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Contents

Symbiotic Venture and Social Capital: The Effects of Market Orientation on Small Entrepreneur Firms in China†

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Adopting a perspective of social capital theory, we study the effect of market orientation on the stability of symbiotic ventures in an emerging economy. Focusing on a subset of these ventures, namely symbiotic small-large firm venture, we show that firms' market orientation has a positive effect on 'trust', which is considered as a piece of important social capital. And this social capital, in turn, has a positive effect on the stability of the symbiotic ventures. Moreover, social capital also has a positive effect on the sharing of resources among the partners, which influences stability of symbiotic venture in the future. Finally, 'personal relationship' which is often an important factor for marketing success in emerging market, has a significant and positive relationship with the stability of the venture alliances. This paper concludes with a discussion of the implications for academic researchers and practitioners.

INTRODUCTION

International ventures often adopt the strategies of joint venture or symbiotic alliance (see, Varadarajan and Rajaratnam, 1986 for a detailed review of the relevant literature). These strategies allow firms to deal with their resource constraints or to reduce the uncertainties in their interdependence (Pfeffer and Nowak, 1976; Gulati, 1995; Kauser and Shaw, 2004; Rowley *et al.*, 2005; and Mitsuhashi and Greve, 2009). Prior research

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has identified a number of forms of symbiotic ventures, including strategic groups (Gulati, 1995; and Murray *et al.*, 2005), supply chain and logistic alliances (Balabanis, 1998; Kiessling *et al.*, 2004; and Azuma, 2005), buyer-supplier relationships (Uzzi, 1997; and Dyer and Chu, 2000), relations with government (Rao *et al.*, 2005; and Hitt *et al.*, 2006), supply alliance with co-branding possibilities (Rabino *et al.*, 2008), and symbiotic small-large alliances (Varadarajan and Rajaratnam, 1986).

In this study, we focus on a subset of symbiotic ventures, i.e., the small-large-firm symbiotic ventures. When a small supplier and a large firm in a given value chain, such as a car parts producer and a large car manufacturer in the automotive industry, establish such a supply-demand joint venture, it is said that they are responding to their symbiotic interdependence (Pfeffer and Nowak, 1976; and Varadarajan and Rajaratnam, 1986). Here, we analyze a subset of this type of symbiotic ventures—symbiotic dyads involving a large buyer and a small supplier.

Despite the advances made in the research of symbiotic ventures, the factors that may affect the stability of these symbiotic ventures have not been sufficiently tested. One of such factors is firms' marketing orientation. Research has shown that firms' market orientation is an important factor being able to influence the success of marketing (e.g., Kohli and Jaworski, 1990; Narver and Slater, 1990; Noble *et al.*, 2002). However, it remains unclear how this factor may influence the stability of symbiotic ventures. Drawing on the literature of social capital theory, we test the effect of marketing orientation of symbiotic ventures.

We believe these tests to be of significance. Theoretically, the results of this study are expected to contribute to the theory of international symbiotic ventures. Prior research has suggested that these symbiotic ventures can often be helpful for market success (e.g., Almeida and Phene, 2004; and Yamin and Otto, 2004), although, as noted, the effect of market orientation on the stability of the symbiotic ventures remains unclear. The results of our current study will contribute to the marketing literature by testing simultaneously the effects of market orientation, social capital and resource sharing. In other words, the results from this study should help in enhancing our knowledge about market orientation and its effect on symbiotic ventures.

Moreover, this study can help to further develop social capital theory. Prior research suggests that some important elements of social capital, such as trust, is important for the stability of symbiotic ventures (Almeida and Phene, 2004; and Yamin and Otto, 2004). However, as discussed above, it remains unclear whether this element of social capital refers to one-sided or mutual trust among the partners, or how the trust can be capitalized upon to strengthen the stability of symbiotic ventures. By filling these research gaps, our current study should contribute to the literature by showing the effects of social capital and identifying the mediator between it and the stability of symbiotic ventures.

Practically, we believe the results of this study will help practitioners to better understand how symbiotic ventures partnership can be maintained and be successful.

Some authors, such as Lovett *et al.* (1999), have suggested that most emerging economies currently conduct business on the basis of a symbiotic relationship (such as a *guanxi*-type system). We consider this suggestion particularly true for small international firms that seek to establish alliances with large firms in emerging economies. Take a major emerging market, i.e., China, as an example. Boisot and Child (1996) predicted that the Chinese economy is moving toward 'relationship-based' network capitalism. More specifically, Chinese business, compared with business in the West, is characterized by trust in family-like relationships, where reliance on another partner depends greatly on its embeddedness within a network (Chua *et al.*, 2009). However, such relationship-based networks may be of little use to foreign firms that attempt to enter a market without access to those networks (Svejenova, 2006), a situation often faced by small overseas firms considering a partnership with one of China's large state-owned enterprises. Accordingly, it would be helpful if practitioners understand better how the variables tested in our current paper, such as market orientation, can improve the performance of symbiotic ventures.

Take the Chinese car market as an example, this market has become the largest one in the world today (*Wall Street Journal*, 2010). Given its potential for further growth, many small auto-parts producers from overseas are trying to enter the country. However, because of their resource limitations, these small firms may experience great difficulties in trying to compete with China's large local firms or multinational enterprises. To overcome these difficulties, one option is for small firms to establish and maintain symbiotic venture alliances with large firms already operating in the country. One practical objective of this study is to help such firms to understand how they can do so more effectively.

The remainder of the paper is organized as follows. We first review relevant aspects of the prior research on symbiotic ventures. Based on this literature review, we then propose a model and relevant hypotheses for empirical testing. Following empirical analysis based on data drawn from China's auto industry, we then report our findings and conclude with a discussion of their implications for academic researchers and practitioners.

THEORETICAL BACKGROUND AND HYPOTHESES

Researchers have been studying symbiotic interdependence for decades. Hawley (1950, p. 36), for instance, defines it as "a mutual dependence between unlike organizations." This mutual dependence is often associated with mutual trust. By establishing symbiosis with such social capital as mutual trust, organizations may enhance their ability to obtain resources and hence improve performance (see, Varadarajan and Rajaratnam, 1986 for a detailed discussion of the advantages of business symbioses). Relationships between independent entities participating in symbiotic ventures, such as dealers, suppliers, and distributors, can also be considered a form of 'relationship marketing' in which attempts are made to establish win-win relationships (Copulsky and Wolf, 1990; Mitchell *et al.*, 1992). Some authors also point out that the central construct in relationship marketing is the trust among all partners involved (Katsikeas *et al.*, 2009).

Research suggests that the nature and scope of symbiotic ventures can be understood along six dimensions; timeframe (short-, medium-, or long-term), proximity (arms-length or close working), number (one or a simultaneous multiple), level (organizational or functional), focus (product offerings of one or both symbiotic partners), and scope at the functional level (joint formulation of overall strategy or limited to specific projects or programs) (Varadarajan and Rajaratnam, 1986, p. 8).

Based on this body of research, this paper defines symbiotic ventures as strategic alliances based on symbiotic interdependence. These can also be considered as a form of strategic cooperation or connection between two independent firms or organizations. This definition is consistent with previous research on the constructs of business symbiosis and symbiotic interdependence (Adler, 1966; Pfeffer, 1976; Pfeffer and Nowak, 1976; Varadarajan and Rajaratnam, 1986; and Reuer and Ragozzino, 2006). All cases of symbiotic interdependence have a common characteristic, namely that none of the parties involved in the symbiosis are competing head-to-head for the same resources, and they more or less depend on each other for some important resources to survive, operate, and grow in the industry (Pfeffer and Nowak, 1976).

In addition, using the six dimensions identified by Varadarajan and Rajaratnam (1986), we further define a subset of symbiotic ventures, namely the small-large symbiotic dyads that we focus on in this study. The dyads we consider are partnerships in Chinese auto industry in which a small supplier sells a certain product to a large car maker. Specifically, in terms of timeframe, we study a form of medium- or long-term alliance. In terms of proximity or interlocking ownership, we study only alliances in which each symbiotic partner maintains independent ownership. In terms of number, we focus on symbiotic ventures comprising only two firms, and at the organizational level. Finally, in terms of focus and scope, we consider only the product that a small supplier produces for a large partner, namely the car maker.

Past research also indicates that mutual trust is a very important issue to a given strategic alliance, including a symbiotic venture alliance (Dyer and Chu, 2000; and Madhok, 2006). In other words, the trust among partners can influence stability (Gulati and Singh, 1998; Koza and Lewin, 1998; and Li and Rowley, 2002). In this context, trust can be defined as the degree to which a trustor believes in the goodwill and reliability of the trustee in a risky exchange situation (Das and Teng, 1998), which is a determinant of relationship quality (Moorman *et al.*, 1992). Some authors show that trust influences the formation of strategic alliances or ventures (Parkhe, 1993; and Gulati and Westphal, 1999), while others argue that it should function as a major positive force in partner cooperation by reducing uncertainty and risk in symbiotic relations (Li *et al.*, 2010). Trust can also help to create competitive advantages for partners because it lowers transaction costs and leads to better information-sharing routines (Ring and Van de Ven, 1992; Kanter, 1994; Fukuyama, 1995; Kumar, 1996; Lane and Bachmann, 1996; and Das and Teng, 1998). Moreover, it provides a basis for expanded moral relations in business (Brenkert, 1998).

In spite of the studies, as mentioned above, the effects of some variables, such as 'market orientation', on the stability of symbiotic ventures remain unclear. For managements of small entrepreneur firms that are targeting global market, it would be of interests to study the effects. Moreover, as we have also mentioned above, most of the extant literature on market orientation and symbiotic ventures were conducted among firms in developed countries, such as the US or Japan (e.g., Johnson *et al.*, 1996; Choi *et al.*, 1999; and Dyer and Chu, 2000). On the other hand, some emerging markets, such as the Chinese market, are becoming more and more important. To address this research gap, it would be helpful to conduct more empirical studies in emerging economies.

Based on research on social capital theory, our study proposes a new theoretical model to address the issues above. Before discussing this model, we first provide a brief review of that theory.

SOCIAL CAPITAL THEORY AND MARKET

According to research (Nahapiet and Ghoshal, 1998), social capital can be defined as the goodwill or trust available to individuals or groups. In other words, goodwill or trust that others have towards us is the substance of social capital. Its effects flow from the information, influence, and solidarity it makes available to the actor (Adler and Kwon, 2002, p. 23). Social capital can also be considered as a piece of resource that inheres in the social network tying a focal entity to other entities, which reflects the primordial feature of social life (Adler and Kwon, 2002, pp. 17-19). As Adler and Kwon (2002, p. 18) have pointed out, "the core intuition guiding social capital research is that the goodwill that others have towards us is a valuable resource." We believe that this goodwill mainly includes the trust that others show towards us. Thus, when partners in a dyad of symbiotic venture alliance have goodwill towards each other, the symbiotic venture can be considered to have a high level of goodwill, including mutual trust.

Research also suggests that social capital may be culturally specific. In other words, it is more likely to exist or function in cultures that treasure social ties (Putnam, 2000). Accordingly, in those countries or cultures where social networks are important, such as China, Italy, and Israel, social capital may be more relevant or significant in terms of its effects on organizational behaviors and outcomes.

From the perspective of social capital theory, it is arguable that mutual trust among partners can be considered as an important piece of social capital or intangible resource within a strategic alliance, which helps maintain its stability and reduces the transaction costs among partners (Gooderham *et al.*, 2011). Mutual trust differs from one-sided trust, which emanates from only one party, along several dimensions. Table 1 provides a summary of these differences.

Firstly, social capital is located not in a given actor but in its relations with other actors (Adler and Kwon, 2002). According to this argument, mutual trust is a piece of

Table 1: Contrasting One-side Trust and Mutual Trust		
As a Piece of Social Capital	**One-side Trust**	**Mutual Trust**
Location	Can be located in one actor or one party only.	Should be located among all actors and partners in a given strategic alliance.
Dependency on Other Actors	Can be independent from other actors and partners.	Can never be independent from other actors and partners.
Requirement of Resource Investment	May not need such resource investment and can be derived from a partner's personal belief and wishful thinking only.	Need investing significant resources by both/all of the partners involved.
Maintenance and Renew	Can be maintained for a long time without being renewed or confirmed by all parties involved.	Have to be periodically renewed and reconfirmed by all parties involved, or it may disappear.
Social Structure	Can exist independently without any specific social structure.	Must exist with one, two or all of the social structures: Market relations Hierarchical relations Social relations

social capital while one-sided trust is not. One-sided trust can exist independently from that of other actors because it may represent a single actor's wishful thinking or personal preferences. In other words, one-sided trust can be located in one actor only. On the other hand, mutual trust can never be independent from others. Taking the case of partners in a strategic alliance as an example, if one fails to maintain its trust in others, mutual trust will decrease or even disappear. This may happen even if other partners maintain their trust in that partner. In other situations, the one-sided trust of a given partner in terms of other members of the symbiotic venture may remain unchanged, but others may no longer trust it, which should still have a negative effect on mutual trust in the symbiotic venture overall.

Secondly, the development of social capital requires firms to make significant efforts or to commit a large amount of tangible, intangible, and human resources. In other words, its development or accumulation represents a very significant investment (Nahapiet and Ghoshal, 1998, p. 260). According to the character of this development process, mutual trust can be considered as a piece of social capital while one-sided trust cannot. The reason for this is that one-sided trust may be derived simply from a partner's personal preference, subjective opinions, and/or wishful thinking, while mutual trust cannot. Without significant resources being invested by all of the partners involved, there can never be a high level of mutual trust in a given strategic alliance.

Thirdly, social capital has to be periodically renewed and reconfirmed, or it loses its efficacy and disappears (Adler and Kwon, 2002). According to this characterization, mutual trust is a piece of social capital while one-sided trust is not. As mentioned above, the development of one-sided trust may not be contingent on a significant investment of resources, and may remain unchanged for a long time even without any effort to renew or reconfirm. On the other hand, mutual trust should be periodically renewed and reconfirmed by all partners or parties in a given alliance, or it will lose its efficacy or function.

Finally, according to Adler and Kwon (2002, pp. 18-22), a precondition for social capital is the satisfaction of the three dimensions of social structure: 1) market relations, in which products and services are exchanged for money or bartered; 2) hierarchical relations, in which obedience to authority is exchanged for material and other resources; and 3) social relations, in which favors and gifts are exchanged. Considering these three dimensions, one can again see that mutual trust is a piece of social capital while one-sided trust is not. The former cannot exist without the social structure of three exchanges, while the latter may be derived independently from it. For example, a clan may have trust in a certain God, who is neither a business partner nor a hierarchical authority, but this one-sided trust can exist in a given party for a long time.

Research also suggests that firms' market orientation may help increase their social capital. Market orientation can be defined as the degree to which the supplier understands the needs of the buyer and reacts quickly to any changes in demand from its customers (Azuma, 2005; and Zhou *et al.*, 2008). According to the literature of market orientation, if a supplier has a high level of market orientation, it should become more flexible to the change of market and more sensitive to the needs of customers, which in turn should help obtain a piece of important social capital—the trust of customers or buyers (Johnson *et al.,* 1996). In other words, with a high level of market orientation, a supplier is more likely to serve its buyer better in a given value chain. This better service, in turn, is more likely to increase the mutual trust between the supplier and its customers (Zhou *et al.,* 2008), which can be considered a piece of social capital for the firm. Research has provided empirical evidence supporting this evidence (Johnson *et al.,* 1996). Firms with mutual trust are also more willing to pursue alliances if their partners can facilitate access to the resources they need (Gimeno, 2004; Gimeno *et al.*, 2005; Luo, 2005; and Mitsuhashi and Greve, 2009).

In emerging economies, we believe the effect of market orientation can be even more significant because of the poorer institutions for market transaction. In other words, the law system has not yet been fully developed in emerging markets. As a result, in these markets, a given supplier in a symbiotic venture alliance may have to obtain its trust or social capital through doing a good job in meeting the demands of its partners or customers. Accordingly, we make the following hypothesis.

H_1: *In an emerging economy such as China, market orientation of a given firm has a significant and positive relationship with the amount of its social capital in symbiotic venture alliance.*

On the other hand, based on the perspective of social capital theory, it is arguable that strategic alliances, including symbiotic ventures, should perform better and last longer if they can call upon mutual trust or other social capital. This should be especially true in emerging markets where a legal system for market economy has yet to be fully developed (Geletkanycz and Hambrick, 1997; Gulati and Westphal, 1999; Luo, 2001; and Currall and Inkpen, 2002). The importance of mutual trust among partners in symbiotic ventures can be supported by research evidence (Levinthal and Fichman, 1988; Seabright *et al.*, 1992; Chen *et al.*, 2004; and Luo, 2005). For example, in pursuing R&D innovation, managers are more likely to choose alliance partners from among their friends that they trust than from among strangers (Li *et al.*, 2008). Consistent with this argument, we predict that mutual trust, considered in our current study as a piece of social capital, may have a positive direct effect on the stability of a symbiotic alliance. At the same time, it may also have an indirect effect on such stability through the sharing of organizational resources. Below we provide a detailed discussion of these two predictions based on research.

MUTUAL TRUST AS SOCIAL CAPITAL AND THE STABILITY OF SYMBIOTIC VENTURES

Symbiotic ventures that are imbued with mutual trust can provide all partners with channels to information, knowledge, and resources that they might not otherwise be able to access (Jandik and Kali, 2009; and McDermott and Corredoira, 2010). Mutual trust, as a piece of social capital, has also been shown to encourage inter-organizational collaboration (Dwyer *et al.*, 1987). All these propositions should also be true for firms in auto industry, especially for those operating in societies such as China, where the relationship network is important (Wasti and Wasti, 2008). Based on past studies of emerging markets, we predict that, when the symbiotic ventures partners in emerging markets have mutual trust, i.e., a piece of valuable social capital, there is more likely to have stability in the symbiotic ventures alliance.

> H_2: *In an emerging economy such as China, social capital has a significant and positive relationship with the stability of symbiotic venture alliances.*

Consistent with the two hypotheses above, we predict that social capital may mediate the relationship between market orientation and the stability of the symbiotic ventures. In other words, we predict that market orientation may improve a firm's social capital, which in turn should strengthen the stability of symbiotic ventures.

> H_3: *In an emerging economy such as China, social capital mediates the relationship between market orientation and the stability of symbiotic venture alliance.*

In addition, we predict that social capital should also be capitalized by sharing resources among the partners in a symbiotic alliance, which in turn should increase its stability. Here, one should observe two relevant processes. On the one hand, the increase of social capital leads to better sharing of resources among the partners in a given alliance. This prediction is consistent with research evidence. For instance, in symbiotic ventures, mutual trust in each others' reliability and integrity, when verified and reinforced over time, has shown increase in the sharing of resources (Dwyer *et al.*, 1987). It is also suggested that such social capital as mutual trust can reduce transactional costs and suppresses opportunistic behaviors (Doney and Cannon, 1997), which should also have a positive effect on resource sharing among partners. One main reason for this might be that according to the transaction cost perspective, this benefit should also enable the partners involved to effectively lower their information search costs (Williamson, 1975), which, again, should be especially true in emerging markets. With low-cost and reliable information as well as a high level of mutual trust, partners in a symbiotic alliance should be more willing to share resources, such as information on new products and technology in a given industry. Also, because mutual trust helps to reduce transaction costs, resources can also be shared more efficiently. Several recent studies, including those conducted in emerging economies, have provided evidence supporting this argument (Gooderham *et al.*, 2011). According to these studies, we propose the following hypothesis for an emerging market such as China:

> H_4: *In an emerging economy such as China, social capital has a significant and positive relationship with resource sharing among the partners involved in the venture alliance.*

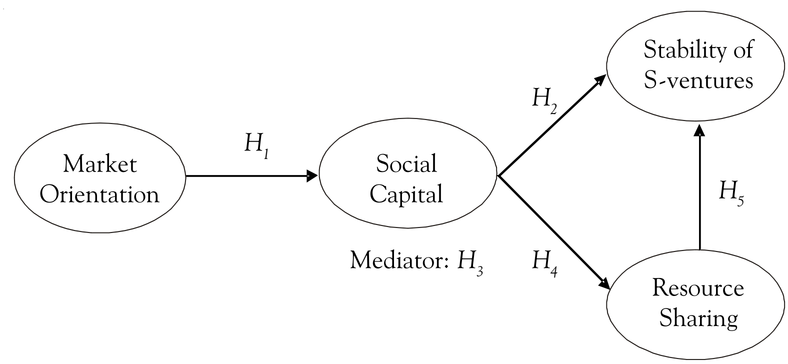
Finally, the sharing of resources should also have a positive relationship with the stability of a symbiotic alliance, and this should be especially true in an emerging economy. Research suggests that among interconnected firms including symbiotic ventures, the relational rent including stability, can be extracted only from the shared resources of the partners involved (Lavie, 2006, p. 644). The reason is that, as Dyer and Singh (1998) point out, this type of rent cannot be generated individually by a single partner in the symbiotic venture. It can only be developed through the processes of combining, exchanging, sharing, and co-developing of resources. Hence we predict:

> H_5: *In an emerging economy such as China, there should be a positive relationship between the sharing of resources and the stability of symbiotic venture alliance.*

In the hypotheses above, we actually predict another mediating effect, i.e., that of resource sharing. Specifically, we predict a positive mediating effect of this variable on the relationship between mutual trust and the stability of the symbiotic ventures.

Figure 1 shows a model summarizing the hypotheses that we have proposed above. In this model, we predict that market orientation has a positive relationship with the amount of social capital (H_1). The social capital, in turn, should have both direct and indirect effects on the stability of the symbiotic ventures (H_3). On the one hand, the social capital has a direct and positive effect on the stability (H_2). On the other hand,

Figure 1: A Conceptual Model About the Effects of Social Capital



the social capital has a direct and positive effect on resources sharing (H_4), which in turn influences the stability of the symbiotic ventures positively (H_5).

METHODS

SETTING, SAMPLING AND DATA

To test our hypotheses, we collected data from members of symbiotic ventures operating in China's auto industry. The main reason for selecting this sample was that Chinese culture emphasizes the importance of social ties, making it more likely that we can observe the effects of social capital on symbiotic ventures, including symbiotic ventures (Putnam, 2000). Moreover, China has become one of the fastest-growing markets for the auto industry, yet little empirical research has been conducted on these issues. Therefore, exploring the extent and function of mutual trust in Chinese society can enhance our understanding of its effect. Moreover, this industry is characterized by a great number of small-large dyads or symbiotic ventures than many other industries, which makes it easier for data collection. Finally, relatively few studies on the topic of symbiotic ventures or marketing have been conducted in China, so choosing this research context adds to the empirical evidence available.

We first obtained approval to conduct the study from the top management of one of China's largest car producers, which has more than 100,000 employees. Using a name list and relevant data from this company, we then randomly contacted 100 of its auto-parts suppliers in 2009, 89 of which expressed willingness to allow us to conduct interviews in their firms and to respond to our questionnaires. The largest of these supply firms had 6,202 employees, and the smallest just 22 (mean = 632 employees). In terms of ownership, 31 had overseas ownership, and 58 were owned by the Chinese governments. The data collected from these 89 firms and their common larger partner, i.e., the aforementioned car maker, gave us a total of 89 symbiotic dyads to test our hypotheses.

To avoid common method biases, we collected data from three sources: 1) the questionnaire data collected from each supplier, whose CEOs responded to the questions; 2) the questionnaire data gathered from the car maker, whose senior manager in charge of outsourcing provided the responses; and 3) documentary data obtained from the car maker's archives, including its records and statistics on suppliers. These records covered the tenure of the symbiotic alliance with a given small supplier, its size, and its ownership structure. The methods of data collection from all three sources are discussed in the following section.

MEASUREMENTS

All of the questionnaire items employed in this study were measured on a seven-point Likert scale in which the responses ranged from 1 (strongly disagree) to 7 (strongly agree). The items, which were originally in English, were adapted from publications in top-tier academic journals. We adopted the technique of translation and back-translation to develop a Chinese version of the measurement instruments and then conducted pre-tests of their reliability among a group of MBA students in China.

INDEPENDENT VARIABLES

Questionnaire Measures

Trust of a given partner (one-sided trust): It was measured using a five-item instrument adapted from Kale *et al.* (2000) for studying trust in symbiotic ventures: (1) there is a good understanding among the partners; (2) the strategic alliance is characterized by mutual respect among the partners; (3) the strategic alliance is characterized by mutual trust among the partners; (4) the strategic alliance is characterized by personal friendship among the partners' managers; and (5) the strategic alliance is characterized by a cooperative attitude among the partners. Our pre-test produced a reliability α of 0.83. As previously noted, managers from both the suppliers and the car manufacturer responded to this set of questions.

Social capital: It was measured based on the measures discussed above. Specifically, to operationalize this construct, we first defined it as the sum of the trusts among all partners towards each other in a given alliance after taking into account the difference between the partners in their levels of trust for each other. Based on this definition, we developed the following formula for the dyads in this study:

$$\text{Social capital} = (\text{trust of suppliers} + \text{trust of buyer}) - |\text{trust of buyer} - \text{trust of suppliers}|$$

In this formula, we actually take into account two issues according to our definition of social capital. First, we consider the sum of the total trust among partners. The reason is that social capital would not exist without mutual trust between a given partner and other partners in the same alliance. Second, we consider the difference in the level of trusting other partners in the symbiotic venture, which is consistent with the basic assumption of social capital theory. For instance, the sum of trust could be also high even though one actor has a low level of trust while other actor has a high level of trust. Our formula helps reduce the effects of this trust differential. Other conditions being equal, the higher the value based on this formula, the higher the social capital.

Motivation to maintain symbiotic relationship (symbiosis motivation): It was measured by three items adapted from McFarland *et al.* (2008): (1) we expect the relationship with this company to continue for a long time; (2) renewing the relationship with this company is virtually automatic; and (3) in the next two years, we are likely to terminate this relationship (reverse-coded). Our pre-test showed this instrument to have a reliability α of 0.782. The supplier in each symbiotic alliance responded to this set of questions.

Market orientation: On the part of a given supplier it was measured by four items adapted from Zhou *et al.* (2008): (1) we are quick to detect changes in our customers' product preferences; 2) we are quick to detect fundamental shifts in our industry; 3) customer suggestions and comments are disseminated at all levels of the organization on a regular basis; and 4) we pay close attention to changes in our customers' needs. A pre-test showed this instrument to have a reliability α of 0.845. The suppliers in the symbiotic ventures responded to this set of questions.

Archival Data Measure

Location proximity: It was measured by a dummy variable indicating whether the supplier was located in an inland province of China. Because most domestic car makers are located in these provinces and were coded as one (i.e., proximate), and those located elsewhere were coded as zero (i.e., not proximate).

Some of the other information in the archival dataset was also coded, including 'government or state ownership' and supplier 'size'. All of these data items were used as control variables in our regression analyses.

DEPENDENT VARIABLE

Stability of symbiotic venture (S-venture): It was a measure concerning whether a car maker is willing to continue its relationship of symbiotic venture with its supplier partner. Because the source of this dependent variable was different from those of the independent variables, the threats of common method biases and study tautology were avoided. More specifically, assuming that the willingness of the car maker to continue using a given supplier is the most important factor influencing the stability of the symbiotic venture between the two, we measured alliance stability with a set of questionnaire items adapted from McFarland *et al.* (2008): (1) even if we could, we would not drop this supplier because we like being associated with it; 2) we want to continue as a customer of this firm, because we genuinely enjoy our relationship with it; and 3) our positive feelings toward this company are a major reason we continue to work with it. Our assumption was that if the large and more powerful car maker in the small-large symbiotic dyad was unwilling to continue the symbiotic alliance, then the symbiotic venture was more likely to be terminated soon. The car maker could either find another supplier or internalize production of the auto part in question, depending on which was more likely to reduce transaction costs. Our pre-test showed this instrument to have a reliability α of 0.811.

CONTROL VARIABLES

As previously noted, we controlled the effects of several factors, including firm size, state ownership, symbiotic alliance tenure and perceived resource complementarity among the partners. Firm size was measured by the log of the total number of employees working for a given firm. State ownership was measured by dummies coded one for yes and zero for no. Symbiotic alliance tenure was measured by the number of years the supplier had supplied parts to the car maker. Finally, resource complementarity in the symbiotic venture, the degree to which partners' resources are bound together through collaboration (Luo, Shenkar, and Gurnani, 2008), was measured on a scale ranging from 1-100%. The managers of each supplier responded to this question by selecting a number on the scale, such as 20% or 40%.

Table 2: Descriptive Statistics

S. No.	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1.	State Ownership	0.65	0.48									
2.	Resource Complementarity	0.57	0.25	–0.26*								
3.	Social Capital	11.23	3.35	–0.14	0.14							
4.	Size	5.64	1.14	–0.22*	0.31**	0.11						
5.	Tenure of Alliance	12.10	7.74	–0.10	–0.08	0.02	0.28**					
6.	Location Proximity	0.22	0.42	–0.33**	–0.10	0.09	0.16	0.13				
7.	Resource Sharing	2.50	1.14	0.18	0.09	0.38**	0.17	0.11	0.13			
8.	One-side Trust of a Suppliers	4.40	0.66	–0.12	–0.03	–0.16	–0.25*	–0.39**	0.12			
9.	One-side Trust of Its Buyers	3.25	1.86	0.08	0.47**	0.17*	0.18	–0.00	–0.03	–0.10	–0.09	
10.	Stability of S-venture	3.50	0.65	0.03	0.35**	0.41**	0.11	0.07	0.41**	0.39**	0.15	0.48***

Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed).

DATA ANALYSIS AND RESULTS

Table 2 presents the descriptive statistics for our data. Some interesting correlation can be observed here. For instance, state ownership among suppliers was significantly and negatively correlated with location proximity to the buyer. This finding suggests that the majority of suppliers located near the allied carmaker are not state-owned. After checking the data further, we found that the majority of Chinese suppliers in close physical proximity to their alliance partners are private firms.

To test the hypotheses proposed above, we adopted the approach of hierarchical linear regression. Specifically, to test H_1, we first entered social capital as a dependent variable. Subsequently, we entered several control variables—firm size, state ownership, tenure of alliance, location proximity and resource complementarity (Model 1)—followed by the independent variable, i.e., market orientation (Model 2).

Table 3 shows the results of the analyses. The numbers suggest that there is a significant and positive effect of market orientation on social capital (standardized $\beta = 0.41$; $p \leq 0.001$). This result supports H_1.

Table 3: The Effects of Market Orientation on Social Capital (H_1)

	M1	M2
Control Variables		
State Ownership	–0.19	–0.08
Resource Complementarity	0.04	0.32**
Size	0.08	0.07
Tenure of Alliance	–0.16	–0.09
Location Proximity	0.02	0.01
Motivation to Symbiosis	0.04	0.03
Trust of the Supplier	–0.13	–0.12
Independent Variable		
Market Orientation		0.41***
Overall Model		
R^2	0.20	0.39
ΔR^2	0.20	0.17
F	5.16***	6.99***
ΔF	4.57***	19.53***

Note: * $p \leq 0.05$ (two-tailed); ** $p \leq 0.01$; *** $p \leq 0.001$.

With similar approaches of regression, we further tested the effects of social capital on the stability of S-venture (H_3) and resource sharing (H_4). Table 4 shows the results of the analyses. Below we discuss the results briefly.

THE EFFECT OF SOCIAL CAPITAL ON RESOURCE SHARING

The last three columns of Table 4 present the relevant results. First, the number in Model 1 shows a significant and positive effect of resources complementarity (standardized $\beta = 0.42$, $p \leq 0.01$) on resource sharing (Model 1). In addition, the overall model F-values in Model 1 suggests that the explanatory power of the regression equation is significant ($F = 5.77$, $p \leq 0.001$). With the entry of market orientation in Model 2, the overall model F-value was significantly improved ($F = 7.87$, $p \leq 0.001$), and the effects of the independent variables were significant. Finally, after we entered social capital, the model was further improved ($F = 9.21$, $p \leq 0.001$), and we found a significant and positive effect of social capital on resource sharing (standardized $\beta = 0.25$; $p \leq 0.01$). This result supports H_4, which also suggests that social capital can

Table 4: The Effects of Social Capital on the Stability of Symbiotic Venture and Resource Sharing

	Stability of S-venture (H_3)			Resource Sharing (H_4)		
	M1	M2	M3	M1	M2	M3
Control Variables						
State Ownership	–0.19	–0.20	–0.10	0.21	0.21	0.20
Resource Complementarity	0.04	0.07	0.05	0.40^{***}	0.39^{***}	0.38^{***}
Size	0.08	0.11	0.21^{**}	0.16	0.09	0.11
Tenure of Alliance	–0.16	–0.14	–0.07	0.06	0.03	–0.01
Location Proximity	0.02	–0.04	–0.11	0.10	0.10	0.11
Motivation to Symbiosis	0.04	–0.05	–0.12	0.09	–0.07	–0.09
Trust of the Supplier	–0.13	–0.10	0.46^{***}	–0.10	–0.10	0.25^{**}
Independent Variables						
Market Orientation		0.28^{**}	0.20^{**}		0.25^{**}	0.24^{**}
Social Capital			0.40^{***}			0.25^{**}
Overall Model						
R^2	0.2	0.19	0.39	0.25	0.35	0.41
ΔR^2	0.2	0.03	0.17	0.25	0.11	0.07
F	4.83^{***}	4.55^{***}	7.73^{***}	5.77^{***}	7.87^{***}	9.21^{***}
ΔF	4.83^{***}	2.97	19.85^{***}	5.72^{***}	13.9^{***}	8.17^{***}

Note: * $p \leq 0.05$ (two-tailed); ** $p \leq 0.01$; *** $p \leq 0.001$.

be considered a mediator on the relationship between market orientation and resource sharing.

THE EFFECT OF SOCIAL CAPITAL ON THE STABILITY OF SYMBIOTIC VENTURE

The first three columns of Table 4 show the effects of social capital on stability of the symbiotic ventures. First, the numbers in Model 1 show the effects of the control variables, and none of them is statistically significant. With the entry of market orientation in Model 2, the overall model's *F*-value was significantly improved ($F = 4.55$, $p \leq 0.001$), and the effect of the independent variable was significant. Finally, after we entered social capital, the model was further improved ($F = 7.73$, $p \leq 0.001$), and we found a significant and positive effect of social capital on the stability of S-venture (standardized $\beta = 0.40$; $p \leq 0.01$). This result supports H_2, which predicts both a significant and positive direct effect of social capital on the stability of the symbiotic ventures. Moreover, the results also suggest that social capital can be considered a mediator on the relationship between market orientation and S-venture stability, which supports H_3.

Finally, to test H_5, we adopted the same approach of regression. Specifically, we first entered the stability of symbiotic venture as a dependent variable. After that, we entered the control variables—firm size, state ownership, tenure of alliance, location proximity and resource complementarity (Model 1)—followed by social capital (Model 2). Finally, we entered the mediator—resource sharing.

Table 5 shows the results of the analyses. While most of the results in this table are consistent with those in Table 4, one can see that, with the entry of sharing resources in Model 3, the explanatory power of the regression equation is increased further ($F = 16.77$, $p \leq 0.001$), and there is a significant and positive effect of sharing resource on the dependent variable (standardized $\beta = 0.63$; $p \leq 0.001$). Moreover, there is still

Table 5: Mediating Effect of Sharing Resources (H_5)

	M1	M2	M3
Control Variables			
State Ownership	–0.19	–0.10	–0.18
Resource Complementarity	0.04	0.05	0.13
Size	0.08	0.21^{**}	0.11
Tenure of Alliance	–0.16	–0.07	0.00
Location Proximity	0.02	–0.11	0.38^{***}
Motivation to Symbiosis	0.04	–0.12	–0.11
Trust of the Supplier	–0.13	0.46^{***}	0.33^{**}
State Ownership	–0.19	–0.10	–0.10

Table 5(Cont.)

	M1	M2	M3
Independent Variables			
Social Capital		0.41^{***}	0.36^{**}
Mediator			
Resource Sharing			0.63^{***}
Overall Model			
R^2	0.21	0.38	0.62
ΔR^2	0.21	0.15	0.39
F	4.56^{***}	7.39^{***}	16.77^{***}
ΔF	4.56^{***}	20.23^{***}	41.89^{***}
Note: * $p \leq 0.05$ (two-tailed), ** $p \leq 0.01$, *** $p \leq 0.001$.			

a significant and positive effect of social capital on the dependent variable (standardized $\beta = 0.36$; $p \leq 0.01$). All these results suggest that sharing resources partially mediates the relationship between social capital and the dependent variable, i.e., the stability of symbiotic venture. In other words, the resources of social capital can be capitalized through sharing of resources to improve the stability of the symbiotic ventures, and the same resource can also have a direct and positive effect on the stability of the symbiotic ventures.

DISCUSSION AND CONCLUSION

Using data from China's auto industry, this study shows empirical evidence of the effect of market orientation on social capital, which in turn influences the stability of symbiotic ventures positively. Drawing on the perspective of social capital theory, this study also compares the construct of one-sided trust with that of mutual trust, and identifies key differences. Based on this comparison, a measurement of social capital was developed and applied to the study of symbiotic ventures in the current study. Showing how market orientation may lead to the increase of social capital, the resource sharing and the stability of symbiotic ventures, this paper makes contribution to the relevant literature.

This study contributes to social capital theory by providing new evidence for the positive effect of a seldom-tested variable—the mutual trust among symbiotic partners. No previous study has tested this element of social capital although several authors have suggested it may have important effects on the development and stability of symbiotic ventures. By testing the effect of this element of social capital empirically, we show that the level of social capital has a significant effect on the stability of a symbiotic venture alliance.

Moreover, the findings from this study increase our knowledge about the relationships among market orientation, social capital, resource sharing and the stability of symbiotic ventures alliances. Specifically, by testing the mediating effect of social capital, we show how social capital can have both direct and indirect effects on the stability of symbiotic ventures alliances. While social capital may influence stability directly, it can also influence the sharing of important resources among the partners, and thus exhibit an indirect influence as well.

In addition, the data from this study show that the one-sided trust of small partners or suppliers has no effect or may even have a negative effect on the stability of the symbiotic ventures alliances. The negative effect here may be caused by the overrating of the trust by the suppliers. Believing that they enjoy a higher level of trust in symbiotic venture, these firms may actually perform poorer as suppliers. On the other hand, those that do not have much confidence in the trust may actually be more careful and more willing to provide better products to their customers. Hence there is a negative relationship between the one-sided trust and the stability of S-venture. By showing the evidence that one-sided trust, especially the one-sided trust of small and less powerful partners, may not really predict the stability of their symbiotic ventures, our current study can help improve the quality of future research on trust and its consequences.

Finally, although our study was conducted in China, we believe that the findings should have sufficient external validity. The reason is that none of the findings are really culturally specific, and the results are consistent with those obtained from other societies or economies. Moreover, no research has suggested the effects of market orientation and social capital should be moderated by the level of economic development.

IMPLICATIONS

In terms of academic research, our results show that more comprehensive investigations are required in future to test the factors or variables that may influence the performance or stability of symbiotic ventures alliances. For instance, previous research of symbiotic ventures has paid insufficient attention to the effects of market orientation and social capital, our current study suggests that these variables can be critical to understanding the explanatory power of the regression equations. Without taking into account the effect of social capital, for instance, the effects of many other relevant factors may not be significant. Accordingly, future research in this area should give more consideration to the effects of market orientation and social capital.

Moreover, our findings also suggest a need to improve the methodology used for studying the relationship between trust and symbiotic ventures, including those located in the auto industry. Such investigations need to collect data from all partners involved in S-venture and not just one. As our results show, if a researcher collects only questionnaire data from one partner or symbiont only, as has commonly been the case, that data may not be sufficient in itself to predict the performance or stability of a given symbiotic ventures alliance. This is especially likely to be the case when the data are collected by self-reporting only, thus risking common source bias.

Our results also have useful implications for managements, especially those in small and medium-sized firms that want to enter the fast-growing market in China by establishing symbiotic ventures. For instance, our data suggest that firms with market orientation are more likely to accumulate social capital, which in turn should improve the stability of symbiotic ventures.

Finally, these findings also suggest that state ownership is no longer effective in maintaining the stability of symbiotic ventures in today's China. After more than 30 years of opening up and economic reform, managerial value and other institutions, including those relating to symbiotic ventures, are moving closer to their international equivalents. State ownership may therefore not have any significantly positive effect on the stability of symbiotic ventures.

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Social Fluidity Mapping System: A Way to Reduce Social Stigma in Business Failures†

*P Baba Gnanakumar**

The research explores the social stigma associated with the failure of entrepreneurial activity by means of escape velocity. Negative publicity, lack of financial intermediation, disgrace among the stakeholders and lack of social immunity causes social stigma. The research explored the effectiveness of the Social Fluidity Mapping System (SFMS) followed by the entrepreneurs in the context of reducing the social stigma. The affinity created by the entrepreneurs with the society under the corporate social responsibility program is well thought-out as the social fluidity for the purpose of research. The results contented that the social fluidity mapping is established on the basis of social cohesion theories. It also builds enterprise image. It leverages the social networks to develop business rapport. It establishes alliance strategy to reduce risk and build community funding system to reduce the financial turbulence. High escape velocity ratio leads to reduce the social stigma. The success of social fluidity mapping depends upon leveraging the social network that creates entrepreneurial structural relationship among the stake holders. The customer reliability is no longer a significant competitive advantage, but trust among the society is a competitive advantage for an entrepreneur to reduce the social stigma related with business failures.

INTRODUCTION

Structural relationship network of entrepreneurship evolved in the US has been quite successful and has considerable applicability in other countries. Entrepreneurial behavior traits produce counter productive effects due to stigma of failure (Landier, 2006). The social status of an entrepreneur predicts high degree of interest in avoiding business failure (Begley and Tan, 2001). The degree of business failure does not occur due to experience but due to lack of supportive attitudes (Jason *et al.*, 2004). The entrepreneurs possessing high self-efficacy and social capital are able to recover from grief over project

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failure (Shepherd *et al.*, 2009). An entrepreneur devotes more time to develop entrepreneurial intelligence for his own enterprise than their functional activities. By the time the entrepreneur maps the resource availability with the social currency; the business failure takes place due to social stigma. To get rid of such catastrophe, there is a need for Social Fluidity Mapping System (SFMS).

Entrepreneurs are driven not only by the business values but also by the social values (James Austin, 2006). The businessmen believe that they are defending their enterprise when they declaim that business is not concerned merely with 'profit' but also with promoting desirable 'social' ends (Friedman, 1970). The environmental spirit can have important moderating influence on this relationship between culture, stigma and entrepreneurial risk taking (Damaraju *et al.*, 2010). If an entrepreneur fails in this innovation process, the firm remains on the market, but bears a stigma of failure (Crifo and Sami, 2008). The corporate social responsibility is an imperfect substitute for business failures (Baron, 2007). However, its purpose is to reduce the risk associated with the business failure (Milton, 2000). Past researchers proved that the corporate social responsibility had positive correlations with social currency and it decreases the business failure. The findings of Melé (2011) suggest that it is necessary to develop a new theory on the business and society relationship. Hence, the present study aims to conceptualize the value of corporate social responsibility with the social fluidity mapping.

The primary objective of the research is to determine the basic values of social fluidity system. The facilitating objective is to explore SFMS effect in getting rid of stigma of failure associated with entrepreneurial activity.

METHODOLOGY

Primary data were collected from 312 entrepreneurs having at least 10 years experience, possessed at least two sales outlets and must have engaged in social responsibility programs. Snow ball sampling method was used to identify the entrepreneurs. The entrepreneurs located in five western districts, in the state of Tamil Nadu (in India) are selected. There are 9,000 entrepreneurs in the western part of Tamil Nadu. Out of that only 3,256 entrepreneurs are registered in the traders associations. Only 934 entrepreneurs are organizing their own social affinity programs under corporate social responsibility. Hence the sample size constitute about one-third of the size of the population. The affinity created by the entrepreneurs with the society under the corporate social responsibility program is well thoughtout as the social fluidity for the purpose of this research. Twenty nine social fluidity variables (see Appendix) were identified from the past researches. The perceptions towards such variables are measured with five-point rating scale. Gravity index is defined as the location coordinates of the sales outlets of the entrepreneurs. It is measured in terms of percentage. If the gravity index is 100, it means that the location of the sales outlet is exactly at the same place of the desired location, i.e., nearer to the stock keeping units. Escape velocity is the ratio of success over the failures in the business. Analysis of variance is used to find out the variations between the social fluidity variables with gravity index and escape velocity.

SOCIAL FLUIDITY VARIABLES

Factor component analysis was employed to find out the social fluidity factors that are practiced by the successful entrepreneurs (Table 1). Through interview schedule, 312 entrepreneurs were surveyed and they were asked to evaluate 29 questions about their perception towards the social fluidity variables on five-point scale (1 = completely disagree; 5 = completely agree). The data collected were coded to perform factor analysis using SPSS. The null hypothesis, that the population correlation matrix is an identity matrix, was rejected by the Bartlett's test of sphericity. The value of Kaiser-Meyer-Olkin statistics (0.656) is also greater than 0.5. The chi-square statistics value is 678.56 and it is significant at 95% level of confidence at 105 degrees of freedom. Hence principal component analysis is appropriate for analyzing the correlation matrix of the 29 variables. The variables having factor loading less than 0.5 were filtered out of the analysis. The number factors were selected based on the eigenvalue. Four factors

Table 1: Factor Component Matrix of Social Fluidity Variables

Variables	Factor Loading Component			
	Factor 1	Factor 2	Factor 3	Factor 4
Societal Interaction	0.770	–0.294	0.033	0.324
Community Affiliation	0.658	–0.151	–0.125	0.030
Social Stratification	0.652	–0.132	0.384	–0.027
Social Assimilation	0.587	–0.063	–0.139	0.195
Social Media	0.521	–0.095	–0.098	–0.118
Risk Sharing	0.344	0.792	–0.309	0.064
Franchising	–0.129	0.686	0.014	–0.313
Business Integration	–0.027	–0.683	–0.220	0.243
Power of Prophecy	0.083	0.576	0.387	0.248
Social Ventures	–0.146	–0.108	0.702	–0.166
Societal Cartels	0.335	0.134	0.646	0.133
Social Unification	0.022	0.130	–0.530	–0.207
Working Capital Bailout	0.389	–0.132	0.082	–0.623
Crowded Funding	–0.494	–0.174	0.069	0.607
Survival Start-up	0.170	0.473	–0.052	0.579

Source: Based on the Primary Data

having eigenvalue greater than one was selected. All the four factors are accounted for cumulative variance of 64%.

Fourteen variables having factor loading less than 0.5 are filtered out. The variables societal interaction, community affiliation, social stratification, social assimilation, and social media are highly correlated and contribute to a single factor which can be named as 'social networking'.

The variables risk sharing, franchising, business integration, and power of prophecy are highly correlated and contribute to a single factor which can be named as 'alliance strategy'.

The variables social ventures, societal cartels, and social unification are highly correlated and contribute to a single factor which can be named as 'social cohesion'.

The variables working capital bailout, crowded funding, and survival startup are highly correlated and contribute to a single factor which can be named as 'community funding'.

Based on these findings, we defined the functions of social fluidity mapping as follows:

> Under Social Fluidity Mapping System, the entrepreneur recognized the social cohesion theories to build enterprise image, leverage the social networks to develop business rapport, form alliance strategy to mitigate risk and build community funding system to reduce the financial turbulence.

JUSTIFICATION FOR SOCIAL FLUIDITY MAPPING

The business development plans of the entrepreneurs depend on building a strong relationship among the society. The empirical research conducted among the successful entrepreneurs proved that social networking, social cohesion, alliance strategy and community funding are the key elements of social fluidity. The success of the social fluidity mapping depends on how these variables are integrated.

SOCIAL NETWORKING

The benefits of social networking for entrepreneurs are usually more strategic and can be more transparent so customers can get ideas from others that might improve their success (Vernon, 2009). Firms that rely heavily on external social networks scored 24% higher on a measure of radical transformation than companies that do not have such network (John and Pamela, 2008). Social networking websites are worth huge premiums because of their game-changing nature and huge potential. Building rapport among the stakeholders is an essential element for the business.

Case Example: Elumalai Sarathbabu's venture 'Food King' was established with a small capital. First he created a network for his own employees and then for customers.

After that, he entered into social networking websites and placed his ideas. He started free coaching classes for meritorious poor children in Tamil Nadu under the brand 'Golden-10'. He initiated a project for road-side vendors to help them upgrade and organize their micro businesses. He initiated a social movement to achieve "Hunger Free India". Even though his mission is not to earn big profits, his turnover reached ₹ 7.5 cr within five years. The social networking strategy enables him to increase the number of outlets to six in India (Sarathbabu, 2011).

SOCIAL COHESION

The degree of attitudinal consensus or behavioral uniformity in a group has been employed by scholars as measures of group cohesion. Thus, several researchers have emphasized the degree of positive interpersonal ties among persons as a basis of social cohesion(Gross, 1952; Lott, 1965; and Cartwright, 1968). (Moreno (1937) argued that social cohesion is indicated by the number of mutual dyadic ties within the group. The cohesion has been understood by the business entrepreneurs as "the resistance of a group to disruptive forces" (Gross, 1952). The social cohesion will build values of mutual-positive attitudes among the members in the group (Lott, 1961). The establishment of such cohesion groups among the society enables the entrepreneurs to create business segments.

Case Example: Rajashekar Reddy Seelam launched Sresta Natural Bio-products firm that markets more than 200 food commodities cultivated without using chemicals or pesticides (Sreekala, 2011). The venture was financed by the South-India based Murugappa Group in 2004 with an initial capital of ₹ 1 cr. The social cohesion model of the Sresta was based on three distinct groups. In the supply side, Sresta group entered an agreement with 10,000 farmers who follow organic certification procedures for cultivating various crops. In retailing side, Sresta group clinched deals with leading retailers such as Future Group, Food World, Heritage, Spar, Spencers and Godrej Natures Basket. It operates through shop-in-shop business model. In customer segmentation, they identified a substantial opportunity in tying up with IT companies and opened organic stores on their campuses. Its first in-house store was opened in Infosys campus at Hyderabad. The establishment of these three distinctive cohesion groups in the business society enables Sresta to cultivate more than 6,000 tones of food products in a year. Sresta is also exporting 65% of its agricultural commodities to the US, Western Europe and Japan.

ALLIANCE STRATEGY

Alliance strategy created by entrepreneurs can benefit them from various business aspects such as economies of scale, shared technology, risk sharing and access to untapped market. It also decreases the operational costs. Strategic alliances not only drive the entrepreneurs to share profits, but also to share the risk of loss. Entrepreneurs follow five management structures as proclaimed by Cullen (1999) such as dominant parent, shared management structure, split-control management structure, independent management structure and rotating management.

Case Example: Ashvin Gami uncovered that there was no typical ERP software solution available for the real estate business. He established Aakash Strategic Software firm, with 20 people (Babar, 2011). The team then coded software that helps real estate firms to assess their businesses through web-based applications. Its alliance strategy with their clients like Armstrong Group, Usha Breco Reality, Namdivardhan Group and Gannon Dunkerley enables them to develop their business in London and New York. The alliance strategy also initiates them to compete with the big daddies in the business such as Oracle and SAP.

COMMUNITY FUNDING

The community funding is in two diluted forms. First form is based on the capital infusion from the customer community. Second form is based on the contribution made to others under corporate social responsibility.

Case Example: The business model of Lebara set an example for capital infusion through its own customer's community. Ratheesan of Madurai (located in the state of Tamil nadu in India) who worked in a telecom company, launched his own London-based telecom company, Lebara, in 2001 with a start-up capital of €55,000 in credit for 14 days (Ram, 2011). It started selling international telephone calling cards. Lebara customers are the immigrants in London who used to call to their families at cheap rates. The retained cash from the immigrants were used for buying cards from other companies. Lebara got discount from their suppliers for making prepayments. After that, Lebara had infused the revenues earned from the immigrants and did not borrow any loans. Lebara sales' focused at the immigrant community in Europe and earned £650 mn. Lebara has struck agreements with several network providers across Europe. The top 10 destinations for repatriating the money from Europe and top 10 destinations of its mobile customers are from similar locations. Lebara as a part of community funding to others, set up a charity to provide care services for children in Tamil Nadu with £10 mn. This goodwill gestures enable them to develop their business to France, Netherlands, Germany, the UK, Australia, Switzerland, Denmark and Spain. Lebara takes advantage of the patronage of three million customers and more than 1000 employees in 10 countries.

The entrepreneurs who earned by way of social currency (goodwill) are funding the under privileged society as a part of corporate social responsibility. The concept of 'crowd-funding' and 'crowd sourcing' through venture capital firms are also often used by the first generation entrepreneurs for capital infusion. In case of Jignesh Shah's establishment of Multi Commodity Exchange, the venture was financed by 20 venture capital firms.

GRAVITY INDEX

Entrepreneurs choose the location of their business in proximity to the customers place. The location model depends on the spatial competition, demand and supply. The entrepreneurs expand their business in different locations after creating social networks. To find out whether the social fluidity variable depends upon the location factors, gravity index was constructed. The data regarding the number of sales outlets for each business unit, the number of round trips per month from the stock keeping units and two-dimensional coordinates (among the sales outlets) were collected. The center of gravity location model (Martinich, 2008) is used to find out the two coordinates x and y. The optimal location is derived based on the following equation:

$$\text{Minimize } z = \sum_{i=1}^{n} w_i \left[(x_i - x)^2 + (y_i - y)^2 \right]$$

where (x, y) are the two dimensional coordinates; n is the number of sales outlets; i is the sales outlets and w_i is the number of round trips from the stock keeping unit to sales outlets per month.

Gravity index = [(a/b)/(x/y)]100; where (a, b) are the actual coordinates.

Hence if, x and y coordinates are equal, the sales out let is located at the exact place. Otherwise, there is fluidity in location of the sales outlets. The frequencies of the calculated values are mentioned in Table 2.

Table 2: Gravity Index

S. No.	Gravity Index-Range	Frequency	Percentage
1.	Less than 25	91	29
2.	Greater than 25 but less than 50	112	36
3.	Greater than 50 but less than 75	88	28
4.	Greater than 75	21	7
	Total	**312**	**100**

The result reveals that around 65% of the entrepreneurs' (in the sample) sales outlets are not located proximity to stock keeping units.

Analysis of variance is used to find out whether the social fluidity variables such as social cohesion, social networking, alliance strategy and community funding differ in terms of gravity index. The null hypothesis that *the social fluidity variables have no significant variation among the means of the gravity index* was constructed. The results are portrayed in Table 3.

The results indicate that there is a significant variation among the means of gravity index with the social cohesion variable and alliance strategy. The null hypothesis has been rejected in these cases. However, for the remaining social fluidity variables, the null hypothesis has been accepted. Hence it may be concluded that the social cohesion

Table 3: ANOVA – Social Fluidity vs. Gravity Index

Variables		Sum of Squares	df	Mean Squares	*F*	Sig.
Social Networking	Between Groups	9.009	3	3.003	3.063	0.028
	Within Groups	301.991	308	0.980		
	Total	**311.000**	**311**			
Alliance Strategy	Between Groups	23.562	3	7.854	8.416	0.000
	Within Groups	287.438	308	0.933		
	Total	**311.000**	**311**			
Social Cohesion	Between Groups	78.813	3	26.271	34.849	0.000
	Within Groups	232.187	308	0.754		
	Total	**311.000**	**311**			
Community Funding	Between Groups	8..624	3	2.874	3.34	0.024
	Within Groups	302.376	308	0.858		
	Total	**311.000**	**311**			

attitudes and alliance strategy of the entrepreneurs depends on the location of the sales outlets. The entrepreneurs build a brand image in the location of the sales outlets by using social cohesion models and alliance networking. This leads to establishing the business unit in a concentrated market place. This attracts concentration of customers in a location and distracts spatial competition.

ESCAPE VELOCITY

Entrepreneurs come across financial and operating risk. To find out whether the risks are substantiated with upturns in the business, escape velocity is calculated. The escape velocity is measured based on the following equation.

Escape Velocity = (Number of upturns/Number of downturns during the course of business) × 100

The downturns were measured with the events related to negative publicity, lack of financial intermediation, disgrace among the stakeholders and lack of social immunity. The upturns were measured based on the positive events related to additional capital infusion, expansion to other location, increase in social currency (Goodwill), sponsoring social welfare programs and creating strategic network. All the events values are converted into quantitative value by giving equal weights. If the downturn exceeds the upturn, the social stigma related to business failure will be high. The frequencies of the calculated values are grouped in Table 4.

The result shows that around 66% of the entrepreneurs' escape velocity is greater than 100. This implies that the stigma associated with the failures is offset with the

Table 4: Escape Velocity

S. No.	Escape Velocity-Range	Frequency	Percentage
1.	Less than 50	54	17
2.	Greater than 50 but less than 100	52	17
3.	Greater than 100 but less than 150	153	48
4.	Greater than 150 but less than 200	42	14
5.	Greater than 200	11	4
	Total	**312**	**100**

upturn in their business. Analysis of variance is used to find out whether the social fluidity variables such as social cohesion, social networking, alliance strategy and community funding differ in terms of escape velocity. The null hypothesis that the mean factor scoring of social fluidity variable has no significant variations among the means of escape velocity has been established. The results are shown in Table 5.

Table 5: ANOVA – Social Fluidity vs. Escape Velocity

Variables		Sum of Squares	df	Mean Squares	F	Sig.
Social Networking	Between Groups	20.172	4	5.043	5.323	0.000
	Within Groups	290.828	307	0.947		
	Total	**311.000**	**311**			
Alliance Strategy	Between Groups	20.814	4	5.204	5.505	0.000
	Within Groups	290.186	307	0.945		
	Total	**311.000**	**311**			
Social Cohesion	Between Groups	21.479	4	5.370	5.670	0.000
	Within Groups	289.521	307	0.943		
	Total	**311.000**	**311**			
Community Funding	Between Groups	22.034	4	5.509	5.852	0.000
	Within Groups	288.966	307	0.941		
	Total	**311.000**	**311**			

The results indicate that there is a significant variation among the means of the escape velocity with the social fluidity variables. The null hypothesis was rejected in these cases. Hence it may be concluded that the social fluidity mapping influences the escape velocity. It decreases the social stigma related to business failures.

Conjoint analysis was carried out to determine the relative importance of social fluidity variables compared with the escape velocity. The reliability of using conjoint analysis was measured by R^2. Since R^2 was 0.734, conjoint analysis was appropriate

Table 6: Social Fluidity Mapping – Relative Importance

Attribute	Relative Importance (%)	Attribute Values	Utility
Social Networking	15.6556	Societal Interaction	0.17807
		Community Affiliation	0.04364
		Social Stratification	0.09800
		Social Assimilation	–0.09206
		Social Media	–0.13667
Alliance Strategy	27.5303	Risk Sharing	0.23922
		Franchising	–0.31425
		Business Integration	–0.24675
		Power of Prophecy	0.14502
Social Cohesion	23.9839	Social Ventures	–0.17337
		Societal Cartels	0.26871
		Social Unification	0.25081
Community Funding	32.8303	Working Capital Bailout	–0.31478
		Crowded Funding	–0.19551
		Survival Startup	0.34525

one. Table 6 shows the relative importance among the social fluidity variables as compared with escape velocity.

The successful entrepreneurs give more weight to community funding system than the other variables. The 'community funding' and 'alliance strategy' accounts for 60% relative importance. However, to develop a strong community funding system, social networking, social cohesion and alliance strategy are essential. The transition pattern changes the socioeconomic situation of the entrepreneurs.

CASE OF M KRISHNAN

M Krishnan along with his brother transformed a single retailing unit into a multiple unit using SFMS (Krishnan, 2011). The social affinity created by them leads to prolonged survival in the business and even without borrowing loan capital. Mahadeva Iyer set up Sri Krishna Sweets in 1948 at Coimbatore. After him, it is being managed by Krishnan and his brother Murali. From a single retail outlet, it has been moved to 62 units in a period of 20 years. In the year 1991, it opened its branches in Coimbatore. It established its own corporate social responsibility department in 1992. During that period, it organized social welfare programs in Coimbatore along with social entrepreneurs. In 1996, it opened its branch in Chennai. By the year 2011, there were 52 outlets in the country located at Tamil Nadu, Bangalore, Hyderabad and Mumbai. It has offshore retail outlets are at the US, the UK, Singapore, Malaysia and Dubai. The sweet shop has centralized kitchens spread over one lakh sq. ft. These are located in Coimbatore, Chennai, Bangalore and Mumbai in India. The recipe and the ingredients are dispatched from Coimbatore to other locations for the purpose of maintaining uniform quality. There is an advanced laboratory with experienced food technologists to ensure the quality standards of both input and output. Its quality control lab is certified by the government. It uses biodegradable and environment-friendly materials for packing. In addition, it uses the colors and natural savor allowed as per government norms. Sri Krishna Sweets has employed over 1,000 people at their various outlets. It also provides indirect employment to over 400 people. Sri Krishna Sweets is organizing a variety of corporate social responsibility programs for the rural sections of the society and their overall growth needs. Few popular programs are listed as follows:

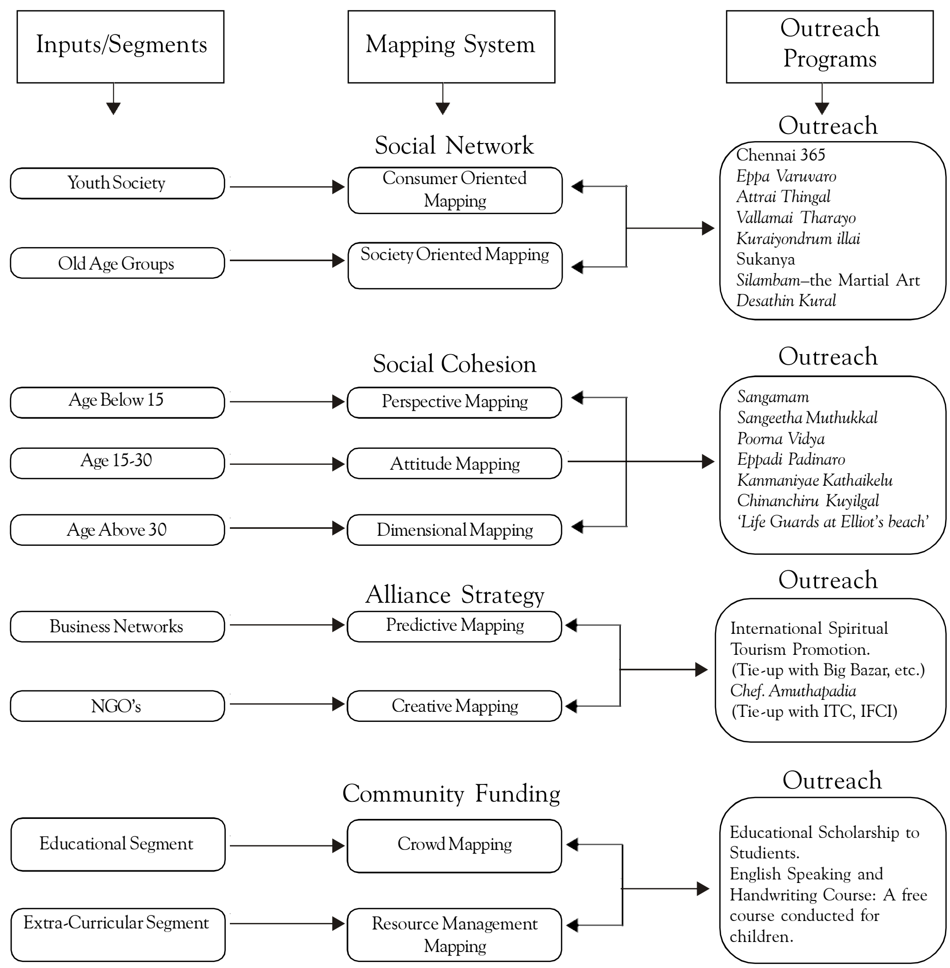
- *Attrai Thingal* (Tamil language Literary Series): In this program, eminent Tamil scholars talk about classical Tamil concepts on third Sundays of every month.
- *Chef Amuthapadai* (Divine feast): It is a program that has been arranged to provide meals once in a month to children living in orphanage.
- Chennai 365 (Vision for Madras): It is a remarkable social responsibility program that is targeted at the urban society with the aim of creating neighborhood community.
- *Chinanchiru Kuyilgal* (Lovely kids) : It is a course organized for the children on classical music. It is conducted on first Sundays of every month.
- *Desathin Kural* (Voice of Nation): Under this program, inspiring speeches of leaders and spiritual heads will be broadcasted in All India Radio.
- English Speaking Course: It is a course conducted to develop the spoken English for rural children.
- *Eppa Varuvaro* (Arrival Phase): It is a spiritual talk series conducted annually during the first two weeks of January.
- *Eppadi Padinaro* (Philosophical Composer): It is a program designed for musical admirers. It is conducted on fourth Sundays of every month.
- *Ilaya Bharathathinai Vaa Vaa* (Call for young people of India): It is a patriotic talk series given by eminent personalities.
- International Spiritual Tourism Promotion Program: This program is aimed to develop pilgrimage to divine places in the world.
- *Kanmaniyae Kathai Kelu* (Story telling program): It is an exclusive story narration program for kids and conducted on first Sundays of every month.
- *Kuraiyondrum illai* (Plethora thoughts): It is a program organized for elders about the divine thoughts and conducted on first Sundays of every month.

- Life Guards at Elliot's beach: It is an unique program designed for depressed youth. During a period of 10 years, 69 persons, who ventured into the sea, were saved.
- *Poorna Vidya* (Holistic Education): It is a heritage program organized exclusively for under privileged children in the society.
- *Sangamam* (Cultural Feast): It is a cultural program conducted for urban people.
- *Sangeetha Muthukkal* (Musical Pearls): It is a classical music concert organized with the help of stalwarts in the field of *carnatic* (Classical) music. It is broadcasted through All India Radio.
- *Silambam* (Martial Art): It is a classical martial art training program for students studying in colleges.
- *Sukanya* (Women Empowerment): It is a guidance program conducted for the young girls that aimed to improve the social well-being.
- *Vallamai Tharayo* (Brave Thoughts): It is a program for dynamic youth that aimed to improve their self-confidence.

In addition to the above, Sri Krishna Sweets, in association with Exonora International, is engaging in restoration of water bodies and addressing environmental issues. All these programs are uniquely designed to achieve the objectives of social networking and social cohesion. This enables to have alliance strategy with different groups in the form of franchising, collaboration and harmonization. The firm has tied up with Big Bazaar in Bangalore, Hyderabad and Mumbai. The business unit is not borrowing from anybody for working capital and capital requirements. They have generated their own funds from its own business community in the form of revenue itself. All the dealings are only in cash. They are contributing in the form of community funding for weaker section in the society. Exhibit I shows the social fluidity mapping system followed by the Sri Krishna Sweets.

The social networking of the organization is based on the consumer oriented mapping (stratification of consumers) and society oriented mapping (stratification of non-consumers under societal values) strategies. The social cohesion strategies are segmented based on the age groups. The outreach programs such as *Kanmaniyae Kathai Kelu*, *Porna Vidya* and *Chinanchiru Kuyilgal* are designed to fit the needs of age groups less than 15. S*angeetha Muthukkal* and 'life guards' are uniquely designed and targeted for age groups between 15 and 30. The out reach programs such as *Sangamam*, *Kuraiyondrumillai* and *Epadi padinaro* are designed for the age group more than 30. The alliance strategy depends upon the predictive mapping and creative mapping. The organization has tie-up with Big Bazaar (a chain retail outlet in India) with the aim of creating business network. To introduce innovative ideas and for new product marketing, the firm is doing outreach program such as *Chef Amudupadi*. The community funding strategies of the firm is based on crowd mapping, through which they are also

Exhibit I: Social Fluidity Mapping in Sri Krishna Sweets

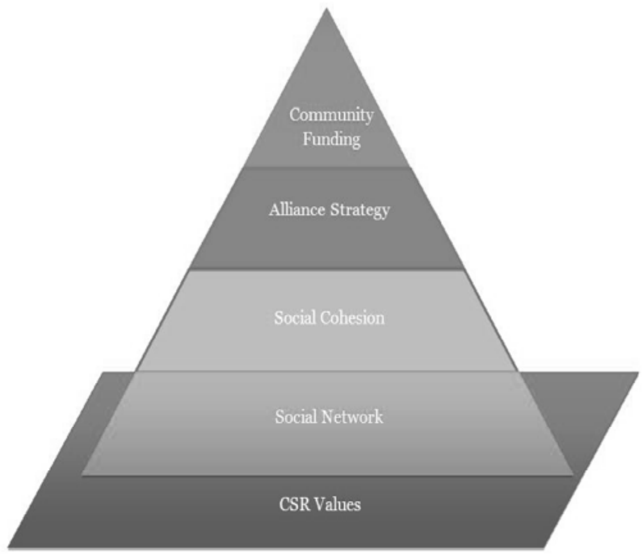


one of the sponsors for providing scholarship to under privileged students. Through resource mapping, they are organizing their own welfare programs in schools and undertaking the renovation of water tanks in Coimbatore. The returns from organizing corporate responsibility programs enable them to create value for the firm's social currency. In the long-term, this social currency gets translated to provide monetary benefits.

EMPIRICAL FINDINGS AND IMPLICATIONS

Past researches contended that goodwill creation, supplier and customer relationship, risk mitigation and sourcing of funds are the main factors essential to get rid of the social stigma. The present research contented that there is a need for social fluidity

Exhibit II: Social Fluidity Pyramid



mapping to earn social currency. There is a strong association among the social cohesion and alliance strategy with gravity index. There is a strong relationship between the social fluidity variables and escape velocity ratio. High escape velocity leads to reduced social stigma. The success of social fluidity mapping depends upon leveraging the social network that creates entrepreneurial structural relationship among the stakeholders. The returns on social affinity reduce the business failure.

The results also contented that the success of social fluidity mapping depends on the integration of social networking, social cohesion, alliance strategy and community funding. Creation of social cohesion and alliance strategy depends upon the location of the sales outlets. The equilibrium level of maintaining the social fluidity mapping decreases the risk associated with the entrepreneurship. This has been proved with the variation between the escape velocity and social fluidity variables. The hierarchy of the social fluidity mapping is in the order of achieving social networking strategy, social cohesion strategy, alliance strategy and community funding (Exhibit II). The achievement of corporate responsibility values through social networking and social cohesion depends on the internal factors of the entrepreneur. However, the external factors such as alliance strategy and community funding depend on the value of the social currency created by the first two variables. The results were derived from the opinions of the well established experienced entrepreneurs and those who have successfully implementing corporate social responsibility programs. Hence the 'startup entrepreneurs' would not focus on social fluidity variables. A social entrepreneur who created a social fluidity mapping can easily transform his social entrepreneurship in to a business entrepreneurship. The entrepreneurs find easy to sustain, after establishing social fluidity mapping system. During the start-up period, entrepreneurs create a matrix type of business model with social entrepreneurs to reduce the risk. SFMS provides not only the decision to establish corporate social responsibility, but also the choice of revenue models and the decision to change location. In order to reduce the stigma of failures, entrepreneurs need to create good relationship, reward the right cohesion group and create right working culture. A business unit that wants to be prosperous in a time frame of rapid change has to build SFMS in its own system.

CONCLUSION

Entrepreneurs are relationship-driven people. They always aim to create social currency through corporate social responsibility programs. The corporate social responsibility programs are based on the social fluidity mapping system. The success of social fluidity mapping not only creates value to business but also to society. If 'start-up entrepreneurs' find it difficult to penetrate into social fluidity mapping, they can arm-up with social entrepreneurs and increases the value of social currency. The customer reliability is no longer a key competitive advantage. Instead, trust among the society is a competitive advantage for an entrepreneur to reduce the social stigma related with business failures. The social commitment is the ultimate aim of social fluidity mapping system.

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APPENDIX

Social Fluidity Variables		
S. No.	**Variables**	**Reference**
1.	Business Integration	Ahlfors U (2005), *Successful Interactive Business: Integration of Strategy and IT*, University of Jyvaskyla.
2.	Community Affiliation	Tribhuvananda S H and Nandeshwar R (2011), "Nurturing Entrepreneurship in Rural Communities", *International Journal of Research in Commerce & Management*, pp. 49-52.
3.	Conservative Equilibrium	Landier A (2005), "Entrepreneurship and the Stigma of Failure".
4.	Crowded Funding	Agarwal A, Catalini C and Goldfarb A (2010), "The Geography of Crowdfunding", NET Institute Working Paper, No. 57.
5.	Distribution Networks	Hitt M A, Ireland D, Camp M and Sexton D L (2001), "Strategic Entrepreneurship: Entrepreneurial Strategies for Wealth Creation", *Strategic Management Journal*, pp. 479-491.
6.	Execution Complexity	Yixin D and Bhattacharya K (2008), "Estimating Business Value of IT Services Through Process Complexity Analysis", *Network Operations and Management Symposium*.
7.	Franchising	Tracey P and Jarvis O (2007), "Toward a Theory of Social Venture Franchising", *Entrepreneurship Theory and Practice*, pp. 667-685.
8.	Integrity	Eijaz A K, Md Nur A and Sarif M K (2005), "Factors Affecting the Growth of Entrepreneurship in Small-Scale Business", *Business Review*, pp. 33-38.
9.	Passion	Peredo A M and Mclean M (2006), "Social Entrepreneurship: A Critical Review of the Concept", *Journal of World Business*, pp. 56-65.

APPENDIX (Cont.)

Social Fluidity Variables		
S. No.	**Variables**	**Reference**
10.	Power of Prophecy	Wootton S and Horne T (2010), *Strategic Thinking: A Nine Step Approach to Strategy and Leadership for Managers and Marketers*, Kogan Page Publishers.
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20.	Social Media	Zarrella D (2009), "The Social Media Marketing Book", *Business & Economics* , p. 232.

APPENDIX (Cont.)

Social Fluidity Variables		
S. No.	**Variables**	**Reference**
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22.	Social Stratification	Bian Y (2002), "Chinese Social Stratification and Social Mobility", *Annual Review*, pp. 91-116.
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24.	Social Ventures	Tracey P and Jarvis O (2007), "Toward a Theory of Social Venture Franchising", *Entrepreneurship Theory and Practice*, pp. 667-685.
25.	Societal Cartels	Granovetter M (2005), "The Impact of Social Structure on Economic Outcomes", *The Journal of Economic Perspectives*, pp. 33-50.
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Structural Equation Modeling for Testing the Impact of Organization Communication Satisfaction on Employee Engagement

Suryanarayan Iyer and D Israel***

Communication satisfaction plays a very crucial role in achieving employee engagement in organizations. It becomes even more significant and relevant in the context of the recent global crisis wherein organization's focus on employee engagement was high and was aimed towards employee retention and motivation. Using the second-generation analytical technique structural equation modeling, the present study examines the relationship between various components of organization communication satisfaction and various components of employee engagement. A modified version of the Downs and Hazen's communication satisfaction questionnaire was administered on 235 personnel in the Information Technology (IT)/Information Technology Enabled Services (ITES) industry in India. The scale was tested for reliability and validity using confirmatory factor analysis. The results indicate that organization communication satisfaction has a positive impact on employee engagement. The study findings have strategic implications for organizations with regard to laying a greater emphasis on increasing communication satisfaction through various human resource interventions, both at macro and micro levels in the organization.

INTRODUCTION

Employee Engagement (EE) has been drawing a lot of importance in various organizations in recent times. A global workforce study conducted by Tower's Perrin in 2007-2008 revealed that only 21% of the employees were engaged. A more disturbing finding of the study was that 38% of the employees were partly to fully disengaged. The study also concluded that companies with the higher levels of EE are able to retain their valued employees as also achieve better financial results. Similarly, Gallup

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has also conducted a study on EE and found that 29% of employees are actively engaged in their jobs, 54% are not engaged, and 17% are actively disengaged. Many researchers have studied and have found that EE predicts employee outcomes, organizational success and financial performance (Harter *et al.*, 2002; and Bates, 2004). Similarly, Hewitt Associates (2005, p. 1) have also established a strong relationship between EE and profitability through higher productivity, sales, customer satisfaction and employee retention. Unfortunately though, a lot of literature available is only those from consulting firms and there is very little theoretical or empirical research available on EE.

Today, as a result of continuous organizational restructuring (mergers, acquisitions and downturn imperatives), it is commonly observed that organizations are resorting to right sizing strategies. Every Chief Executive Officer (CEO) accords topmost priority to engage the employees who survive the layoffs. Research indicates that there is a decline in engagement levels and that there is deepening disengagement among employees today (Bates, 2004; Richman, 2006; and Saks, 2006). It has also been reported that the majority of workers today, roughly half of all Americans in the workforce are not fully engaged or they are disengaged leading to what has been referred to as an 'engagement gap' that is costing US business $300 bn a year in loss of productivity (Kowalski, 2003; Bates 2004; Johnson, 2004; and Saks, 2006). Further, with the world becoming a global market place, where every thing is becoming a commodity, people and their talent are the key differentiators to an organization's ability to service its customer. Managing disengaged employees or non-engaged employees in a customer facing role is therefore, very crucial to the success and profitability of the business. Lockwood explains, "As organizations move forward into a boundaryless environment, the ability to attract, engage, develop and retain talent will hence, become increasingly important".

In addition to the various literatures available from consultants, there have been a few researches conducted on the antecedents and consequences of EE and also on "What is employee engagement?" A very exhaustive analysis of EE has been done by Macey and Schneider (2008).

Organizational communication plays a very important part in ensuring EE. It has been established that clear, concise and honest communication is an important tool for EE (Lockwood). It is further established that lack of communication or poorly communicated information can lead to distrust, dissatisfaction, skepticism and unwanted employee turnover. Studies demonstrate that there is a significant influence of interpersonal trust on individual, group and organizational achievements (Earley, 1986; and Robinson, 1996), job satisfaction (Muchinsky, 1977; and Driscoll, 1978), job involvement (Saks, 2006) and organizational citizenship behavior (Konovsky and Pugh, 1994; and McAllister, 1995). Studies have also underlined the central role of communication in developing and maintaining Trust (Muchinsky, 1977; Becerra and Gupta, 2003; and Gail *et al.*, 2009).

With particular reference to recession, downsizing has become a harsh reality over the past two decades. These downsizing strategies come with other negative consequences of "attrition of employees who are not impacted by downsizing". The problem is more profound when the attriting employees are top performers or employees with skills crucial to future growth plans of the organization. Various studies have proved that downsizing negatively affects attitudes of employees surviving the downsizing by reducing organizational commitment, morale, job satisfaction and also increasing intention to quit and job stress (Arnold and Feldman, 1982; Greenhalgh, 1982; and Kozlowski *et al.*, 1993).

It is therefore, very important for organizations to find ways to retain the attriting employees after downsizing. Managerial communication and organizational support can be looked at as possible avenues to reduce the negative effects of downsizing. Communication becomes very crucial because employees believe that their organization holds them in low regard and ignores their interest (McLean Parks and Kidder, 1994; and Anderson, 1996). They also suspect that management communication is not credible for that information is being withheld (Noer, 1993; and O'Neill and Lenn, 1995). Employees need to understand how they fit into the overall plans of the organization in terms of their roles and contribution to the growth plans of the organizations. Various surveys in this regard indicate that employees want more communication with their managers (Argenti, 1998). There are various studies that have established a positive relationship between communication satisfaction and job satisfaction (Pincus 1996; and Petit *et al.*, 1997) and organization commitment (Varona, 1996). A communication Return on Investment (ROI) study by Watson Wyatt (2008) revealed "firms that communicate effectively are four times as likely to report high levels of employee engagement as firms that communicate less effectively".

This study therefore, attempts to establish the impact of organizational communication satisfaction on EE in the Information Technology/Information Technology Enabled Services (IT/ITES) industry in India. We have selected the IT/ITES industry because of the significance of the impact during the recent recessionary period.

LITERATURE REVIEW AND RESEARCH HYPOTHESIS

ORGANIZATIONAL COMMUNICATION

Organization communication constitutes many dimensions spanning formal and informal means of internal communication and external communications. A review of literature in this area reveals that organizational communication can be classified into four different levels (*SHRM Magazine*, 2008):

(1) Overall Organizational Communication
(2) Inter-organizational Communication
(3) Group-level Communication
(4) Interpersonal Communication

Further, review of the research in this area underlines the importance of organizational communication towards building commitment, satisfaction and retention of employees in an organization. A number of studies (Jain, 1970; Burhans, 1971; and Downs, 1971) studied the relevance and importance of satisfaction with organizational communication. Such examinations of the communication satisfaction relationship have produced a construct called 'communication satisfaction', which is becoming a common reference in organizational literature (Downs and Hazen, 1977). Downs and Hazen introduced the Communications Satisfaction Questionnaire (CSQ) and conducted a factor analytic study of communication satisfaction. This study established eight stable definitions of communication satisfaction, which has also been enumerated as follows in another study by Clampitt and Downs (1993):

Communication Climate: Reflects communication on both the organizational and personal level. On one hand, it includes items such as the extent to which communication in the organization motivates and stimulates workers to meet organizational goals and the extent to which it makes them identify with the organization. On the other, it includes estimates of whether or not people's attitudes toward communicating are healthy in the organization.

Supervisory Communication: Includes both upward and downward aspects of communicating with superiors. Three of the principal items include the extent to which a superior is open to ideas, the extent to which the supervisor listens and pays attention, and the extent to which guidance is offered in solving job-related problems.

Organizational Integration: Revolves around the degree to which individuals receive information about the immediate work environment. Items include the degree of satisfaction with information about departmental plans, the requirements of their jobs, and some personnel news.

Media Quality: Deals with the extent to which meetings are well organized, written directives are short and clear, and the degree to which the amount of communication is about right.

Co-worker Communication: Concerns the extent to which horizontal and informal communication is accurate and free flowing. This factor also includes satisfaction with the activeness of the grapevine.

Corporate Information: Deals with broadest kind of information about the organization as a whole. It includes items on notification about changes, information about the organization's financial standing, and information about the overall policies and goals of the organization.

Personal Feedback: Is concerned with the workers' need to know how they are being judged and how their performance is being appraised.

Subordinate Communication: Focuses on upward and downward communication with subordinates. Only workers in a supervisory capacity respond to these items, which include subordinate responsiveness to downward communication and the extent to which subordinates initiate upward communication.

Crino and White (1981) investigated communication satisfaction with 137 supervisors from textile mills. Similarly, Pincus (1986) used the CSQ in a study of nurses and their supervisors to investigate the relationship between communication, job satisfaction and job performance. These findings had resulted in the CSQ being the most widely used scale when measuring communication satisfaction. The notable aspect though, is that the studies by Downs and Hazens (1977), and Crino and White (1981) focussed on exploratory factor analysis rather than Confirmatory Factor Analysis (CFA) for assessing the validity of the CSQ. Therefore, the convergent and discriminant validity of the CSQ was under question.

Additionally, until the introduction of CSQ, communication was considered as a unidimensional construct. The underlying belief was that employees are either satisfied or dissatisfied with communication. However, the introduction of the CSQ changed communication satisfaction to be viewed as a multidimensional construct wherein, employees could be satisfied or dissatisfied with one or more aspects of communication.

Gary and Laidlaw (2004) assessed the CSQ using CFA. Their study used a series of congeneric measurement models to study the validity and reliability of the CSQ. Based on the study, Gary and Laidlaw concluded,

> The results substantiate CSQ as a valid instrument for measuring communication satisfaction and supports the multidimensional aspects of the communication satisfaction construct.

This study therefore, proposes to establish the convergent and discriminant validity and reliability of the CSQ for the purpose of IT/ITES sector in India. The study also proposes to establish the relationships between the individual dimensions of organizational communication satisfaction using first-order and second-order CFA.

H_1: *Dimensions of Organization Communication Satisfaction (OCS) are inter-related.*

H_2: *Organizational Communication Satisfaction is explained through organizational integration, supervisory communication, personal feedback, corporate information, communication climate and media quality.*

EMPLOYEE ENGAGEMENT

EE has been drawing a lot of importance in various organizations in recent times. There have been few research works on EE (Robinson *et al.*, 2006) and most of the understanding comes from consulting firms and independent research agencies. There have been various definitions of EE. It is the level of commitment and involvement an employee has towards his/her organization and its values (Vazirani, 2007). Engagement is the willingness and ability to contribute to company success, the extent to which employees put discretionary effort into their work, in the form of extra time, brainpower and energy (Towers Perrin, 2007-2008). Often used as a synonym for motivation or retention; engagement is really more fundamental. Engagement is an employee's decision to apply his discretionary effort to the goals of the enterprise, to accept those goals as his own and wholeheartedly commit himself to achieving them (Fineman and Carter, 2007).

Though EE as a concept has been drawing a lot of importance, it is still a term widely referred among consulting firms and independent research agencies. There have been very few empirical research initiatives in the academic world to establish the definition of the construct 'employee engagement'.

Macey and Schneider (2008) have done a detailed study on the meaning of EE and have established a series of propositions covering three facets:

1) Psychological stage engagement

2) Behavioral engagement

3) Trait engagement

This research though will focus on the psychological state engagement facet since this has received maximum attention and is central to the engagement issue. Further, the scope of the research is focused towards examining the impact of OCS on EE. Past researches on similar subjects have all focused on studying the relationship between OCS on individual aspects of state engagement viz., satisfaction, commitment and involvement.

Macey and Schneider (2008), while explaining the psychological state engagement have studied four different aspects viz., job satisfaction, organizational commitment, psychological empowerment and job involvement. They have further referred to various related research in each of the above aspects and thereby analyzed each of the above aspect as a facet or antecedent or consequence of EE.

ENGAGEMENT AS JOB SATISFACTION

In defining job satisfaction as a facet of EE, the views of Erickson (2005) are noteworthy;

> Engagement is above or beyond simple satisfaction with the employment arrangement or basic loyalty to the employer. Engagement in contrast is about passion and commitment, the willingness to invest oneself and expand ones discretionary effort to help the employer succeed.

Therefore, it is beyond basic loyalty and is about the emotional aspect of job satisfaction that triggers emotions and feelings of energy, enthusiasm and thereby constitutes a very important aspect of engagement.

ENGAGEMENT AS ORGANIZATION COMMITMENT

In defining organizational commitment as an important facet of EE, the views from various contributions are noteworthy (Mowday *et al.*, 1982; O'Reilly and Chatman, 1986; Meyer and Allen's, 1997; Meyer *et al.*, 2004; and Wellins and Concelman, 2005). These significant contributions lead to definitions; employees exert extra energy in support of the organization, feel proud as a key contributor to the organization and its success, and enjoy a personal identity with the organization. This leads to organization commitment being defined as a key facet of engagement (Macey and Schneider, 2008).

While analyzing organization commitment, there is also an analysis around organization/job withdrawal thereby suggesting that commitment as a state of engagement also relates to how long an employee stays as a result of commitment (The Corporate Executive Board, 2006).

ENGAGEMENT AS JOB INVOLVEMENT

The next aspect analyzed by Macey and Schneider (2008) is job involvement. Job involvement has been defined "as the degree to which an employee psychologically relates to his or her job and the work performed therein and specifically equated job involvement and job commitment (Cooper-Hakim and Visweswaran, 2005). Brown (1996), and Mathieu and Zajacs (1990) have also come up with the conclusion that job involvement is an antecedent to organizational commitment. Brown further concluded that organizational withdrawal decisions are less related to job involvement than to organizational commitment. Erickson (2005) described job involvement as a key antecedent of the state of engagement.

Based on the analysis and significant well-researched contributions, we identify job satisfaction, organizational commitment and withdrawal as key facets of EE.

Further, Saks (2006) has conducted a good study on the antecedents and consequences of EE. The research conceptualized engagement as being reflective of the extent to which an individual is psychologically present in a particular organizational role (Kahn, 1990; and Rothbard, 2001). It was further conceptualized that there are two dominant roles attributable to most organizational members viz., their work role and their role as a member of the organization. These two roles led to the two components of EE—job and organization engagement. Saks (2006) further found that job and organization engagement were significantly positively related to job satisfaction, organizational commitment and organizational citizenship behavior, and negatively related to intention to quit.

In summary, EE is about one's emotional commitment towards the organization, being psychologically involved and willingness and ability to walk that extra mile in achieving the organizational goals and objectives. Based on the above review, it is understood that EE mainly constitutes three aspects viz., organizational commitment, job satisfaction and withdrawal cognition.

This study proposes to establish the convergent and discriminant validity and reliability of the individual scales of the dimensions of EE. This study further proposes to establish the relationships between the individual dimensions of EE using first- and Second-order CFA:

H_3: Dimensions of Employee Engagement are interrelated.

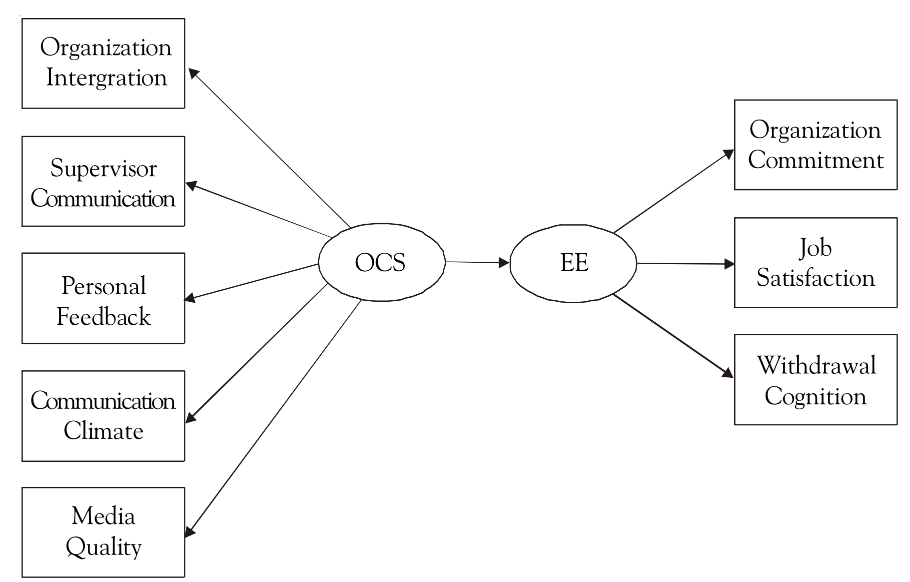
H_4: Employee engagement is explained through organizational commitment, job satisfaction and withdrawal cognition.

ORGANIZATION COMMUNICATION SATISFACTION AND EMPLOYEE ENGAGEMENT

The next dimension studied was the relationship between organizational communication and EE in organizations. Employees see managers as trustworthy when their communication is accurate and forthcoming. In addition, adequate explanations and timely feedback on decisions lead to higher levels of trust (Folger and Konovsky, 1989; Konovsky and Cropanzano, 1991; Sapienza and Korsgaard, 1996). Evidently, managers who take the time to explain their decisions thoroughly are likely to be perceived as trustworthy. Finally, open communication, in which managers exchange thoughts and ideas freely with employees, enhances perceptions of trust (Farris *et al.*, 1973; Gabarro, 1978; Hart *et al.*, 1986; and Butler, 1991). Lockwood states that "lack of communication or poorly communicated information can lead to distrust, dissatisfaction, skepticism, cynicism and unwanted turnover. This is even more relevant in times of crisis as observed by Meyers in 1986; "When a crisis occurs, employees are affected on a personal level, in ways and to an extent unlike in any other audience. Their immediate reaction is often to be 'stunned and lose a sense of common purpose and cohesiveness' Gripped by fear, employees may stray from their sense of reality and turn inward, focusing exclusively on their personal needs and ignoring the organization's needs". Pincus and Acharya (1998) observed "Employees who are uncertain about their jobs, health, or safety may deny, misinterpret, selectively perceive, or tune out information from management about the crisis situation because they may be blinded by their own sense of a 'personal' crisis."

These studies lead us to the understanding that "clear, concise, timely and honest communication is a very important management tool towards building employee engagement in organizations" (Lockwood, 2007). As discussed earlier, there have been many consultants and independent research organizations, which have established communication as a very crucial component in enabling EE in organizations. Further, there have been individual studies relating organizational communication and the individual facets and antecedents of EE. This study proposes to study the relationship of OCS on EE using second-generation analysis technique, Structural Equation Modeling (SEM) (Figure 1).

Figure 1: Proposed OCS-EE Model



H_5: *Organization communication satisfaction has a positive impact on employee engagement.*

RESEARCH METHODS

QUESTIONNAIRE DESIGN

The CSQ (Downs and Hazen, 1977) was selected for the organization communication construct of the study. We have used seven factors of the CSQ because the eighth factor, 'subordinate communication' was aimed at personnel in their role as employees and not supervisors. For the EE construct, each of the individual facets was measured on borrowed scales. Job satisfaction was measured on five items taken from the scale developed by Price and Muellar (1986). Organization commitment was measured on six items taken from the scale developed by Meyer *et al.* (1993) while withdrawal cognition was measured on 3-item scale developed by DeConninck and Bachmann (2005).

Since we are using borrowed scales for each of the constructs, it is important to first establish the validity and reliability of the scale. In other words, the items must reflect what they are intended to measure (face validity) and represent a proper sample of the domain of each construct (content validity), and pass other tests of validity (discriminant, convergent and predictive validity) in order for a measure to have construct validity (Hardesty and Bearden, 2004). As a first step, we carried out a face validity of the constructs of the study. Based on the approaches discussed by Hardesty and Bearden, we identified a panel of seven judges to assess the face validity. The judges were exposed to the definition of each construct, overall scope and objective of the study and the individual items under each construct (total number of items was 49). Each judge was requested to rate the importance and relevance of the item to the construct's conceptual definition on a scale of 1-10 (1 – least important to 10 – Most Important), e.g., Items like "I find real enjoyment in my job" or "I am seldom bored with my job". Additional remarks were also sought from the judges on whether multiple items under a construct mean the same and also which among the items was a better representative of the construct's conceptual definition. These results were summarized for each item and the items which were given a weightage of 'less than 8' were considered for reduction. During the content validity stage, the judges unanimously felt that co-worker communication, as a dimension was not too relevant from an engagement perspective since a lot of it was not largely under the control of the organization. However, one item in the co-worker communication was felt necessary to be included viz., Extent to which communication practices are adaptable to emergencies and hence, the same was retained and included in the dimension 'communication climate'. Similarly, the items viz., Information about changes in our organization, and information about company goals and policies were the only two items left under the dimension 'corporate information'. Since it is required to have at least three items under each dimension/factor for SEM, these two items were grouped under the dimension 'Organizational Integration'. Therefore, in the final questionnaire (total number of items 28), OCS was measured on five factors viz., organizational integration, supervisory communication, personal feedback, communication climate and media quality. The factors under EE were all retained viz., organization commitment, job satisfaction and withdrawal cognition.

In addition to the two sections representing the main constructs of the study, the questionnaire also covered a brief write up covering the purpose of the study as well as explicit statements of assurance to the respondents about the confidentiality of their responses and that the responses would be used for academic purposes only.

DATA COLLECTION AND SAMPLING

For this study, primary data was collected through structured undisguised questionnaires administered to the respondents. Questionnaires were administered through personal contacts/meetings and through mail as per the convenience of the respondent at home or in office. The respondents were requested to spare few minutes to provide categorical responses to items in the questionnaire.

The respondents for the study were selected from the personnel of organizations in IT /ITES industry in India. A total of 275 questionnaires were administered to the respondents. Two hundred and sixty four questionnaires were found to be complete in all respects, giving a response rate of 96%. A further 29 invalid questionnaires were eliminated (those questionnaires where too many items were left unanswered or the same response was given to all the questions) and 235 valid questionnaires were taken for further analysis.

MEASUREMENTS

The study hypothesis covers two constructs—OCS and EE. OCS is measured for five key dimensions/Factors viz., organization integration, supervisory communication, personal feedback, communication climate and media quality while EE is measured on three key dimensions/factors viz., organization commitment, job satisfaction and withdrawal cognition. The eight categorical dimensions were measured on the items/variables mentioned in Table 1.

All the variables are categorical in nature and were measured on a categorical scale (5-point Likert).

ANALYSIS

We have applied second-generation analytical technique, SEM as the tool of analysis for maximum likelihood estimation for examining the proposed hypotheses. As suggested by many researchers (e.g., Anderson and Gerbing, 1998), we have chosen the two-step analysis method wherein in the first step, we conduct the CFA based on the

Table 1: Factors and Their Measurement Variables Used in the Study

Factors/Dimensions	Items/Variables of Measurement
Organization Communication Satisfaction (OCS)	
Organization Integration (ORG)	1. Information about the requirements of my job (*oi1*).
	2. Information about my progress in my job (*oi2*).
	3. Information about company policies and goals (*oi3*).
	4. Information about changes in our organization (*oi4*).
Supervisory Communication (SUP)	1. Extent to which my supervisor listens and pays attention to me (*sc1*).
	2. Extent to which my supervisor offers guidance for solving job related problems (*sc2*).
	3. Extent to which my supervisor trusts me (*sc3*).
	4. Extent to which my supervisor is open to ideas (*sc4*).

Table 1 (Cont.)

Factors/Dimensions	Items/Variables of Measurement
Organization Communication Satisfaction (OCS)	
Personal Feedback (PER)	1. Information about how I am being assessed (*pf1*).
	2. Information about how my efforts are recognized and rewarded (*pf2*).
	3. Extent to which superiors know and understand the problems faced by subordinates (*pf3*).
Communication Climate (CLI)	1. Extent to which the organization's communication motivates and stimulates an enthusiasm for meeting its goals (*cl1*).
	2. Extent to which the organization's communication makes me identify with it or feel a vital part of it (*cl2*).
	3. Extent to which communication practices are adaptable to emergencies (*cl3*).
	4. Extent to which I receive in time the information needed to do my job (*cl4*).
Media Quality (MDQ)	1. Extent to which written directives and reports are clear and concise (*mq1*).
	2. Extent to which the attitudes toward communication in the organization are basically healthy (*mq2*).
	3. Extent to which the amount of communication in the organization is about right (*mq3*).
Employee Engagement	
Organization Commitment (OM)	1. I really feel as if this organization's problems are my own (*om1*).
	2. I do not feel like "part of the family" at my organization (R) (*om2*).
	3. I do not feel "emotionally attached" to this organization (R) (*om3*).
	4. This organization has a great deal of personal meaning for me (*om4*).
	5. I do not feel strong sense of belonging to my organization (R) (*om5*).
Job Satisfaction (JS)	1. I find real enjoyment in my job (*js1*).
	2. Most days I am enthusiastic about my job (*js2*).
	3. I feel fairly well satisfied with my job (*js3*).

Table 1 (Cont.)

Factors/Dimensions	Items/Variables of Measurement
Employee Engagement	
Withdrawal Cognition (WDC)	1. I would be very happy to spend the rest of my career in this Company (*wc1*).
	2. Within the next six months, I would rate the likelihood of leaving my present job as high (R) (*wc2*).

correlation coefficient matrix of each measurement item (i.e., dimensions/factors of OCS and dimensions/factors of EE). In the second step, after confirming the fitness of the constructs, the structural model is examined further based on the covariance matrix and the hypothesis is tested for the entire model (OCS-EE).

RESULTS

MEASUREMENT MODEL

The study employed both first-order and second-order CFA to confirm the fitness of the measurement model. The latent constructs and their corresponding measurement items are listed in Tables 2 to 7 covering the first-order and second-order CFA results for the two main constructs of the study—OCS and EE.

Overall results show that the factor loadings for most of the items were above 0.7 except for one item under OCS—"Information about changes in our organization" for which the factor loading is 0.57 and for one item under EE—"I really feel as if this organization's problems are my own". We retained the item with factor loading of 0.57, because the judges as well as our literature survey had identified 'communication about changes' in the organization as very relevant to EE and removal of this was actually reducing the model fit characteristics of the OCS construct. We however, removed the item EE—"I really feel as if this organization's problems are my own" from further analysis because this removal was improving the model fit characteristics of the EE construct. The Critical Ratio (CR) values of all the items reached the significant level ($p < 0.001$). This finding confirmed the convergent validity of each of the items measuring the constructs of the study. We further analyzed the composite reliability for each of the factors and they were all above 0.7 except one factor 'withdrawal cognition' which was marginally lower at 0.66. This implies a good internal consistency of the scale (Nunnally, 1978). We also analyzed the variance-extracted estimates for each of the factors and almost all of them are nearly equal to and greater than 0.5. These results therefore, provide adequate evidence of convergent validity.

HYPOTHESIS TESTING

ORGANIZATION COMMUNICATION SATISFACTION

Table 2 and Figure 2 show the constructs and indicators of the measurement items of OCS on executing first-order CFA. For a sample size of 235, the factor loadings are all

Table 2: Constructs and Indicators of the Measurement Items (Organization Communication Satisfaction) – First-Order

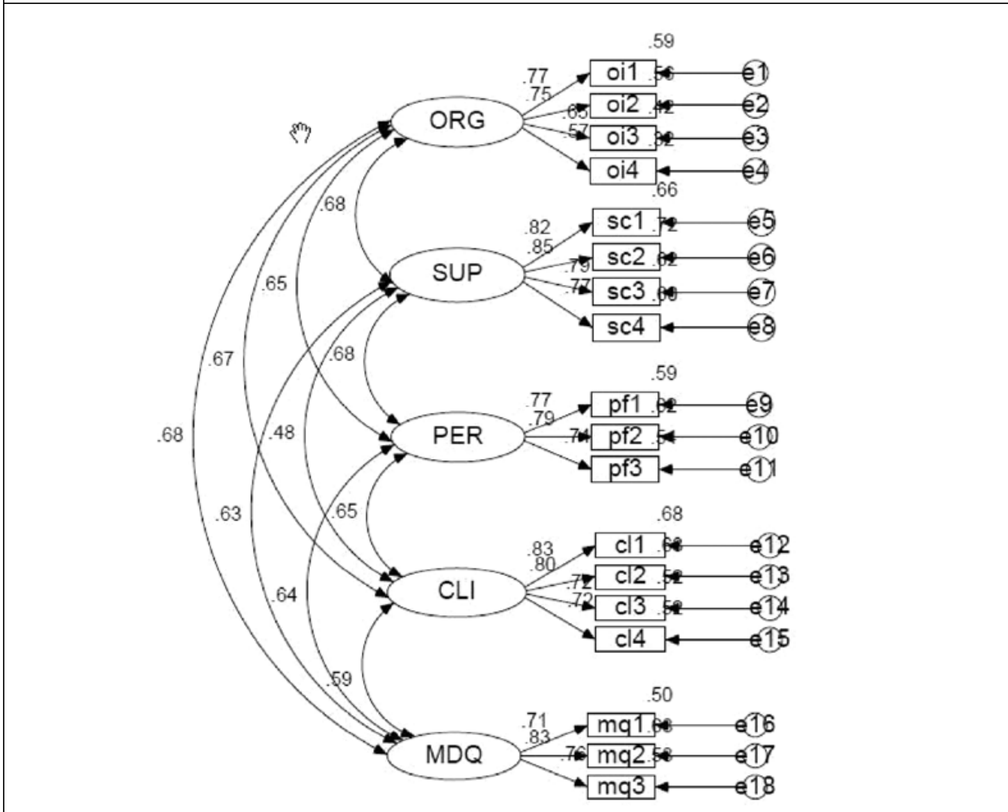
Measurement Item	Factor Loading	Standard Error	Error Variance	CR Value	Construct Alpha	AVE
Organization Integration					**0.93**	**0.501**
Information about the requirements of my job	0.77		0.59			
Information about my progress in my job	0.75	0.098	0.56	10.805**		
Information about company policies and goals	0.65	0.085	0.42	9.359**		
Information about changes in our organization	0.57	0.090	0.32	8.116**		
Supervisory Communication					**0.80**	**0.500**
Extent to which my supervisor listens and pays attention to me	0.82		0.66			
Extent to which my supervisor offers guidance for solving job related problems	0.85	0.077	0.72	14.575**		
Extent to which my supervisor trusts me	0.79	0.065	0.62	13.272**		
Extent to which my supervisor is open to ideas	0.77	0.070	0.60	12.951**		
Personal Feedback					**0.86**	**0.501**
Information about how I am being assessed	0.77		0.59			
Information about how my efforts are recognized and rewarded	0.79	0.100	0.62	11.375**		
Extent to which superiors know and understand the problems faced by subordinates	0.74	0.091	0.54	10.692**		
Communication Climate					**0.80**	**0.495**
Extent to which the organization's communication motivates and stimulates an enthusiasm for meeting its goals	0.83		0.68			
Extent to which the organization's communication makes me identify with it or feel a vital part of it	0.80	0.066	0.68	13.023**		

Table 2 (Cont.)

Measurement Item	**Factor Loading**	**Standard Error**	**Error Variance**	**CR Value**	**Construct Alpha**	**AVE**
Extent to which communication practices are adaptable to emergencies	0.72	0.065	0.52	11.551**		
Extent to which I receive in time the information needed to do my job	0.72	0.071	0.52	11.527**		
Media Quality					**0.75**	**0.500**
Extent to which written directives and reports are clear and concise	0.71		0.50			
Extent to which the attitudes toward communication in the organization are basically healthy	0.83	0.105	0.68	10.713**		
Extent to which the amount of communication in the organization is about right	0.76	0.101	0.58	10.153**		
Fit Index						
χ^2 (df)	315.73	(125)				
GFI	0.87					
AGFI	0.82					
CFI	0.91					
NFI	0.87					
RFI	0.84					
RMSEA	0.08					

Note: ** $p < 0.001$; All the measurement items are guaged with Likert 5-point item.

Figure 2: First-Order Confirmatory Factor Analysis Model for OCS



Note: Refer Table 1 for the details of the factors and variables in the figure.

greater than 0.7, except two items of the Factor "Organization Integration". The first item "Information about company goals and policies" has a factor loading of 0.65, which is marginally lower than 0.7. The second item "Information about changes in our organization" has a factor loading of 0.57. Though this is less as compared to the acceptable value of 0.7, we have retained it for the purpose of further analysis based on it importance specified in the literature survey and researchers' opinion. The Critical Ratio (CR) values for all the items reached the significance level ($p < 0.001$). Further, the composite reliability for each of the factors was greater than 0.7 and the Average Variance Extracted (AVE) for each of the factors was greater than or equal to 0.5. The above results confirm the convergent validity and internal consistency reliability of the OCS construct.

Table 3 shows the AVE values and the squared correlations for the constructs in the first-order measurement model for OCS. All the variance-extracted estimates are higher than the squared correlations estimates for the constructs in the first-order measurement model for OCS. This test confirms the discriminant validity. The other key model statistics and values, CFI = 0.91, GFI = 0.87 and RMSEA = 0.08 indicates

Table 3: Average Variance Extracted (AVE) Values and Squared Correlations for the Constructs in the First-Order Measurement Model (OCS)*$

	Organization Integration	Supervisor Communic-ation	Personal Feedback	Communi-cation Climate	Media Quality
Organization Integration	0.501				
Supervisor Communication	0.466	**0.500**			
Personal Feedback	0.420	0.462	**0.501**		
Communication Climate	0.453	0.230	0.417	**0.495**	
Media Quality	0.456	0.402	0.411	0.349	**0.500**

Note: * AVEs are shown along the diagonal of the matrix; $ Squared correlations between each pair of constructs are shown in the left bottom of the matrix; Correlation matrix for measurement items and constructs in the model are available with the author upon request.

an acceptable level of model fit. These results clearly support H_1 that the factors/dimensions of OCS are interrelated.

Table 4 and Figure 3 show the constructs and indicators of the measurement items of OCS on executing the second-order CFA. In this case also, the factor loadings of all the measurement items was greater than 0.7 except the two items of the factor "Organization Integration" similar to first order analysis. The CR values for all the items reached the significance level ($p < 0.001$). Further, the composite reliability for each of the factors was greater than 0.7 and the AVE for each of the factors was greater than or equal to 0.5. The other key model statistics and values, CFI = 0.91, GFI = 0.87 and RMSEA = 0.08 indicate an acceptable level of model fit. These results clearly support H_2 that OCS is explained through the dimensions viz., organization integration, supervisory communication, personal feedback, communication climate and media quality.

EMPLOYEE ENGAGEMENT

Figure 4 and Table 5 show the constructs and indicators of the measurement items of EE on executing the first-order CFA. In this case, the factor loadings of all the measurement items was greater than 0.7 except the item, "This organization has a great deal of personal meaning for me", which was marginally lower at 0.67. In the first analysis, we executed the CFA with five items under the factor 'organization commitment'. The item, "I really feel as if this organization's problems are my own" was removed from further analysis because the factor loading was less than 0.7. Further, removal of the item improved the overall model statistics. The CR values for all the items reached the significance level ($p < 0.001$). Further, the composite reliability for each of the factors was greater than 0.7, except one factor, 'withdrawal cognition' which was marginally lower at 0.66. The AVE for each of the factors was greater than or equal to 0.5. The above results confirm the convergent validity and internal consistency reliability of the EE construct.

Table 4: Constructs and Indicators of the Measurement Items (Organization Communication Satisfaction) – Second-Order

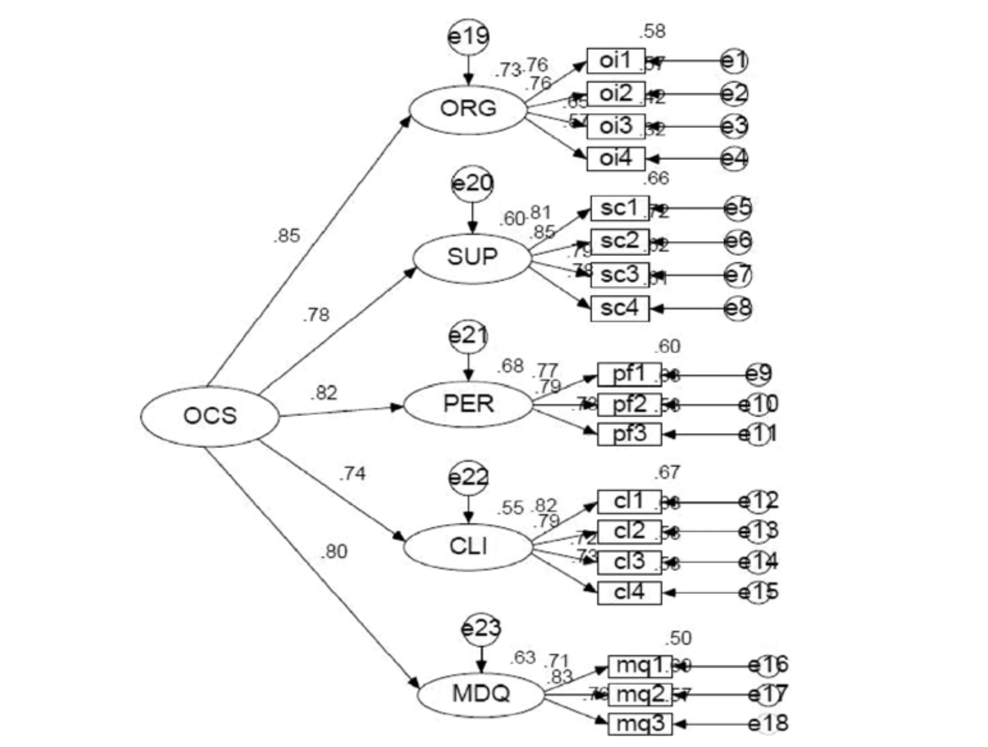
Measurement Item	Factor Loading	Standard Error	Error Variance	CR Value	Construct Alpha	AVE
Organization Integration					**0.93**	**0.501**
Information about the requirements of my job	0.76		0.58			
Information about my progress in my job	0.76	0.100	0.57	10.729**		
Information about company policies and goals	0.65	0.086	0.42	9.298**		
Information about changes in our organization	0.57	0.091	0.32	8.061**		
Supervisory Communication					**0.80**	**0.500**
Extent to which my supervisor listens and pays attention to me	0.81		0.66			
Extent to which my supervisor offers guidance for solving job related problems	0.85	0.078	0.72	14.455**		
Extent to which my supervisor trusts me	0.79	0.066	0.62	13.146**		
Extent to which my supervisor is open to ideas	0.78	0.071	0.61	12.956**		
Personal Feedback					**0.85**	**0.486**
Information about how I am being assessed	0.77		0.60			
Information about how my efforts are recognized and rewarded	0.79	0.101	0.68	11.386**		
Extent to which superiors know and understand the problems faced by subordinates	0.73	0.091	0.58	10.587**		
Communication Climate					**0.80**	**0.494**
Extent to which the organization's communication motivates and stimulates an enthusiasm for meeting its goals	0.82		0.67			
Extent to which the organization's communication makes me identify with it or feel a vital part of it	0.79	0.068	0.68	12.751**		

Table 4 (Cont.)

Measurement Item	Factor Loading	Standard Error	Error Variance	CR Value	Construct Alpha	AVE
Extent to which communication practices are adaptable to emergencies	0.73	0.067	0.53	11.491**		
Extent to which I receive in time the information needed to do my job	0.73	0.073	0.53	11.561**		
Media Quality					**0.75**	**0.500**
Extent to which written directives and reports are clear and concise	0.71		0.50			
Extent to which the attitudes toward communication in the organization are basically healthy	0.83	0.105	0.69	10.741**		
Extent to which the amount of communication in the organization is about right	0.76	0.101	0.57	10.142**		
Fit Index						
χ^2 (df)	329.89	(130)				
GFI	0.87					
AGFI	0.82					
CFI	0.91					
NFI	0.86					
RFI	0.84					
RMSEA	0.08					

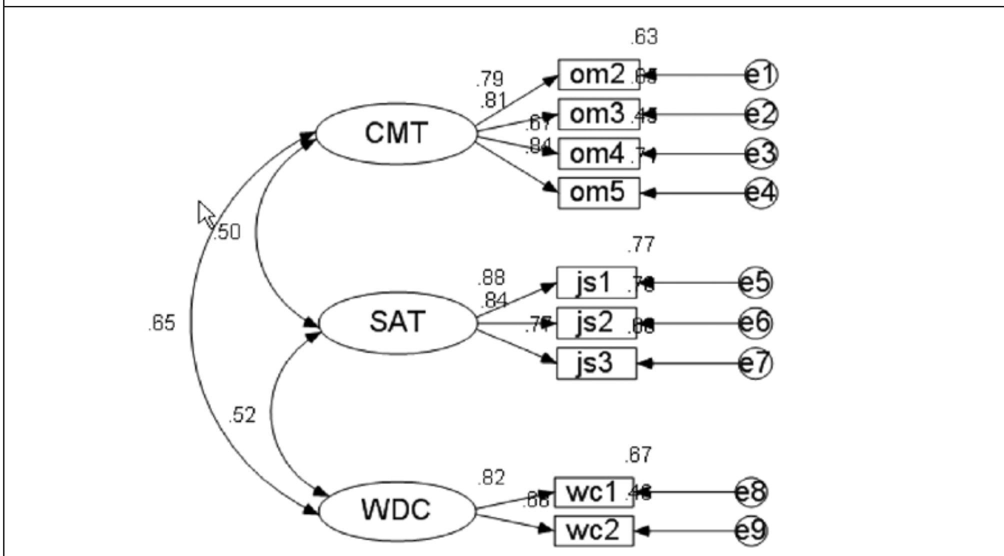
Note: ** $p<0.001$; All the measurement items are guaged with Likert 5-point item.

Figure 3: Second-Order Confirmatory Factor Analysis Model for OCS



Note: Refer Table 1 for the details of the factors and variables in the figure.

Figure 4: First-Order Confirmatory Factor Analysis Model for EE



Note: Refer Table 1 for the details of the factors and variables in the figure.

Table 5: Constructs and Indicators of the Measurement Items (Employee Engagement) – First-Order

Measurement Item	Factor Loading	Standard Error	Error Variance	CR Value	Construct Alpha	AVE
Organization Commitment					**0.80**	**0.501**
I do not feel like "part of the family" at my organization	0.80		0.63			
I do not feel "emotionally attached" to this organization	0.81	0.080	0.65	12.946**		
This organization has a great deal of personal meaning for me	0.67	0.070	0.45	10.456**		
I do not feel strong sense of belonging to my organization	0.84	0.075	0.71	13.476**		
Job Satisfaction					**0.75**	**0.501**
I find real enjoyment in my job	0.88		0.77			
Most days I am enthusiastic about my job	0.84	0.070	0.70	14.637**		
I feel fairly well satisfied with my job	0.77	0.065	0.60	13.422**		
Withdrawal Cognition					**0.66**	**0.499**
I would be very happy to spend the rest of my career in this Company	0.82		0.67			
Within the next six months, I would rate the likelihood of leaving my present job as high	0.68	0.112	0.46	7.773**		
Fit Index						
Chi-Square (df)	60.803	(24)				
GFI	0.94					
AGFI	0.89					
CFI	0.96					
NFI	0.94					
RFI	0.92					
RMSEA	0.08					

Note: All the measurement items are guaged with Likert 5-point item; ** $p<0.001$.

Table 6: Average Variance Extracted (AVE) Values and Squared Correlations for the Constructs in the First-Order Measurement Model (EE)*$

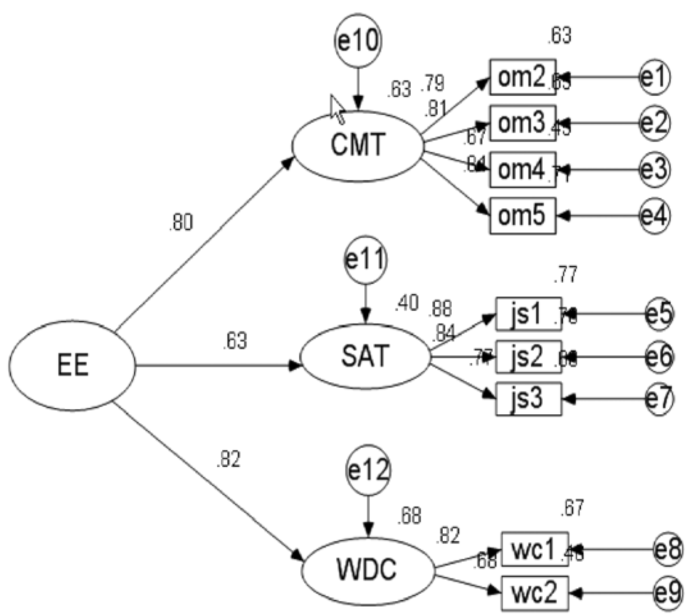
	Organization Commitment	Job Satisfaction	Withdrawal Cognition
Organization Commitment	0.501		
Job Satisfaction	0.254	0.501	
Withdrawal Cognition	0.429	0.272	0.499

Note : * AVEs are shown along the diagonal of the matrix; $ Squared correlations between each pair of constructs are shown in the left bottom of the matrix; Correlation matrix for measurement items and constructs in the model are available with the author upon request.

Table 6 shows the AVE values and the squared correlations for the constructs in the first-order measurement model for EE. All the variance-extracted estimates are higher than the squared correlations for the constructs in the first-order measurement model for EE. This test confirms the Discriminant Validity. The other key model statistics and values, CFI = 0.96, GFI = 0.94 and RMSEA = 0.08 indicates an acceptable level of model fit. These results clearly support H_3 that the factors/dimensions of EE are interrelated.

Figure 5 and Table 7 show the constructs and indicators of the measurement items of EE on executing the second-order CFA. In this case also the factor loadings of all

Figure 5: Second-Order Confirmatory Factor Analysis Model for EE



Note: Refer Table 1 for the details of the factors and items in the figure.

Table 7: Constructs and Indicators of the Measurement Items (Employee Engagement) – Second-Order

Measurement Item	Factor Loading	Standard Error	Error Variance	CR Value	Construct Alpha	AVE
Organization Commitment					**0.80**	**0.501**
I do not feel like "part of the family" at my organization	0.80		0.63			
I do not feel "emotionally attached" to this organization	0.81	0.080	0.65	12.946**		
This organization has a great deal of personal meaning for me	0.67	0.070	0.45	10.456**		
I do not feel strong sense of belonging to my organization	0.84	0.075	0.71	13.476**		
Job Satisfaction					**0.75**	**0.501**
I find real enjoyment in my job	0.88		0.77			
Most days I am enthusiastic about my job	0.84	0.070	0.70	14.637**		
I feel fairly well satisfied with my job	0.77	0.065	0.60	13.422**		
Withdrawal Cognition					**0.66**	**0.499**
I would be very happy to spend the rest of my career in this Company	0.82		0.67			
Within the next six months, I would rate the likelihood of leaving my present job as high	0.68	0.112	0.46	7.773**		
Fit Index						
Chi-Square (df)	60.803	(24)				
GFI	0.94					
AGFI	0.89					
CFI	0.96					
NFI	0.94					
RFI	0.92					
RMSEA	0.08					

Note: All the measurement items are guaged with Likert 5-point item.; ** $p < 0.001$.

the measurement items was greater than 0.7 except the item, "This organization has a great deal of personal meaning for me", which was marginally lower at 0.67, similar to first order analysis. The CR values for all the items reached the significance level ($p < 0.001$). Further, the composite reliability for each of the factors was greater than 0.7, except the one factor, 'withdrawal cognition' which was marginally lower at 0.66, similar to the first-order CFA. Average Variance Extracted for each of the factors was greater than or equal to 0.5. The other key model statistics and values, CFI = 0.96, GFI = 0.94 and RMSEA = 0.08 indicate a good and acceptable level of model fit. These results clearly support H_4 that EE is explained through the dimensions viz., organization commitment, job satisfaction and withdrawal cognition.

ORGANIZATION COMMUNICATION SATISFACTION AND EMPLOYEE ENGAGEMENT

Table 8 shows the results of the examination of the overall OCS-EE model. The overall model reached the range of acceptability, since the value of χ^2/df equals 2.003, which is considered acceptable (Bollen, 1989). The other indices of model fitness and values, CFI = 0.91, GFI = 0.83, AFGI = 0.80, IFI = 0.91 and RMSEA = 0.065. These results achieve an acceptable level of 'goodness of fit' (Hair *et al.*, 1998). The results also show that OCS has a significant positive influence on EE ($g = 0.76$, $p < 0.001$). Therefore, our H_5 is supported that OCS has a positive impact on EE."

Table 8: SEM Results of Hypothesis Testing

Hypothesis	Structure Coefficient	CR-Value
Organization Communication Satisfaction —> Employee Engagement	0.76	5.734*
Model Fit Index		
χ^2(df)	631.049	(315)
χ^2/df	2.003	
GFI	0.83	
AGFI	0.80	
CFI	0.91	
NFI	0.83	
IFI	0.91	
RMSEA	0.065	

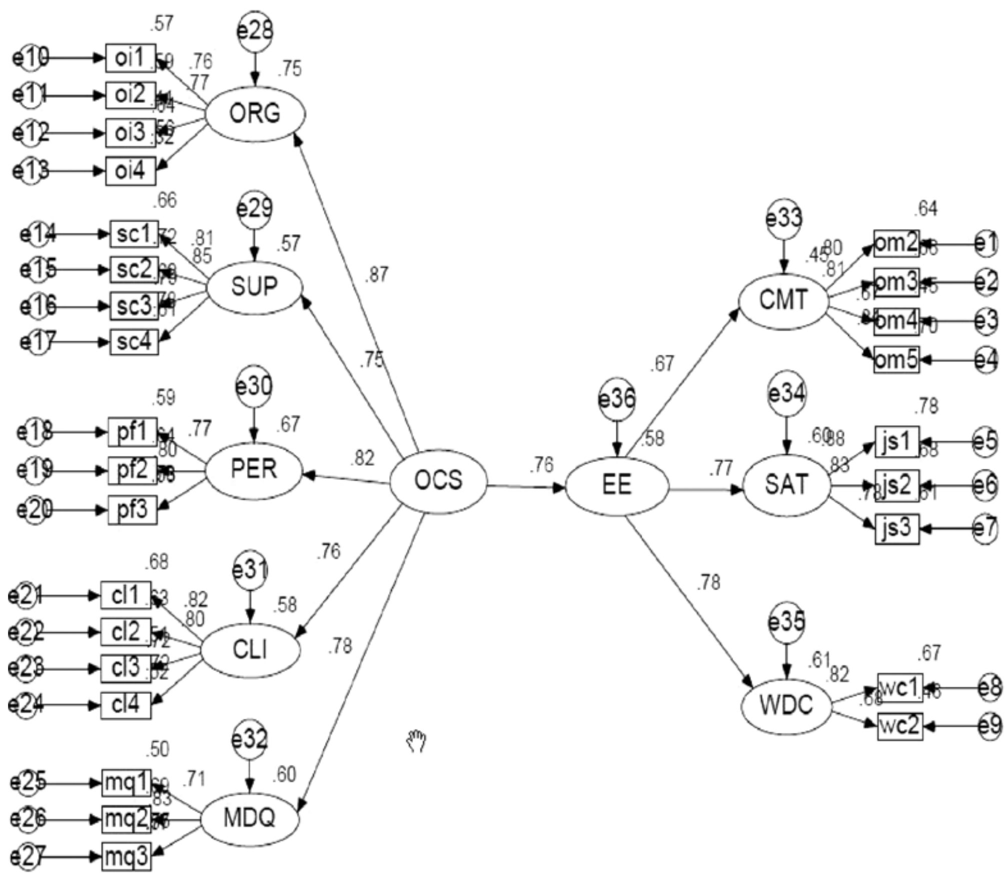
Note: * $p < 0.001$.

DISCUSSION

MANAGERIAL IMPLICATIONS

The overall model is summarized in Figure 6. All the five hypothesis proposed by us were confirmed thereby establishing the importance of OCS in influencing EE in

Figure 6: Overall OCS-EE Structural Equation Model



Note: Refer Table 1 for the details of the factors and items in the figure.

organizations. This study therefore, serves as a means of empirically validating the understanding of concepts expressed in various literatures from consulting firms and independent research agencies (Towers Perrin, Gallup, Hewitt LLC, etc). With the downturn and associated resource reorganization in various organizations, specifically in the IT / ITES sectors, it will become imperative for the organizations to ensure that their most valued employees are fully engaged. This study underlines the importance of communication satisfaction in building a sense of organizational commitment—willingness to walk that extra mile to achieve organizational goals and objectives. Organizations would like to use communication as a strategic option to deliver focused messages to segmented employee audiences in order to gain their trust and make them highly engaged. This would help organizations reduce the uncertainty in the minds of their employees about their jobs, future in the organization, especially during uncertain times and thereby reduce attrition of high performing and most valued employees.

LIMITATIONS AND FUTURE IMPLICATIONS FOR RESEARCH

This study was limited to the IT and ITES industry. While the effects of downturn and resource reorganizations are more profound in the IT/ITES industry, the other sectors are also feeling the heat with respect to EE. Therefore, findings of the study may not be generalized and would need further research to check its relevance to all industries.

This study has focused largely on the Psychological Stage engagement facets of EE. There are other facets like behavioral engagement and trait engagement (Macey and Schneider, 2008) that would need to be analyzed. Further, this study has focused on OCS and its impact on EE. There are other aspects of EE that literature refers to as antecedents and consequences to EE viz., Organization Citizenship Behavior (OCB) and Perceived Organization Support (POS) (Saks, 2006). Future studies could examine the impact of Organization Communication on OCB and POS.

Lastly, there is a mention of trust in various literatures and the role of Organization Communication in developing trust among employees. There are also studies that mention the role of Interpersonal trust in positively influencing the various facets of EE—Organization commitment, Job satisfaction and Withdrawal cognition (Earley, Robinson, Drischoll, Saks, etc). This study did not specifically examine the role of Organization communication in building interpersonal trust and its impact on EE. Future studies could therefore, examine the mediating role of trust in the OCS-EE relationship.

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Impact of Marketer's Influence Strategies on Distribution Channel Partners: A Comparison Among Distribution Channel Partners

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Distribution channel management is the priority of the marketer. Profitable operation of physical distribution along with sustainable relationship management with channel partners is the need of the hour. In this regard behavioral management of the channel partners is very important for their motivation. Literatures have expressed six various ways to influence channel partners. These six ways are promise, request, threat, legalistic plea, recommendation and information exchange. Further theories have also inferred that these six ways are standard in nature and practice. In this present research we are testing the standardize nature of the influence strategies globally talked about. We have chosen three industries of varying nature and compared the perception of the dealers/distributors vis-à-vis influence strategy executed by marketers. For this purpose we have used multivariate test of equality of vector means between industries pair-wise. Finally, this paper concludes with an interesting result that influence strategy requires customized industry specific applications.

INTRODUCTION

Distribution management is one of the priorities in this era of competition. Efficient channel management is becoming a compulsion among the marketer for the right placement of product and service to customers. Management of physical distribution does not generate efficiency in the channel management. Behavioral management of channel partner is imperative to bring efficiency in channel management. It also leads to a long lasting relationship with channel partners. Thus channel partners consider themselves as an integral part of the company. Actually efficient behavioral management makes channel partner's behavior under channel principal's directives. Required motivation of channel partners is the pre-condition to direct their behavior in accordance with the objectives of the marketers. Actually channel participants perceive

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various reasons for motivating. All these reasons create dependency among the channel partners about the marketer. Naturally, marketers use these reasons for creating dependency in their own favor for influencing channel partners. These various ways of influencing channel partners are termed as influence strategies in various management literatures. Influence strategies can be defined as the way by which one channel member influences other member's behavior towards achieving desired action.

Different research papers have been published whose main objective is to develop a framework that will promote the effectiveness of influence attempts between organizations in managing the channel relationship. These literatures talk about more or less six dimensions of influence strategies in managing distribution channel management. Literatures have also stated various facets of influencing strategy as a model for practicing managers in the global context. Researchers opine that these six strategies are standard in nature and practice. This is the point for which we have objections. We believe that the influencing strategies must be different between industries. In this backdrop our present paper examines whether practices between the three industries are different in nature or the same.

REVIEW OF THE RELATED LITERATURES

Frazier and Summer (1984) have introduced the concept of influencing channel partner in marketing literature. Influencing is a kind of tactics that channel member use to gain compliance from channel partners (Frazier and Summer, 1984). In fact they propose for six dimensional influence strategies to control channel participants. These six influence strategies are information exchange, recommendation, requests, threat, promises and legalistic plea. Frazier and Sheth (1985) have developed a model consisting of influence strategies different from six mentioned above based on attitude of the channel participants in response to channel program (a way of influence) offered to them by channel leader (marketer). Proposed model yields influence strategies like information exchange, modeling, recommendation, warning, positive normative, negative normative, economic and non-economic reward, punishment and request. In another study Frazier and Summer (1986) were in search of a relationship between influence by means of different degrees of coercion by channel leader and channel partner's perceived satisfaction. To explore the research objective they have also employed the six dimensions of influence strategy of Frazier and Summer (1984). Frazier and Summer (1986) find a negative association between coercive influencing strategy and dealer's perceived satisfaction. Thus, according to theory, coercion of channel leader is ineffective strategy in relation to dealing with channel partner. Most of these empirical works are of the US origin excepting work of Kale (1986) which has been carried out in Indian Business to Business (B2B) industry. In this work Kale (1986) recommends for carrying out the research in channel principal mechanism in developing nations with the deployment of both power and influence scale. They carried out personal interview among 51 dealers of Tungsten carbide tool industry in India and found a strong relationship between power of the channel leader and threat, legalistic plea and promise as influence strategies. Lastly, they have suggested that more powerful manufacturers are interested to depend on high pressure influence strategies (threats, legalistic pleas and promise) and vice-versa. Frazier *et al.* (1989)'s work is an extension of Kale (1986) work and the work is also executed in India and academic contributory in channel management. Considering the sample of Tungsten carbide tool industry of India, Frazier *et al.* (1989) explore that the channel partner's dependence level is related to their action reciprocation. In the same work, authors also identify that satisfaction of channel participants is correlated with degree of conflict within the channel. Keith *et al.* (1990) have also found similar result. Research executed on B2B distributors, Frazier and Rody (1991) conclude that within the channel framework the use of non-coercive and coercive strategy by marketer is returned in kind by distributor and vice-versa. One step ahead they also find that a firm's level of power is positively related to its sales personnel's use of non-coercive strategies and inversely related to the use of coercive influence strategies. On the other hand, Boyle *et al.* (1992) developed a new measure of influence strategies in the marketing channel to examine associations with buyer-seller relationship and channel governance structure. From the study we reveal association between negative relationship and coercive influence strategies (threats, legalistic plea and requests). The study also proves the frequencies of recommendation, promise and information exchange are associated positively with the good relationship between channel actor and marketer. Venkatesh *et al.* (1995) have explored the relative effectiveness of the six influence strategies and the conditions under which those influence Strategies are most likely to be used. In the context of Europe (Spain), Molla and Sanchez (1997) measured the six influence strategies in relation to retailer's perception of manufacturer usage of the same. Shamdasani *et al.* (2001) described the usage of coercive and non-coercive influence strategies to influence the dealer members. Bandyopadhyay (2004) has employed a multi item scale which is developed with the help of Boyle's (1992) to measure influence strategies and dealer satisfaction among dealers of electric lamps and lighting equipment from India. According to his work, information exchange, requests, recommendation, promises, threats and legalistic pleas are the strategies used to explore the patterns and consequences of suppliers' strategies to influence dealers in marketing channels in India. He suggests that at the time of employing indirect influence strategies, the recommendation is used with higher frequencies than that of information exchange. Contrary to that when direct influence strategies are applied by suppliers, promise is used most often followed by request, legal pleas and threat. McFarland *et al.* (2006) has also utilized the six dimensions of influence strategy to identify the specific influence tactics used by the sales people to persuade the buyers. In their work, Payan and McFarland (2005) proved empirically the effectiveness of influence strategies in relation to gain channel member's compliance. Brown *et al.* (2009) also made use of the six dimensions of influence strategy to investigate the effectiveness of influence strategies.

Chang and Lin (2008) explored the impact of six dimensional influence strategies (information exchange, requests, recommendation, promises, threats, legalistic pleas) on channel satisfaction. This study also measures the impact of influence on channel participants based on the empirical investigation over the Taiwanese manufacturer. In the similar way Bandyopadhyay (2004) and Kazemi *et al.* (2010) have also measured exactly the same. In fact work of Kazemi *et al.* (2010) is based on dealers from India and dealers from Iran.

Most of these surveyed literatures are found either identifying various facets of influence strategies or establishing interrelationship between nature of influence strategies (coercive or non-coercive) with dependence and satisfaction of the channel participants. All these works implicitly assume that influence facets are standard in nature and practice. Our initial apprehension regarding customized requirement of influence strategies partially contradicts with this assumption. Some of the literatures (Kale, 1986; and Frazier *et al.*, 1989) indirectly throws lights on this issue by arguing requirement of industry-wise analysis. We believe that these six facets of influence strategies are not acceptable in all country situations. For the sake of argument if for a while we may accept these proposition still the question for the industry-wise applicability of the same remains. Hence in this present study, we have decided to check whether industry-wise deployment of each of the strategies is same or not. Therefore, for the present work we have decided to work with given six strategies which are the most accepted influence strategic facets in the present global literatures. Moreover, for the purpose of understanding these six facets we have decided to consider the measure (scale) by Boyle *et al.* (1992) because most of the researches in the past have used the same.

OBJECTIVE AND HYPOTHESIS

We have already raised doubts in the introductory section and subsequently in literature review section about standardization of practices made by channel partners across various Indian industries. Thus in this research we would like to examine impact of influence strategies over the channel partners of FMCG, Cement and Consumer Durables industries. Already we have mentioned that we have taken scale proposed by Boyle *et al.* (1992) for the purpose of measuring influence over the same. This scale is having high reliability and validity. According to this scale, there are six important extracted factors. These factors are promise, legalistic plea, threat, request, recommendation and information exchange. According to the referred scale (Boyle *et al.*, 1992) observed items under each factor are expressing the said latent (unobservable) factor. Each of this item is a statement in relation to the perception of the channel partner. Now if it has been administered to Indian channel partner of FMCG, Cement and Consumer Durables industries, we receive item-wise score recorded from channel partners for these industries.

In the present research we compare agreeableness of the factors among channel partners of FMCG, Cement and Consumer Durables Industries. But we have not compared all these three industries at a time; rather we have compared them pair-wise. So the hypothesis identified for this purpose would be as follows:

H_0: *There is no difference in vector mean scores between channel partners of X and Y industries in terms of the i^{th} factor.*

H_1: *There is difference in vector mean scores between channel partners of X & Y industries in terms of the i^{th} factor.*

where *X* and *Y* are a pair-wise combination of industries. The pair-wise combinations are: a) Cement and Consumer Durables, b) Consumer Durables and FMCG; and c) FMCG and Cement.

where *i* can be any of the factors like promise, legalistic plea, threat, request, recommendation or information exchange.

But for the purpose of carrying out these hypotheses we have to check and satisfy three important conditions (Anderson, 2003). First condition is whether items are sufficiently intercorrelated to consider them as a vector combination or not. If it is found by present research empirically that the items under each factor are correlated in such a way that they can be used as vector combinations then only we proceed for any hypothesis which refers to multivariate test. Next to that, second condition is whether variance-covariance matrix between two subjects under study is same or not. Because of the fact that in case of unequal variance-covariance matrix no one can carry out any type of multivariate test. We have to be sure about equality of variance-covariance matrices of the populations considered in the present study. Third condition is related to multivariate normality of variables which we are assuming on the basis of large sample central limit theorem (Fischer, 2010). If all the conditions are satisfied, only then we can carry out the proposed multivariate test.

METHODOLOGY UNDERTAKEN

For the purpose of the survey among the respondents who are channel participants for the present work, we have decided to execute on South Bengal region of West Bengal. West Bengal is one state which represents cosmopolitan, rural encircled urban area and the urban middle class dominated characters of India.

The South Bengal region is very much representative of the features stated above. Further we have collected names and addresses of channel participants from three industries namely FMCG, Cement and Consumer Durables located in this region, from various sources like a) yellow pages; b) respective trade association's directory; and 3) executives of major companies in these three industries operating in this region. We have prepared three lists of channel partners of FMCG, Cement and Consumer Durables industries. For the list of Consumer Durables group of channel partner, we have selected all 53 respondents. We have visited personally to all those 53 channel participants and interviewed with a structured questionnaire. Likewise for the list of cement, we have selected 80 respondents randomly (Malhotra, 2007) out of which 56 have been responding positively at the time of a visit to their place for the purpose of interviewing. In the similar way, from the list of FMCG, we have selected 80 respondents randomly (Malhotra, 2008), but only 57 responded positively in time of a visit to their place for an interview with a structured questionnaire. Finally to analyze the data, we have received 166 (56+53+57) responses of channel partners of Cement, Consumer Durable and FMCG industry in the southern part of the West Bengal of India (Table 1).

Table: 1: Sampling at a Glance

Industries	**Population**	**Randomly Selected**	**Responded**
Consumer Durable	53	53	53
Cement	117	80	56
FMCG	121	80	57
Total	**291**	**213**	**166**

We have executed an influence strategy construct for the purpose of recording the response. More specifically, in this present research we have used only 19 items (Figure 1) of the scale of 29 items proposed by Boyle *et al.* (1992). Proposed scale of Boyle *et al.* (1992) consisting of 29 items which makes questionnaire too long. To estimate the consistency of the construct, we have measured the reliability coefficient of the scale. Cronbach's alpha is used for the purpose. The Cronbach's alpha value estimated for this scale is 0.776, which is highly acceptable for this type of empirical research. The original scale is a valid scale. Hence the validity is presumed. Further, experts have selected 19 most important items in terms of coverage of the issue in the Indian context. This also works as a test for the validity of the scale used for the study. To identify the difference in perception between the industries we have done a pairwise comparison. Therefore we have grouped these three industries into three (${}^{3}C_{2}$) combinations of group for interpretation of differences in perception of influence strategy.

STATISTICS USED

In the present research we have dealt with a single most generalized hypothesis and two generalized conditions. These two conditions are used as necessary conditions for carrying out of the hypothesis. For the purpose of testing the said hypothesis, we may use multivariate tests like Hotelling's trace, Wilks' lambda, Pillai's trace, Roy's largest root (descriptions are given in the appendix) for comparing vector mean between two populations. For the purpose of carrying out generalized H_1, we need to satisfy condition 1 and 2. For the purpose of checking condition 1, we have to run 'Barlett's test of spherecity (descriptions are given in the Appendix) and for satisfying condition 2, we have to carry out Box's *M*-test statistics (Statistical Appendix for detail of the statistics applied for the present research).

Figure 1: Influence Strategy Variables Applied for Present Study
Item Variables
I-1) Company makes it clear that by following their recommendations, our business would benefit.
I-7) Company makes it explicit, when making a suggestion, that it is intended for the good of our operation.
I-13) Company provides a clear picture of the anticipated positive impact on our business a recommended course of action will have.
I-19) Company outlines the logic and /or evidence for expecting success from the specific programs and actions suggested.
I-2) Company focuses on general strategies (as opposed to specific tactics) as to how to make our business more profitable.
I-8) Company concentrates more on strategic,long-term issues, rather than specific cources of action our business should take.
I-4) Company asks for our compliance to their request,not indicating any positive or negative outcome for our business contingent upon our compliance.
I-20) Company attempts to change our perspective by looking at how our business decisions affect the 'Big Picture'.
I-9) Company provides price breaks or other incentives for our participation in manufacturer promos, showrooms design and other program.
I-15) Company emphasizes what they will offer in return for our cooperation or participation when presenting a good plan.
I-21) Company offers specific incentives for us to make changes in marketing and/or operating procedures.
I-10) Company asks us to accept new ideas without an explanation of what effect it will have on our business.
I-16) Company asks our cooperation in implementing new programs without mentioning rewards for complying or punishments or refusing.
I-11) Company makes a point to refer to any legal agreements we have when attempting to influence our actions.
I-17) Company 'Reminds us' of any of our obligations stipulated in our sales agreement.
I-23) Company uses section of our sales agreements as a 'Tool' to get us to agree to their demands.
I-6) Company makes it clear that failing to comply with their request will result in penalties against our business.
I-12) Company threatens poorer service to our business if we fail to agree to their requests.
I-18) Company uses threats of disturbing our business, such as higher prices for supplies, slow delivery times and lower bill rates.
Source: Boyle et al. *(1992, But Modified by Authors)*

FINDINGS AND ANALYSIS

To detect whether channel partners of three industries differ in the case of each of the influence strategies we have carried out various multivariate tests. The first table of descriptive statistic contains the grand mean of the item and ranking for each of the influence strategies. Table 2 provides a summary of the grand mean of the items under each influence strategy and ranking for each of the item of influence strategies among the Cement, Consumer Durables and FMCG industries. A quick visual inspection reveals that there is difference in grand mean scores among each influence strategy among the three industries.

Table 2 also depicts the ranking of each of the influence strategies used by three different industries. The ranking of request, legalistic plea and threat is same for all industries. The difference in ranking is found in recommendation, information exchange and promise. This ranking reveals that recommendation, information exchange and promise influence strategies are used as a most priority by the Indian industry in operational vis-a-vis channel management. This also indicates that Indian channel participants are mostly motivated by the non-coercive influence strategies like promise, information exchange, recommendation and request. Further, the similarity of the ranking across the industries helps us to understand that the usages of influence strategies are almost common from a broader perspective. But more introspection with respect to the grand mean of the item under each influence strategy among three industries expresses the magnitudinal differences. Hence, for the purpose of more concrete analysis of the same, we need to study statistically with the help of multivariate testing of equality of vector means of the influence strategy of the concerned industry, between all the industry pairs.

Table 2: Descriptive Statistics

Industry	Cement		FMCG		Consumer Durable	
Influence Strategy	Grand Mean of the Item	Ranking	Grand Mean of the Item	Ranking	Grand Mean of the Item	Ranking
Request	3.07143	4	2.70173	4	3.01887	4
Legalistic Plea	2.82143	5	2.33917	5	2.89937	5
Threat	2.28570	6	1.78363	6	2.21383	6
Recommendation	3.92858	3	3.65350	2	3.91983	1
Information Exchange	4.09523	1	3.81873	1	3.74213	2
Promise	3.92860	2	3.04680	3	3.32077	3

In Table 3 we can see the results of Barlett's test of sphericity. It checks whether the assumption of spericity is met or not. Assumption of sphericity is met only when sufficient intercorrelation is present between variables. On the other words, to determine whether the variables are significantly correlated, (otherwise it is not prudent to carry out multivariate exercise) we use Barlett's test of sphericity (Johnson and Whichern, 2008). It examines the correlation among all variables and assess whether, in combination, significant intercorrelation exists. In this present research for each influence strategy, we have seen the probability value of significance is 0.000 vis-à-vis Barlett's test of sphericity (Table 3). Thus it is easy to consider items under each specified influence strategies are multivariate in nature. As a result we should not treat them marginally (univariate ways), rather we can consider them as a vector combination.

Table 3: Bartlett's Test of Sphericity

Industry		Promise	Legalistic Plea	Threat	Request	Recomm-endation	Information Exchange
Cement and Consumer Durables	Likelihood Ratio	0.000	0.000	0.000	0.000	0.000	0.000
	Approx. χ^2	37.267	72.297	17.874	18.552	53.320	26.344
	df	5	5	5	5	9	5
	Probability of Sig.	0.000	0.000	0.003	0.002	0.000	0.000
Consumer Durables and FMCG	Likelihood Ratio	0.000	0.000	0.000	0.000	0.000	0.000
	Approx. χ^2	40.688	81.065	19.043	29.496	42.565	35.121
	df	5	5	5	5	9	5
	Probability of Sig.	0.000	0.000	0.002	0.000	0.000	0.000
FMCG and Cement	Likelihood Ratio	0.000	0.000	0.000	0.000	0.000	0.000
	Approx. χ^2	54.109	75.61	35.088	26.131	59.972	33.762
	df	5	5	5	5	9	5
	Probability of Sig.	0.000	0.000	0.000	0.000	0.000	0.000

In Table 4 the results of the Box's *M*-test are given (Johnson and Whichern, 2008). It is a test by which we examine whether variance-covariance matrices between two populations are same or not. For each of this factor we have executed the test separately and in all cases probability value is found greater than 0.05. For two concerned populations probability value greater than 0.05 indicates no difference in variance-covariance matrices. Therefore, we conclude that condition 2 is satisfied for carrying out multivariate tests for equality of vector means between three said pairs of industries.

Table 4: Box's Test of Equality of Covariance Matrices

Industry		Promise	Legalistic Plea	Threat	Request	Recomm-endation	Information Exchange
Cement and Consumer Durables	Box's M	7.912	4.003	8.867	4.395	7.205	4.636
	F-Ratio	1.278	0.647	1.433	0.71	0.691	0.749
	df1	6	6	6	6	10	6
	df2	82,257.54	82,257.354	82,257.354	82,257.354	54,349.475	82,257.354
	Probability of Sig.	0.263	0.693	0.198	0.641	0.734	0.610

Table 4 (Cont.)

Industry		Promise	Legalistic Plea	Threat	Request	Recomm-endation	Informa-tion Exchange
Consumer Durables and FMCG	Box's M	7.446	5.43	11.712	7.399	13.235	9.635
	F-Ratio	1.203	0.878	1.893	1.196	1.27	1.557
	df1	6	6	6	6	10	6
	df2	83,281.856	83,281.856	83,281.856	83,281.856	55,079.475	83,281.856
	Probability of Sig.	0.301	0.510	0.078	0.305	0.241	0.155
FMCG and Cement	Box's M	12.089	8.627	3.729	2.605	10.663	9.208
	F-Ratio	1.956	1.396	0.603	0.421	1.025	1.49
	df1	6	6	6	6	10	6
	df2	89,191.542	89,191.542	89,191.542	89,191.542	58,861.98	89,191.542
	Probability of Sig.	0.068	0.212	0.728	0.865	0.419	0.177

Tables 5, 6 and 7 explain the four most commonly used multivariate tests (Pillai's trace, wilks' lambda, Hotelling's trace and Roy's largest root) (Field, 2009; and

Table 5: Multivariate Tests of Cement and Consumer Durable Industry

Influence Strategies		Value	*F*	Hypothesis df	Error df	Sig.
Promise	Pillai's Trace	0.126	5.059	3.00	105.00	0.003
	Wilks' Lambda	0.874	5.059	3.00	105.00	0.003
	Hotelling's Trace	0.145	5.059	3.00	105.00	0.003
	Roy's Largest Root	0.145	5.059	3.00	105.00	0.003
Legalistic Plea	Pillai's Trace	0.110	4.317	3.00	105.00	0.007
	Wilks' Lambda	0.890	4.317	3.00	105.00	0.007
	Hotelling's Trace	0.123	4.317	3.00	105.00	0.007
	Roy's Largest Root	0.123	4.317	3.00	105.00	0.007
Threat	Pillai's Trace	0.024	0.876	3.00	105.00	0.456
	Wilks' Lambda	0.976	0.876	3.00	105.00	0.456
	Hotelling's Trace	0.025	0.876	3.00	105.00	0.456
	Roy's Largest Root	0.025	0.876	3.00	105.00	0.456
Request	Pillai's Trace	0.012	0.439	3.00	105.00	0.726
	Wilks' Lambda	0.988	0.439	3.00	105.00	0.726
	Hotelling's Trace	0.013	0.439	3.00	105.00	0.726
	Roy's Largest Root	0.013	0.439	3.00	105.00	0.726
Recom-mendation	Pillai's Trace	0.013	0.331	4.00	104.00	0.857
	Wilks' Lambda	0.987	0.331	4.00	104.00	0.857
	Hotelling's Trace	0.013	0.331	4.00	104.00	0.857
	Roy's Largest Root	0.013	0.331	4.00	104.00	0.857
Information Exchange	Pillai's Trace	0.040	1.443	3.00	105.00	0.235
	Wilks' Lambda	0.960	1.443	3.00	105.00	0.235
	Hotelling's Trace	0.041	1.443	3.00	105.00	0.235
	Roy's Largest Root	0.041	1.443	3.00	105.00	0.235

Hair *et al.*, 2009) for comparing vector means between Cement and Consumer Durables, Consumer Durable and FMCG, and FMCG and Cement respectively. The criterion of significance of each of these tests is assumed 0.05. Probability value less than 0.05 represents the difference between the industries is significant and otherwise vice-versa. Table 5 explains the result of multivariate test for Cement and Consumer Durables industry. Result shows significant difference is visible in case of promise and legalistic plea. Result also elaborates that other four influence strategies are not statistically significant between Cement and Consumer Durable industries.

Table 6 explains the multivariate test result between Consumer Durables and FMCG industry. Result expresses two dimensions of influence strategy that belong to the criterion for significance—legalistic plea and recommendation. Result also confirms a difference in channel partner's perception between Consumer Durables and FMCG industries for legalistic plea and recommendation types of influence strategy.

Table 6: Multivariate Tests of Consumer Durable and FMCG Industry

Influence Strategies		Value	*F*	Hypothesis df	Error df	Sig.
Promise	Pillai's Trace	0.034	1.251	3.00	106.00	0.295
	Wilks' Lambda	0.966	1.251	3.00	106.00	0.295
	Hotelling's Trace	0.035	1.251	3.00	106.00	0.295
	Roy's Largest Root	0.035	1.251	3.00	106.00	0.295
Legalistic Plea	Pillai's Trace	0.104	4.108	3.00	106.00	0.008
	Wilks' Lambda	0.896	4.108	3.00	106.00	0.008
	Hotelling's Trace	0.116	4.108	3.00	106.00	0.008
	Roy's Largest Root	0.116	4.108	3.00	106.00	0.008
Threat	Pillai's Trace	0.070	2.660	3.00	106.00	0.052
	Wilks' Lambda	0.930	2.660	3.00	106.00	0.052
	Hotelling's Trace	0.075	2.660	3.00	106.00	0.052
	Roy's Largest Root	0.075	2.660	3.00	106.00	0.052
Request	Pillai's Trace	0.042	1.542	3.00	106.00	0.208
	Wilks' Lambda	0.958	1.542	3.00	106.00	0.208
	Hotelling's Trace	0.044	1.542	3.00	106.00	0.208
	Roy's Largest Root	0.044	1.542	3.00	106.00	0.208
Recommendation	Pillai's Trace	0.142	4.356	4.00	105.00	0.003
	Wilks' Lambda	0.858	4.356	4.00	105.00	0.003
	Hotelling's Trace	0.166	4.356	4.00	105.00	0.003
	Roy's Largest Root	0.166	4.356	4.00	105.00	0.003
Information Exchange	Pillai's Trace	0.069	2.633	3.00	106.00	0.054
	Wilks' Lambda	0.931	2.633	3.00	106.00	0.054
	Hotelling's Trace	0.075	2.633	3.00	106.00	0.054
	Roy's Largest Root	0.075	2.633	3.00	106.00	0.054

Table 7: Multivariate Tests of FMCG and Cement Industry

Influence Strategies		Value	F	Hypothesis df	Error df	Sig.
Promise	Pillai's Trace	0.152	6.525	3.00	109.00	0.000
	Wilks' Lambda	0.848	6.525	3.00	109.00	0.000
	Hotelling's Trace	0.180	6.525	3.00	109.00	0.000
	Roy's Largest Root	0.180	6.525	3.00	109.00	0.000
Legalistic Plea	Pillai's Trace	0.032	1.214	3.00	109.00	0.308
	Wilks' Lambda	0.968	1.214	3.00	109.00	0.308
	Hotelling's Trace	0.033	1.214	3.00	109.00	0.308
	Roy's Largest Root	0.033	1.214	3.00	109.00	0.308
Threat	Pillai's Trace	0.084	3.353	3.00	109.00	0.022
	Wilks' Lambda	0.916	3.353	3.00	109.00	0.022
	Hotelling's Trace	0.092	3.353	3.00	109.00	0.022
	Roy's Largest Root	0.092	3.353	3.00	109.00	0.022
Request	Pillai's Trace	0.033	1.241	3.00	109.00	0.298
	Wilks' Lambda	0.967	1.241	3.00	109.00	0.298
	Hotelling's Trace	0.034	1.241	3.00	109.00	0.298
	Roy's Largest Root	0.034	1.241	3.00	109.00	0.298
Recom-mendation	Pillai's Trace	0.191	6.354	4.00	108.00	0.000
	Wilks' Lambda	0.809	6.354	4.00	108.00	0.000
	Hotelling's Trace	0.235	6.354	4.00	108.00	0.000
	Roy's Largest Root	0.235	6.354	4.00	108.00	0.000
Information Exchange	Pillai's Trace	0.071	2.772	3.00	109.00	0.045
	Wilks' Lambda	0.929	2.772	3.00	109.00	0.045
	Hotelling's Trace	0.076	2.772	3.00	109.00	0.045
	Roy's Largest Root	0.076	2.772	3.00	109.00	0.045

Table 7 describes the multivariate test result of Cement and FMCG industry. Again it proves disagreement between channel partners of said two industries for some influence strategies. Those influence strategies are recommendation, information exchange, promise and threat. These confirm industry-wise variation in perception and impact of this perception. After viewing results given in Table 7 we can identify four influence strategies for which perceptual differences in terms of the impact of the influence strategies between channel partners of the said two industries are found.

Table 8 summarizes the result for each pair of industry. Table describes a pair of industry-wise result for which differences are found. It also describes in which differences are not found. Result shows that two influence strategies each in Pair 1 (Cement and Consumer Durables) and Pair 2 (Consumer Durables and FMCG) and four influence strategies in Pair 3 (FMCG and Cement) are showing significant difference vis-à-vis perception of impact of influence strategy among channel partners. More specifically, for pair 1 industry, the difference in perception is found in promise and legalistic plea type of influence strategy. Probably the main reasons behind these differences are the nature of product and the distribution channel management policy of these industries. The responses of the channel participants from Cement industry show the less use of promise and legalistic plea type of influence strategy by the channel principal. Pair 2 industries shows the differences in legalistic plea and recommendation dimension. Recommendation and legalistic influence strategy are used as less priority by the FMCG channel principal than Consumer Durables industry. In case of Pair 3, industries show the differences in four dimensions (promise, threat, recommendation and information exchange). The descriptive statistics (Table 2) explains that recommendation , information exchange and promise dimension of Cement and FMCG industry is having different priority (ranking) structure. So it is obvious that the differences in perception are found there. The descriptive statistics are also showing the less use of threat dimension by the FMCG than that of the cement industry.

Table 8: Comparison

Pair for Study	Industries	Difference Found	Difference Not Found
Pair 1	Cement and Consumer Durables	Promise Legalistic Plea	Threat Request Recommendation Information Exchange
Pair 2	Consumer Durables and FMCG	Legalistic Plea Recommendation	Promise Threat Request Information Exchange
Pair 3	FMCG and Cement	Promise Threat Recommendation Information Exchange	Legalistic Plea Request

Hence, all these stated logic proves the overall difference in impact of influence on channel participant's of Indian industry.

IMPLICATION FOR INDUSTRY

Channel principal uses different influence strategies to make control over channel partner's behavior to act as per company directives and wishes. Channel principal adopts various ways to influence other channel partners. All these ways are combinedly known as influence strategy. But the question with which we have initiated the present research is whether the combination of various influence strategies create a similar impact across the industries or not. In our work we have found differences in perceiving the importance attached with the various dimensions of influence strategies by the channel partner of the FMCG, Consumer Durables and Cement industries. Further the ranking of the influence strategies of three industries on the basis of the grand mean score explains the less priority of the request, legalistic plea and threat dimensions. This is exactly same among the three industries studied here. We have also found that

Indian channel principals are mostly using the non-coercive influence strategies for motivating the channel participants. This paper also reveals the less priority of the use of coercive influence strategy in channel principal relationship. Finally we have identified overall differences at least to any one pair of industries for five cases like: promise, legalistic plea, recommendation, threat, and information exchange. Thus, we can understand very clearly that this model proposed by Boyle *et al.* (1992) to control channel members is not applicable in a similar fashion to all industries. We mean to say that it is nonstandard in practice and it requires customize application industry-wise. Further these collective differences across the industry show the ways to do further research on various dimensions of influence strategies over the industries.

CHI-SQUARE AND LIKELIHOOD RATIO

Chi-square is simply a comparison of frequencies observed with frequencies expected to get into a particular category (here factor). By this we are checking observed data is how much deviated from actual data (Field, 2009). We can see the model as follows:

$$\chi^2 = \frac{\sum \left(Observed_{ij} - Expected_{ij}\right)^2}{Model_{ij}}$$

where $Expected_{ij} = (Row\ Total_i * Column\ Total_j)/n$

n = Total number of samples (Field, 2005).

Similar type of estimator is the likelihood ratio. In case of likelihood ratio we check the assumption of sphericity is met or not. Assumption of sphericity is met only when the association among variables are perfect. Naturally purpose of this test is alike with chi-square (Field, 2009). Here statistics are as follows:

$$L\chi^2 = 2\Sigma\ \text{Observed}_{ij} \log_e (\text{Observed}_{ij}/\text{Expected}_{ij})$$

(Field, 2009).

Hence, we can understand very clearly it is comparing the observed values of the items within a factor with expected value of the items within a factor. In the case of those factors deviation is less in statistical senses, accept the association between items. In that case assumption of spericity is met perfectly (Field, 2009).

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APPENDIX

Statistics Used in the Study

Box's *M* test statistics: Statistics are used to test whether the variance-covariance matrices are same or not in the case of two populations. (Field, 2009)

Barlett's test of spherecity: Statistics are used to test the assumption of sphericity in the distribution (Field, 2009)

Pillai's trace: it is the sum of the proportion of explaining variance on the discriminant varieties of the data. Statistics are used to test differences in the vector mean between two populations. (Field, 2009)

Wilks' lambda: It is the product of the unexplained variance in each of the discriminate function varieties. It represents the ratio of error variance to total variance for each variate. Statistics are used to test differences in the vector mean between two populations. (Field, 2009)

Hotelling's trace: 'Hotelling Trace' is the sum of eigenvalue for each discriminant function variety of the data. It is the sum of the ratio of systematic and unsystematic variance for each of the variates. Statistics are used to test differences in the vector mean between two populations. (Field, 2009)

Roy's largest root: It is the eigen value for the first discriminant function variate of a set of observation. It represents the proportion of explained variance to unexplained variance. Statistics are used to test differences in the vector mean between two populations. (Field, 2009)

Factors Affecting Capital Structure of Indian Venture Capital Backed Growth Firms†

*Swati Panda**

Entrepreneurship is an engine for bringing about positive changes in the form of socioeconomic welfare (Kortum and Lerner, 2000). One of the major constraints faced by entrepreneurs is access to finance. Recently, venture capital has emerged as one of the alternative sources of financing for new ventures. Studies indicate a trend towards venture capitalists' preference towards late stage deals (e.g. Gompers and Lerner, 2001). Therefore, it becomes essential to understand the various factors that venture capitalists consider before investing in growth firms. This paper seeks to identify the various financial indicators that venture capitalists consider before funding growth firms by analyzing their capital structure. This paper draws from the capital structure literature to carve out the variables, i.e., tangible assets, profitability, size, volatility, growth opportunities, etc., that affect the capital structure of firms which receive venture financing later. Propositions are drawn on the basis of this reasoning and a conceptual framework is put forth that tries to identify an optimal capital structure strategy for Indian growth firms that seek venture capital.

INTRODUCTION

Entrepreneurship is considered as an engine for bringing about positive changes in the form of socioeconomic welfare (Kortum and Lerner, 2000). However, it is a well established fact that, one of the major constraints faced by entrepreneurs is access to finance. Self-financing is usually not sufficient and collateral based debt funding is not always available. Information asymmetries prevailing between investors and entrepreneurs, uncertainty related to the future of the product and bleak exit prospects of the investor severely curtail a new venture's prospects of receiving finance (Chan, 1983; and Amit *et al.*, 1990). In recent years, equity financing in terms of venture capital has emerged as one of the alternative sources of financing for new ventures.

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The most accepted form of definition for venture capital includes investment in young firms which are very risky but promise a great return. (Gompers *et al.*, 1998).

Recent research in venture capital indicates a trend towards venture capitalists' (VCs) preference towards late stage deals (e.g., Gompers and Lerner, 2001). Since a large volume of venture capital is flowing into growth stage firms, it becomes essential to understand the various factors that VCs consider before investing in a particular firm which is in its growth stage. Earlier research has focused mostly on analyzing the criteria used by VCs to select a new venture based on human capital, attractiveness of markets, uniqueness of products, etc.

However, this paper seeks to identify the various financial indicators that VCs consider before funding growth firms. One way to do this is to analyze the capital structure of firms which receive venture financing later. The basic objective of this paper is to understand whether the determinants of capital structure of a firm have a major role to play in the access of venture capital later in its life cycle. Finance literature comprises of numerous studies that focus on the determinants of capital structure of firms. However, there do not exist many studies which talk about the determinants of capital structure of a firm which is financed by venture capital. This paper is based in the Indian context. It uses the static trade-off theory, pecking order theory and agency theory to explain the financial structure of firms which receive venture capital subsequently. This paper draws from the capital structure literature to carve out the variables, i.e., tangible assets, profitability, size, volatility, growth opportunities, etc., that affect the capital structure of firms which receive venture financing later. Propositions are drawn on the basis of this reasoning and a conceptual framework is put forth that tries to identify an optimal capital structure strategy for Indian growth firms that seek venture capital.

THE INDIAN VENTURE CAPITAL SCENE

The India growth story is well documented. According to the IVCA Grand Thornton India Private Equity Report (2011), India's Gross Domestic Product (GDP) has grown from \$3.09 tn in 2009 to \$4.05 tn in 2010. Real GDP rose to 8.3% in 2010 from 7.4% in 2009. The purchasing power of the Indian middle class has increased. There is a considerable increase in the disposable income among the Indian middle class, Greater urbanization has seen a rise in demand for real estate, FMCG, retail, etc. India managed to shield itself from the recessionary pressures that captured many economies in the recent past.

One of the major contributors to the India growth story are the private equity and venture capital players. They have played a considerable role in the development of various sectors in India (e.g., real estate, education, telecom, information technology, healthcare, etc.). The investments by private equity players increased from \$2 bn in 2005 to \$19 bn in 2007. However, these investments dropped to \$6.2 bn in 2010, primarily as after effects of the global recession. The private equity investments have accounted for a total of approximately $55 bn since 2005.

THE 'LEMONS' PROBLEM REVISITED

This section lays the theoretical foundation of the paper. It draws out the need for screening out bad ventures from good ventures. The rationale behind the screening process is drawn from the finance literature dating back to early 1970s. Various means to resolve the screening problem have also been discussed in the subsequent subsections.

THE ADVERSE SELECTION PROBLEM

A venture capitalist has to face an adverse selection problem during selection of various ventures in which he eventually decides to invest. He invests in untested ideas which may or may not have a potential to earn the expected rate of return. There exists an information asymmetry between a venture capitalist and the entrepreneurs. The entrepreneurs usually have a better idea regarding the quality of the venture. The venture capitalist has to base his investment decisions on the information that the entrepreneurs provide. However, the entrepreneurs might have a vested interest in not representing the entire information about the venture. In order to separate the good entrepreneurs from the rest, the venture capitalist demands a high expected rate of return. Here, there emerges a 'lemon' problem (Akerlof, 1970). Those entrepreneurs, who believe that their venture is a good, can achieve this high expected rate of return. However, they will not be willing to accept this high rate of return, because they will be exerting 100% of their effort into it, with the receipt of only a fraction of the payment (Jensen and Meckling, 1976). But, those entrepreneurs who know their ventures have low potential will accept this proposal. This is because they will get the money they need. Even if the venture fails, they will not be at a losing end because of their limited liability. As a result the venture capitalist will receive proposals from bad entrepreneurs only. And since the venture capitalist will not find a good venture to back up, the market for venture capital will breakdown. This is the adverse selection problem faced by the venture capitalist.

A classic example of screening is when the employer wants to hire employees for two kinds of jobs—the first one in which the employee can affect the output through his skills and the other one where the employee's skills have no effect on the project's output. The employer will obviously want to hire high skilled employees for the job in which the output can be affected by the employee's productivity. A possible way through which the employer can sort out high skilled workers from low skilled ones is by offering two types of compensation—a piece rate compensation and an hourly compensation. If these compensation types are properly implemented, then the highly skilled workers will take up the piece rate where he can improve the output through his skillsets and the unskilled ones will opt for the hourly wages where no matter what their skills utilized, they are assured of a certain amount. This screening process is likely to curb the adverse selection process. This is because the piece rate or hourly rate in itself does not influence the worker's effort. The contract merely sorts out workers based on their private information. This sorting works in favor of the employer. If the contract terms are drawn in a manner that affects incentives as well, then moral hazard problems are also curbed (Smith and Smith, 2004).

In case of screening, the actor is the investor (the party without the private information). He proposes alternatives to the entrepreneur, and arrives at a conclusion (the entrepreneur's expectations about the venture's success) based on the alternative that the entrepreneur opts for. For example, if the investor, is assured that the entrepreneur has other options to finance his venture (e.g., personal savings), but still opts for venture financing, then the investor can draw a conclusion that the entrepreneur wishes to diversify his risk by bringing in outside financing, and is not very confident about the venture's outcome.

Screening occurs when the party without the private information (venture capitalist) offers alternatives to the other party (entrepreneur), so that the other party reveals the information by choosing (Smith and Smith, 2004).

SIGNALING AS A SOLUTION TO THE ADVERSE SELECTION PROBLEM

An investor is usually faced with a situation where he has to distinguish between a good venture and a 'lemon'. The problem here is that it is difficult and costly for the investor to verify the claims made by the entrepreneur.

One way through which an entrepreneur can convey positive private information to the investor is to simply bare all the information to the investors and let them draw their own conclusion. However, one of the problems of this option is that, there is a high probability that the idea (if good) may be appropriated by the investors without the knowledge of the entrepreneur.

Therefore, some vital questions that need to be answered include: How can an entrepreneur convey the true picture of his venture (his positive performance) without compromising on his idea? Conversely, how can a prospective investor convey the idea that he is not involved in any competitor's product and he has no mal intentions about the product?

The answer to these questions can be provided by the word 'signals'. Spence (1973) first introduced the concept of signaling in a labor market context. In his example, each worker is aware of his own productivity, but this productivity is unobservable by prospective employers. Without this ability to distinguish between productive and unproductive workers, the employer will have to offer the same (low) wage to all. This results in an adverse selection problem. Spence shows that, under certain circumstances, workers can use educational qualification as a signal to communicate their productivity. Education attainment works as a signal because it is observable and separates the workers according to productivity levels. Education, however, may not change the productivity of any worker. This signal is therefore used to address information problem and not incentive problem.

The idea of signaling can be extended to new venture financing as well. From an investor's point of view, the entrepreneur's claim of being motivated, honest, creative, hard working, etc., holds little value. The attributes that the investors seek from the entrepreneurs are, for most parts, unobservable. Investors would prefer entrepreneurs who realistically represent their true beliefs and provide accurate information regarding their financial projections and who have the (unobservable) managerial attributes that are needed for success.

In a startup, the entrepreneur must find a way to reveal the true value of the venture to the potential investor. Signaling theory suggests that ownership share retained by the entrepreneur helps the investors evaluate the information they receive. Leland and Pyle (1977), and Prasad *et al.* (2000) reason that since many entrepreneurs have limited personal capital, a preferred signal of project quality is the proportion of investor's personal wealth invested in the venture. Such investments indicate both project value and the entrepreneur's commitment.

Another signal that acts as a deterrent to the selection of the business plan is the inclusion of non-disclosure agreements. Business plans accompanied by non-disclosure agreements are usually ignored by VCs. This is mainly because the VCs would prefer not be entangled in case of any legal proceedings due to use of proprietary information. Such potential litigations take away a lot of precious time, are costly and damage the reputation of the venture capitalist.

The boundaries between these two methods, i.e., screening and signaling are blurred. Both of them occur in reciprocation with one another.

THE SCREENING PROCESS

The screening process includes separating the potentially good investments from the bad ones. The VCs checks on the various indicators provided by the entrepreneur. Based on these indicators, the venture capitalist decides to invest in the venture or skip it.

The venture capital literature till date has focused on the various generic criteria that VCs look at before investing in a venture. However, along with these non-financial aspects that VCs take into consideration before proceeding to invest, there occur some financial considerations also which have not received much attention in the venture capital literature. Even though the literature talks about financial consideration as a single variable, however, they do not get into the intricacies of the financial consideration that dictate the investment decision of the venture capitalist.

The following subsection shall draw a brief overview of the generic criteria that the venture capitalist looks at before investing. This is followed by the general financial theory that acts as the foundation for drawing out the financial factors that VCs might attach importance to. After the theory has been adequately discussed, the hypotheses are developed. These hypotheses seek out the financial conditions that may attract VCs to invest in a particular firm.

GENERAL CRITERIA USED BY VENTURE CAPITALISTS FOR SCREENING

VCs receive multiple proposals seeking funding on a particular day. A typical venture capital firm receives more than 1000 business plans per year, but a majority of them are not considered unless they are referred by the VC's network. The VCs have a look at only about 50 of the thousands received and seriously consider only 25 of them. Out of these, the VCs conduct due diligence (which involves costs in terms of finance and time) on one or two of the proposals (Sahlman, 1990).

Ideally, they will have to sort out good proposals from bad. Good proposals imply proposals which have the potential to generate sustainable profits and satisfy the VCs expected rate of return. VCs usually have expertise in the sector and stage of investment. Since, most of the business proposals are by entrepreneurs who do not have a history of running a firm, VCs usually rely on other specifics such as the potential of the idea, the characteristics of the entrepreneur, the market demand, etc. According to Kaplan and Stromberg (2004), VCs consider various internal factors and external factors during their due diligence process. Internal factors that influence the investment process mostly include the management quality, performance till date, influence of other investors, VC portfolio fit, monitoring cost, and valuation. External factors include market size, growth opportunities, competition, and barriers to entry, probability of acceptance among customers, financial/economic conditions and exit market conditions.

One of the major questions that has been well researched over in venture capital finance includes the various criteria that VCs look for before selecting a particular investment (Poindexter, 1976; Tyebjee and Bruno, 1984; Macmillan *et al.*, 1985 and 1987; Timmons and Bygrave, 1986; Sandberg *et al.*, 1987 and 1988; Hall and Hofer, 1990; and Zacharakis and Meyer, 1995).

One of the earliest studies in the VC decision making process was by Tyebjee and Bruno in 1981. He looked into various criteria that the VCs looked into which mostly involved the investment size, the technology used in the venture, the expected growth rate of the market, the location of the entrepreneur among others.

Macmillan *et al.* (1985) included various criteria such as the entrepreneur's overall personality, his experience, the characteristics of the product or service, the characteristics of the market and the expected rate of return. The entrepreneur's characteristics and experience emerged as the prime criteria followed by the expected rate of return from the investment. The entrepreneur's prior experience in the target market, his leadership abilities and reputation act as vital factors for evaluation. The product should be unique and the market should have a high growth rate. This criterion was cited as equally important to that of financial considerations. They identified six risk categories which include risk of losing entire investment, risk of being unable to be bailed out, risk of failure of implementation of idea, risk from competition, risk of management failure and risk of leadership failure.

Macmillan *et al.* (1987) have tried to distinguish between a successful and unsuccessful venture. They have included five types of risk. Risk of failure due to incompetent team, inexperienced management, the risk of the business idea not working out, competitive risk which reduce profit margins and high lock in period of investment.

All the above studies have received criticism due to the methodologies that they have employed. Mostly interviews and questionnaires were used which comprised of responses that were *ex post*. These studies suffered shortcomings in terms of rationalization of business decisions that the venture capitalist had already made. The studies mostly over emphasized on a particular criterion that was on the top of the memory of the VC or it was a particular criterion which the venture capitalist was biased at.

As a result of these criticisms, newer and more suitable methodologies were used to capture the decision making process. Sandberg and Hofer (1987) used a verbal protocol methodology to capture the evaluation criteria. The technique recorded the idea when the decision was actually being taken. Industry characteristics and management track record emerged as the most essential criteria for screening process.

Hall and Hofer (1993) also used a similar qualitative technique to capture the most important evaluation criteria. The most important criteria that emerged included the new venture's fit with the long-term growth and profitability prospects of the venture capital firm.

Zacharakis and Meyer (1998) used a method called social judgement theory (from the cognitive psychology stream) and used a tool called policy capturing to resolve the discrepancies between the actual criteria they use as compared to the criteria they think they will use. They find that VCs themselves are not sure about the various criteria they employ during a particular decision making process. Amidst a lot of information and the bounded rationality constraint, the venture capitalist lose themselves. Instead of depending on hard facts to base their decisions, VCs rely on their past beliefs and experiences. Under different contexts, different criteria seem important. Sometimes the market is of importance, sometimes the entrepreneur and sometimes the novelty of the product/service.

Other studies include Benoit (1975), Hoban (1976), Pointdexter (1976), Wilson (1983), Bruno and Tyebjee (1985), Goslin and Barge (1986), Knight (1986), Dixon (1991) and Rah *et al.* (1994). These studies are mostly based on the US VCs. Studies in Europe and Asia are quite few. Ray and Turpin (1993) look into the criteria utilized by the Japanese VCs. The study compared the Japanese VCs with that of American VCs. They found that the selection criteria employed by US VCs were more stringent. The Japanese VCs were more flexible in their approach. The study also found that Japanese VCs were more market oriented in terms of selecting their ventures.

Chotigeat *et al.* (1997) looked into the criteria used by VCs in Taiwan, Thailand and Sri Lanka. They found that financial consideration and team characteristics were given more importance by VCs in Taiwan and Sri Lanka. Thailand VCs emphasized more on the characteristics of the entrepreneur and the management team.

Pandey (1996) did a study on the criteria sought by Indian VCs before investing. It was one of the first. He identified eleven important criteria that VCs were interested in. Variables such as integrity, managerial skill and the desire to grow were some of the important characteristics that VCs looked for in Indian entrepreneurs among others.

Other important international studies include Dixon (1991), Sweeting (1991) in the UK, Ray (1991) in Singapore, Rah *et al.* (1994) in South Korea, Riquelme (1994) in Europe, etc. All these studies found the personality of the entrepreneur and his team of prime importance.

FINANCIAL CRITERIA USED BY VENTURE CAPITALISTS FOR SCREENING

The costs involved in the due diligence process are quite high (cost of hiring external technical/legal/financial consultant, resources of the VC himself, etc.). It is because of these costs involved, prior to the due diligence process, the VCs prepare a term sheet. This term sheet outlines the general terms and conditions of the investment as anticipated by the venture capitalist based on the information that he has. Eventually, if it is discovered that certain critical aspects in the term sheet are missing due to omission of information by the entrepreneur, then the entrepreneurial firm has to bear part of the cost. This process ensures that the entrepreneur provides honest and relevant information.

Theoretical Foundation

Are there any financial indicators that the VCs take into consideration before deciding to invest?

The answer to this question can be derived from the capital structure literature. The capital structure determinants may provide an indication as to what sort of firms the VCs prefer to invest in. The main objective of this section is to find out about the various financial determinants of firms that aid it in receiving external financing from VCs at a later stage.

The capital structure of a firm is the manner through which a firm finances its business activities. It is usually a combination of debt and equity. The decision to finance one's assets by either debt or equity depends on various factors, e.g., the firm's age, its asset characteristics, its profitability, etc.

The origin of the capital structure literature can be attributed to Modigliani and Miller (1958 and 1963). Many researchers have tried to solve the capital structure puzzle (Myers, 1984) through various points of view. However, there is no universally accepted theory on capital structure (Harris and Raviv, 1991).

There is the trade-off theory which is the oldest one and reasons out the existence of an optimal capital structure (Bradley *et al.*, 1984). There is a trade-off that occurs between the benefits of the corporate tax shield against the disadvantages of bankruptcy cost (Kraus and Litzenberger, 1973) and agency cost (Jensen and Meckling, 1976; and Myers, 1977). Another highly discussed theory is the pecking order theory which goes against the trade-off theory and states that there is no optimal capital structure (Myers, 1984; and Myers and Majluf, 1984). There exists a hierarchy of financial instruments with increased information asymmetry via which a firm finances its business activities. Only when all the internal mode of financing are exhausted, the firm opts for external financing in terms of debt followed by equity. There are some other comparatively recent theories which have come up as an alternative/extension to the above literature. For example, the life cycle theory of firm financing and the market timing theory are the recent entrants into the capital structure literature.

A large number of empirical works has been concluded on the above theories. Some of them favor the trade-off theory (Marsh, 1982; Bradley *et al.*, 1984; Jalilvand and Harris, 1984; Fischer *et al.*, 1989; Hovakimian *et al.*, 2004; Flanery and Ragan, 2006; López-Gracia and Sogorb-Mira, 2008, etc.). Many other empirical studies support the pecking order hypothesis (Shyam-Sunder and Myers, 1999; Watson and Wilson, 2002). Some studies are able to detect the applicability of both theories (Fama and French, 2002; Frank and Goyal, 2003, etc.).

However, most of these studies were conducted on large public firms. It is until recently that research on capital structure of small firms has emerged. This is mainly because of the importance that they the entrepreneurial firms have in the economic development of nations (Kortum and Lerner, 2000). Also, they make an interesting case study for the testing of these theories in an entirely different setting. For example, the new ventures typically suffer from heavy information asymmetry problems (Berger and Udell, 1998). Also, there is no clear distinction between the shareholder and managers of the firm. In a majority of the case, the owner himself is the shareholder of the firm. As a result new firms typically suffer from difficulties in accessing finance in comparison to their older counterparts. The mature public firms already have a track record and hence are able to draw finance more easily than the younger ones.

Before getting into the intricacies of the determinants of capital structure of pre-VC backed firms, there is an absolute necessity to understand about the theories that govern them.

Modigliani and Miller Irrelevance Proposition

Modigliani and Miller (1958) stated that under some key assumptions, the value of the firm is unaffected by the way it is financed. The main assumptions include that capital markets are perfect (insiders and outsiders have symmetric information), firms operate without any transaction cost, bankruptcy cost or taxes. Under these situations, it does not matter whether the firm decides to choose between debt and equity. Here, internal and external funds are perfectly substitutable.

These assumptions are, however, not practically applicable. A majority of the research in testing the trade-off theory have been devoted to circumstances where the above assumptions do not hold.

The Static Theory of Capital Structure

This theory states that, every firm has a target capital structure and it continually strives to achieve it. However, a firm always has to choose between debt and equity. If it intends to finance its business activities through debt, it has to face the trade off between the benefit it gains through the tax deductibility on its interests against the risk of bankruptcy and agency cost of debt.

> Firms borrow up to the point where the tax benefits from an extra dollar in debt are exactly equal to the cost that comes from the increased probability of financial distress. (Ross *et al.*, 2008)

Due to these risks, equity seems a better option. However, accessing financing via equity has its own demerits. For instance, the firm has to suffer from the agency cost of equity. Basically, the capital structure move towards an optimal one which embodies the existing tax rates, the asset characteristics, the profitability of the firm and the cost incurred due to bankruptcy. Specifically, the firm tries to strike a balance between the costs and benefits of debt, holding its assets and investment plans constant (Myers, 1984).

The optimal capital structure of various firms will differ with difference in the firm characteristics, institutional differences (e.g., different bankruptcy laws, different tax rates, etc.). This theory predicts that, less risky firms (e.g., more tangible assets, more taxable income to shield, etc.) should have a high debt ratio. Whereas, more risky firms (e.g., firms with more intangible assets which have negligible value in case of liquidation) will have difficulty in attracting debt (due to lack of collateral as assets are intangible) and will have to find respite through equity financing. As a result these firms will show a low debt equity ratio. Also, the firms which are more profitable will have high taxable income to shield as well as more debt-payment capacity.

Therefore in order to balance these two aspects, they will have to rely mostly in debt, i.e., they will have a high debt equity ratio. The opposite applies to not-so profitable ventures. As far as growth opportunities are concerned, the firms in a high growth path should ideally borrow less as otherwise the likelihood of financial distress increases.

Agency Theory

This theory states that the firm's capital structure is based on agency costs, i.e., the costs incurred due to the conflicting interest between the principal and the agent. The agency cost comprises of the agency cost of debt and equity. The agency cost of equity basically comprises of the monitoring expense incurred by the principal (investor or the venture capitalist in our case), the bonding expense incurred by the agent (the entrepreneur) and the reduced welfare due to the conflict of interest between the principal and agent (Jensen and Meckling, 1976).

Borrowing implies payment of interests at continual intervals. In order to make these regular payments, the incentive of the owner manager to engage in excessively risky projects increases as these will pay a higher return. However, the risk also increases. And it is the debt holders (instead of the equity holders) who will have to bear the downside risk. Now, if the debtors anticipate this situation, they will charge a higher interest rate which in turn increases the cost of debt. Thus, the agency cost of debt includes the opportunity cost incurred due to the impact of debt on the investment decisions of the firm, the monitoring and bonding expenditures by both debtors and equity holders, the bankruptcy and reorganization costs (Hunsaker, 1999). Since both debt and equity have an agency cost associated with them, the optimal debt equity ratio shall involve a trade off between them.

Agency costs arise due to conflicting interest between various actors. Jensen and Meckling (1976) has offered a good description of these conflicts.

SHAREHOLDER MANAGER CONFLICTS

The origin of this conflict is the separation of ownership and control of the firm. If the firm is financed by equity, the managers do not own the entire firm. As a result, even though they exert full effort they are not able to reap the whole benefits of their effort, as it is shared between the owners and the investors (who are part owners). These type of conflicts can emerge due to various reasons. The managers realize that they do not receive full benefits of their effort. As a result they indulge in non-value maximization behavior which involves investing their effort in perquisites (e.g., lavish cars and office space). This sort of conflict can be mitigated by awarding managers with equity share of the firm. Another means is to increase the debt level of the firm (keeping the managers equity holding constant). This will reduce the amount of cash flow that is available with the firm as a majority of it will be invested in paying the interest. And little will be available for the manager to invest in perquisites (Jensen and Meckling, 1976). Another reason of this conflict is that managers might prefer to invest in less-value maximizing short-term projects, which will result in short-term profits and immediate enhancement of reputation against investing in value maximizing long-term projects (Maulis, 1988). Managers would essentially prefer investing in less risky projects and less leverage as the likelihood of bankruptcy will go down (Hunsaker, 1999). Managers would generally prefer to protect their current positions. If the control of the firm changes, the probability of the manager being terminated increases. As a result managers generally resist takeovers or mergers (even if it is value enhancing for the firm. Sometimes managers continue to run the project even when liquidation is preferable (Harris and Raviv, 1990).

The overinvestment problem is another issue which occurs due to the conflict between the shareholders and managers (Jensen, 1986). Managers prefer to increase the firm size (so that they can be in control) rather than working towards increasing the value of existing projects (as preferred by shareholders). During this process, the managers may accept negative Net Present Value (NPV) projects as well, thereby reducing the firm value. This situation can aggravate due to the presence of excess free cash flow and low growth opportunities. Increasing the debt would help mitigate these problems. This is because the excess free cash flows will mainly be used up in payment of regular interests and there would be little capital to invest in negative NPV project. Also, debt increases the risk of bankruptcy and prevents managers from investing in non-value maximizing projects (Hunsaker, 1999).

SHAREHOLDER BONDHOLDER CONFLICTS

In this situation, shareholders make certain decision which result in transferring the wealth from bondholders to shareholders. Since, the bondholders are aware of such a situation, they will charge a higher interest rate. In one condition, there is a direct transfer of wealth from shareholders to bondholders (Smith and Warner, 1979). Shareholders increase their wealth in comparison to bondholders by increasing the dividend payment. Also, high priority debt requires payment prior to the servicing of bondholders. Another source of conflict is the asset substitution (Jensen and Meckling, 1976; and Smith and Warner, 1979). When the debtors agree to issue debt, they charge an interest rate (risk premium) in accordance to the riskiness of the project. Shareholders would prefer to invest in risky projects because, if the project succeeds, the returns will be more. Therefore, they will get a share of all the profits and the bondholders will receive only their periodic interest payments. However, if the project fails, then it is the debtors who will have to suffer (limited liability of the shareholders). Once the debtors are aware of this, they will charge a higher interest rate, thereby increasing the cost of capital. This increased cost of debt is borne by the shareholders as they are the residual claimants. Another problem that occurs due to these conflicts is the underinvestment problem (Myers, 1977). Debt overhang occurs when the earnings generated by a new project is used to pay off existing shareholders. This situation usually arises during times of financial distress. Shareholders would not want to invest in new positive NPV projects because the earnings from these projects will be used up to payback existing debtors.

Literature has suggested various ways to mitigate these problems. This theory proposes that firms which are in a high growth path should have lower short-term debt and higher long-term debt in comparison to mature firms. Adding an upper limit to dividend payment (Smith and Warner, 1979), collateralization of tangible assets (Stulz and Johnson, 1985), issue of convertible debts (Jensen and Meckling, 1976) can lead to lower agency costs.

INFORMATION ASYMMETRY PROBLEMS

Usually, the firms' insiders (managers) are more aware of the status of the firm as compared to outsiders. The capital structure in this situation therefore reflects the firm's needs to mitigate the information asymmetry problems (Myers and Majluf, 1984). This capital structure is sometimes even used as a signal to external investors about the insider information that managers possess (Ross, 1977).

Usually, when a new firm issues equity, the existing shareholders consider it as negative information about the firm. And they are willing to pay less than the value of the share. As a result the equities are underpriced. If the existing shares are underpriced, then there is a high probability that the new shares which will be used in case of a new project will also be underpriced. These studies are done under the assumption that managers work on behalf of the interests of the existing shareholders. The managers may therefore forego a positive NPV project if it requires the issuing of debt as this will result in a transfer of wealth to new shareholders in comparison to existing shareholders (Myers and Majluf, 1984). Use of debt usually results in mitigation of such problems.

Myers (1984) proposed a theory of pecking order which is based on this concept of asymmetric information. Firms, while financing their projects, prefer to use their internal funds first, before issuing debt and afterwards, equity. Internal financing (retained earnings) require no public disclosure of information or incur no flotation cost, they are mostly preferred. Once these internal funds are exhausted, the firm would prefer the use of external financial resources in the order of debt, convertible securities, preferred stock and common stock. This is because firms tend to finance their investments through less risky financial instruments, i.e., debt rather than equity. Issuing equity will always result in a trade off between issuing them at lower than the market price or passing up of positive NPV projects.

There are certain implications of the pecking order theory. Under this theory, there is no optimal capital structure. Instead, the capital structure is designed by the firm's need for external financing. This determines the amount of debt the firm will have. Another implication is that profitable firms will usually have less debt. This is mainly because, these firms will have high retained earnings to finance their future projects. For example, in mid-2006, Google had an asset of \$14.4 bn out of which \$10 bn were in cash or marketable securities. Due to the reasons discussed above, a firm will try to increase its retained earnings (financial slack). This is mainly done to save cash to invest in future projects immediately. This tactic also avoids resorting to external means of financing (Ross *et al.*, 2008).

There is a continuous debate on whether the static trade -off theory or the pecking order theory is more correct. According to Ross *et al.* (2008), the trade-off theory's prescriptions is mostly about long-term financial decisions (tax shields, financial distress, etc.) in comparison to pecking order theory, which is mostly concerned with tactical issues of raising external finance. Therefore, both these theories have merit. In the words of Ross *et al.* (2008):

> It is probably the case that firms have long run, target capital structures, but it is also probably true that they will deviate from those long run targets as needed to avoid issuing new equity.

FINANCIAL INDICATORS THAT ATTRACT VENTURE CAPITALISTS

Based on the above theories, Harris and Raviv (1991) finds that the tangibility of assets, default probability of the firm, volatility of earnings, growth opportunities, tax effects, marketing expenditures, expenditures in research and development, product specificity, etc. decide the level of debt that a firm might issue. In their own words:

> Leverage increases with fixed assets, non-debt tax shields[1], investment opportunities and firm size and decreases with volatility of earnings, advertising expenditures, the probability of bankruptcy, profitability and uniqueness of products.

However, the results vary in accordance to sectors, stages of firm, different institutional settings and country settings. Taking a cue from the above information, some propositions are developed that will reason out the attraction of VCs for some of the above-mentioned financial indicators.

In this section we are talking about firms that are in their growth stage, i.e., firms that have grown from being an idea to having a tangible product/service. They have started earning revenues and are probably within the age range of 2-5 years. Growth firms can be further sub-divided into early and late stage growth firms. Those firms which have a running prototype and have managed one or two clients can be considered to be in the category of early stage growth firms. They may or may not be earning revenues at this stage. Those firms, which are having a product/service ready and have to some extent an established client base, can be considered to be in the late stage growth firms. They might have earned some revenue and would be on their way to break even or would have already shown some profits.

[1] E.g., depreciation and depletion.

Asset Tangibility

Presence of tangible assets indicates the presence of more debt. This is mainly because these tangible assets can act as collateral. Hence, the cost of debt will be low. Presence of large amount of tangible assets reduces the agency cost of debt and deters the firm from indulging in asset substitution (Jensen and Meckling, 1976; Johnson, 1997; Stulz and Johnson, 1985). Also, during the occasion of liquidation of the firm, the tangible assets have more liquidation value (Wald, 1999). Therefore, if a firm has more tangible assets, then the level of debt would be more, i.e., there is a positive relationship between the tangibility of assets and the level of debt (Titman and Wessels, 1988; MacKie-Mason, 1990; Prowse, 1990; Jensen *et al.*, 1992; Smith and Watts, 1992; Grier and Zychowicz, 1994; Hovaikimian *et al.*, 2001; Frank and Goyal, 2003).

According to pecking order theory, when a firm seeks external equity funding, all his internal sources of financing and debt capacity must have been over. It is only after the firm has exhausted all possibilities of internal financing (including loans from friends, family, etc.) and loans from financial institutions, that the firm seeks external financing in terms of venture capital equity. This situation occurs in a later stage of the firm, when it is looking to expand. The access of debt by the firm sends the venture capitalist a positive signal that the firm is worth investing. This is because other financial institution like banks, etc. have done their due diligence and checked their creditworthiness before sanctioning the debt. Also, at this expansion stage, the amount of investment required per deal will be relatively high as compared to early stage firms. Hence, venture capital firms with large ticket size that are focused in late stage and expansion funding will be able to harbor these investments.

If a firm has intangible assets (e.g., hi-tech ventures), then the likelihood that it receives debt financing is less. This is mainly because it does not have enough collateral to secure loans and its liquidation value is very less. However, if the entrepreneur has a brilliant idea, then the venture capitalist will not want to let go of it. But the idea in itself may not be sufficient in securing venture capital. The entrepreneur should have a prototype ready. Also, in case of services firm, it would be advantageous on the part of the entrepreneur to have a first customer. However, only those types of VCs will invest which have an expertise in that particular area. The venture capital firm should also have experience in developing startup firms from scratch to market ready. This skillset on the side of the venture capitalist is a prerequisite as this will help to reduce the information asymmetry between the entrepreneurial firm and the venture capitalist. Also, venture capital firms which invest in early stage will generally have a small ticket size as compared to their counter parts which are investing in late stage firms. This is mainly because the capital requirement of startups is comparatively low.

Proposition 1: The likelihood that a venture capitalist will finance a growth firm which has high tangible assets is more as compared to a growth firm with high intangible assets.

Tangibility, in the financial literature has been measured by fixed assets (which includes plant, property and equipment).

Firm Size

As the size of the firm increases, the probability of default decreases (Titman and Wessels, 1988; Rajan and Zingales, 1995; Fama and French, 2002; Frank and Goyal, 2003). This is mainly because they are in general, better diversified and have a less volatile cash flow and profits. As a result they can benefit more from interest tax shields (Hovaikimian *et al.*, 2003). Also, the larger firms can have access to cheaper debts because of their bargaining power. Therefore, the cost of capital is less (Michaelas *et al.*, 1999). Also, large size growth firms are considered to have less information asymmetries in comparison to their smaller counterparts. This is because they offer more information to the venture capitalist. This might be another reason why large firms can have access to cheaper debts (Fama and Jensen, 1983; Rajan and Zingales, 1995; and Cassar, 2004). On the basis of this discussion, it can be said that late stage growth firms (that are considerably larger) have a better likelihood of accessing venture capital as compared to early stage growth firms (that are considerably smaller).

However, there are contrary evidences as well. Firms which are in a high growth trajectory, in anticipation of their financing needs in the future, try to establish relationship with bankers, etc. As a result, the information asymmetry between the investors and investees declines. And not so large firms might also be able to access debt at a reasonable rate (Cassar, 2004).

Now, according to the pecking order theory, the late stage growth firm will seek equity financing only when it has exhausted both its internal finance and external sources of debt. Even if a firm has enough debt capacity, it will not use it entirely as it will also have to take into consideration the bankruptcy costs and agency cost of debt (according to static trade-off theory). On the other hand, the early stage growth firm might also seek venture capital financing (because of its unique nature to invest in risky firms), because it will not receive debt (due to lack of collateral and high information asymmetry) and it has exhausted its own personal mode of financing.

Proposition 2: A venture capitalist would prefer to finance a late stage growth firm which is larger in size as compared to an early stage growth firm which is smaller in size.

This is mainly because, everything else remaining the same, the venture capitalist will prefer a less risky venture (late stage growth firm) to a more risky one (early stage growth firm). A late stage growth firm signals the venture capitalist about its potential through the debt that it was able to receive (a signal of creditworthiness). It is also able to resolve some of the information asymmetries by furnishing the venture capitalist with some prior track record and its financial statements. However, a relatively newer venture will have nothing much to show other than an idea and a future plan (which may not be enough sometimes). Size, in the financial literature has been mostly measured by natural logarithm of total sales.

Profitability of Firm

The relationship between the profitability of a firm and its capital structure is not very explicit. If a firm is more profitable, it has more cash flows. As a result, it can gain tax advantages due to the interest tax shield (Modigliani and Miller, 1963). This is in accordance to the trade-off theory. According to the agency theory framework, debt acts as a disciplining instrument. The money that managers would have squandered-off in unnecessary empire building is utilized to payoff the debtors (Jensen, 1986). Also, debt acts as a signal about the profitability of the firm. Therefore, a profitable firm should have more debt. Another steam of reasoning favors the pecking order theory. Now, a profitable firm has a good amount of free cash flow to sustain its future growth and expansion plans. As a result, it need not seek external financing. So, this statement establishes the fact that, a profitable firm should have low debt (Myers, 1984; and Myers and Majluf, 1984). Many empirical studies also find evidence about the negative relationship between debt and size (Titman and Wessels, 1988; Rajan and Zingales, 1995; and Wald, 1999).

But, the story is different for growth firms. A profitable growth firm whether in the late stage or early stage, would need substantial amount of capital for expansion. Since these firms are in a high growth path, the profits may not be sufficient to finance its expansion plans. They will have to seek external finance. If debt is available, then it's good. However, there might emerge situations where the need for external equity finance is acute. High growth firms which have mostly human capital or intangibles to show will need equity financing. Also, sometimes the need for finance may be immediate. At this juncture, raising equity finance is a last resort. This profitability acts as a good signal for VCs. A venture capitalist would be more than willing to finance a profitable growth firm. This venture capital would aid in the expansion of the venture and would lead to further capital gains which can be then shared between the entrepreneur and the venture capitalist.

Proposition 3: Already profitable late stage and early stage growth firms have a better likelihood of receiving venture capital finance as compared to non-profitable ones.

In finance literature, profitability is usually measured by the ratio of Earnings Before Interest and Tax (EBIT) to total assets of the firm.

Earnings Volatility

Firms with high volatility in earnings generally raise less debt. If the earnings are volatile, the risk the firm will not be able to honor its debt commitments is high. As a result, the firm might be forced to borrow at a higher rate in order to serve its existing debts. In case, it is not able to do so, it might even have to file for bankruptcy. Sometimes, earning volatility is taken as a proxy for financial distress.

However, this situation does not arise if the firm is financed by equity. During periods of financial difficulties, the firm can stop paying dividends or it can defer it.

Generally, new, entrepreneurial firms face such situation. As a result its better for them to access equity finance instead of debt. However, these firms might not receive the external equity capital that they are seeking. A venture capitalist needs to have some indication about the potential of a venture before deciding to invest in it. A high volatility in earnings sends a wrong signal to the venture capitalist. Volatility in earnings indicates that the firm is in financial distress and is seeking venture capital as a last resort to save its firm from going down. The venture capitalist might not be interested in acting as a savior for the turbulent firm.

Proposition 4: The likelihood of a venture capitalist financing a growth firm with high volatility is low as compared to a growth firm with low volatility.

In financial literature, volatility in earnings is measured by standard deviation in Return on Assets (ROA) (Booth *et al.*, 2001).

Growth Opportunities

Growth opportunities are depicted by those assets which add value to the firm but cannot be used as collateral and do not generate profits for the firm (Titman and Wessels, 1988). Due to this lack of collateral, the firm will have difficulty in accessing debt. Also, mere growth opportunities without any tangible assets (e.g., software startups) will not contribute to the profitability of the firm. This may be another deterrent in the firm's quest for external finance. As a result, most of the theoretical models have predicted that there is a negative relationship between leverage and growth opportunities.

In an underinvestment situation, firms which have good growth opportunities might give up positive NPV projects because the earnings from those projects will go into the servicing of existing debts (Myers, 1977). In an overinvestment situation, where there is not much opportunity for growth, firms will go for debt as it will help reduce the agency problem of debt.

New ventures usually have difficulty in access of debt due to lack of collateral. However, they might have very good potential of growth in the future. Once they have exhausted all possibility of internal finance, and they cannot access debt, new ventures will seek venture capital finance. Due to their high growth opportunities, and specialized skills to resolve uncertainties, VCs will invest in these ventures.

Proposition 5: The likelihood of a venture capitalist financing a firm with high growth opportunities is more as compared to a firm with low growth opportunities.

Financial literature measures growth opportunities through a ratio of market value to book value (Rajan and Zingales, 1995). He cites two main reasons for this. The probability of financial distress is more for firms that have high market to book value. Also, firms would prefer to issue stock when they are overvalued.

FRAMEWORK FOR GROWTH FIRMS SEEKING VENTURE CAPITAL

We have categorized growth firms into two sub-categories, i.e., early stage growth firms and late stage growth firms. Those firms which have a running prototype and have managed one or two clients can be considered to be in the category of early stage growth firms. They may or may not be earning revenues at this stage. Those firms which are having a product/service ready and have to some extent an established client base, can be considered to be in the late stage growth firms. They might have earned some revenue and would be on their way to break even or would have already shown some profits.

According to the discussion, high tangibility indicates towards a higher debt equity ratio. The asset heavy growth firms have a higher likelihood of securing venture capital. This is mainly because firms with some amount of tangible assets would have already secured some amount of debt because of their tangibles which acts as collateral. Also their liquidity price is high. This debt level of the growth firms would send a signal to the venture capitalist about the credibility of the firm. Growth firms which have low tangibility would not mange much debt because of their lack of collateral. As a result, they will have to send a signal about their abilities through things like a working prototype, some clients, their own personal investment, etc. If they succeed, then their likelihood of securing venture capital might increase.

Bigger size implies a higher debt equity ratio. Growth firms in their late stage and in the early stage have equal likelihood of seeking venture capital. This is because the late stage growth firm might have exhausted its debt capacity and could seek venture capital. The early stage growth firm might not receive debt and seek venture capital financing as a last resort. Given this option of selecting between the late stage growth firm (larger size) and the early stage growth firm (smaller size), the venture capitalist would finance the late stage growth firm which is larger in size. This is mainly because the late stage growth firm would be able to provide more and better information about its ability (its prior track record, its established client base, its prior debt history, etc.) than the early stage growth firm. This helps in reducing the information asymmetry between the entrepreneur and the venture capitalist to a great extent.

There are no clear cut relationships between profitability and debt equity ratio. Profitable growth firms (whether in the late stage or early stage) have a greater likelihood of securing venture capital finance. Their profitability acts as a signal regarding the quality of the firm. The venture capitalist would invest in them. The capital gains that would be made in the future, will then be subsequently shared between the entrepreneur and the venture capitalist.

A high volatility in earnings indicates a low debt equity ratio. Fluctuations in earnings may indicate that the firm is in financial distress. As a result the probability of the firm receiving debt capital is low. The probability of receiving equity capital also reduces because the venture capitalist would not like to bet on a sinking ship, because the probability of failure is high.

There is a negative relationship between firms with high growth opportunities and debt equity ratio. Growth firms which are either in their early stage or late stage with good growth opportunities will not be able to secure debt finance due to their lack of collateral. However, these growth opportunities indicate an increasing chance of success for these firms. The venture capitalist would like to capitalize on this opportunity by providing finance to these firms.

Table 1 provides a complete framework of financial determinants for growth firms that can act as a benchmark, before they seek out venture capital financing.

Table 1: Framework of Financial Indicators for Growth Firms Seeking Venture Capital

Criteria	Debt/Equity Ratio	P (Accessing Venture Capital in Late Stage Growth Firm)	P (Accessing Venture Capital in Early Stage Growth Firm)
High Tangibility	High	High	High
Bigger Size	High	High	Low
High Profitability	Mixed	High	High
High Volatility	Low	Low	Low
More Growth Opportunities	Low	High	High

The framework indicates that late stage growth firms that are bigger in size, have tangible assets, are profitable and have high growth opportunities have high profitability of receiving venture capital. Early stage growth firms that have high tangible assets, are highly profitable and more growth opportunities have a high likelihood of receiving venture capital. Therefore, a growth firm which intends to seek out venture capital in the near future must keep in mind these financial considerations. Other than the generic criteria such as the quality of the entrepreneur, the management team, the external competitive environment, etc., these financial criteria would go a long way in securing venture capital. These financial criteria shall act as positive signal to the VCs indicating the robustness of the firm. These signals therefore, enhance the possibility of the growth firm in securing venture capital.

CONCLUSION

This paper draws out various criteria that an entrepreneur running a firm in the growth stage should keep in mind before securing venture capital. Along with various generic criteria such as good management team, able entrepreneur, good economic and market conditions, financial considerations such presence of tangible assets, prior profitability, high growth opportunities, bigger size shall provide positive signals regarding the credibility of the firm. The probability of the growth firm securing venture capital funding will therefore increase.

However, one thing that emerges from this discussion is that VCs are not exactly the risk takers that they are assumed to be in the academic literature. Their financial criteria for selection are not very different as compared to the criteria adopted by banks and other financial institutions. They too need some amount of risk mitigating methods to limit their downside risk. Once proven, this academic work shall be a breakthrough in deconstructing a major assumption of venture capitalist as risk takers. Their role then will be basically confined as another source of finance for entrepreneurial firms that are seeking finance rather than the change makers that they are touted in a majority of venture capital finance literature.

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Financial Management As a Determinant of Profitability: A Study of Indian Pharma Sector

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This paper aims to examine the relationship between financial management and profitability of the enterprise. Financial management, invariably, has two aspects—mobilization of funds and deployment of funds. Both these aspects of financial management have immense potential to influence the profitability—the former through incurrence of costs and the latter through generation of revenue. The study uses six variables viz. Long-term Debt to Equity Ratio (LTDER), Inventory Ratio (IR), Debtors Ratio (DR), Creditors Velocity (CRSV), Total Assets to Sales Ratio (TASR) and Profit After Tax to Sales Ratio (PATSR), covering both the aspects of financial management. These variables are studied for 64 public limited pharmaceutical companies for a period of 10 years. The observations are analyzed using statistical techniques. The empirical results suggest that TASR and CRVS are the important variables to be paid greater attention while optimizing the profitability of the enterprise.

INTRODUCTION

As defined by Prof. Solomon (1963) "Financial management is properly viewed as an integral part of overall management rather than as a staff speciality concerned with fund-raising operations. In this broader view, the central issue of financial policy is the wise use of funds, and the central process involved is a rational matching of the advantages of potential uses against the cost of alternative potential sources so as to achieve the broad financial goals which an enterprise sets for itself. The underlying fund using proposals which originate within the operating departments of an enterprise are still assumed as given. So are the present and prospective conditions in technology and in the markets for goods, services and capital. Given these data, the function of financial management is to review and control decisions to commit or recommit funds to new or ongoing uses. Thus in addition to raising funds, financial management is directly concerned with production, marketing and other functions within an enterprise whenever decisions are made about the acquisition or destruction of assets."

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Naturally management of finance has evinced keen interest both amongst the academicians and practicing managers primarily due to its immense potential to influence the profitability of the enterprise. This potential is engrossed in both the aspects of management of funds, be it mobilization of funds or deployment of funds. Appropriate costs have to be incurred irrespective of the magnitude, type and source from where funds are mobilized as there is no free lunch in finance. Mobilization of funds, thus, influences profitability of the enterprise through incurrence of costs. The deployment of funds too has to be carefully done in a manner that it results in to creation of assets, fixed and/or current, that are capable of providing desired stream of profits. Naturally, management of finance has to excel in both the aspects—mobilization of funds and deployment of funds. These aspects invariably involves several variables such as equity share capital, share premium, reserves and surplus, debenture and other long-term borrowings, current liabilities including creditors, bank advances, provisions and other current liabilities, fixed assets, investments, current assets including debtors, cash and marketable securities, inventories, advances made, deferred revenue expenditures, etc. Multiplicity of the variables and the varying degree of influence they exert on the profitability of the enterprise make the task of finance managers extremely difficult. They simply cannot concentrate on all the variables. They have to ascertain the important variables exerting substantial influence on the profitability. This problem of ascertaining the important variable can be better solved through a research-based approach, instead of mere reliance on historical practices.

LITERATURE REVIEW

Academicians have widely visited different aspects of financial management in order to postulate the corporate profitability. For example, Ross (1977), Leland and Pyle (1977) and Kishore (1978) studied capital structure from different perspectives. Authors like Myres and Mujluf (1984) through their study of capital structure of various enterprises tested pecking order approach while (Titman, 1984) linked the capital structure with the operating income and Pandey (1985) examined the impact the size of firm and profitability had on the capital structure of the enterprises. Fama and French (2002) examined dividend and capital structure decisions with reference to firm's value. Authors like Chiang *et al.* (2002), Voulgaris *et al.* (2002), Pandey (2004), Joshua (2008), and Rafiu and Obafemi (2009) examined inter-relationship between capital structure and profitability. On the other end Shin and Soenen (1998), Weinraub and Visscher (1998), Pike and Nam (2001), Deloof (2003) and recently Lazaridis and Tryfonidis (2006) and Vishnani and Shah (2007) studied working capital of different enterprises to examine its association with profitability. The gist of research work done by these authors is chronologically depicted in the ensuing lines.

Ross (1977) and Leland and Pyle (1977) pointed out that the managers are penalized for bankruptcy but also are rewarded for any rise in value of security. According to the Ross model capital structure and value of the firm are positively related. Leyland and

Pyle have advocated that the promoters' stake can be used as a signal of quality. The possibility of asymmetric information opens up various approaches for explaining the presence of an optimal capital structure. According to them the choice of capital structure by the business enterprise signals to the outside investors the information which might be available to the insiders. Kishore (1978) discussed how the fundamental aspects were neglected while deciding the capital structure of the public enterprise. He urged that reasoning should prevail over the rule of thumb while taking decisions pertaining to financing mix of the public enterprises. Cash flow ability of the enterprise must be considered while determining the debt limits. Bhat (1980) in his study of 62 companies from engineering industry examined various aspects, viz., the impact of size, growth, business risk, payout policy, debt-service capacity, profitability and degree of operating leverage on the capital structure decisions of the firm. He found that debt service capacity, dividend policy, business risk, and profitability of the firm had significant effect on capital structure choice.

Myers and Majluf (1984) in their study validated presence of pecking order approach in capital structure decisions. According to their study financial resource mix decisions are guided by certain order of preferences—first internal funds are selected, then risky debt and lastly the external equity. The authors observed that managers will be better equipped with the information regarding future investment potential of the firm as compared to the prospective investors. As a result, when managers approach the market for external debt, the prospective investors are more likely to ask for a premium as a measure of protection against the risk perceived by them. By the same measure of higher risk perception, if the market is approached for external equity, the prospective investors will offer lower quote. This means the issue is likely to be under priced. This may result into rejecting the projects otherwise having positive net present value. However, no such problem of higher premium or under pricing is faced when managers opt for internal funds.

Titman (1984) advocates that financial distress imposes a substantial cost on the users of the product. If the product or service is durable in nature, the customers might be interested in financial position of the company. Higher debt component in the company's capital structure sends a negative signal in the product market and adversely affects product's competitive advantage. Therefore, companies with larger debt component in financing mix are likely to experience financial difficulties which may lead to bankruptcy. This means firm's operating income is critically influenced by firm's capital structure. Pandey (1985) conducted another study to examine the impact of industrial patterns, trend and volatility of leverage, size, profitability and growth on the capital structure of the company. The study used a sample of 743 companies from 18 industrial groups and used the data from 1973-74 to 1980-81. Analyzing the leverage by industry groups did not reveal any significant patterns. Both trade credit and bank borrowings were employed on equal basis. Trends and volatilities associated with leverage also did not reveal any industry specific feature. It was observed that the size has positive relationship with the leverage in the sense that most large sized firms concentrated in the high leverage group. At the same time it was also observed that substantial number of small firms had capital structure with high debt component. The study did not reveal significant structural relationship between leverage, profitability and growth. Shin and Soenen (1998) investigated the relationship between the net trade cycle as a measure of working capital and return on investment in US firms and their study reported a negative relationship between the length of net trade cycle and return on assets. This means shorter the length of trade cycle better will be the returns. For shorter trade cycle, levels of inventory and debtors need to be kept low. In other words, inventory turnover ratio and debtors turnover ratio are to be maintained at higher levels for better profitability. Creditors may be kept at higher levels for shortening the length of net trade cycle. Furthermore, this inverse relationship between net trade cycle and return on assets was found different across industries depending on the type of industry. Weinraub and Visscher (1998) examined the relationship between aggressive and conservative working capital practices for companies in different industries during the period 1984-1993 and observed a high and significant negative correlation between industry asset and liability policies. In general it appeared that when relatively aggressive working capital asset policies are followed they are balanced by relatively conservative working capital liability policies. Pike and Nam (2001) studied credit management practices of 154 large UK companies and observed that credit management seeks to create, safeguard and realize a portfolio of high quality account receivables. Fama and French (2002) studied the impact of dividend decisions and debt decisions on he firm's value. According to them decisions regarding dividend and capital structure convey information about firm's profitability and net of taxation effects of financing decisions. The study revealed that firm's value is negatively related to dividend payout and positively related to debt. Chiang *et al.* (2002) investigated the inter-relationship between capital structure and profitability of the property and construction sectors in Hong Kong. They noticed that capital structure bears negative association with profitability. Voulgaris *et al.* (2002) found profitability to be the major determinant of capital structure in their study of Greek manufacturing sector. Deloof (2003) studied the effects of working capital management on the profitability of 1,009 Belgian firms for a period of five years from 1992-1996. The study revealed that inventories, account receivables and account payables have negative significant association with profitability. Accordingly the managers in Belgian firms can improve profitability if they reduce account receivables, inventories and account payables to a reasonable minimum. Pandey (2004) investigated relationship between capital structure and profitability of 208 Malayasian companies for the period from 1994 to 2000 and observed saucer shaped relationship between capital structure and profitability. Sarma *et al.* (2004) found that non-traditional debt had a preference over traditional debt in case of the firms that have higher leverage. The study further revealed that the firms with non-traditional debt were clearly discriminated based on the criteria such as profitability, cash ratio, volatility of earnings and bankruptcy costs. Lazaridis and Tryfonidis (2006) investigated the relationship between working capital management and profitability of 131 companies listed in the Athens Stock Exchange for the period 2001-2004. They observed that account receivables, inventories and account payables had negative relationship with profitability. However, the relationship of accounts receivables and account payables with the profitability was highly significant while the relationship of inventory with the profitability was not statistically significant suggesting that account receivables and account payables are the areas to be focused to improve the profitability of the firm. Vishnani and Shah (2007) from their study of Indian companies during the period 1994-2004 observed that working capital management practices' indicators and profitability performance indicators were negatively associated.

Joshua (2008) examined the relationship between capital structure and profitability of firms listed in Ghana Stock Exchange for a period of five years from 1998 to 2002. The author noticed negative relationship between long term debt and profitability. Rafiu and Obafemi (2009) studied capital structure and profitability of the firms listed on Nigerian Stock Exchange. They observed negative association between long term debt and profitability and suggested that top management should take interest in capital structure to improve profitability.

The above literature review revealed the importance of below mentioned variables for this study (Table 1).

Table 1: Literature Review-Variables

Variable	References
Capital Structure – Long-term to Debt Equity (*LTDER*)	Ross(1977), Leland and Pyle (1977), Kishore (1978), Bhat (1980), Myres and Mujluf (1984), Titman (1984), Pandey (1985), Fama and French (2002), Chiang *et al.* (2002), Voulgaris *et al.* (2002), Pandey (2004), Sarma *et al.* (2004), Joshua (2008), Rafiu and Obafemi (2009)
Working Capital – Inventory Ratio (*IR*), Debtors Ratio (*DR*), Creditors Velocity (*CRSV*)	Shin and Soenen (1998), Weinraub and Visscher (1998), Pike and Nam (2001), Deloof (2003), Lazaridis and Tryfonidis (2006), Vishnani and Shah (2007)
Profit After Tax to Sales Ratio (*PATSR*)	Shin and Soenen (1998), Weinraub and Visscher (1998), Pike and Nam (2001), Chiang *et al.* (2002), Voulgaris *et al.* (2002), Deloof (2003), Pandey (2004), Lazaridis and Tryfonidis (2006), Vishnani and Shah (2007), Joshua (2008), Rafiu and Obafemi (2009)

NEED FOR THE STUDY

Literature review clearly reveals that some authors have examined capital structure (mobilization of funds with longer time frame) and profitability from different perspectives while others have investigated association of working capital management (mobilization and deployment of funds with shorter time frame) with profitability. A few of them have also examined variables such as dividend and size of firms, etc. from different viewpoints. However, the relationship of the these aspects of financial management viz. mobilization of funds and deployment of funds, both with long-term and short-term time frame, needs to be empirically examined in view of their association with profitability of the enterprise. This study proposes to simultaneously examine the effects of both the aspects of financial management with profitability of Indian pharmaceutical companies. The ratios representing different variables used in the study are Long-term Debt to Equity Ratio (*LTDER*), Inventory Ratio (*IR*), Debtors Ratio (*DR*), Creditors Velocity (*CRSV*), Total Assets to Sales Ratio (*TASR*) and Profit After Tax to Sales Ratio (*PATSR*). From amongst the said variables, *LTDER*, *IR*, *DR*, *CRSV* and *PATSR* were examined by various authors as stated in the literature review. This researcher has considered *TASR* as it refers to effective utilization of assets which has the potential to generate profits. The details pertaining to each ratio is given in Appendix. From amongst these variables, *LTDER*, *IR*, *DR*, *CRSV* and *TASR* are the independent variables and *PATSR* is the dependent variable.

HYPOTHESES DEVELOPMENT

Based on the literature review and the variables stated above, the following hypotheses were developed:

H_0*(LTDER)* : *LTDER has no significant influence on the PATSR of firm from 1999-2008.*

H_1 *(LTDER)* : *LTDER has significant influence on the PATSR of firm from 1999-2008.*

H_0 *(IR)* : *IR has no significant influence on the PATSR of firm from 1999-2008.*

H_1*(IR)* : *IR has significant influence on the PATSR of firm from 1999-2008.*

H_0*(DR)* : *DR has no significant influence on the PATSR of firm from 1999-2008.*

H_1*(DR)* : *DR has significant influence on the PATSR of firm from 1999-2008.*

H_0*(CRSV)* : *CRSV has no significant influence on the PATSR of firm from 1999-2008.*

H_1*(CRSV)* : *CRSV has significant influence on the PATSR of firm from 1999-2008.*

H_0 *(TASR)* : *TASR has no significant influence on the PATSR of firm from 1999-2008.*

H_1*(TASR)* : *TASR has significant influence on the PATSR of firm from 1999-2008.*

RESEARCH DESIGN

RESEARCH OBJECTIVES

The research objectives, therefore, are:

- To understand the relationship of *LTDER*, *IR*, *DR*, *CRSV* and *TASR* with *PATSR* of the enterprise.
- To examine the impact of *LTDER*, *IR*, *DR*, *CRSV*, and *TASR* on *PATSR*.
- To gain insight into management of finance and its impact on the profitability of the enterprise.

PERIOD OF STUDY

It was decided to study the variables *LTDER*, *IR*, *DR*, *CRSV* and *TASR* on *PATSR* of various pharmaceutical companies for a period of 10 years ending on March 31, 2008 with a view to weed out cyclical effects of the economy and develop better understanding of the behavior of the said variables.

DATA COLLECTION

Criteria

For the purpose of this study, the set of the enterprises is determined using the criteria stated below:

- The enterprise is a public limited company.
- The public limited company is listed on the Bombay Stock Exchange (BSE) Ltd. and/or the National Stock Exchange (NSE) Ltd.

The above stated criteria were adopted with a view that listed corporate enterprises will have relatively greater transparency in their financial reporting. This would make their data more reliable. Using the abovementioned criteria a list of companies was generated. From this the companies for which full data for the complete time frame of 10 full years each of 12 months was not available were dropped in order to avoid statistical inaccuracies in the analysis of data. The final set of enterprises so emerged is comprised of 64 companies.

Type and Nature of Data

The data required was historical and voluminous in nature. The said data was collected from published audited annual reports, databases such as *CAPITAline*, and of BSE Ltd. and NSE Ltd.

TECHNIQUES OF ANALYSIS

The data for all the variables viz. *LTDER*, *IR*, *DR*, *CRSV*, *TASR* and *PATSR* was entered for each company for all the 10 years. Thereafter, measures of central tendency were worked out. Multiple regression analysis technique was used to examine the relationship of independent variables with dependent variable and to know the extent of influence independent variables exercise over the dependent variable. *F*-test, Auto correlation Test – Durbin-Watson test and Multi colinearity Test – VIF Statistics were carried out to lend greater validity to the results (Hair et al. 2003; and Elliott and Woodward, 2007).

RESULTS AND DISCUSSIONS

(1) The standardized β of the independent variables with their respective direction, values and significance level are given in the Table 2. As stated in the said table, standardized β of *LTDER* is –0.016. This indicates that *LTDER* has negative relationship with *PATSR*. However, the significance level of 0.468 points out that the said β (*LTDER*) is statistically not significant.

Thus the weight of the evidence suggests that null hypothesis $H_0(LTDER)$ be accepted and the alternate hypothesis $H_1(LTDER)$ be rejected. This means *LTDER* does not exert much influence over *PATSR*.

(2) The standardized β of IR, as shown in Table 2, stands at +0.025 which indicates that IR has positive relationship with *PATSR*. However, it's significance level 0.349 does not allow $\beta(IR)$ to be even statistically significant.

Thus, the weight of the evidence suggests that null hypothesis $H_0(IR)$ be accepted and the alternate hypothesis $H_1(IR)$ be rejected. This means a change in IR practically does not have any influence over *PATSR*.

(3) Table 2 further shows that the standardized β of *DR* stands at +0.040. This indicates that *DR* has positive relationship with *PATSR*. However, it's significance level 0.098 renders the $\beta(DR)$ statistically insignificant.

Table 2: Regression Coefficients, Significance Level and VIF

	Standardised Regression Coefficients (β)		***t***	**Significance Level**	**Collinearity Statistics VIF**
	Direction	**Value**			
Constant		0.632	5.101	0.000	
LTDER	–	0.016	–0.730	0.468	1.080
IR	+	0.025	0.945	0.349	1.544
DR	+	0.040	1.680	0.098	1.234
CRSV	–	1.023	–40.117	0.000	1.392
TASR	–	0.095	–3.697	0.000	1.398

Note: Dependent Variable: *PATSR*; $R^2 = 0.971$; Mean (VIF) = 1.330; Independent Variables: *LTDER*, *IR*, *DR*, *CRSV*, *TASR*; $N = 64$.

The weight of evidence, therefore, suggests that null hypothesis $H_0(DR)$ be accepted and the alternate hypothesis $H_1(DR)$ be rejected. This means *DR* too does not exert significant influence over *PATSR*.

(4) The standardized β of *CRSV*, as shown in Table 2, is –1.023 . This indicates that CRSV has a very strong and negative relationship with *PATSR*. The corresponding significance level of 0.000 clearly points out that the $\beta(CRSV)$ is statistically very significant.

The weight of evidence suggests that null hypothesis $H_0(CRSV)$ be rejected and the alternate hypothesis $H_1(CRSV)$ be accepted.

This means *CRSV* exerts significant influence over *PATSR*. An increase in *CRSV* will bring about a decline in the profitability by number of times the value of the standardized β of (*CRSV*). Thus, *CRSV* appears to be an important determinant of *PATSR*.

(5) The standardized β of TASR, as shown in Table 2, is –0.095. This indicates that *TASR* has a negative relationship with *PATSR*. The corresponding significance level of 0.000 clearly points out that the $\beta(TASR)$ is statistically very significant.

The weight of evidence suggests that null hypothesis $H_0(TASR)$ be rejected and the alternate hypothesis $H_1(TASR)$ be accepted. This means *TASR* exerts substantial influence over *PATSR*. An increase in *TASR* will bring about a decline in the profitability by number of times the value of the standardized β of (*TASR*). Thus, *TASR* appears to be another important determinant of *PATSR*.

(6) The results of *F*-test given in Table 3, clearly shows $F = 416.291$ at a significance level of 0.000 with df(5, 58). This indicates that all standardized regression coefficients will be non-zero.

(7) The results of auto-correlation test, i.e., Durbin-Watson statistics placed at Table 3 shows $D = 1.985$.

For $N = 64$, $dL = 1.41$ and $dU = 1.47$. As a result, $D > dU$ and $4 - D > dL$. This means that there is no cause of concern from viewpoint of either positive or negative auto-correlation amongst the independent variables.

Table 3: Results of F-test and Auto-correlation Test

	Sum of Squares	df	Mean Square	F	Significance Level	Durbin-Watson
Regression	146.249	5	29.250	416.291	0.000	1.985
Residual	4.075	58	0.070			
Total	**150.324**	**63**				

(8) The multicolinearity amongst the independent variables has been checked through matrix of coefficients of correlations given in Table 4 and Variance Inflation Factor (VIF) statistics stated in Table 2. The said matrix of coefficients of correlations reveals that none of the five independent variables has the coefficient larger than +0.7 . Hence there is no cause of concern from viewpoint of multicolinearity amongst the independent variables. This is further confirmed by the VIF statistics placed at Table 2. The VIF statistics are far away from 10 and each of them centered on the mean (VIF).

Table 4: Matrix of Coefficients of Correlations

Variables	*LTDER*	*IR*	*DR*	*CRSV*	*TASR*
LTDER	1.000	–0.171	–0.043	–0.024	–0.232
IR	–0.171	1.000	0.399	0.285	0.219
DR	–0.043	0.399	1.000	0.025	0.000
CRSV	–0.024	0.285	0.025	1.000	–0.349
TASR	–0.232	0.219	0.000	–0.349	1.000

(9) The test outputs described at points (6), (7), and (8) above provide considerable reliability to the results and the emerging multiple regression Equation is as under:

$$PATSR = +0.632 - 0.016(LTDER) + 0.025(IR) + 0.040(DR) - 1.023(CRSV) - 0.095(TASR)$$

The R^2, i.e., the coefficient of determination, as shown in Table 2, stands at 0.971 indicating that the said equation can explain 97.1% variations in *PATSR*. For the remaining variations, i.e., unexplained variations, some other variables are responsible.

(10) The descriptive statistics pertinent to the analysis are depicted in Table 5.

Table 5: Statistics

Statistics	*PATSR*	*LTDER*	*IR*	*DR*	*CRSV*	*TASR*
Mean	–0.144	0.431	6.482	6.781	96.366	1.154
Standard Deviation	1.545	0.373	3.647	4.968	271.029	0.497

The predictive value of the analysis will be greater if the dataset of the companies to be studied closely resemble the pattern of descriptive statistics given in the said table.

FINDINGS

CAPITAL STRUCTURE

The long-term debt to equity ratio, an indicator of the capital structure of the company, is found to have negative relationship with *PATSR*. However, the significance level makes it irrelevant. This leads us to believe that the corporate do not consider capital structure as important variable influencing the profitability. The research findings of Pandey (1985) also confirmed the absence of significant relationship between the capital structure and profitability. However, Titman (1984) noticed negative and significant association between the two variables. In sharp contrast, Ross (1977) and Leland and Pyle (1977) identified positive and significant relationship between capital structure and profitability. On the other hand, (Bhatt, 1980) observed that profitability of the firm exerts significant influence over choice of capital structure.

INVENTORY

The *IR* bears a positive relationship with the profitability of the enterprise. However, the unacceptable significance level does not allow it to be important. It means that the corporate do not view inventory turnover as a significant determinant of profitability. The corporate probably do not assign much importance to inventory holdings. This is in sharp contrast to research findings of Shin and Soenen (1998), Deloof (2003) and Vishnani and Shah (2007) who identified inventory as significant variable having negative association with profitability. On the other hand, (Lazaridis and Tryfonidis, 2006) noticed negative association between inventory and profitability, but did not find it to be significant.

DEBTORS

The *DR* bears a positive relationship with the profitability of the enterprise. However, the unacceptable significance level does not allow it to be important. This points out that the corporate do not view *DR* as a significant determinant of the profitability of the enterprise. The corporate do not assign much value to the credit to be offered to customers. This is contrary to the research findings of Shin and Soenen (1998), Deloof (2003), Lazaridis and Tryfonidis (2006) and Vishnani and Shah (2007) who identified debtors as significant variable having negative association with profitability.

CREDITORS

The *CRSV*, an indicator of management of creditors, bears a negative relationship with *PATSR* with significance level standing at 0.000. In means creditors play a critical role in influencing the profitability. Lesser the creditors better it is. This leads us to believe that the corporate view creditors' management as useful contributor to the profitability and therefore would like to keep it at the lowest level as it bears negative relationship with the profitability. This may be due to high premium built in to price when goods are supplied on credit basis. This is confirmation to research findings of Deloof (2003), Lazaridis and Tryfonidis (2006) and Vishnani and Shah (2007).

TOTAL ASSETS

TASR bears negative relationship with profitability of the enterprise. The significance level of 0.000 clearly points out that *TASR* is an important determinant of profitability.

This means the corporate attach high importance to total assets utilization in its role to influence the profitability of the enterprise. However, this uncommon behavior of *TASR* may be due to diminishing returns generated by large part of assets or poor asset management and sales management practices of organizations, which require detailed analysis to get better insights.

RECOMMENDATIONS AND MANAGERIAL IMPLICATIONS

- In view of analysis and findings discussed above the following are recommended:

  The practicing financial managers in Indian pharmaceutical industry should concentrate more on managing the creditors, keeping them at lower levels and extracting from them the terms that are most favorable to the company to improve the profitability. The research findings of Deloof (2003), Lazaridis and Tryfonidis (2006) and Vishnani and Shah (2007) has emphasized the importance of management of creditors.
- The academicians should devise superior models for management of creditors.
- This research work has significant implications for corporate managers. The corporate managers need to attach grater importance to management of creditors to improve the profitability of the enterprise. This has broader ramifications in the sense that management of creditors will become important performance criteria for managers. It may as well find a place in the balance scorecard if the company uses one.

FUTURE RESEARCH DIRECTIONS

The present study focuses on companies in the pharmaceutical sector in India. Replication studies can be carried out to examine the influence of financial management in other sectors of economy such as petroleum, infrastructure, textile, information technology, telecommunication, banking, insurance, etc., before generalizing the results. A global research study to compare financial management practices adopted by the companies in developed nations and developing nations can also be carried out. Further research can also be carried out by encompassing more variables such as growth rate of product market, growth rate of economy, participation in international trade, etc.

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APPENDIX

Details of Variables

Particulars	Formula	Aspect of Financial Management
Long-term Debt to Equity Ratio (*LTDER*)	Long-term Debts Equity	Mobilization of Funds
Inventory to Sales Ratio (*IR*)	Sales Inventory	Deployment of Funds
Debtors to Sales Ratio (*DR*)	Sales Debtors	Deployment of Funds
Creditors' Velocity (*CRSV*)	Creditors Daily Output Value	Mobilization of Funds
Total Assets to Sales Ratio (*TASR*)	Sales Total Assets	Deployment of Funds
Profit After Tax to sales Ratio (*PATSR*)	Profit After Tax Sales	Results from Mobilization and Deployment of Funds

Case Study

Bridging the Cross-Cultural Transformational Li (Distance Measure) at Huawei Technology India Private Limited†

Bidipta Das*, Menaka Rao and Vasanthi Srinivasan*****

The rapid growth of Information Technology (IT) globally fuelled by innovation and customer demands propelled companies to globalize. India witnessed several global technology giants thriving on Indian soils during this phase and Huawei Technology India Pvt. Ltd. (HTIPL) was one such. Huawei entered India in 1999 to set up a software R&D center and take advantage of the availability of skilled IT professionals and the potentially high evolving telecom market. Indian engineers who had built a reputation for being technically superior in software and quality process skills were to be HTIPL's cash cow. Huawei's strategy was to combine the strengths of Indian engineers with that of the Chinese hardware design and system integration. Being new to India, attracting and retaining talent was a challenge especially in the initial start up stage and once the initial stage of hiring people was crossed grooming talent was an equally daunting task. Though most of the HR functions like training, performance management, employee relations and compensations were fairly similar to that of most of the other MNC's in India, HTIPL had unique practices which set it apart in establishing the organization as one that created and sustained a high performance work culture. The case is set in 2007-2008 when a transformation to reorganize and align with China's HR practices and culture was to be designed and implemented and rolled out at HTIPL in India.

INTRODUCTION

When Arun Prasad, the HR Head at Huawei's research and development center in Bangalore was tossed into implementing the new strategy of retaining only self-sustaining and revenue generating business units and aligning the subsidiary's structure to that of the parent company in China, he was in an awkward position. Undertaking such changes had been unprecedented so far where three non-revenue generating business

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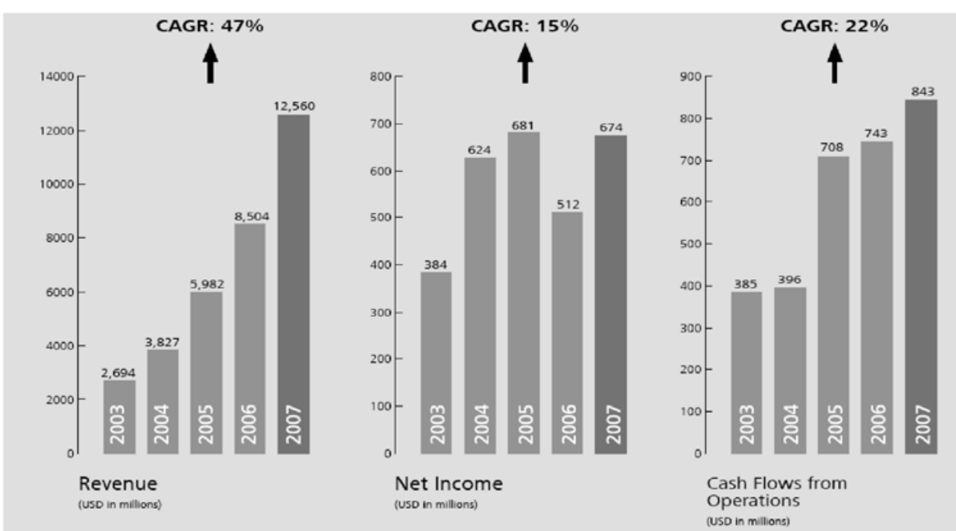
units out of the existing five were to be dissolved and the personnel relocated to other departments. Moreover, all three Strategic Business Unit (SBU) heads were close friends of his and he was not sure how to break this news to them. Of more immediate concern for Arun was what impact this would have on the subsidiary?

FOUNDING HUAWEI

In 1988, Ren Zhengfei, formerly with the People's Liberation Army in China, founded Huawei in a shabby, one room workshop in Shenzhen, China. The Chinese word, 华为 translates to the English word, Huawei. The company's name was particularly chosen as the character, 华 means Chinese (the first part) and can also be used as an adjective to mean splendid or magnificent. The character 为 means action or achievement (the second part). Five years after establishment, Huawei achieved its first breakthrough when it launched a digital telephone Private Branch Exchange (PBX) switch which was in high demand in China as the communication industry was rapidly expanding at the time and dominated by foreign companies like Siemens and Alcatel. In China Huawei soon became the largest PBX equity agent and 20 years later achieved second position (after Ericsson) as a global Original Equipment Manufacturer (OEM). With a taste of success in the homeland, and after winning the first overseas contract in 1996 with Hong Kong's Hutchison-Whampoa, Huawei began expanding to markets outside China. Initially the company was dismissed as an upstart with few sustainable prospects, but at the turn of the century Huawei defied predictions and grew from a minnow to a mammoth global company in telecommunications, with a fast growth track record between 2003 and 2007 (Figure 1). Globally, Huawei invested

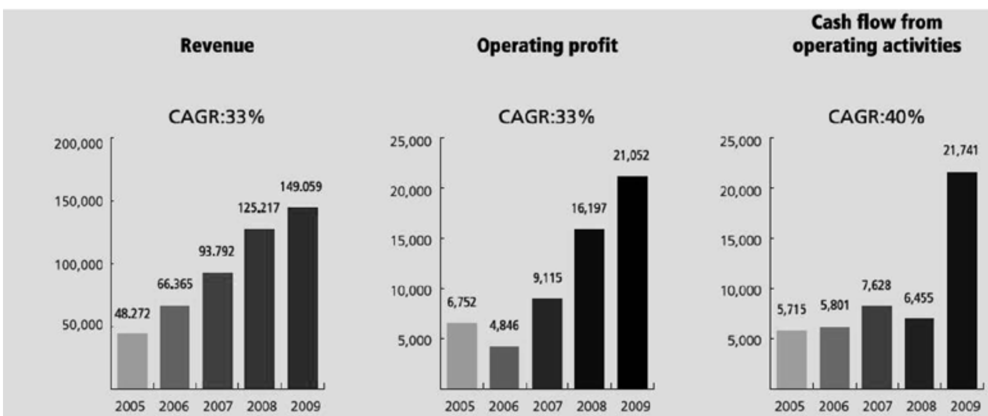
Figure 1: Fast Growth of Huawei



Source: Company Website

more than 10% of its revenues in R&D, and more than 10% on pre-R&D stages of development. So much so, that in 2007, Huawei became the fourth largest patent applicant in the world with 1,365 applications. The company was also placed as being the fifth largest telecommunication company surpassing Nortel Networks in sales worldwide in the same year. Huawei was also included in the World's Most Respected 200 Companies list compiled by Forbes magazine in May 2007. Huawei's global R&D centers were located in Bangalore (India); Moscow (Russia); Stockholm (Sweden); the Silicon Valley, California (USA); and Dallas, Texas (USA), in addition to those in Beijing, Shanghai, Nanjing, Shenzhen, Hangzhou and Chengdu in China. In 2008, 75% of Huawei sales came from the overseas market with total revenue of $17 bn and contract sales of $23.3 bn. Ren had led the company as it jumped from a local player to a global competitor serving 31 of the world's top 50 carriers and over one billion users worldwide. In 2009 Huawei's annual sales revenue touched RMB_149 bn[1] ($22 bn), with a year on year increase of 20% and a net profit of RMB 18 bn ($2.7 bn) with profit margins of 14% (Figure 2).

Figure 2: Sales and Growth in 2009



CNY Million	2009	2008	2007	2006	2005
Revenue	149,059	125,217	93,792	66,365	48,272
Operating profit	21,052	16,197	9,115	4,846	6,752
Operating margin	14.1%	12.9%	9.7%	7.3%	14.0%
Net profit	18,274	7,848	7,558	3,999	5,519

Source: Company Annual Report (2009)

HUAWEI'S CULTURAL ETHOS

To understand Huawei one needs to take into account the genesis of its distinctive corporate culture. Ren was a follower of Mao and had drawn inspiration from him, in building his company. Initially he developed cooperatives in China's interior regions

[1] Huawei Technologies Co., Ltd. (2009) Annual Report.

using the PLA's military strategy. He adopted the same strategy for business. The corporate culture he built around his company was reflected in the rigidly hierarchical organization, he created. Emphasis was laid on hierarchical management rather than on individual employees who were viewed as replaceable foot soldiers. According to Ren in Huawei, everyone stood on the same starting line and obtained opportunities by personal practices[2]. Responsibility and efficiency were considered to be the greatest wealth of the employees and the measurement of outstanding capabilities and contributions was the criteria for promotions. The influence of social psychology was built into the matrix of Huawei's culture.

Huawei's work culture revolved around four major assets of human behavior – sense of responsibility, team work, dedication and a spirit of innovation. Additionally, every employee was expected to obey regulations, work hard, be self less and disciplined, be skilful and remain devoted to the core values and the vision and mission of the company (Figure 3). There was a strong focus on work timings (the number of hours

Figure 3: Huawei's Vision Mission and Core Values

Vision, Mission and Core Values

Vision
To enrich life through communication.

Mission
To focus on our customers' market challenges and needs by providing excellent communications network solutions and services in order to consistently create maximum value for customers.

Core Values
Our core values are deeply rooted in every aspect of our business. They are the internal driving force for the Company and are our commitments to the ecosystem. These values enable us to provide effective services to our customers and to achieve our vision of "enriching people's lives through communication".

Customers First
Huawei exists to serve customers, whose demand is the driving force behind our development. We continuously create long-term value for customers by being responsive to their needs and requirements. We measure our work against how much value we bring to customers, because we can only succeed through our customers' success.

Dedication
We win customers' respect and trust primarily through dedication. It includes every effort we make to create value for customers and to improve our capabilities. We value employees' contributions and reward them accordingly.

Continuous Improvement
Continuous improvement is required for us to become better partners for our customers, improve our company and grow as individuals. This process requires that we actively listen and learn in order to improve.

Openness & Initiative
Driven by customer needs, we passionately pursue customer-centric innovations in an open manner. We believe that business success is the ultimate measure of the value of any technology, product, solution or process improvement.

Integrity
Integrity is our most valuable asset. It drives us to behave honestly and keep our promises, and, thus, win our customers' trust and respect.

Teamwork
We can only succeed through teamwork. By working closely in both good times and bad, we lay the foundation for successful cross-cultural collaboration, streamlined inter-departmental cooperation and efficient processes.

Source: Company Annual Report (2009)

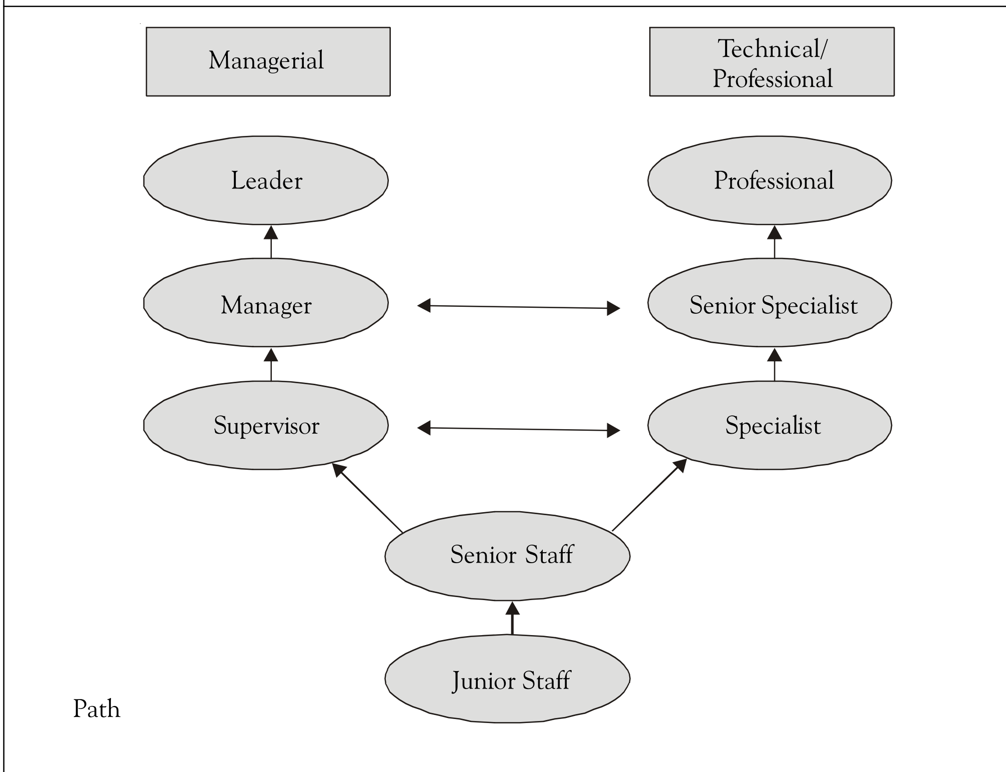
[2] *Huawei people.*

an employee devoted in office). Employees with qualities of hard work, discipline, personal sacrifice and organization devotion were deemed professional and those who followed it were considered apostles of success.

WORKING STYLE

Despite Huawei's strong identity, the company adopted several western work strategies. For instance, Ren began the dual career path (Figure 4) in Huawei in 2005 where employees could choose a path by understanding the cross-level positions available and holding two portfolio's at the same time. He believed that employees needed to be technically competent and at the same time continuous in learning new management styles. Utilizing western ideas was also to be imbibed by employees as Ren hired IBM for management consulting services with the intention of modeling Huawei on the lines of the American company. "If we were going to innovate and survive, we would have to learn the successful management structures of western countries. Our management style was immature, while IBM had been a successful model for 30 years." said Ren.[3]

Figure 4: Model of Dual Career



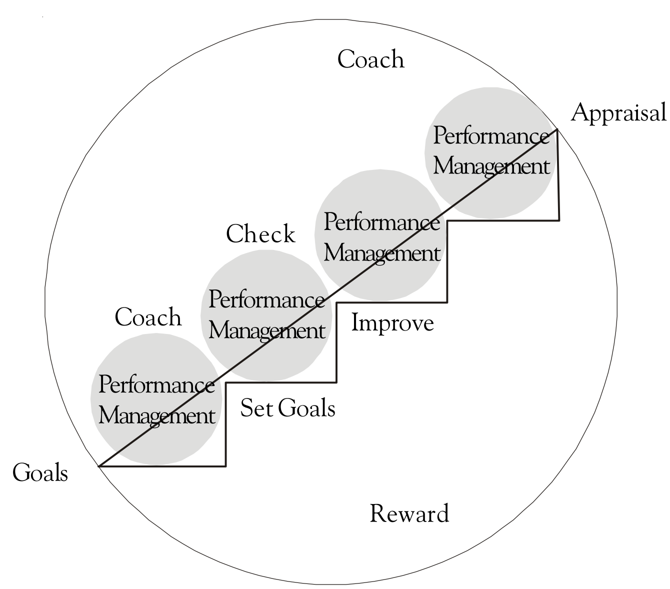
[3] Xiao Zhixing (2006), ***"Ren Zheng Fei's Way is Huawei Participating in the World", available at:*** http://www.cbfeature.com/index.php?categoryid=Vm0xMFUxSXhTbkpQVm1SU1lrVndVbFpyVWtKUFVUMDkrQg==&p2_articleid=Vm10YWEyUXlSbkpOVnpWUlZrUkJPUT09K1M

Ren outlined nine major points he wanted his management team to adopt:

- Balanced development with focus on research and development;
- Responsibility and accountability;
- Self-criticism;
- Incentive mechanism to facilitate the company's core competitive strategy;
- Not be blind to innovation;
- Reduce the organization to key essential organs;
- Face change while balancing competitiveness and enhancing growth;
- Genuine sense of concern for employees at all levels; and
- Prepare for impending crisis with an open mind.

Huawei's global market was divided into eight different zones that reported directly to a Marketing Management Committee. A Huawei vice president headed each of Huawei's eight regional headquarters. The regional offices were organized by different product lines and had a technical support department, and two departments in-charge of client relations and business development. In China, every recruit underwent a mandatory cadet training soon after joining. In addition the performance and reward system was unique to the company (Figure 5).

Figure 5: Performance and Reward Model



GROWING HTIPL

India was projected to become the second largest telecom market globally and was among one of the few countries where both Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA) were operational. Unable to ignore this potential, Huawei's entry into India was to take advantage of the rapidly growing market and its vast pool of engineers. Huawei's strategy was to combine the strengths of Indian engineers (known for their management and software skills) and Chinese skills of manufacturing, hardware design and integration to reduce time-to-market and cater to customer needs by developing cutting-edge telecom software solutions for global markets. With this in mind, Bangalore the Silicon Valley of India with its prominent position as India's technology capital, was selected to house Huawei's overseas R&D center (HTIPL) in 1999. In the initial months of its inception a modest 100 Indian staff and an equal number of Chinese colleagues supported the new venture. HTIPL began its operations by combining the Chinese skills of discipline, competence and diligence with the Indian talent of creativity, articulation and perseverance and infused its culture as the underlying stream at work. George Chen, the Chief Operating Officer (COO) of Huawei's R&D center in Bangalore remarked "In terms of market, India has the biggest potential in telecom and we want India to become our biggest market outside of China in the future. We want our India R&D center to support our global operations, leveraging India's English language skills and software expertise to our advantage globally."

Several employees were known to say: "… We are not brainwashed. We really share Huawei's culture and values. When we as job seekers sat for the written examination and attended the interviews or when we work as a member of the company, it's a process of mutual selection. I fit the organization culture and was selected and put into today's position". "Huawei's values fit my own and I have chosen to remain in Huawei and be one of the Huawei wholeheartedly…." remarked an Indian employee at HTIPL. Another employee remarked: "…. we were having dinner together when all of a sudden someone's cell phone began to ring. Then they all went back to the company, leaving me alone with a table of dishes. Or someone promised to go shopping with me at six but at seven, he told me that he was still working and asked me to wait for some more time. At one time, after working for hours, I finally finished my news report at two in the morning. On a sudden impulse, I telephoned to harass a friend at Huawei, anticipating he would murmur complaints dreamily. Unexpectedly, I found on the other end of the line, people were heatedly discussing problems concerning setting up a base station…"

Over time HTIPL grew significantly, to become Huawei's largest R&D center outside China. An investment of $200 mn had been made from inception and the head count had grown to about 3,200 Indians across various operations in the country. The Indian workforce grew gradually to represent approximately 85% of localization among the total workforce in India.

BUILDING THE BUSINESS MODEL

Over the years of HTIPL's existence in India, it underwent transformations in its business model, from being development driven to end-to-end focused. To employees it meant that they needed to achieve final results rather than merely be satisfied with procedural results. The company encouraged employees to take ownership for the parts or components during the entire lifecycle, including development, test and deployment to customers (internal and external), post-release support, new feature enhancement and continuous optimization.

HTIPL's mandate was to continuously maintain and improve subsystems/components by collecting defect information and feedback, and understanding new requirements from customers and to eventually make perfect deliveries.

According to an internally circulated corporate magazine called *Huawei People* "Huawei possesses a unique culture which is more customer driven—as the customer is the main reason for Huawei's existence. Huawei has achieved remarkable growth globally by being customer focused, and every member of the organization should imbibe that culture of being customer focused, whether they are serving the internal or external customers. That's the only way forward…. HTIPL will continue to grow rapidly along with Huawei's momentum globally, and increase its contribution towards Huawei's forays into more developed markets around the world." [4]

The same vision was echoed when an employee shared his impression on HTIPL. "Coming from a traditional Indian service company, I was quite intrigued with the experiences of Day 1 at Huawei. It was a bright sunny Thursday morning in March 2001. A pleasant Chinese face, my first Project Leader, greeted me in Operations and Maintenance Center (OMC) business unit and explained the project and technical details to me painstakingly in English. Let me admit that I could not grasp most of what he said. But the enthusiasm and the challenge that he wanted to pass on did reach me quite well."

During organization building, HTIPL morphed several times to accommodate widening product ranges, manpower, infrastructure, etc.

UNIQUE HR PRACTICES AT HTIPL

A striking practice at HTIPL was that the organization consciously focused on quality control and adherence to well-defined processes right from its inception days. This early orientation to process compliance brought a lot of internal discipline to teams and helped streamline business strategies across the entire organization making several tasks a part of the daily routine work life. Some of these were internal audits across Business Units, Root Cause Analysis (RCA) for defects leaks, metrices variance, attrition and customer satisfaction. The old adage of 'think global and act local' fitted

[4] *Huawei People,* issue 181.

the HR practices followed at HTIPL, the essence of which was 'ideas implemented through involvement with the inclusion of stakeholders'.

MENTORING

The mentoring program was instituted for new recruits immediately after joining and the completion of an induction. The program ran typically for two to three months and was intended to help the recruits align themselves to the organizations' objectives. The reporting manager of the recruit would identify focus areas to be covered like familiarization of the structure of the organization, developing expertise of system design, prototyping, etc. along with managerial skills. Program evaluations on the efficacy of the program were done on a regular basis. An important facet of mentoring was to ensure that new recruits were groomed to undertake responsibility independently.

TRAINING PROGRAMS

Training programs covered areas of technical, behavioral and non-technical needs of employees. The needs were prioritized at HTIPL, immediately at the time of joining for a recruit. Some programs like 'The new leaders induction program', and 'end-to-end' were designed and developed as in-house delivery packages. These were programs apart from the usual induction and process training programs that new recruits underwent. The organization also encouraged employees to play the role of internal trainers who would then be rewarded for their efforts with a training incentive.

CAREER GROWTH

The organization stressed on performance driven career growth. HTIPL introduced the fast track career growth where employees with excellent track records and the potential to handle more responsibility were elevated to the next higher level with additional responsibilities. They would then be observed for a period of time before being promoted.

COMMUNICATION

People related policies and procedures were accessible to the staff of HTIPL through the intranet known as—Process Asset Library (PAL). Employees were encouraged to give feedback as well as suggestions through—'improvement proposals' which were discussed by the 'improvement focus group'.

When a team was formed at HTIPL each member of the team was inducted with an introduction which covered sharing past experiences, hobbies, interests, health, etc. to propagate an open culture and constant interaction among team members.

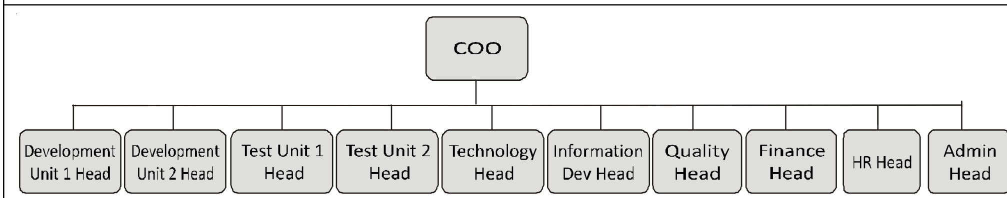
THE TRANSFORMATION

In 2008-2009 several transformations were brought about by the management at China for HTIPL. Organization changes were introduced and new complex challenges that required an increased amount of transparency and organizational procedural justice were introduced. Significant changes in organization design, promotion procedures and policies related to international travels were addressed. The change impacted all HTIPL employees including its senior and middle management staff.

ORGANIZATION REDESIGN

The corporate office and the development centers at China had restructured to "self sustaining revenue generating business units" in 2007. The India R&D center was to follow suit and align its structure with that of the global R&D organization's design as quickly as possible. This meant reshuffling the entire organization from a predominantly functional model to a hybrid matrix (Figure 6). The change was daunting as three independent non-revenue generating units were to be reorganized and reallocated with bigger business departments.

Figure 6: HTIPL's Existing Functional Operations Model (A)

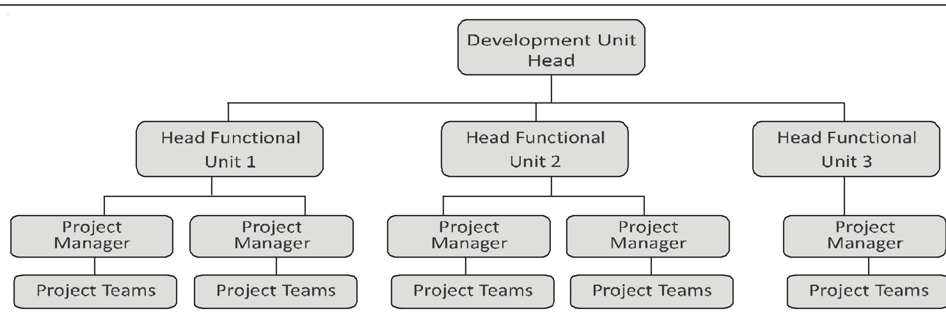


Note: The organization structure of HTIPL was predominantly a functional one with Development, Test, Technology, Information Development, and Quality as core departments. Support divisions included Finance, Admin and the HR department.

Arun was conscious that the exercise being sensitive could take close to a year to conceptualize, formalize and implement. He had seen that any change management introduced in China was accepted unquestioned; but in India he was quite sure that the same sort of compliance would never work. He was under tremendous stress to think hard and fast and find a via media. After mulling over the issue for several days he drafted his proposal.

As he drafted his proposal he kept in mind several issues to help maintain harmony in the organization during the transition. Business heads that previously functioned as

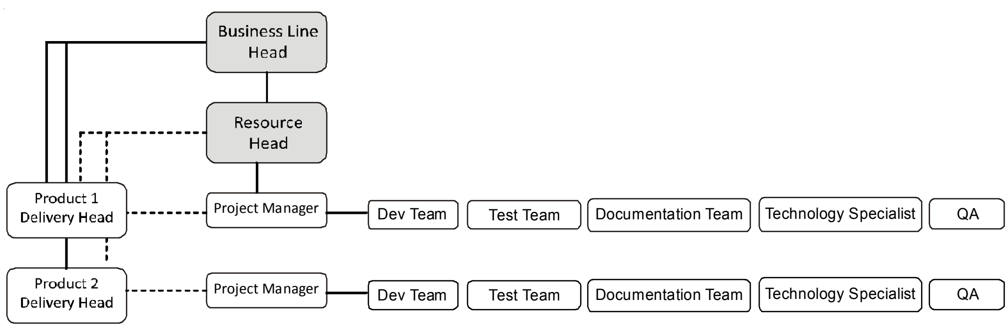
Figure 7: HTIPL's Existing Changed Operations Model (B)



Note: Development Head used to have internal Functional Unit Heads comprised of senior managers.

department heads would now change to being resource heads with the additional responsibility of being mentors or coaches (Figure 7). To help mitigate risk Arun proposed that the displaced heads could opt for their new supervisors rather than be thrust with a supervisor at random. With no plan to introduce change agents, Arun planned to identify a few select HR personnel who could be involved in the transition by playing the role of collaborators during the process. His draft ended with proposed modifications in the existing R&D system, changing the decision making processes existing in the organization and revamping appraisals system (Figure 8).

Figure 8: HTIPL's New Organization Structure



Note: The Technology, Test, Documentation and Quality Department become a part of the business unit with Product Delivery Head with responsibilities of running the show and taking ownership. Delivery Head also had a dotted relationship with Resource Head. HTIPL has multiple such business units.

CHANGING PROMOTION PROCEDURES

As revenue from India increased, Huawei's operations in India grew concurrently. Weeks before HTIPL's biannual appraisals and promotions announcements one would feel the prevailing tensions in the environment. Initially HTIPL followed the traditional policy of promotion where based on the organizational structure (Figure 9) supervisors would nominate candidates for promotion based on their perceptions of the candidate. This, however, to Arun's mind was prone to biased outcomes and to overcome this issue and make the system more transparent, participative and objective, the 360 degree feedback system was introduced. The feedback was triggered by business development heads and structured as a questionnaire circulated to peers, subordinates and supervisors. The responses to the questionnaire were later shared and discussed over a formal meeting with the Strategic Business Unit (SBU) head and the person being appraised. However, even this did not satisfy Arun. It was further modified and led to introducing the Independent Promotion Evaluation Panel (IPEL). The panel consisted of senior managers responsible to assess and evaluate promotion nominations (Figures 10 and 11). The panel members were given defined procedures and asked to assess candidates for promotion based on presentations made by candidates on their contribution and achievements. The panel would judge the candidate on both

Figure 9: Organizational Structure at HTIPL

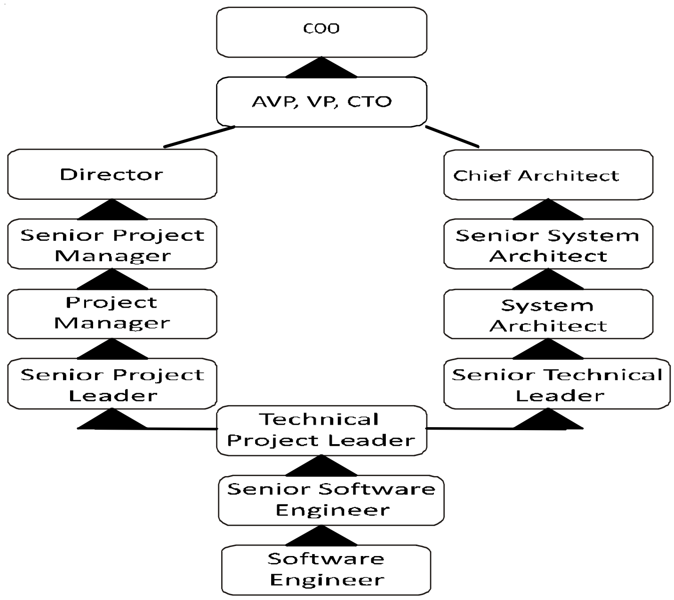


Figure 10: The 5-Point Promotion Scale

Promotion Scales	Meaning	Percentage of Employees
1	Poor Performance	10
2	Sometimes Meets Expectation	20
3	Meets Expectation	40*
4	Sometimes Exceed Expectations	20
5	Always Exceed Expectations	10**

Note: Typically, employees having ratings 4 or 5 are nominated for promotion; * Varies from 40-45%; ** Varies from 5-10%.

Figure 11: Promotion Evaluation Process Through Independent Promotion Evaluation Panel (Sample)

	Respective Business Unit Rating	Overall Panel Rating (after aggregating data from all panel members)	HR Remarks
Business Unit *X*			
Employee A	1	1	Preferred
Employee B	2	6	Not Preferred
Employee C	3	2	Preferred

Figure 11 (Cont.)

	Respective Business Unit Rating	Overall Panel Rating (after aggregating data from all panel members)	HR Remarks
Business Unit *Y*			
Employee D	1	5	Not Preferred
Employee E	2	3	Preferred
Employee F	3	4	Preferred

Note: Preferred tag does not ensure promotion. In fact, it just qualifies a candidate to move to next round where based on the number of opportunities available in the organization, a candidate is promoted. The actual business unit details have been masked.

quantitative and subjective qualities before arriving at a decision. Post presentation the candidate would be appraised of individual strengths and weaknesses as perceived independently by the panel as well as the collective opinions from the questionnaire. Arun intentionally dropped the clause of giving the liberty of 'dropping out' for nominated candidates as was the practice in the parent organization. Arun, however, was concerned that when his proposal was finally approved and rolled out, handling the paradigm shift in employee behavior that was bound to follow would be catastrophic if not handled properly.

INTERNATIONAL TRAVEL POLICY

During HTIPL's initial days, employees would travel to various development centers across China and other countries for business development and joint project work. Indian employees were paid a per diem of $40 daily in addition to free lodging and food facilities, without disturbing their Indian salary. Down the line a few years later Huawei's corporate office introduced an integrated global travel policy where all cities across the globe were divided in categories with specific travel allowances based on

Figure 12: Travel Allowance Classification Based on Categorization of Cities (Sample)

Category of the Originating City	Category of the Destination City	Cities	Allowance
Group 1	Group 5	City 1	$60*
		City 2	
		City 3	
		City 4	
	Group 4	City 5	$50*
		City 6	
		City 7	

Figure 12 (Cont.)

Category of the Originating City	Category of the Destination City	Cities	Allowance
Group 1	Group 3	City 8	$40*
		City 9	
	Group 2	City 10	$30*
	Group 1	City 11	$0*
		City 12	

Note: * The values are only indicative, not actual.; For example, an employee, working in a Group 1 city and travelling to cities of the same category is not eligible for any allowance. However, when travelling from a Group 1 city to a Group 4 city, he is eligible for an allowance of $50. There can be additional hardship allowances, based on the location of a city.

zone classifications (Figure 12). As evident, in many cases, there were cuts in per diem amount. Arun feared that this new policy could to some extent give rise to employees refusing business trips to China as traveling to China on a business trip meant saving an extra buck which went a long way in their savings. However, since only 10% of the employees regularly traveled, he felt that it was a better way of controlling costs at HTIPL rather than downsizing on employee strength or initiating salary cuts. He also realized that the new travel policy could add additional anxiety to project and delivery managers who would now put in extra efforts to keep their team members motivated to travel to China.

Arun was well aware of the psychology and dynamics prevailing in HTIPL yet he had only few options in hand. HTIPL had evolved to a formidable development center and expectations from the parent company's corporate center had also increased manifold over the years. HTIPL still had a long way to go and still look inwards at the long-term big picture. Arun not only needed compliance from HTIPL employees when his proposal was rolled-out but he also needed to simultaneously ensure that operational expenditures were optimized and side by side improve the work culture. And yet he was still not sure whether the organization was ready at this moment to handle such a big leap. Though his proposal was ready he still needed to find a convincing communication channel to tell all the employees. He glanced at the latest edition of *Huawei People* magazine still open on his desk. The magazine was open at a page which covered an article stating that Huawei was aspiring before the end of the decade to take the pole position globally.

PART B

It has been a busy week for Arun Prasad. The appraisal process was finally complete and he had to concentrate on the employee promotions. The last few weeks were gruelling as Arun initiated several organization wide changes.

Unprecedented in the history of HTIPL, with changes chalked out Arun knew that the company was slated to grow even bigger with its more than 1000 employees and three prominent locations in Bangalore. Sitting in his cabin, Arun was wondering if the change he had undertaken in the last one year had brought about the desired impact in the organization.

ORGANIZATION REDESIGN

As Arun had predicted the change took close to a year with several rounds of modifications. Keeping in mind the "unfreeze-change-refreeze" state that change brought about; the SBU heads were reallocated. To facilitate the change, the management of HTIPL took permission from corporate headquarters for a deviation from its Chinese work philosophy and gave an option to the displaced SBU heads to find a suitable supervisor internally. Considering that the displaced SBU heads were allowed to choose their supervisors they looked at their new job responsibilities as a challenge and proactively provided mentoring during the transition while HR played the role of a collaborator. Additionally, the organization did take care of modifying the existing Reward and Recognition (R&R) system, decision making and appraisal system to reinforce the change process.

CHANGING THE PROMOTION PROCEDURES

Post reorganization, once IPEPs were introduced in HTIPL, at the end of first annual cycle, Arun made a few observations. First, despite well-defined guidelines few panel members gave ratings which were beyond the acceptable deviation from the group average (15%). On hindsight, Arun felt that the overall process could have been better if a formal frame of reference for training was conducted prior to implementation for the panel members. Second, the ratings from the panel, for few employees, seemed to differ widely from the recommendation of the manager. For example, the rating from the business unit was high but the panel rating was poor. The HR department needed to probe the issue to understand the cause of the anomaly. Finally, for employees that had a 'reject' in their appraisals lost their confidence and claimed they had become apprehensive and would hesitate to apply again in the following appraisal cycle. Many rejected candidates felt that the entire system was a mockery similar to failure in an exam and had to reappear to score a pass mark next time! This Arun felt added a new worrisome problem as it meant that the line manager had to keep such candidates not only motivated but also make them try harder next time and not just give up. But from the organization front, a clear message was the outcome of the exercise—while personal bias was avoided and a common benchmark was created more importantly candidates needed to prove their mettle. Meanwhile, HR also extended the process by shuffling the panel before each annual appraisal exercise. Additionally, information on 'excellent performers' was widely circulated across the organization. Arun in the long run also contemplated to move one step ahead by permitting all nominated members to sit through the entire evaluation session and listen to the credentials of other candidates which would serve two purposes. First, it would trigger self-evaluation and second, it would help identify potential gaps and add more transparency to the overall promotion evaluation process.

INTERNATIONAL TRAVEL POLICY

The change triggered a lot of discussion in the organization and hence took several weeks before it was rolled out formally. However, the top management persisted that it was better to cut travel cost overheads rather than downsize employee strength or initiate salary cuts. Arun felt considering that at that point in time since most multinational companies in India had started laying off people, the company's decision would eventually be appreciated by his colleagues.

Book Reviews

Designing and Managing a Research Project: A Business Student's Guide

By Michael Jay Polonsky and David S Waller

Sage Publications, Second and South Asia Edition, 2010; Pages: 279; Price: ₹395

ISBN: 978-81-321-0577-0(PB)

I am sure, in many mushrooming management institutes, the completion of a research project remains to be a formality in order to acquire the masters degree (at least in countries like India). I do not know how many students are enthused to do the research project and how many of them have fair knowledge about various aspects of research at that stage. The very word 'research' makes people uncomfortable when basic things are not clear and when one doesn't receive proper guidance for conducting the research. The number of people that would like to register for Ph.D. in management and the number that receive doctorates is a clear indication of it. When enough research is not carried out in a discipline, the growth and development of the discipline itself is at stake.

What if a 279 page book takes the place of research guide, what if it answers all the expressed, unexpressed and possible doubts of masters level student? What if it sows necessary zest in a student for research? Michel Jay Polonsky and David S Waller's book *Designing and Managing a Research Project subtitled A Business Student's Guide* precisely does that. It is not an exaggeration to say it is a 'guide' in true sense. The book interacts, advises, directs and also leads the student (confused or otherwise) through his/her research project. In one word, it makes the life of business management student easy. It provides a solid basis of academic research projects.

In a cursory look of the book, one would understand that it is not a book of research methods, it is a ready help available for a business student in dealing with various issues associated with the design and management of a research project. It is directly addressed to the student, and it reads as if a guide/supervisor in reality advising his research student.

Following the logical flow of the research process, the content of the book has been arranged into three main parts namely: 1) The Foundations; 2) Undertaking the Research; and 3) Communicating the Results.

Part one "The Foundations" consists of five chapters. The first chapter while providing an overview of the book also deals with the basics of research and research projects. The second chapter deals with the question, how to choose a topic? While cautioning that a poorly chosen topic will have adverse effects, the authors emphasizes upon choosing a manageable and focused topic of research. The chapter goes into the specifications of what a student could do if the topic is assigned to him or what a student should do if the topic has not been assigned. While emphasizing that selection of right topic is crucial for both the student and assignment, the chapter deals with five essentials steps in choosing a topic.

The third chapter provides an overview on the role of the supervisor. Beginning with the need for understanding the supervisor's potential role and expectations for a healthy student-supervisor relationship, it deals with various roles a supervisor can play, selection of supervisor and also the possibility of having multiple supervisors. The fourth chapter deals with the complexities of working in groups, if a student has to work in a group project. It elaborates on the sources of conflict and its management. Chapter five throws considerable light on ethics in research and in general business. It deals in detail with codes of ethical conduct and various ethical issues to be considered while conducting the research.

In the second part, from Chapters 6 to 11, the authors focus on various activities involved in "Undertaking the Research". For a research project to be successfully completed, it requires a structured process and the sixth chapter of the book deals with each such step involved in the planning of a research project. Seventh chapter deals with the need for the literature review that may assist them in the research process. It also produces minute details of writing the literature reviews and referencing. While saying that the method chosen for data gathering will have a major impact on the activities for the rest of the research project, the eighth chapter deals with each small thing involved in data gathering. The ninth and tenth chapters deal with data analysis. While the ninth chapter deals with the qualitative data, the tenth chapter deals with the quantitative data. The eleventh chapter is all about establishing recommendations with the detail of each component ranging from description of results to research implications and to the recommendation guidelines. Though, not elaborated much on the detail of each chapter, the chapters under this section address almost all the questions that fall under the purview of the title of each chapter.

While stating that the analysis and formulation of the recommendations is not the end of the research process, In the third part, under the title "Communicating the Results" the authors deal with all the critical steps that ought to be undertaken after analyzing the data. There are four (Chapter 12 to 15) chapters under this part. Various ways to present research findings using tables, pictures, maps etc. have been discussed in Chapter 12 under the title "Presenting the Results". The thirteenth chapter titled "Writing the Report" deals with the written communication of research findings while dealing with the types of reports and the structure of a project report. An oral presentation may not be essential for all research projects, but is often required. Thus, the fourteenth chapter examines a range of issues relating to oral presentations. The chapter deals with the necessary ground work to be done before presentation, presentation content, style, things to be taken care during the presentation and its appropriate conclusion. The final chapter titled "Concluding Remarks" is a perfect wrap-up of the fourteen chapters and it provides some final hints for those who are undertaking the research project. Each chapter is provided with project checklist and chapter questions at the end and the hypothetical case study of "Rick's Chicken Salad Bar" spreading across all the chapters enhances the students' understanding about the design and management of a research project.

Definitely the second edition is not only an improvement but unique as it includes the topics like supervision, group work, ethics and data analysis. Though the authors were quite polite in saying: a) that the book is designed to supplement other texts and materials that a business management student is currently using; and b) admitting that the book is not designed to set out the doctoral dissertation process. I consider the book to be a beacon light for both the students at the masters level and doctoral level as it makes the life of masters level student easier and generates real interest for any further research. I strongly recommend the book not only for the management students but also for students who would like to enjoy their research activity. Definitely the books of this type by taking away the fear and apprehensions of students would contribute to the growth of the subject. One final word, do not mistake the book to be another research methodology book which you can promptly place in your book rack. It is a book that you definitely loosen its spine by referring to it from time to time though your project and after.

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The Coaching Manager: Developing Top Talent in Business

By James M Hunt and Joseph R Weintraub

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The future will challenge corporations to surpass both current and predictable levels of performance and productivity. Organizations in the midst of today's changes need coaching at the executive and the managerial level to effectively communicate and facilitate where the organization is and where it is headed. In addition to educational development and experience, long-term successful leaders need honest and objective feedback. Coaching is needed today more than ever as a critical tool for successfully engineering organizational change. Adopting coaching as a management style requires managers to help other people unlock their potential and enhance their own performance. It's about supporting people to learn instead of telling them what the answers are. Coaching is increasing in popularity because of the value it adds to the staff relationships, teamwork, individual and organizational productivity. Parsloe (1999) defines it as: "a process that enables learning and development to occur and thus performance to improve. To be a successful coach requires knowledge and understanding of the process as well as the variety of styles, skills and techniques that are appropriate to the context in which coaching is taking place".

The distinguished authors James Hunt and Joseph R Weintraub combine a lifetime of research, development and practice in human behavior and development to explore the underpinnings of coaching in this book. James Hunt is an associate professor of management and the Charles Barton Term Chair Holder at the Babson College in Wellesley, Massachusetts. He teaches Management, Talent development and Leadership besides being a management consultant to numerous business and health care organizations on the development of organizational coaching capability, executive coaching and talent development by managers. Dr. Joseph R Weintraub is a professor of management and is the Charles Barton Term Chair Holder at Babson College, in Wellesley, Massachusetts. He is an organizational psychologist who focuses in the areas of individual and organizational effectiveness. In addition to this he provides his consulting service to top client companies as President of Organizational Dimensions, a management consulting and assessment firm based in Wellesley. The rich experience of authors is reflected in the content of the book that offers engaging stories, has believable characters with realistic problems illustrating the structure and content of the coaching process.

The book is divided into 14 chapters. With an experience of over 10 years and interaction with more than 4,000 practicing managers and entrepreneurs about coaching and talent development the authors start the book with an introduction to coaching, how it is different from mentoring, why it's good for an organization, why don't mangers coach and why to think about becoming a coaching manager. Interest in the book starts developing as the reader moves to the second chapter that presents a developmental coaching model which builds on the well connected and detailed case taken as an example. The author uses the example to touch upon themes like "coachable coachee", creating coaching opportunities, collaboratively interpreting the meaning of performance gaps and creating a plan for change and follow-up. The model developed seems quite relevant for the current, fast paced companies. The focus of the content shifts to coaching setup from chapter three onwards. Considering the established fact, that defining success represents defining what people need to do in order to achieve desired results, and thinking through the talent that it takes to be successful; the authors raise the significance of having a competency model for providing a focus and facilitating a structured and systematic approach to coaching. In the coaching friendly context of the future, the manager may increasingly be called upon to manage the environment, particularly the social environment within which the formal as well as informal learning can take place. Chapter four covers this aspect as the authors provide a detailed insight into creating a coaching friendly context by highlighting on the values and norms that characterize a coaching friendly context and the role individual managers can play in their organizations and teams.

People want to work with managers who coach because those managers help them succeed in both the short-term and long-term leading to career movement and growth. Apart from creating a coaching friendly organization environment the challenge faced by most managers is how to become 'coaching managers'. These issues supplemented with real life examples are addressed in chapter five by the author where the focus is on the attitudes and behaviors that characterize a coaching mindset such as making responsibility for learning shared, personal actions of helpfulness and adding a bit of fun to work life. A self assessment tool concludes the chapter. The subsequent chapter takes a closer look at the other partner in the coaching process, 'the coachee', the barriers to coachability and tactics for engaging the coachee. However, a very critical and significant area covered by the author here is the 'mismatch' that happens between the career stage of the employee and the manager as it was shared by many of the coaching managers that they have to vary their approaches to coaching in response to the career stage of the employee. The authors here, evaluate the need for coaching in the light of the five career stages viz. establishment, early career stage, advancement, maintenance and exit.

Once the situation has a high learning opportunity and the employee coachable, it falls on the manager to seize the opportunity and begin the process by starting a coaching dialogue. The book provides with sample exercises on learning how to create a coaching dialogue and ask useful questions. The authors use the metaphor of 'coaching mirror' in chapter eight where they discuss on how to enable the coachees to see themselves and their actions more clearly by improving the managers observation ability wherein they provide them with accurate feedback, being cautious of the Pygmalion effect at the same time. An effort is made here to train the reader on observing, inferring and making the most from the various sources of performance data by way of case examples and exercises.

Feedback reflects back to an individual a picture of his or her own actions, behaviors or decisions. There are useful rules of thumb for constructing and delivering feedback which have been covered by authors earlier (Smart, 2002; Starr, 2002; Whitmore John, 2002) who have written on this; but this book offers a little more on the theme apart from managing the mechanics of packaging the feedback data, as it goes beyond and covers in a very pragmatic way how to manage the emotional content of feedback, giving examples of coaching actions or statements in chapter nine.

In line with the developmental coaching model presented in chapter two, chapter eleven discusses about integrating goal setting and follow-up for achieving results. Several cases are illustrated in the subsequent chapter as to how development coaching can be utilized to help employees deal with the career development concerns. One particular aspect that would appeal to the readers are the true yet disguised examples of common career concerns faced by managers presented as caselets in exhibits like:

- The good employee who has become bored with her job.
- The employee who wants to move up too fast.
- The employee with work and family concerns.

This chapter thus brings out the importance of a careful and helpful coaching dialogue when faced with such challenges along with tactical solutions on the same. The root cause of some of the performance problems along with providing guidelines for employees with performance problems on improving his or her performance have been dealt with in Chapter 13. The authors have spent considerable time and energy here and have attempted to create educational experiences for practicing managers in a classroom format.

Majority of the managers these days don't tend to take a direct interest in the impact of classroom learning on the employees and the business owing to the manifestation of the unaddressed split between learning and working that exists in most organizations. Keeping this in view the last chapter describes the challenges of transferring learning from the classroom to the workplace and provide guidelines on how coaching managers can follow-up to help facilitate the transfer of learning. Most companies pay for the classroom training for their employees and strangely do little with it back at the workplace. This book can lead the way in this regard to learn quite a bit about the process.

In sum 'The Coaching Manager' Second Edition, presents a coaching methodology that managers can use to guide employees to achieve higher levels of skill, greater engagement with organizations, and promote personal development. Clearly written, specific coaching techniques are illustrated through short case studies and self-assessment exercises that will enable readers apply the principles in their own lives. Hunt and Weintraub provided detailed insight and advice for developing leadership talent and inspiring performance through an innovative coaching model. The depth of their research and experience with thousands of managers can be of relevance to any business leader interested in developing talent within their organization. This book can serve as a practical reference to effective mentoring in a format that provides quick access to important concepts and techniques of coaching.

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In Quest for a Theory of Production: An Organizational Approach

By Kalyan Chakrobarty

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The book entitled *In Quest for a Theory of Production: An Organizational Approach* consists of six chapters dealing with different aspects of the theory of production and organizational issues.

Chapter 1 makes a review of the present state of production theory with a new insight while chapter 2 deals with production and economic activity. Chapter 3 makes a thorough analysis of the production and consumption-production dichotomy. Chapter 4 deals with preliminaries for a theory of organization. Chapter 5 analyzes interdependence between society and organization with a new perspective while Chapter 6 deals with the logic of organization theory so as to establish a basis of production theory.

In the book the author has made an attempt to highlight some loose ends in the theoretical texture of the subject matter of economics which has turned out to be a halfway house between descriptive social sciences of many vintages and history at one end. It is no wonder that many thoughtful economists argue that on a theoretical plane economics is moving around in blind alleys. The author has tried to give proper emphasis on sociological, physiological and economic factors in such a way that a question like "What happened in history?" can be put in a proper perspective. It is a long standing proposition in the sphere of knowledge that the relevance of a query can be understood only if it addresses the right type of questions. There are some thinkers who believe that economics, because of its propensity to draw instant interferences from history, sociology and mathematics and also philosophy have failed to address and raise right type of questions. Therefore, as a discipline for studying human behavior and social realities, its methods are very narrow. The present book is an humble attempt to give a new twist to the process of understanding economic issues in relation to history and realities of the society. The author has tried to introduce the concept of 'organization' which economists have used merely as a relation, as a concrete economic input (and also as a concrete input in other social relationships) and in doing so developed logical structure for organizational activities and also developed some concepts expressing the psychological attitude of human beings for understanding what is happening in a society. The idea of organization may be discussed in the context of the theory of a firm. But such discussion may not be enough because there are already some highbrow theories in circulation none of which has been able to clear-up the obscurity that surrounds the concept of organization. The concept needs more rigorous and intensive treatment. So, the author has made an attempt to develop a theory of the firm which can be used as a micro foundation of macroeconomics and hence the author is in quest of new variable which can link up the micro basis with the macro superstructure. The author is in the view that economics still lacks a theory of production which has a general validity. In the main stream neoclassical economics some very sophisticated market-based analytical theories have been developed. But at the same time we find a strong anti-market debate. In the debate though much has been said either in favor of or against the market system, a theory of production could not be developed in the desired direction in view of the author.

Important theoretical development took place in the last two decades in the field of capital theory which brought into the forefront some ticklish issues, such as the double switching problem, which dealt with some basic problems in the context of production scenario expressed through the production function. According to the author's view, we have to accept the fact that a production function can only take account of situations having an already existing relationship with the factors of production.

Economists seem to be satisfied with the situation that production has taken place in the first place and in the second place, the right combination of the factors of production has been achieved. However, economists often forget that they have to answer some basic questions which are not raised because it is implicitly assumed that economists have answers to those questions. Even we may be regarded as a naive in the field for our question, we still like to ask: why do certain things happen at a certain historical moment? What are the social factors which make different societies behave differently? Why do production systems differ between societies? The potential answer to the last question may be given by trade theories. But according to the author the answer will not be enough. As the author said, we speak a lot about historical background behind social activities, and give opinions on the factors behind transition. But we often forget that we must delve deeper into the different layers of history and not get amused by the frozen data of history to find out what made history to differ and how social forces activate themselves. The author, however, does not mean to say that we should get ourselves entangled in the labyrinth of the anthropological or biological details of human actions. We should need a logical structure for human activities in their sum totality. But this gives rise to another question: what would be the premises of such a logic? We know that all social sciences, including economics, deal with organized behavior of human beings. Yet we do not have any approach to explain how organized behavior came into existence: according to the author, in economics we have psychological laws, such as the law of consumption function, which constitute the backbone of economic theory in many respects. But economics does not bother about the lost data of economic actions. If a certain commodity is introduced in the market and the market does not accept it, the economic theory is not interested to discuss the aftermath of such a rejection. Of course, Prof. Lancaster deserves a special mention for highlighting the possibility and the reason behind such a rejection. But from a theoretical point of view economics and other social sciences need to explain why certain things does not happen. The author has tried to use 'organization' as a missing link between two queries. Right from German Historical School and down to Joan Robinson, there is a sense of 'give up' in the quest for the missing link. Apart from historical analysis based upon organizational approach, some theoretical writings have tried to incorporate the importance of the organization for the theory of production as a separate entity. Of course, economists like D H Robertson, L Robbins and A Robinson referred to some organizational activities more as conceptional tools rather than concrete economic entities. Hence the task for developing a theory of organization remains incomplete. The author has tried to complete this incomplete job after a good deal of searching for the clues that would show the way to the basis for such a theory. The author has made several innovations to prepare the ground for such a theory. The author has put special emphasis upon the concepts like 'slack' to enable it to be used as a special variable. He has also introduced some psychological aspects of human behavior to understand how decisions are taken. He has also introduced some laws to understand how consumption and production activities can be understood in new context and some new axioms to round up understanding about the basis for production theory, standing upon an organizational structure. The author has used mathematical tool in a very simple way so that the analysis does not become very much esoteric. The author has used the concept 'field' to replace the idea of 'space' (usually used in economic analysis) to analyze the simultaneous actions of several variables, and he has effectively used this method. However, the whole approach of the author is based upon an abstract plane. In author's view, he has begun with a new type of abstraction with the hope that the points he has raised would be more vigorously discussed in near future. The type of analysis adopted by the author to address the problems and issues of production theory is a great departure from the traditional line. As a result, the author's standing point cannot be tagged to any particular school of thought. The author is of the opinion that the logical arguments in economics have bypassed one of the actual economic entity. The author argues that because of the omission, futuristic evaluation of situational sequence is arbitrary and when this type of evaluation is done in terms of mathematical modeling including the process of probabilistic calculations, predictive capability remain very inadequate. So, the author has started with a new paradigm which in its essentiality would mean two things: (1) that every action (economic or otherwise) must be explained in the background of the organization from which those actions emanate and organizational activities have to be quantified within certain manageable limits; and (2) the nature of organizational actions has to be specified by referring to the axiom set for organizational activities. As the author said, he got the inspiration from the monumental work of Georgescu Roegen on entropy and economic theory to proceed in this unconventional and risky path. The author regrets that the message of Prof. Georgescu Roegen's work has not been fully evaluated by the persons who dominate over the knowledge domain of economics at present. The author has ventured this little offering of a holistic approach for the altar of economic science enamored by the range of Prof. Georgescu Roegen's approach. In analyzing his new concept, the author has borrowed heavily from the works of Karl Marx, J M Keynes, Istvan Meszaros, R Coase, K Lancaster, K Arrow, A K Sen and S R Hicks. Since the author has tried to establish a logical foundation for production theory, contributions from Arrow and Sen have occupied a special place in this book because the Arrow-Sen work intended to give a specific direction to resource allocation without discussing how it can be done. The author has constructed the axiomatic set mainly because he has tried to understand the prime movers in a society as they exist at any moment of time.

In fine, the book is an attempt to widen the scope for economic analysis by incorporating some new variables. In particular, the book has redefined the concept of the organization to make it a meaningful concept. The book has also introduced some new behavioral concepts to delimit decision rules within manageable areas. One of the targets set in this book is to explain the phenomenon of social change through the interactive process of technological change and organizational adoption. The present work has tried to define the concept of the organization in this context. In the book the concept of the organization has been replaced by the concept of the institution. It is the contention of the present work that the phenomenon of the production cannot be understood without bringing in organizational aspects. This book is intended to draw a picture in one canvas of how economic and non-economic forces interact to bring in organizational changes. The basic idea is to give a new twist to the learning process of the organizational personnel in relation to the society.

This book is likely to draw attention of all those discerning readers who are interested in social change and the issues relating to decision rules. The book will be relevant not only for economists but also for sociologists and management scientists. The language of the book is simple and lucid.

I congratulate the author for undertaking this noble endeavor. I wish wide publicity and circulation of the book.

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