered. They are:

- What is important to the target market?
- How does the target market perceive the destination?
- What attributes should a destination use to differentiate itself to make the best use of its limited resources?

The reality of the matter is that if the target market doesn't perceive the image, the image does not exist. If the target market does not believe that what the destination has to offer is a benefit, it isn't a benefit. If the target market doesn't believe that the benefit can be delivered, promises are meaningless. If the benefit isn't important to the target market, it isn't important. If the benefit is not perceived as being different from that of the competition, then differentiation has not succeeded. In short, images, benefits, and differentiation are solely the perception of the tourist, not the perceptions of tourism officials or the tourism marketer. It is the mind of the tourists where a space has to be created.

But mere positioning is not enough even if it is the crucial first step. Providing high quality products and services is what is required. In the case of tourism this means the tourist sites and hospitality arrangements must satisfy the tourist. So the state government needs to go for development of new sites, facelift of existing sites and sprucing up the hospitality arrangement. Attempts are on in this regard but lot more needs to be done. Already the state government has initiated steps to develop a beautiful park at the mining town of Kiriburu in West Singhbhum on the lines of the famous Jubilee Park of Jamshedpur. Similarly Akarshani Devi temple at Saraikela in Kharsawan district is being developed on lines of Vaishno Devi temple. There efforts are going to pay rich dividends. However, careful planning and organizing is required for effective management and exploitation of tourism potential is to be achieved.

Before making any action plan for tourism the ground realities like inadequate and poor infrastructure, clean and comfortable lodging facility at reasonable charges and the carrying capacity of airlines, rail and road transport etc. need to be taken care of. However of late several states have proved that tourism marketing can work wonders as far as increasing the tourist inflow is concerned. Kerala, Goa, Himanchal have all come up with innovative ideas. They are harnessing the benefits too. The newly formed states like Uttaranchal, Chattisgarh and Jharkhand can take a cue from their older counterparts and make tourism a money-spinner for their states. More so, as tourism is catching up as fashion and passion with the Indian middle class.

In light of the above, Jharkhand state needs to market tourism in right earnest in order to exploit the potential that present. There is need for careful, systematic and long term perspective.

## References

**Gupta, Anil and Ghosh, Anil,** (2004) 'Tourism Marketing in India: Inviting the Domestic Traveler' Advertising Express, ICFAI Journal,

**Sood, Suresh,** '(2006) The Blogging of Travel and Tourism: Next Generation Travel Marketing and Advertising' Advertising Express, ICFAI Journal.

'Riding on Tourism', The Times of India, May 12, 2007

www.wttc.org, 'India-Travel and Tourism Climbing to New Heights, The 2006 Travel and Tourism Economic Research', last accessed on May 06, 2007

www.tourism.gov.in/statistics/fla06.htm last accessed on May 6, 2007

www.fhri.com/mag-news/magTourismStatisticsIndia.asp last accessed on May 2, 2007

www.dancewithshadows.com/blog/2007/01/incredible-india-campaign-works-foreign-tourist-arrival 'Incredible India Campaign Works: Foreign Tourist Arrival in India Grow at 13% in 2006'

'Record Increase in foreign Tourist Arrivals in India', Hindustan Times, Online Edition, April 18, 2007  
<http://www.hindustantimes.com/StoryPage/StoryPage.aspx?id=be1505b5-5664-493b-951a-2883c130e98a>

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## IDBI Bank — A Case of Fluctuating Brand Design and Corporate Identity Impact on Customer Loyalty and Satisfaction

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Gautam Billore\*\*

Ashish Sadh\*\*\*

### Abstract

*This study explores the branding strategies related to corporate brand design and brand image of the bank. It seeks to follow the changes that have occurred with the banks evolution and change and aims to study the impact of these strategies on the customer segments associated with the bank. It has particular focus on the different logos adopted by the bank during the past decade as an important element of the bank's positioning strategy. It also attempts to study the opinions of the employees and customers regarding the changes to draw attention to issues related to brand logo and its impact on identity within the target market of the bank.*

**Key Words :** Brand Logo, Corporate Design, Image Building, Retail Banking, Reverse Merger

### The IDBI BANK

The acronym IDBI comes from Industrial Development Bank of India. IDBI was formulated in 1964 as a wholly owned subsidiary of the Reserve Bank of India to help in the industrial development of the country focusing on the priority sectors identified by the Government. Later as the group developed and diversified, the IDBI Bank Ltd was created in 2004 to serve India with a range of banking operations.

Over the years the institution has taken several important strategic corporate decisions and been through many changes in its form .The latest change has been the reverse merger of the former parent group IDBI with its subsidiary IDBI Bank.

### Introduction

#### Corporate Brand Design

Corporate design is linked very closely to the concept of

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Corporate Identification and the evolution of the organization. Schmidt, K and Ludlow, C ( 2002) state that when a design becomes a corporate logo, it helps to trigger certain amount of identification, motivation and generates associations in the customers mind for a particular organization. This helps the organization to gain a STYLE, which can be understood in a CONSISTENT manner. It also helps the organization to get RECOGNISED and remain high on the scale of MEMORABILITY, which is the important aim of brand management. Studies by Henderson et al (2003) indicate that it is very important that a clear distinction is to be created so as to have a clear place in the mind of the end user of the brand at any given time.

Research by Van, R.; Cees, B.M and Van den Ban (2001) shows that most successful companies have adhered to the basic structure of their brand designs and logos and have done only a few cosmetic changes to the overall appearance with the motive of bringing a fresh look. For example SHELL and Coca Cola.

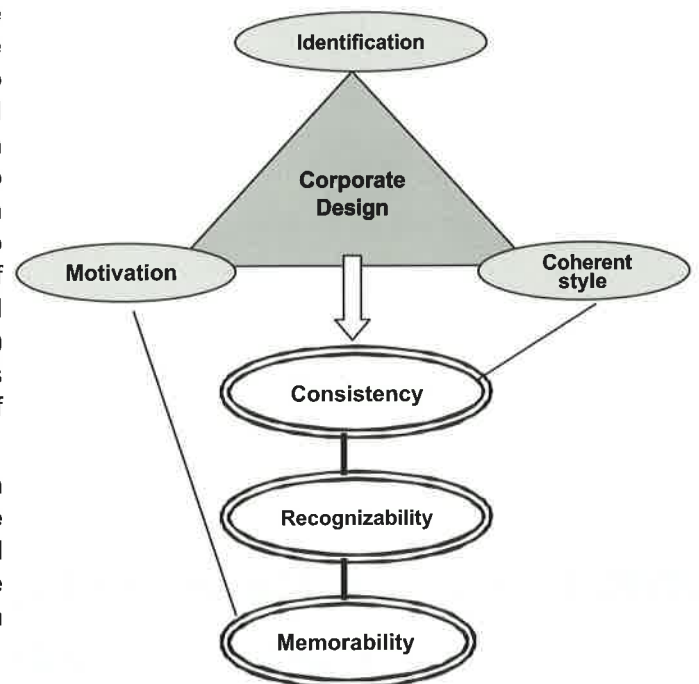
However, when a major restructuring occurs in a company or an organization, the changes in the design, if any, signify that a big change has occurred. The impact of the new corporate design or logo is often significant and the first impression created speaks volumes of the attitude generated among the consumers.

*"Design / Logo is a powerful ally who can unite, motivate, signal a change or continuity, trigger emotional and rational appeals, make associations, create differentiations and raise sales."*- Schmidt, K.

Gray(2006) indicates that in order to unleash the full performing capacity of the brand design, it has to be treated with carefully planned strategies and effectively within a holistic approach. Care has to be taken that the design is not a superficial link to the corporation. Instead the design should help link deep with the aims, mission and vision of the corporation. The design speaks all silently. Like everything else, design too generates first impressions that long last. Ogrizek (2002) suggests that Financial institutions especially banks can also leverage their branding status and customer recall through involvement in non business activities and improve their CSR image thereby enhancing customers trust in them.

## The Study of IDBI Bank

This paper deals with a financial institution and it's changing brand Identity over a short span of time. The brand design was an important agency of giving the customers a message about the Institutions culture and how it was attempting to reinvent, reposition and refurbish itself over a period of time. The changes in the brand architecture were kept in accordance with the



**Figure 1: The links of a corporate design: Shows the various parameters that influence an organization**

shift in the roles and responsibilities that the Bank decided to do in every change.

IDBI was set up under an act of Parliament as a wholly-owned subsidiary of the central bank called Reserve Bank of India (hence forth referred to as RBI) in July 1964 for catering to the developing sectors of the country and was designated in the category of development banks. In February 1976, the ownership of IDBI was transferred to Government of India. In January 1992, IDBI accessed domestic retail debt market for the first time with innovative deep discount bonds and registered path-breaking success. In December 1993, IDBI set up IDBI Capital Market Services Ltd. as a wholly-owned subsidiary to offer a broad range of financial services, including Bond trading, Equity broking, Client asset management and depository services. In September 1994, in response to RBI's policy of opening up domestic banking sector to private participation, IDBI in association with Small Industries Development Bank (SIDBI) set up IDBI Bank Ltd.

## Milestones of IDBI

IDBI is the tenth largest developmental bank in the world. It has been credited for building huge institutions like National Stock exchange of India (NSE), The National Securities Depository Services Ltd., and Stock Holding Corporation of India (SHCIL).

- 1964 : Created by the Act of Parliament as a wholly owned subsidiary of RBI
- 1976 : Ownership transferred to Government of India
- 1982 : Export Import bank spun off
- 1990 : SIDBI set up as wholly owned subsidiary
- 1994: IDBI act amended to permit public ownership. Setup IDBI Bank Ltd.
- 1995: Successful IPO. Government stake reduced to 72%. Further restructuring reduces it to 58%
- 2001: 51% of ownership in SIDBI divested
- 2002: Government of India plans Corporatisation of IDBI.
- 2003: IDBI acquired the entire shareholding of Tata Finance Ltd to diversify into "IDBI Home Finance Ltd". This signaled its entry into Retail Finance sector.
- 2005: Decision to merge IDBI Bank with IDBI.
- 2006: Merger process completed. New institutions with a completely new look floated for the public.
- Technology was deployed mainly as business support and not to create business opportunities
- Organization structure was branch driven with no clear focus on product suite delivery to the customer
- Key performance attribute continued to be building of assets and total deposits as against profitability

#### The Image Building Process of this Phase:

- Target customer segment: The IDBI as an institution concentrated on corporate banking as its customer segment.
- Mission : IDBI's activities transcended the confines of pure long-term lending to industry and encompassed, among others, balanced industrial growth through development of backward areas, modernization of specific industries, employment generation, entrepreneurship development along with support services for creating a deep and vibrant domestic capital market, including development of apposite institutional framework.
- Product portfolio : Fund Based-Working Capital Finance, Short Term Finance, Bill Discounting, Export Credit, Term Lending etc., Non Fund Based – Letter of Credit , Bank Guarantee etc
- Network : Only in few Major cities in India with Indore as a registered Office
- Differentiations : Elite Banking / Class Banking (Corporate)

#### The first Logo: 1994- 2001: Corporate Bank for the Elite



#### (Logo recreated from employees recollection)

IDBI has played a pioneering role, particularly in the pre-reform era (1964-91), in catalyzing broad based industrial development in the country in keeping with its Government-ordained 'development banking' charter. In pursuance of this mandate, IDBI's activities transcended the confines of pure long-term lending to industry and encompassed, among others, balanced industrial growth through development of backward areas, modernization of specific industries, employment generation, entrepreneurship development along with support services for creating a deep and vibrant domestic capital market, including development of apposite institutional framework.

- Traditional focus of the bank was on corporate banking business
  - 95% of assets have been corporate assets
  - 77% of liabilities have been corporate liabilities

#### The second Logo: 2002 - 2005:

The Major Image Building process and a Holistic Change management.



#### Brand Image and Change Management



Studies by Boyle (2007) indicate that brand management is often a part of the change management, especially in relation to the corporate brand. In a situation of mergers, it is well accepted that the failure of cultures to adapt and meld is one of the main causes of difficulty. It is cited that when hard factors such as costs, staff numbers and profit forecasts are difficult to manage, soft factors like culture and core values are often ignored or neglected.

The novel concept of holistic positioning, propositioned by recent studies (Schmidt et al 2002, Lindstrom 2005) identify CULTURE as one dimension of the complete approach that actually and subtly integrates other factors such as behavior, communication, and design etc. It identifies that market conditions and strategies will be affected by culture and vice versa.



This phase of the bank showed how change management could be done holistically. The company underwent many alterations in its focus, vision and image building strategy to bring an altogether new look and purpose to the banking system of IDBI Bank.

- **Target Customer Segment:** Change of focus from Corporate to retail segment. Masses became the priority market to be tapped and looking at the huge retail market the banks focus widened.
- **Mission:** To provide the best of services in banking to retail customers falling in the upper income segment. Convert class banking to elite mass banking.
- **Product Portfolio:** Introduced retail products – like saving bank, current account etc in addition to all the corporate products from the earlier organization.
- **Network:** 55 cities with 75 branches and over 210 ATMs.
- **Differentiations:** Retail Products. cross selling. introduced sale of third party products. One stop shop for a range of products. Better core banking connectivity. Bought a core banking product “Finacle” from Infosys, which can provide over all banking system to the bank.
- **Look of the Organization:** A modern fresh young look to the brand logo with the International color of the millennium selected for its brand design – Teal. The logo was in small case and in italics representing flexibility and inclination towards retail customers.
- **Slogan:** What can I do for you?

### “Mission IDBI Bank”: The Image Building Process of this phase:

During 2001, the transformation was at its peak process. According to several business magazines the IDBI Bank Ltd was exhibiting a growth rate of 200 percent. The transformation was for 2 years and several important changes had been taking place due to the efforts of the banking institution management.

#### Major Changes:

- The entire software of the bank had been converted from an earlier bank master to finacle- a core banking software from the Indian IT giant Infosys worth \$ 400 million.
- The earlier corporate bank philosophy of ELITE banking was converted to mass banking and products had been converted from corporate banking products to retail banking products.
- For the visual projection of the bank, the color composition was changed from navy blue to a modern teal. This color was also the color of the new millennium.
- The spirit of the bank was made more aggressive through a range of competitive products in the market to meet the competitive spirit from the competitors.
- Logo was transformed from an earlier rather stiff I of the IDBI Bank to a more relaxed tilted I to show humbleness and a readiness to serve the customers thereby enhancing their readiness for customer service.
- Newer products called 3rd party products were designed to enhance the opportunities for cross selling and convert themselves into a one stop shop for all of the customer’s financial needs.

All the image building processes were aimed at being YOUNGER, DYNAMIC, and AGGRESSIVE and FAST GROWING. The bank made newer in growth in the market by becoming pioneers in the salary accounts of many companies and businesses.

At that point in the existence of the institution, the then MD and CEO Mr. Guneet Chadha was primarily responsible for creating a previous financial institution in to a charming, promising and fast growing IDBI Bank Ltd. Despite an environment reeling from an economic slowdown, Mr. Chadha consciously adopted an expansionary strategy. In a span of 2 years the bank had doubled its network and footprint across the country, covering 55 cities with 75 branches and over 210 ATMs. Manpower also grew from a modest 550 to over 1,200 in the same period.

The bank fully executed its new, state-of-the-art, online, real-time technology platform across the entire network. There was a steady rise in the number of new customers. IDBI Bank clocked over 500,000 customers in one financial year as against 210,000 in the same period in the previous financial year. Despite its aggressive growth strategy, the bank never lost sight of asset quality. During the same period, a massive clean-up drive was launched and non-performing assets were pruned ruthlessly.

## Employee Training and Customer Focus

### ***Capital Formation- Human and technological capital to generate financial capital***

Most of the employees of the previous IDBI Bank Ltd recall the focus of the Training sessions that they had to undertake when the IDBI Bank Ltd was created. According to them, the entire exercise revolved around the fact that the focus was the bank was undergoing a massive change on the system side as well as on the business side. The new line of thought had to be embedded in the minds and thereby the service behavior of the employees to make sure that the spirit of Service remained consistent across all the channels of delivery and that an overall consistent image was created in front of the customers.

The training modules started with focus on the NEW logo. The entire message was in the formation of the new logo itself which was now changed from a stiff, capital, navy blue I – that essentially spoke of an official strict and very formal approach towards its Banking services to the corporate clients to an “in a new form which was now small case and teal colored. The fact that it was italicized gave the form a more friendly and informal appearance and the slight tilt to the form representing IDBI Bank Ltd personnel who was humble, homely friendly and ready to serve the customers with a smile. The training to the employees on customer service made use of these parameters when training them for right from the customer service approach, receiving phone calls, meeting clients up to the correct welcoming sentence, voice intonation and modulation, facial expressions, warm smile etc. The training effectiveness was constantly tested by means of dummy customers who interacted with the employees at the teller counters, front desks, inquiry etc to analyze the performance of the employees.

Such kind of aggressive focus on customer friendly service training was a very new thing for most of the employees of the previous IDBI Bank and also for the new partners who were joining IDBI Bank. The efforts

put into the training module created an atmosphere of sincerity and commitment to the overall performance and efficiency of the Bank employees. It was a change for the new batch.

Human Capital formation was thus given priority with an ambitious recruitment drive.

The Efforts were thus aimed at:

- Reconstitution of Senior Management Team with significant experience from foreign banks and private sector banks: CEO, Retail bank head, Retail risk head, Product heads, Treasurer, Treasury marketing head, CFO, CTO, Ops. head, HR head.
- Performance Assessment changed to focus on leading indicators and profits
  - Formulation of KRAs, Tiering process to differentiate performers
  - Performance linked ESOP scheme initiated in Oct. 2000 covering 75% of employees
- Significant training initiatives undertaken
  - Relationship and sales management
  - New technology platforms
- Young Professionals (85% CAs / MBAs) with average age of 31 years
- Lower cost base than foreign banks

These efforts brought successful results that showed in the satisfaction of the customers, which converted, into huge customer retention and new customer formations.

As the young spirit of the bank spread across the customer base whether old or prospective, the degree of brand commitment was also enhanced multifold and customers made it a point to attend the annual general meeting to put in their views and suggestions and to know the direction of the banks progress.

An important decision of that time was to make a clear-cut differentiation between corporate clients and retail or mass clients. To enhance effectiveness of service towards each segment, separate divisions were created for corporate banking and retail banking. Not just the products and the service methodology but also the employees were clearly demarcated with a separate, specially trained group consisting of young employees to cater to retail or mass clients. These clients were infused with the young spirit as represented by the tilted I-- (i).

On the other hand, the employees serving the corporate clients continued their rather official approach to be in tune with the corporate clients who were supposedly more serious businessmen who were more adapted to



the previous service standards.

Because the employees had to cater to only those kinds of clients for whom they were trained, there was no chance of Mix-up. As a result the final output and expression of service quality towards the customers was efficient for each of the groups respectively.

### The Third Logo

2006 onwards -- THE REVERSE MERGER decision:



Towards the end of 2005, a decision of reverse merger was taken to blend IDBI Bank with IDBI Ltd.

### Major reasons for the decision of reverse merger were:

- IDBI was gradually becoming a sick organization, which was losing funds in its projects and was unable to meet up to the competition from other players among the group of Indian financial institutions.
- It was projected that the merger would help to have a mutual benefit between the two institutions wherein the funds of IDBI and the Infrastructure of IDBI Bank Ltd. could be used for mutual growth and development that could help both institutions to sustain the enhancing competition from domestic companies as well as foreign players who have been eager to enter Indian market for the past few years.
- The merger could help create an institution that could help to create a young and healthy PSU that would be capable enough to withstand any market shocks and debacles.

### New Branding: Repositioning Strategy

- **Target Customer segment** : Both Corporate and retail customers.
- **Mission** : To be one of the largest banks of India serving both development and commercial banking

needs of India.

- **Product portfolio** : Corporate and Retail banking products. No major change from the earlier portfolio.
- **Network** : 432 branches, 255 centers, 525 ATMs, 18 Extension counters.
- **Differentiation** : Technology Enabled Agile Banking
- **Look of the organization**: Helping India achieves its ambitions. Modern. Sharp and smart.
- **Slogan** : Aao Sochein bada ( Translated -- Lets think Big )

The formation of the new company after the reverse merger brought some vital changes in the Branding and Image building efforts as well. The earlier small case teal colored I was replaced by a capital. tall standing, large case I. The color composition changed from teal and white to a newer green and orange. The stiffness of the I brought back with it a stiff, more official image of the Bank, which was a complete opposite of the friendly, more humble and friendly looking teal. The new logo was thus a merger of the old name of the bank into which the logo of IDBI had been incorporated.



Post merger organizational structure has been retained as before. However, nomenclature has been shifted from Corporate banking division and retail banking division to commercial banking strategic business units (CBS) for the previous corporate banking division and Developmental Banking Strategic Business unit (DBS) from the previous retail banking unit.

- Retail Banking Unit → Commercial Banking Strategic Business Units
- Corporate Banking Unit → Developmental banking strategic Business Unit.
- The CBS consists of personnel from IDBI bank while the DBS has people from IDBI.

The entire turnaround in the appearance and outlook of the organization was a big surprise for its entire clientele base.

### The Impact of the Constant Changes in the Brand Logo and Brand Identity



**1994-2001**  
Profile:  
Corporate  
Banking



**2002- 2005**  
Profile:  
Corporate +  
Retail Banking



**2006 onwards**  
Profile:  
Corporate +  
Retail Banking  
Reverse merged  
organization

Opinions regarding these changes were obtained from the employees and the banks long time customers at various points across India. Most employees who were interviewed for this had obtained the special CRM training in the pre-merger IDBI Bank Ltd.

#### Employee Feedback on the Changes

(Consolidated views of 62 employees at Mumbai, Indore, Bhopal, Raipur and Jabalpur branches, obtained by qualitative data collection over a period of 2 months)

As regards employees, the news of the reverse merger had constantly been creating waves of panic and the employees were becoming increasingly apprehensive of their new position and responsibility in the Banks hierarchical structure. There was an atmosphere of uncertainty regarding salary, status, perks and avenues for growth and development of the bank as well as the individual in the new settings. Some personnel were of the opinion that in the process of making a new company IDBI Bank had been made more of a scapegoat to cover the failure of IDBI and to make an experiment to see how well such companies could fare in the future. The possible plan of the government to unite in merger more of such PSUs together to create financially viable institutions could be one of the reasons of the creation of the new company.

At one point the panicky situation was so high that about 900 employees resigned in the course of a year. For instance, in the state of Madhya Pradesh, IDBI Bank had the biggest branch in the city of Raipur in which about 5 to 6 employees were resigning per month on an average. The shortage of the employees was so intense that the Branch head of this branch had to occasionally handle lot of operations work also.

Post merger, most employees who came from IDBI Bank and belonged to the CBS unit constantly felt a step motherly treatment from their new bosses. Their

counterparts who belonged to the DBS unit were given comparatively better treatments and a better position in the banks hierarchy and job responsibility. According to the employees in the CBS unit, small things made a lot of difference in the employee morale and motivation on the whole. For example, the CBS unit had to be content with small amounts of yearly stationery and calendars as a gift for the New Year. On the other hand, members of the DBS unit even got personal telephone calls inquiring about their welfare from the head office. The employees of IDBI Bank had been professionally trained to handle retail banking operations while the employees of IDBI had the experience of corporate banking in the area of government institutional funding. In the course of the merger, the IDBI Bank staff experienced a level of disillusionment to be working along side colleagues who did not have experience in handling retail customers thereby not keeping up to the desired standards of customer service.

When asked about the NEW logo, most employees expressed a feeling of LOSS. As retail bankers who had, in their pre-merger IDBI Bank, received a special training to handle CRM with modern means and a new brand Image – the new logo was quite distracting. It failed to connect them with the spirit of customer service and they were trying hard to get accustomed to the changes in their Identity. A small proportion of employees said that they did not concern themselves so much with the logo as it was something very peripheral. They were more worried about the internal restructuring and changes caused by the merger, the day to day problems caused by these changes, customer queries and the ever increasing customer complaints and grudges that they needed to respond to.

#### Customer Feedback on the Changes Occurred

(Consolidated views of 152 long time customers of Mumbai, Indore, Bhopal, Raipur and Jabalpur branches, obtained by qualitative data collection over a period of 2 months)

Most customers were confused about the changes that had been taking place in the organization. Banking in India is mostly influenced by the relationship between the customer and the banker. Most customers would continue transactions with an organization because they knew the staff at a particular branch very well and they were confident of getting help from the service providers because of the relationships that they had developed over the years.

Based on the customer's responses, 3 distinct impacts were identified as below:

### Mixed Culture in the Merged Organization

The reverse merger phenomenon caused many changes in the employee structure as many people left and many new faces emerged in the scenario. Each bank was now a combination of the staff from IDBI Bank Ltd. and IDBI, which made the maximum impact on Customer service. Customers complained that the New Bank had degraded in its classiness and appeal. The new employees did not seem to carry the same Charisma and confidence that the old employees, which had undergone a special training, previously, possessed. The new staff members did not have the elegance and refined manners to talk, behave and carry themselves in grace, as did the old staff. Quite a few banks changed location and brought in new interiors, which were not as appealing as the former.

### Change of Logo

Most customers tend to agree that the logo of the IDBI Bank Ltd as it was previously, in teal and italic fonts, was more appealing and graceful than the present. This logo added gloss and sophistication to the organization. It also communicated the new line of retail banking service delivery. The customers felt that they belong to a special bank with which they loved to be associated with. The new orange logo is, seemingly, not so attractive and does not carry the same appeal as before. Some customers felt that it was a rather unnecessary action to bring in a new logo or even make any major changes in the brand design of the bank. A small change could also have been equally communicative of something new, as was seen in the case of ICICI Bank logos.

### New Organization

When asked about the identity of the 2 merging institutions, most customers gave similar responses for each. There was no clear distinction among the responses for IDBI Bank Ltd. and IDBI. The respondents had a clearer understanding of the IDBI Bank Ltd. But very few knew about the mission and profile of IDBI. In the merger, customers were more acquainted with only one of the partners. Secondly, the product profile and services offered in the merger were almost the same as the previous IDBI Bank Ltd. (pre merger). There was nothing distinctly different from the facilities offered by the previous organization to make a distinct impact.

In such a situation, the customers did not see the need or the impact of the new Logo. According to them, the decision of the merger was more of an internal restructuring decision, which did not create any major changes on the customer interface, or the business paradigm of the bank. It was more of a merger of

balance sheets, which had least impact on the CRM. Hence it was difficult for the customers to relate to and adapt to the new logo of the organization resulting into comments such as forced change in brand image, unnecessary change done etc

### Problem Identification and Analyses

Most corporations undergoing change management often face problems both internally and externally.

#### Some internal problems could be:

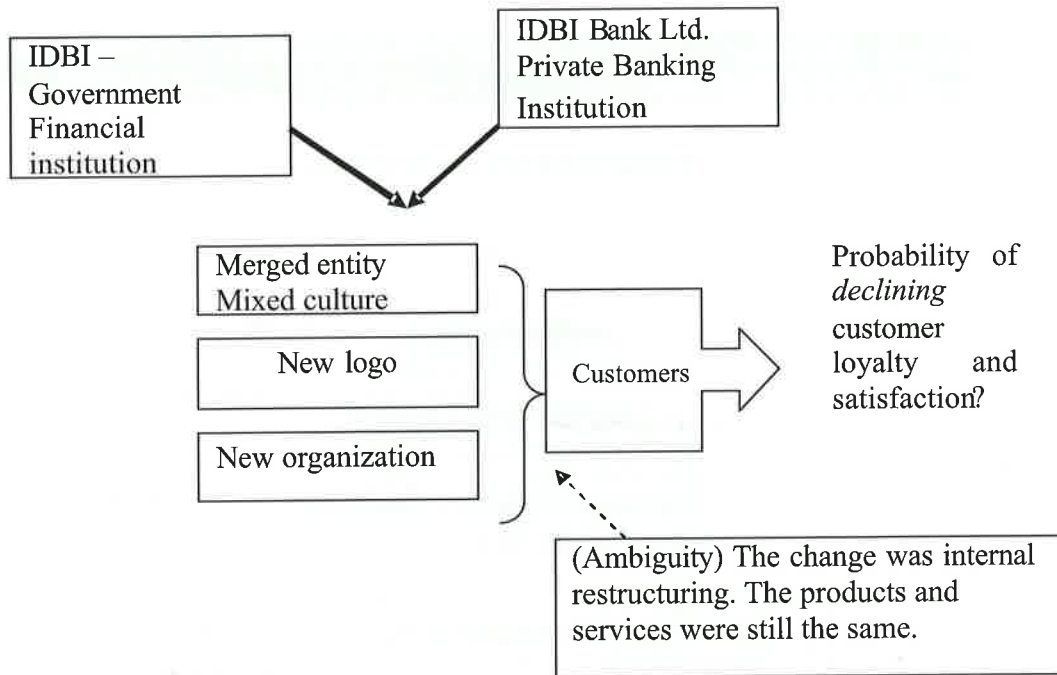
- Attitudes of resentment and resistance towards change
- Cultural mismatch
- Inflexible attitudes preventing realization of a mergers potential
- Loss of competition target, resulting in the need of new targets and new visions
- Decision for major product brands involved in the merger and their future
- Strategic decisions on name, logo, slogan --- to retain or combine or renew.
- Uncertainty of survival and success.

#### Some External problems could be:

- Communicating Changes to the end user effectively
- Dealing with Customers queries and curiosities regarding the new entity.
- Maintaining consistency in service delivery and keeping the front end as smooth as before.
- Retaining customer loyalty and satisfaction in the new environment.
- Enhancing opportunities for positive word of mouth by improving on Holistic appeal

These problems are individually quite complex and they are also interdependent to a large extent. Holistic process could help to identify the need for retention of the old or creation of new dimensions to the merger. The final goal has to be to minimise the risks and maximize the potential of the merger.

In the case of IDBI Bank, the following chart could be created to represent the link between the 3 impacts and customers attitude towards the changes.



It shows the areas of incongruence between the changes caused by the merger and the reasons as understood by the customer. This causes several areas of inconformity between the customer and the organization. As a result customer loyalty and satisfaction with the organization could be adversely affected.

**Some important points are conclusive from the analyses:**

- The first change in the logo from navy blue colored, capital letters to the teal colored italic letters logo was to communicate the message for the new retail product line and banks inclination towards retail banking, and the banks attitude towards the customer meaning the change was more for the business side than the internal,
- The second change in the logo was however, representative more of an internal change than the business side. It seems that the parent organization in this reverse merger forced its logo onto the new entity, which was neither necessary nor wanted for the business. Since the product line and the services remained the same the business side or the customers did not require any message from the logo.
- There were curiosities regarding the need to change the brand image on the whole and the customer segment gave an indication of unfulfilled curiosities regarding the issue.

**Challenges for the New IDBI Bank Ltd.**

The amount of resources that may have gone in the entire process of change towards creating a new Look

and feel to the organization may thus not be justified in terms of the returns that it expected from customers. A fluctuating brand Image could very well speak of an unstable organization that is yet to finalize on its future course of action and also could cast doubts about the mission and vision of the company. All these ambiguities coupled with service unsatisfaction may result into declining brand loyalty and negative word of mouth. Needless to say, the Bank needs to be able to satisfy both its internal and external customers to create a positive and inspiring environment for all its associates. It needs to intensify its efforts towards creating a holistically smooth organization, which speaks more of new goals and objectives and reduces the negative impacts of the constant changes in its brand identity on its customers.

**Limitations of the Case**

It was difficult to obtain in depth information about the IDBI Bank Ltd .in its first phase. Although data was gathered from the banks branch office at Indore, which also happens to be the registered office of IDBI Bank Ltd; not much could be gathered regarding the primary phase of the bank from both the employees as well as the customers. Confidentiality issues prevented the bank from giving any sample of the first logo of the bank. Hence, the logo had to be recreated through employee's recollections for this study

Appendix

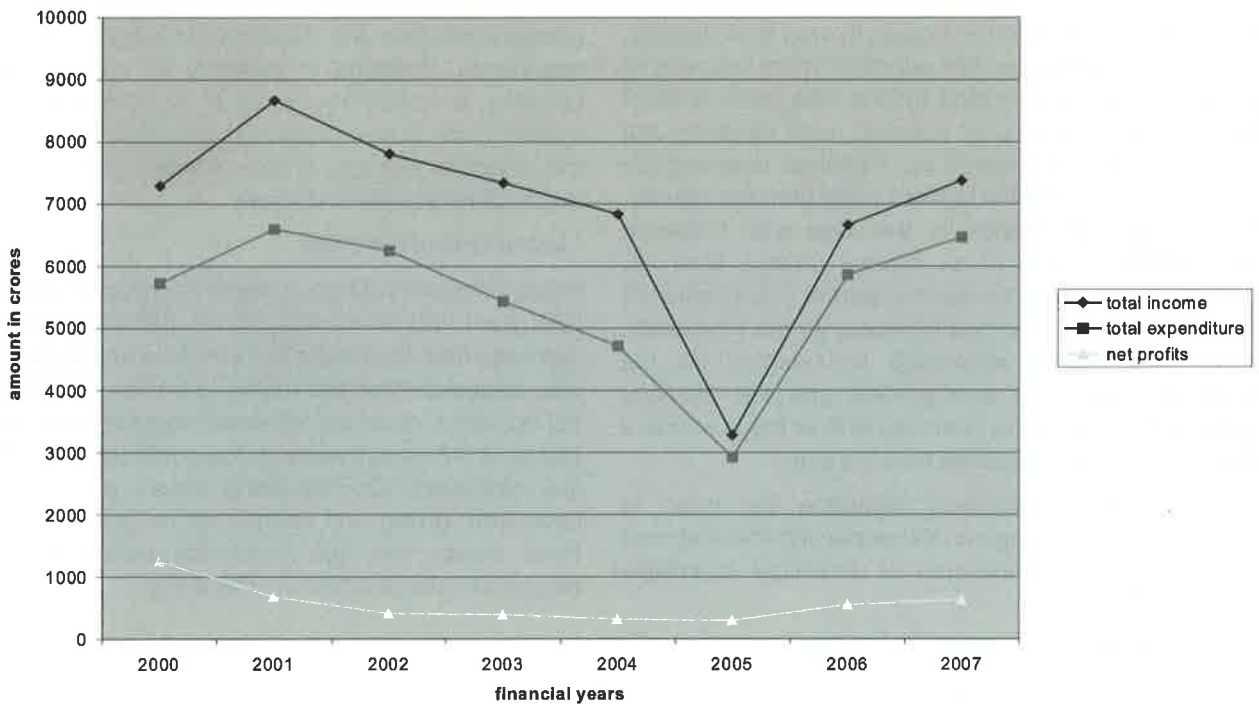


Recognizing Key Value Drivers



(Source: IDBI bank presentation on process of change and evolution in Business strategy for the bank for the year 2002.)

financials for IDBI bank 1999-2007



Comparative Statement of Financials for IDBI Bank

## References

**Boyle, E.** (2007) "A process model of Brand co creation", *Journal of product and brand management*, vol 16, 122-131.

**Gray, B.** (2006) Benchmarking services branding practices", *Journal of Marketing management*, Vol. 22, 717-758.

**Henderson P.W. Cote J.A.; Leong S.M.; Schmitt, B** (2003) "Building strong brands in Asia: selecting the visual components of image to maximize brand strength" *International Journal of Research in Marketing*, Volume 20, Number 4, 297-313.

**Lindstrom, M.** (2005) *Brand Sense*, Free Press.

**Mukherjee A., Nath P** (2003) "A model of relationship in online relationship banking" *International Journal of Bank marketing*, Vol 11, 5-15.

**Ogrizek, M.** (2002) "The effect of corporate social responsibility on the branding of financial services" *Journal of Financial Services Marketing*, Volume 6, Number 3, pp. 215-228(14).

**Schmidt, K., Ludlow, C.** (2002). *Inclusive Branding. The whys and how's of Holistic approach to Brands*, Palgrave Macmillan.

**Van Riel, Cees, B. M.** (2001) "The added value of corporate logos - An empirical study" *European Journal of Marketing*, Volume 35, 428-440(13).

Venkatchari, J. 2000. [http://domainb.com/finance/banks/idbi\\_bank/20001019idbi\\_strategies.html](http://domainb.com/finance/banks/idbi_bank/20001019idbi_strategies.html). Accessed on March 2003.

[www.brandlogos.com/bank\\_logos](http://www.brandlogos.com/bank_logos). Accessed on January 2006.

[www.idbibank.com/financials](http://www.idbibank.com/financials) .Accessed on January 2007.

[www.magindia.com/logos](http://www.magindia.com/logos). Accessed on January 2004.

[http://www.infosys.com/finacle/images/icbi\\_image.gif](http://www.infosys.com/finacle/images/icbi_image.gif). Accessed on February 2007.

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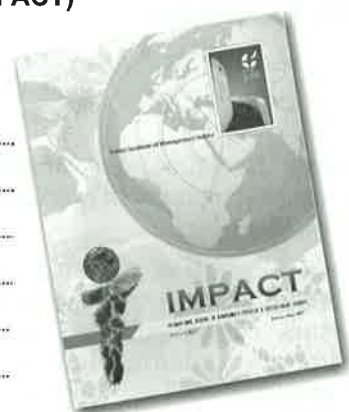
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- (d) Internet: Basu, I. 2004. India's thorny FDI rule under scrutiny. Asia Times. May 28. [http://www.atimes.com/atimes/South\\_Asia/FE28Dfo3.html](http://www.atimes.com/atimes/South_Asia/FE28Dfo3.html). Accessed on April 27, 2004.

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