Vol. 18, Issue No. 1, January-March 2011 ISSN: 0971-5428

SOUTH ASIAN JOURNAL OF MANAGEMENT

SOUTH ASIAN JOURNAL OF MANAGEMENT Vol. 18, Issue No. 1 January-March 2011 ISSN: 0971-5428

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This issue of the
South Asian Journal of Management
is being published with the courtesy of
INSTITUTE OF PUBLIC ENTERPRISE
Osmania University Campus
Hyderabad - 500 007
Andhra Pradesh, India

SOUTH ASIAN
JOURNAL OF MANAGEMENT

Vol. 18, Issue No. 1
January-March 2011

Editor
Mathew J. Manimala

SOUTH ASIAN JOURNAL OF MANAGEMENT

Vol. 18, Issue No. 1
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To subscribe, please write to AMDISA at the above address.

ISSN: 0971-5428

Printed by IUP at M/s. ICIT Software Center Pvt. Ltd., Plot Nos. 165 & 166 P, Phase-V, IDA, Jeedimetla, Hyderabad 500055, Andhra Pradesh, India.

Contents

Moderating Effects of Tenure and Gender on the Relationship Between Perception of Organizational Politics and Commitment and Trust

Setyabudi Indartono and Chun-Hsi Vivian Chen***

Relationships between perceptions of political behavior and outcomes were empirically found to be ambiguous and equivocal. Few researchers have found consistent evidence of their effect on outcomes. This study proposes that employee tenure and gender moderate the relationships between Perceptions of Organizational Politics (POP) and commitment and trust. Series of regression and correlation analysis, Confirmatory Factor Analysis (CFA) and its second-order Higher Order Confirmatory Factor Analysis (HCFA) were adopted to test the model. The result shows that POP relates negatively to both commitment and trust. Tenure and gender were found to influence the relationships between POP and the identified outcomes. Male and female employees, whether treated fairly or not, have gender moderates POP and trust relationships. Tenured employees who are treated fairly also have different strengths in these relationships. Both gender and tenure were found to have different strengths in their effects on POP and commitment relationships. Implications of the findings for organizations and suggestions for future research are discussed.

INTRODUCTION

Organizational cohesiveness is one of the factors differentiating organizations in terms of the employee-employer relationship. Cohesion that involves the molding of a group is related to greater proportions of working relationships in the workplace (Odden and Sias, 1997). For instance, employee cohesiveness is enhanced by commitment and trust. Furthermore, in the literature, commitment has been reported to give firms economic advantage (Martín, 2008). From an economic perspective, employees need contractual safeguards, whereas firms create dependence and make a commitment to employees. However, based on the relational viewpoint, trust is more important than legal and contractual mechanisms to protect exchanges. Nonetheless, both approaches

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are in actual fact viewed as complementary. In order to realize their interests, employees and firms may engage in political behavior (Chen and Fang, 2008).

Most people agree that politics in the workplace is a reality of organizational life and seeks to protect diverse and often competing interests, particularly within dynamic and uncertain situations (Poon, 2003; and Chen and Fang, 2008). Political behavior, for example, is defined as "the study of power in action" (Pfeffer, 1981; and Chen *et al.*, 2008). It is used to bargain to attain or perpetuate certain interests. Therefore, most managers view political behavior as ethical and necessary. They use political behavior as a means to realize organizational effectiveness, change, resource and reputation (Buchanan, 2007). Nevertheless, political action such as inappropriate distribution of organizational outcomes leads to jealousy and resentment among employees (Othman, 2008). As a consequence, employees use political action to manipulate their work. Accordingly, political behavior in the workplace affects individual perceptions of fairness (Judge and Robins, 2007; and Miller and Nicols, 2008), in turn decreasing employee commitment and trust, which in turn affects organizational productivity and profitability. The purpose of this study is to test the effect of different perceptions of equity in political behavior on commitment and trust relationships. The study speculates that employees who perceive inequitable treatment will have negative commitment and trust responses, whereas employees who perceive equitable treatment will have increased commitment and trust.

Although recent empirical studies have investigated the relationship between political behavior and commitment, the relationship seems ambiguous and equivocal. For example, Ferris *et al.* (2002) argued that political behavior negatively affects commitment, yet other scholars have found a positive relationship (e.g., Khumar and Ghadially, 1989; study 1 of Cropanzano *et al.*, 1997). Furthermore, two other studies have found no relationship at all (Cropanzano *et al.*, 1997; and Randall *et al.*, 1999). Miller *et al.* (2008) indicated that Perceptions of Organizational Politics (POP) are complex phenomena, particularly because their existence is interpreted through the perceptions of individuals, and individual perceptions are a function of individual characteristics, social relationships, and certain attitudes toward work. Therefore, consequently, some situations in an organization end up as a fertile ground for political action and are perceived differently. Buchanan (2007) noted that a wide range of organizational, environmental, demographic and personality factors empirically influenced perceptions of political action in the workplace.

Besides Othman's (2008) pioneering study on the issue of fairness in organizational politics, a dearth of studies exist investigating organizational politics in the context of diverse individual perceptions. According to equity theory (Adams, 1965), individuals modify their behavior based on their perceptions of fair treatment, i.e., how one perceives the ratio of his or her inputs to his or her outcomes to be equivalent to those around him or her. Perception of equity is thought to be one of the important facets of organizational politics for obtaining commitment and trust. Therefore, it is worthwhile to explore how individual POP might influence commitment and trust. Can employees use certain situations to achieve commitment and trust in a political workplace? To unravel this problem, it is important to explore whether perception of equity does influence the effect of POP on commitment and trust.

Several researchers have suggested further studies be conducted on the relationship between politics and outcomes from motivational perspectives (Witt, 1998; and Kacmar and Baron, 1999). A recent study by Chen and Fang (2008) inclusively suggested that future researchers should incorporate equity theory to enrich understanding of empirical practice on the relationship between politics and outcomes. In addition, previous research has indicated that perception of equity was influenced by employees' demographic background (Tansky *et al.*, 1997) and their national perspective (Kotabe *et al.*, 1992; Shelley, 2001; and Alma, 2005). Based on equity theory, this study attempts to investigate the influence of employees' perceptions of political behavior on commitment and trust relationships by examining the role of gender and tenure of the employees.

THEORETICAL CONSIDERATIONS AND HYPOTHESES

PERCEPTIONS OF ORGANIZATIONAL POLITICS

The phenomenon of organizational politics, whether actual or perceived, has long been thought to have substantive and significant adverse effects on workers (Miller *et al.*, 2008). First, it was commonly viewed as subjective evaluations of others' self-serving work behaviors not sanctioned by the organization (Miller *et al.*, 2008). Ferris and Kacmar (1989) suggested that organizational politics is a social influence process in which behavior is strategically designed to maximize long-term and short-term self-interest, either consistent with or in opposition to others' interests. Drory and Romm (1990) concluded that political behavior has a definite antisocial property, and that it conflicts with the interests of other parties. Recently, Miller *et al.* (2009) pointed out that politics in organizations should be generally regarded as pervasive and necessary for normal business functioning, and a simple fact of organizational life. Most scholars describe it as the perception of intentional action, sometimes performed at the expense of others, in an effort to advance one's own position. However, although most definitions are different depending on research purposes (Chen and Fang, 2008), definitions of organizational politics highlight the issue of self-interest and the effort to influence others, as well as the significance of the theory of equity. Conceivably, perceptions of equity could strengthen the relationship between POP and outcomes.

Ferris and Kacmar (1989) provided valuable theoretical insights into the antecedents and consequences of politics in organizations. Their model includes six consequences: in-role job performance, organizational commitment, trust, organizational cynicism, justice reactions and organizational citizenship behaviors (Ferris *et al.*, 2002). However, research on these relationships has yielded inconsistent results and thus additional study is needed for further verification (Miller *et al.*, 2008). Empirically, Adams *et al.* (2002) found that employees' perceptions of politics are nearly always negative; hence, organizational politics causes disharmony and conflict in the workplace and consequently produces high stress and turnover intentions, and lower worker satisfaction, commitment and worker productivity (Chen and Fang, 2008).

PERCEPTIONS OF ORGANIZATIONAL POLITICS AND COMMITMENT

Since the early 1960s, quality of work life and organizational commitment are the two important topics that have been widely studied in human resource and organizational development (Koonmeea *et al.,* 2009). Innes (2004) views organizational commitment as a psychological construct referring to an individual's loyalty to the organization and its goals. In turn he conceptualizes this phenomenon as an affective or psychological state central to the employee-organizational relationship influencing employee behaviors. Organizational commitment is defined as the "strength of an individual's identification with an involvement in a particular organization" (Porter *et al.*, 1974). Mowday *et al.* (1979) regard organizational commitment as the degree to which an employee identifies with and is willing to put forth effort on behalf of the organization. Innes (2004) argues that commitment can be used to increase productivity and personal stability, lower absenteeism rate, and increase job satisfaction and organizational citizenship behavior. Allen and Meyer (1990) indicate that there are three "mind sets" characterizing an employee's commitment to the organization: affective, normative, and continuance. Affective commitment is defined as an employee's commitment to the organization because he/she 'wants to'. Normative commitment refers to an employee staying with the organization because he/she 'ought to'. Continuance commitment refers to an employee remaining a member of the organization because he/she 'has to'. For regular employer-employee relationships, it is considered true that commitment enhances the performance of employees, while reducing fluctuations, absenteeism, and stress (Mowday *et al.*, 1982; and Meyer *et al.*, 2002).

Organizational commitment represents a positive and ideal affective state across a wide range of organizational behaviors (Mowday *et al.*, 1982; Blau, 1986 and 1994; O'Reilly and Chatman, 1986; and Mathieu and Zajac, 1990). It is argued that different determining factors of commitment are influenced by individual demographic characteristics, personality traits, differing working conditions (Mathieu and Zajac, 1990; and Meyer *et al.*, 2002), and exceeding or disappointing the aspiration level (Meyer and Allen, 1987). The commitment of employees who feel deceived or have their expectations fulfilled will be influenced differently (Süß and Kleiner, 2010).

The influence of political perceptions on organizational commitment is an important vein of inquiry in light of the desirability to achieve greater levels of commitment on the part of the employee (Vredenburgh and Maurer, 1984). Recent empirical studies have found that the relationship between political behavior and commitment seems ambiguous and equivocal (Khumar and Ghadially, 1989; Cropanzano *et al.*, 1997; Randall *et al.*, 1999; and Ferris *et al.*, 2002). Various findings of relationship between political behavior and commitment are indicated by different factors such as individual characteristics, social relationships, certain consequences of work (Miller *et al.*, 2008), and a wide range of organizational, environmental, demographic and personality factors (Buchanan, 2007). Therefore, an examination of the relationship between POP and commitment should consider exploring a wide range of psychological characteristics of individuals, such as self-perception, interest, demographic background, nationality, and individual and working ethical standards.

Previous studies have suggested that POP and outcomes such as commitment relationships need to be investigated. For example, Miller *et al.* (2008) suggested that future researchers should examine the effect of POP on various outcomes, explore relationships of POP with various organizational commitment dimensions, and moderate the direct relationship between POP and outcomes, whereas Rosen *et al.* (2009) proposed an examination of the boundary conditions of observed relationships, such as focus on situational and personal characteristics. Furthermore, some scholars are of the view that an investigation demonstrating the reliability of a generalized technique measuring POP, such as Miller *et al.*'s (2009) remarks on the consistency of POP measurement, is needed. For example, they suggest that POP measurement can potentially be modified to increase the score of reliability. Consequently, researchers are strongly encouraged to consider using the measurement scale as published or developing a shorter version of the scale as well as validating the use of measurement. Based on the foregoing discussions and empirical findings from various researchers (Miller *et al.*, 2008), a linkage between POP and outcomes variables (Miller *et al.*, 2008 and 2009; and Rosen *et al.*, 2009) can be inferred; therefore the following hypothesis is proposed:

Hypothesis 1: Perceptions of organizational politics are negatively related to commitment

Commitment is widely influenced by individual demographics, working conditions, and expectations (Mathieu and Zajac, 1990; Meyer *et al.*, 2002; and Martín, 2008), whereas, employee expectations includes fair treatment. Equity theory proposes that treating people fairly causes them to be motivated. Equity theory introduces the concept of social comparison, whereby employees evaluate their own input/output ratio by comparing it with that of other employees (Carrell and Dittrich, 1978; and Judge and Robins, 2007). Employees who perceive inequity will seek to reduce it, either by distorting inputs and/or outcomes in their own minds, directly altering inputs and/or outcomes, or leaving the organization. Thus, the theory has wide-reaching implications for employee morale, efficiency, productivity and turnover.

Commitment to the organization is most often operationalized as an affective or psychological state central to employee-organizational relationship which influences employee behaviors such as intent to turn over and job satisfaction, and has implications for the employee's decision to remain with or leave the organization (Innes, 2004). There are several reasons why a relationship may come to an end. One reason derived from the equity theory is that rewards and costs are equal to both parties (Liccione, 2007). If a person in the relationship feels that the personal costs of staying in the relationship outweigh the rewards, there is a great chance that he/she will bring the relationship to an end. This may be true when rewards outweigh costs in some cases.

Accordingly, equity theory strengthens the evidence of employee commitment to the organization; therefore, based on these arguments, it is proposed that:

Hypothesis 2: Perception of equity is positively related to commitment.

Hypothesis 3: Perception of equity moderates the relationship between POP and commitment.

PERCEPTIONS OF ORGANIZATIONAL POLITICS AND TRUST

Trust is one of the main ingredients in business relationships. Business relationship longevity, to a large extent, is dependent on the mutual trust between parties. Trust is highly important for business relationship management, because it constitutes the most critical aspect of an exchange relationship. It is suggested that "perhaps there is no other single variable which thoroughly influences interpersonal and intergroup behavior" like trust (Ojasalo, 2008).

Trust refers to a party's expectation that its exchange partner will perform as expected (Anderson and Weitz, 1989). Ryu and Moon (2009) view trust as involving vulnerability and uncertainty on the part of the trustor, as the trustor risks self-interest-seeking behavior on the part of the trustee. Robinson (1996) defines trust as "one's expectations, assumptions, or beliefs about the likelihood that another's future actions will be beneficial, favorable, or at least not detrimental to one's interest." Aryee *et al.* (2002) argue that trust reflects "concern for others' interests, reliability, openness, and competence."

Shapiro *et al.* (1992) and Lewicki and Bunker (1996) propose that, theoretically, there are three main bases for trust: calculus-based, knowledge-based, and identification-based, whereas Mayer *et al.* (1995) created an integrative model of trust from the fields of sociology, management, and psychology that incorporated four factors—ability, benevolence, reliability, and integrity—These factors that influence a person's ability to trust another party. This perceived trustworthiness and the dispositional factor of trust are based on socialization factors. This model was supported by a conceptual model of trust proposed by McKnight *et al.* (1998). Furthermore, based on an empirical study on trust, five processes were identified as antecedents for trust: calculative or calculus, prediction, intentionality, capability and transference (Doney *et al.*, 1998). While a study by Gefen (2000) found that both familiarity and dispositional factors influence trust, McKnight and Chevany (2002) found that institutional structures and dispositional factors were antecedents to trust.

Definition of trust shows that in an interpersonal, group and in inter-organizational relationships, trust exists when an individual or a party (trustor) fully believes in the integrity or character of the other person or target (Ladebo, 2006). Thus, trust is believed to be central to social relationships and usually needed in situations where there is uncertainty about the actions that would be undertaken by the target and when these actions are of consequence to the trustor (Ladebo, 2006). Although trust has been found to have a number of important outcomes for organizations and their members, this construct has received relatively little attention in the organizational politics literature (Poon, 2003).

Ferris *et al.* (2002) found that trust included several additional POP consequences, whereas Poon (2006) and Vigoda (2007) found POP and trust to be related negatively. Although Othman (2008) found that trust affects POP, he argued for a reverse causality directionality or reciprocal causation of this association. Accordingly, based on the preceding discussion, the current study proposes the following hypothesis:

Hypothesis 4: Perception of organizational politics is negatively related to trust.

In the recent years, there has been increasing focus by organizations to understand the factors which determine employees' perception of fair treatment in organizations and its effects on employees' trust. The understanding of how individuals react to organizational actions is of growing importance to society, and not only to the constituents of a particular business, as it more closely scrutinizes such action (Kickul *et al.*, 2005). Building on early studies, equity theory explains how employees respond to situations in which they believe they are being under- or over-rewarded as compared to a referent individual carrying out similar tasks (Adams, 1965). Hence, Kickul *et al.* (2005) indicated that perception of equity affects employees' trust on organizations. If they believe they have been treated inequitably, employees adjust their work behavior by reducing their efforts or even leaving the organization (Allen and White, 2002). This finding was supported by Othman (2008), who found on the contrary that perception of greater fairness led people to be more trusting.

In accordance with equity theory, the relationship between POP and trust differs as a function of the degree to which individuals perceive fairness at work. Andrews and Kacmar (2003) argued that inappropriate distribution of organizational outcome leads to jealousy and resentment among employees, in turn creating a perception of unfair treatment. This experience is likely to erode trust in the organization. Although many researchers have focused on investigating variables that reduce the negative impact of POP on outcomes, and a variety of moderating variables (Chen and Fang, 2008), little attention has been paid to the moderating effects of perception of equity on the relationship between POP and trust. Chen *et al.* (2008) suggested, in addition, that the perception of equity in POP and outcomes was another gap worth probing further. Othman (2008) indicated that unsanctioned self-serving work behavior weakened employee trust; hence, political behavior at work weakens the level of trust. Therefore, equity theory strengthens the evidence of employee trust on organizations. Based on this discussion, the following hypotheses are proposed:

Hypothesis 5: Perception of equity is positively related to trust.

Hypothesis 6: Perception of equity moderates the relationship between POP and trust.

MODERATING EFFECTS OF TENURE AND GENDER

According to Debra (2008), different employee interests and organizational situations fulfill their expectations with varying levels of fairness. Situational pressures that cause someone to act at odds or change his/her interest do not always achieve negative outcomes. Instead, this may provide an opportunity to assume new expectations. Historically, the processes that create perceptions have been seen as driven primarily by stimulus properties such as texture continuity, and similarity and proximity of distinct elements (Vickery and Jiang, 2009). Opportunities at work were able to change people's wants and needs, as well as their interest in responding to organizational climates (Debra, 2008; and Parish *et al*., 2008). People sometimes demonstrate defensive, reactionary, or protective behavior to avoid action, blame, or change in response to political behaviors. People who consistently rely on defensiveness find that they lose trust and support (Judge and Robins, 2007). Previous research indicates that commitment and trust can increase employee productivity in the workplace. Sufficient rewards and benefits received by employees are found to encourage employee cohesiveness within organizations. Thus, perceived equity at work can increase employee commitment and trust.

Gender of employee is known as one of the controlled variable in researches. Different effects of gender on employee's attitude and behavior have been found in many studies. For example, researchers indicated that male and female employees have different sensitivity, expressive behaviors, and motivational response to the job (Lysonski and Gaidis, 1991; Whipple and Swords, 1992; Haswell *et al.*, 1999; and Bernardi and Guptil, 2008). Empirically, O'Neil *et al.* (2008) found that females tend to be more expressive (Meyers-Levy and Maheswaran, 1991), and sensitive. However, male employees are found to be more confident than female employees (Pajares and Johnson, 1994; Meece and Jones, 1996; and Tillotson and Rutherdale, 2002).

Perception of equity is, however, contingent on demographic background (Kotabe *et al.*, 1992; and Tansky *et al.*, 1997) and national perspectives (Shelley, 2001; and Alma, 2005). Accordingly, the current study attempts to investigate the moderating effects of employee gender and tenure on the relationship between POP and outcomes (Tansky *et al.*, 1997). Based on employees' perceptions of fairness at work and differences in gender and tenure, employees react differently to work environments (Allen and White, 2002); therefore, based on these arguments, this study proposes the following four hypotheses:

Hypothesis 7: *Male and female employees who had higher perceptions of equity have varying degrees of strengths in POP-trust relationship as well as POP-commitment relationship.*

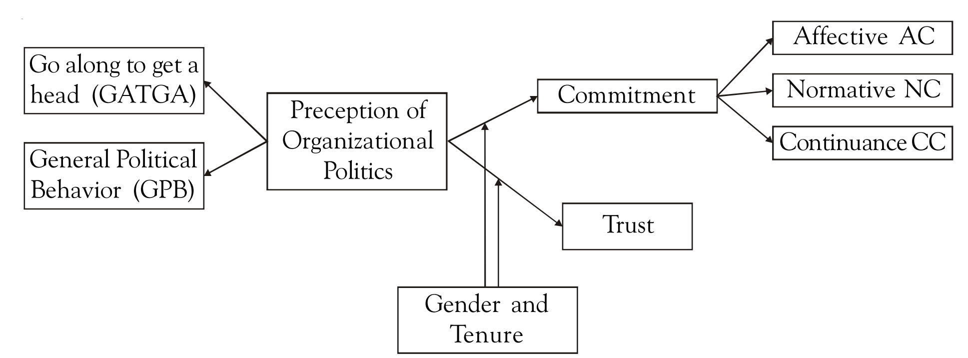
Hypothesis 8: *Male and female employees who had lower perceptions of equity have varying degrees of strengths in POP-trust relationship as well as POP-commitment relationship.*

Hypothesis 9: *Mature and new employees who had higher perceptions of equity have varying degrees of strengths in POP-trust relationship as well as POP-commitment relationship.*

Hypothesis 10: *Mature and new employees who had lower perceptions of equity have varying degrees of strengths in POP-trust relationship as well as POP-commitment relationship.*

The model proposed for the study is as shown in Figure 1.

Figure 1: Model of Study



METHODS

SAMPLE

Data were collected using the survey method from January to March 2009 from the teachers in Indonesian schools. This study collected 261 samples from 500 questionnaires distributed (52.2% response rate). Of the 261 samples, 151 (57.9%) were male, and 149 (57.1%) were married. Their average age was 36.5 years old, working for 7.7 years, and 97 (37.2%) had leadership/managerial positions. Of the respondents, 38 (14.6%) graduated from college, 120 (46%) had a graduate degree, 52 (19.9%) had a master's degree, and 12 (4.6%) had a doctorate degree.

MEASURES

A total of 26 items of perceptions of organizational politics (α = 0.854) were adopted from the questionnaire developed by Kacmar and Baron (1999). A sample item: "People in this organization attempt to build themselves up by tearing others down." A 5-point rating scale was used to evaluate individual perceptions of organizational politics. A higher score indicated a greater level of POP.

Six items of perceptions of equity ($\alpha = 0.893$) were adopted from the questionnaire developed by Janssen (2001). A sample item: "The rewards I receive are not proportional to my investments." A 5-point rating scale was used to evaluate individual perceptions of equity. A higher score indicated a greater level of equity perception.

Six items of trust ($\alpha = 0.837$) were adopted from the questionnaire developed by Podsakoff *et al.* (1990). A sample item: "I have a divided sense of loyalty toward my manager." A 5-point rating scale was used to evaluate individual perceptions of trust. A higher score indicated a greater level of trust perceived by the individual.

Twelve items of commitment ($\alpha = 0.888$) were adopted from the questionnaire developed by Chinen and Enomoto (2004). A sample item: "I feel a strong sense of belonging to company." A 5-point rating scale was used to evaluate individual levels of commitment. A higher score indicated a greater level of commitment. Appendix 1 shows the detailed questionnaire used in the study.

RESULTS AND ANALYSIS

MEASUREMENT MODEL ANALYSIS

The coded data were analyzed using the SPSS-15 and AMOS-7 programs. Confirmatory Factor Analysis (CFA) was adopted to test for the quality and adequacy of the measurement model and its second order (HCFA) for the single factor of POP and commitment (Anderson and Gerbing, 1986). Issues of a higher-order model of HCFA (Koufteros *et al.*, 2009) can be posited and can relate the manifest variables to their respective first-order latent variables which can then be related to their second-order latent variable(s). The contribution of each dimension to a higher-level construct can be assessed and delineated as compared to bundling all items together in a single composite score. If all items are bundled together, the explication of the resultant construct is incomplete and the contribution of various content domains to the final scale score will not be known. In other words, if all items/manifest constructs of affective, normative, and continuance commitment are seen as reflective items of a single first order commitment construct, then it would be difficult to ascertain the contribution of each domain on the overall construct. As well the construct of go along to get a head (GATGA) and general political behavior (GPB) (Byrne, 2005) of POP. GPB refers to overt, self-serving political behaviors that ensure advancement of personal gain. These behaviors are blatant actions (e.g., spreading rumors, belittling others) taken to advance oneself or one's group. The GATGA component of organizational politics refers to more covert, indirect behaviors used to gain advantages. This component of organizational politics emphasizes individuals' compliance with actions taken by others.

Higher-order models are reflective of the body of literature that posits and tests second-order models. The model used was selected from the structural model evaluated. Second-order model is chosen if various fit indices are plausible, such as chi-square per degrees of freedom, the Norm Fit Index (NFI), the Non-Norm Fit Index (NNFI), the Comparative Fit Index (CFI), and the standardized root mean square residual.

Second-order analysis confirmed that the single factor of POP had the following model fit: Goodness of Fit Index (GFI) = 0.936, Adjusted Goodness of Fit Index (AGFI) = 0.912, Root Mean Square Residual (RMR) = 0.053, CFI = 0.947, NFI = 0.863, Tueker Lewis Index (TLI) = 0.937, Incremental Fit Index (IFI) = 0.948, and Root Mean Square Error of Approximation (RMSEA) = 0.045. Accordingly, the dimension of GATGA and GPB (Byrne, 2005) could be used to represent the construct of POP. Whereas, the single factor of commitment fit had a GFI = 0.970, AGFI = 0.939, RMR = 0.032 CFI = 0.989, NFI = 0.964, TLI = 0.981, IFI = 0.989, and RMSEA = 0.041 (Kline, 2004; and Byrne, 2006). Hence, affective, normative, and continuance commitment could be used to reflect the dimensions of commitment (Chinen and Enomoto, 2004).

CFA revealed the goodness-of-fit of the model: RMSEA = 0.066, RMR = 0.069, GFI = 0.881, AGFI = 0.850, CFI = 0. 946, NFI = 0.873, and TLI = 0.936. According to Marcoulides and Schumacker's (1996) standard of fitting, the results of CFA indicated a satisfactory fit for the measurement model.

Convergent validity is determined by the reliability of each construct and the Average Variance Extracted (AVE) for each construct. Anderson and Gerbing (1986) suggest that convergent validity can be assessed from the measurement model by

Table 1: Standardized Loading Indicators, Convergent Validity and Reliability

Variable	Items	Standardized Loading (λ)	*t*-Value	SMC	CR α	AVE
Perception of Organizational Politics	POP9	0.706		0.498	0.854	0.437
	POP10	0.588	9.032***	0.346		
	POP13	0.638	9.638***	0.407		
	POP14	0.734	10.988***	0.539		
	POP15	0.528	7.993***	0.279		
	POP16	0.574	8.794***	0.329		
	POP23	0.641	9.761***	0.411		
	POP24	0.676	10.161***	0.457		

Table 1 (Cont.)

Variable	Items	Standardized Loading (λ)	*t*-Value	SMC	CR α	AVE
	POP25	0.707	10.645***	0.500		
	POP26	0.778	11.672***	0.605		
Perception	PoE27	0.666		0.444	0.893	0.568
of Equity	PoE28	0.776	10.814***	0.602		
	PoE29	0.739	12.027***	0.546		
	PoE30	0.913	12.379***	0.834		
	PoE31	0.614	10.296***	0.377		
	PoE32	0.777	10.150***	0.604		
Trust	TRUST33	0.728		0.530	0.837	0.498
	TRUST34	0.768	11.611***	0.590		
	TRUST35	0.815	11.811***	0.664		
	TRUST36	0.623	9.220***	0.388		
	TRUST37	0.565	8.381***	0.319		
Commitment	COM39	0.678		0.460	0.888	0.456
	COM40	0.642	10.660***	0.412		
	COM41	0.674	12.798***	0.454		
	COM42	0.588	8.560***	0.346		
	COM43	0.796	10.843***	0.634		
	COM44	0.798	10.651***	0.637		
	COM45	0.698	9.257***	0.487		
	COM46	0.642	8.701***	0.412		
	COM48	0.515	7.373***	0.265		

Note: *** implies significantly different from zero at 0.001 level (two-tailed).

determining whether each indicator's estimated pattern coefficient on its posited underlying construct factor is significant or not. As shown in Table 1, each item has a factor loading greater than 0.5 and ranging between 0.5 and 0.99, consistent with Anderson and Gerbing's (1986) suggestions. Therefore, the indicator variables of this study have good convergent validity.

Variance extracted is not only the average percentage of variation explained among the items, but also a summary measure of convergence among a set of items representing a latent construct. Variance extracted is computed as the total of all squared standardized factor loadings divided by the number of items. In other words, it is the average squared factor loading. Fornell and Larcker (1981) suggest that variance extracted of 0.5 or greater is good. Discriminant validity describes the degree to which operationalization is not similar to (diverges from) other operationalization to which it theoretically should not be similar. Campbell and Fiske (1959) introduced the concept of discriminant validity in their discussion on evaluating test validity. They stress the importance of using both discriminant and convergent validation techniques when assessing new tests. A successful evaluation of discriminant validity shows that a test of a concept is not highly correlated to other tests designed to measure theoretically the different concepts. In showing that two scales do not correlate, it is necessary to correct for attenuation in the correlation due to measurement error.

It is possible to calculate the extent to which the two scales overlap by using the following formula, where r_{xy} is correlation between x and y, r_{xx} is the reliability of x, and r_{yy} is the reliability of y:

$$\frac{r_{xy}}{\sqrt{r_{xx} \cdot r_{yy}}}$$

Although there is no standard value for discriminant validity, a result less than 0.85 indicates that discriminant validity likely exists between the two scales (Campell and Friske, 1959; and John and Benet-Martinez, 2000). A result greater than 0.85, however, shows that the two constructs overlap greatly and they are likely measuring the same thing. Therefore, the claim for discriminant validity between them cannot be made. Table 2 shows values of discriminant validity.

Table 2: Discriminant Validity

		1	2	3	4
1.	POP	**0.845**			
2.	PoE	–0.625	**0.893**		
3.	Trust	–0.559	0.393	**0.837**	
4.	Commitment	–0.311	0.278	0.559	**0.888**

Note: **Discriminate validity < 0.85; Cronbach's α-value are shown along the diagonal; POP = Perception of Organizational Politics; PoE = Perception of Equity.

REGRESSION ANALYSIS

A series of regression analyses were conducted to test the correlation of POP with commitment and trust, and the relationship between perception of equity and commitment and trust. Table 3 shows that POP is significantly and negatively related to commitment and trust. Perception of equity is positively related to commitment and trust. The results reveal that *Hypotheses 1, 2, 4* and *5* are supported.

Hierarchical moderated regression analysis was conducted to test the moderating effect of perception of equity, employee's gender, and tenure. Tables 4 and 5 present

Table 3: Correlation Matrix

		Mean	SD	1	2	3	4	5	6
1.	Gender	1.42	0.495						
2.	Experience	7.75	6.35						
3.	POP	2.83	0.45	0.015	–0.096	1.00			
4.	PoE	2.97	0.88	0.055	–0.026	–0.546**	1.00		
5.	Trust	3.49	0.64	–0.095	0.077	–0.473**	0.339**	1.00	
6.	Commitment	3.32	0.63	–0.123*	0.211**	–0.271**	0.247**	0.482**	1.00

Note: *$p < 0.05$; **$p < 0.01$; POP = Perception of Organizational Politics; and PoE = Perception of Equity.

Table 4: Moderation Effect Analysis of PoE to POP – Commitment Correlation

	Commitment		
	β in regression		
	R	Step 1	Step2
Perception of Organizational Politics (POP)	–0.251**	–0.246**	–0.157**
Perception of Equity (PoE)	0.223**		0.126**
POP * PoE			0.047
R^2		0.061*	0.075**
F		16.744**	6.917**
ΔR^2			0.002**
F-change			0.516

Note: *$p < 0 .05$; and **$p < 0.01$.

Table 5: Moderation Effect Analysis of PoE to POP – Trust Correlation

	Trust		
	β in regression		
	R	Step 1	Step 2
Perception of Organizational Politics (POP)	–0.424**	–0.424**	–0.373**
Perception of Equity (PoE)	0.223**		–0.063**
POP * PoE			0.061
R^2		0.180*	0.184**
F		56.689**	19.350**
ΔR^2			0.001**
F-change			0.450

Note: *$p < 0.05$; and **$p < 0.01$.

the results of estimation of the main effect and the moderating effects of perception of equity. The results indicate that the moderating effect of perception of equity was not significant. As shown in Table 6, gender and tenure had moderating effects on the relationship between POP and commitment as well as trust. The findings partially supported *Hypotheses 7, 8, 9* and *10*.

Table 6: Hierarchical Regression on Moderation Effect Analysis of Tenure and Gender on the POP – Outcomes Correlation

	Commitment			Trust		
	β'	ΔR^2	F change	β'	ΔR^2	F-change
Low Perception of Equity						
POP*Gender	–0.316**	0.141*	9.034**	–0.367**	0.298*	14.958**
POP*Tenure	–0.293**	0.158*	8.708**			
High Perception of Equity						
POP*Gender				–0.218**	0.105*	6.113**
POP*Tenure				–0.437**	0.192*	19.412**

Note: *$p < 0.05$; and ** $p < 0.01$.

Figure 2 provides graphical representation of the moderating effects of gender and tenure. The graphs show that when POP is low, female and junior employees

Figure 2: Moderation of Gender and Tenure on the Effect of POP on Commitment and Trust

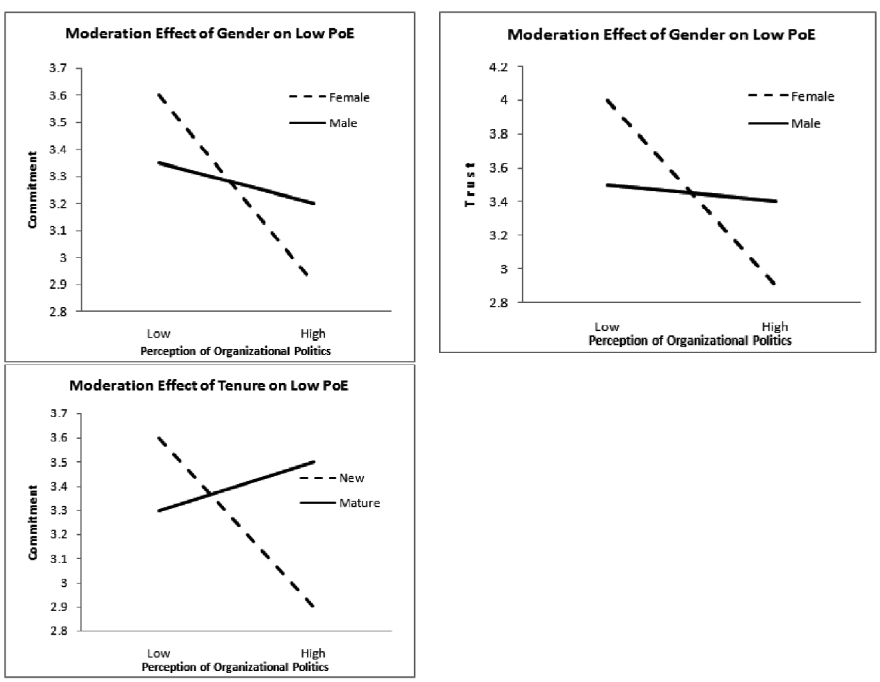
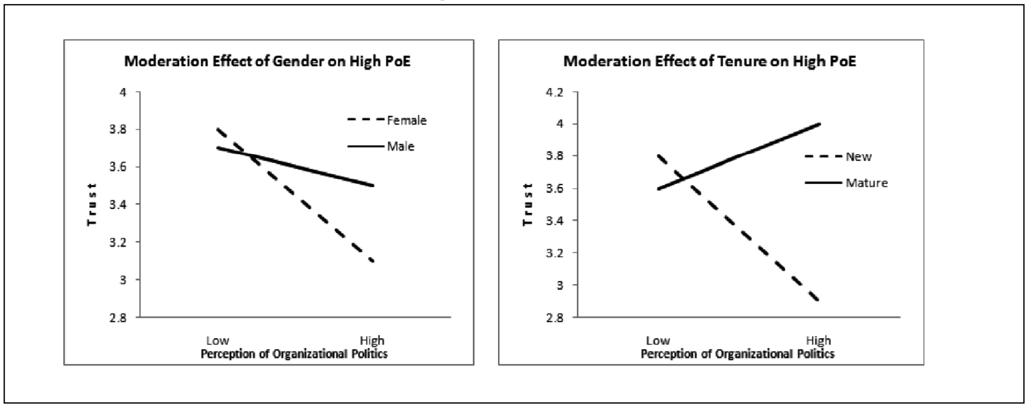


Figure 2 (Cont.)



demonstrate higher commitment with lower perceptions of equity, compared to male and mature employees. Female and junior employees also demonstrate higher trust with high perceptions of equity, than male and mature employees.

CONCLUSION

This study employed equity theory to enrich understanding of empirical practice/ relevance of the relationship between perception of organizational politics and commitment and trust. Employee gender and tenure were used to represent demographic characteristics moderating the POP-outcomes relationship. Second-order analysis indicated that various dimensions of POP and commitment can be respectively represented by a single factor of POP and commitment. The results of this investigation indicate that POP was negatively related to commitment and trust. Results were consistent with the findings of previous studies, e.g., Ferris *et al.* (2002), Poon (2006), Vigoda (2007), and Othman (2008). Although the perception of equity did not have significant moderating effects on the relationship between POP and outcome variables, employee gender and tenure were found to moderate the relationships between POP and commitment as well as trust.

The findings provided further explanation for the uniqueness of perception of equity. It supports previous findings in that employees' gender, tenure, and demographic characteristics have effects on their perceptions of equity (Kotabe *et al.*, 1992; and Tansky *et al.*, 1997). Male employees showed higher commitment and trust than females in the context of strong political behavior at work and low perceptions of equity. Tenure and male employees showed greater trust than female employees in the context of strong organizational politics and perceptions of equity. Tenure employees also showed greater commitment than junior employees in the context of strong political organization and low perceptions of equity. These findings explain the previous inverse opinion of Sanders and Schyns (2006) about the relevance of gender and commitment. Sanders and Schyns (2006) indicated that no answer could be given to the question, "Are women more committed to the organization than men?" Even though most studies have shared the tendency to focus on commitment as a characteristic of employees, the results have been inconclusive (Mayer *et al.*, 1995; and Meyer *et al.*, 2002). Thus, this finding clearly agrees with previous lack of explanation using equity motivation.

Previous researchers, including Mottaz (1988) and Gregersen and Black (1992), have proposed evidence of a positive association between tenure and commitment. Employee commitment to organization has been explained as a result of the organization's socialization process. The length of service in an organization is positively related to the level of internalization of organizational values, resulting in greater commitment on the part of members (Dick and Metcalfe, 2007). Therefore, previous studies have indicated that organizational commitment increases with tenure. In addition, the present research contributes to the explanation of other competitive behavior in the workplace.

THEORETICAL IMPLICATIONS

To enrich the accumulation of related knowledge and our understanding of empirical practices, Chen and Fang (2008) suggest that researchers should employ the theory of motivation. In natural organizational situations (Valle and Perewe, 2000), perceptions and interests within organizations (Miller *et al.*, 2008) interact with each other; hence scholars have indicated varied findings from behavioral investigations in the workplace.

The current study contributed to methodological rigor by applying the concept of motivation theory using appropriate measures. This study used the measurement of perception of equity to represent the theory of equity. Researchers must choose appropriate measures to represent the theoretical approach used to analyze certain conditions. Previous studies have used various approaches to measure their theoretical constructs. For example, Chen and Fang (2008) used the measurement of impression management reflected in expectancy theory, whereas Chen and Fang (2009) used moral intensity and judgment measurements representing a theory of planned behavior. Therefore, researchers have seemed to force certain measurements to predict a concept of motivation. Future researchers are encouraged to use and develop motivational measurement to reflect the motivation theory used, for example, cognitive, self-efficacy, or reinforcement theory of motivation.

MANAGERIAL IMPLICATIONS

The findings of the relationship between POP and outcomes imply that organization leaders need to overcome these negative effects (Chen and Fang, 2008). Perceptions of politics decrease with, and are tempered by age since anyone familiar with the realities of the way organizations operate may be less prone to cognitively process, evaluate, and interpret events as being political in nature (Ferris *et al.*, 1996; and Vigoda and Cohen, 2002). Tenured employees are more familiar with the organization, depend on it more, and accept it as a substantial part of their lives. As for education, highly educated employees are expected to invest more effort in search for jobs that better suit their personalities and attitudes; therefore, their expectations are more likely to be met and their perceptions of organizational politics will be lower than those of less educated employees. Permanent employees are usually those who have decided to stay with the organization for a long time. By providing them with permanency, the organization basically shows them that they are among its core employees; therefore, they are expected to show greater fit with the work environment and eventually have less perception of politics (Vigoda and Cohen, 2002). Accordingly, to neutralize a negative effect of POP, managers must pay attention to employee characteristics and develop various accurate and effective treatments (Martínez-Sánchez *et al.*, 2008). They must reduce the risk of employees' taking on opportunistic behaviors (Ganesan, 1994), pay attention to the intention of political behaviors, reduce job ambiguity, increase employee commitment and trust at work (Kacmar and Carlson, 1997; and Othman, 2008), and build a productive organizational culture and working system (Dan and Sophia, 2005). The current study supports the findings of Casaló *et al.* (2008), which suggest that a leader can foster trust and commitment toward various fair treatments to reduce the negative effects of political behavior.

Based on the equity perspective, this study found that female employees and junior employees show lower commitment and trust and thus need more attention when they encounter or experience political behavior in the workplace than male employees and mature employees. Zin (2006) indicated that responsibility for children was known to be a determinant of job commitment among females. In situations where both family and work roles are equally salient, however, the difficulty of balancing role obligations may precipitate into work-family conflict. These conflicts are predicted to be a form of stress and negatively affect organizational commitment. Hence, weak commitment of female employees might be influenced by family pressures. Researchers have found that male and female employees have different sensitivities, expressive behaviors, and motivational responses to job tasks (Lysonski and Gaidis, 1991; Whipple and Swords, 1992; Haswell *et al.*, 1999; and Bernardi and Guptil, 2008). Accordingly, leaders must be concerned about female employees, even if it appears to be discrimination against their male counterparts. This concern will be reflected in both pay and positions of females within the organization, because female employees place a particular value on ethical treatment within the workplace. Therefore, rules and policies should encompass procedural justice. This contention is supported by earlier studies that suggest that female employees place greater emphasis on procedural justice than male counterparts (Brammer *et al.*, 2007). Therefore, leaders and organizations should support female employees in having a commitment to work equal to that of male employees (Erickson and Roloff, 2007).

This study also shows that junior employees have weak commitment and trust, hence, Judge and Robins (2007) suggest that they adjust their behavior so as to adapt to their new work environment, even though it may not be easy. Political behavior in the workplace has become a reality largely because of the way organizations operate. Tenured employees are more familiar with the organization, depend on it more, and accept it as a substantial part of their lives. Therefore, they are expected to show a greater fit with the work environment and eventually have less perception of politics

(Vigoda and Cohen, 2002). Thus, junior employees must increase their cohesiveness within the organization (Al-Rawi, 2008).

LIMITATIONS AND FUTURE RESEARCH DIRECTION

This study is subject to several limitations. POP has a negative effect on outcome variables. These negative effects of POP might be neutralized by mediators, such as age, education and employee status (Vigoda and Cohen, 2002). Thus, further research is needed to investigate the mediating effects of this model both at individual and organizational intervention levels. The negative effects of POP might also be affected by the single dimension of POP per se. Reinvestigation and exploratory analysis to improve the measurement of POP can possibly produce useful positive POP dimension effects such as general political behavior, an attitude of going along to get ahead, and pay and promotion policies (Cropanzano *et al*., 1997; Kacmar and Carlson, 1997; and Kacmar and Baron, 1999).

Although this study investigated the uniqueness of perceptions of equity, it was delimited within one country and culture. Thus, future studies are suggested to investigate the difference in effect from a cultural perspective, such as Hofstede's (Judge and Robins, 2007) approach. An investigation in different countries would provide further evidence as to why the effects of POP differ. Investigation of demographic characteristics was also limited. Individual attachment was complicated. Employees were not from the same background. Previous research has indicated the separate effects of employee characteristics, such as age, education, and status on perceptions of politics (Ferris *et al.*, 1996; and Vigoda and Cohen, 2002). It would be possible to investigate various combinations of interacting variables of employees tenure and gender and its relation to POP, such as junior-female employee or mature-male employees and so on (Dick and Metcalfe, 2007; and Burke *et al*., 2008). In order to overcome the limitations of phenomena on POP, future studies are suggested to incorporate all the stakeholders of organization.

Finally, although these results support most of the hypotheses, additional research should be conducted to measure other relevant outcome variables and explore different work environments. Further research is also suggested to investigate the different approaches of motivation theory, and constructs in different fields of management. Longitudinal studies might provide better accounts of the dynamic behavioral effect of POP. To confirm the causal relationship of this model, experimental or quasi-experimental research design is needed to help rule out potential alternative explanations for these results.

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APPENDIX

Items of POP Questionnaire

1. My co-workers help themselves, not others.
2. It is best not to rock the boat in this organization.
3. Sometimes it is easier to remain quiet than to fight the system.
4. It is safer to think what you are told than to make up your own mind.
5. There are "cliques" or "in-group" that hinders the effectiveness around here.
6. When it comes to pay raise and promotion decisions, policies are irrelevant.
7. Telling others what they want to hear is sometimes better than telling the truth.
8. When you need help at work, you can always rely on a co-worker to lend a hand.
9. People in this organization attempt to build themselves up by tearing others down.
10. There has always been an influential group in this department that no one ever crosses.
11. Agreeing with powerful people others is the best alternative in this organization.
12. Employees are encouraged to speak out frankly even when they are critical of well-established ideas.
13. When my supervisor communicates with me, it is to make himself/herself look better, not to help me.
14. Promotions around here are not valued much because how they are determined is so political.
15. None of the raises I have received are consistent with the policies on how raises should be determined.
16. The stated pay and promotion policies have nothing to do with how pay rises and promotions are determined.
17. There is no place for yes-men around here; good ideas are desired even if it means disagreeing with superiors
18. Since I have worked in this department, I have never seen the pay and promotion policies applied politically.
19. I can't remember when a person received a pay increase or promotion that was inconsistent with the published policies.

APPENDIX (CONT.)

20. The rules and policies concerning promotion and pay are fair, and it is how supervisors carry out the policies that are unfair and self-serving.
21. People in this organization often use the selection system to hire only people that can help them in their future or who see things the way they do.
22. Managers in this organization often use the selection system to hire only people that can help them in their future or who see things the way they do.
23. I have seen people deliberately distort information requested by others for purposes of personal gain, either by withholding it or by selectively reporting it.
24. If a co-worker offers to lend some assistance, it is because they expect to get something out of it (e.g., makes them look good, you woe them a favor now, etc.), not because they really care.
25. Whereas a lot of what my supervisor does around here (e.g., communicates and gives feedback, etc.) appears to be directed at helping employees, it is an actually intended to protect himself/herself.
26. The performance appraisal/ratings people receive from their supervisors reflect more of the supervisors 'own agenda' (e.g., likes and dislikes, giving high or low ratings to make themselves look good, etc.), than the actual performance of employee.

Items of Perceptions of Equity Questionnaire

1. I work too hard considering my outcomes
2. I give a great deal of time and attention to the organization, but do not feel appreciated
3. I invest more in my job than I receive in return
4. The rewards I receive are not proportional to my investments
5. I put more energy into my job than it is worth
6. I feel unfairly treated in my job.

Items of Trust Questionnaire

1. I feel quite confident that my manager will always try to treat me fairly.
2. My manager would never try to gain an advantage by deceiving workers
3. I have complete faith in the integrity of manager.
4. I feel a strong loyalty to manager.
5. I would support the manager in almost any emergency.
6. I have a divided sense of loyalty toward my manager.

APPENDIX (CONT.)

Items of Commitment Questionnaire

1. I feel "emotionally attached" to (company).
2. Company has a great deal of personal meaning for me.
3. I feel a strong sense of belonging to the company.
4. I really feel as if company's problems are my own.
5. I would be happy to spend the rest of my career with the company.
6. I would feel guilty if I left the company.
7. Even if it were to my advantage, I do not feel it would be right to leave the company.
8. I feel obligation to remain (company)
9. I do not have many options to consider leaving (company).
10. I owe a great deal to the company.
11. Right now, staying with the company is matter of necessity.
12. One of the negative consequences (company) would be difficulty of finding a comparable position elsewhere.

When Work Intersects Family: A Qualitative Exploration of the Experiences of Dual Earner Couples in India

Parveen Kalliath, Thomas Kalliath** and Varsha Singh****

Achieving good balance between work and family commitments is a growing concern for contemporary employees and organizations with mounting evidence linking work-family conflict to reduced health and well-being. As India continues to grow as a global economic power, issues concerning work-family conflict become particularly important. Extant research in this field has occurred primarily in western countries using quantitative methods and individual data. The objective of the present study is to investigate work-family conflict and coping experiences of a sample of employees and their partners, with the main participant belonging to one of the three occupational groups: IT, public service and social welfare service. Three main themes emerged: (a) widespread experience of work-family conflict; (b) religious coping as a mechanism for dealing with work-related stress; and (c) colleague and family support as mechanisms for coping. We discuss the implications of the findings for organizations, and specify some strategies for dealing with work-family conflict at individual, family and community levels.

INTRODUCTION

The last two decades have witnessed a prolific increase in research investigating work-family conflict. Substantial concerns have been expressed by social commentators and researchers over the extent to which work and family roles have become increasingly intertwined (Grzywacz and Marks, 2000; Frone, 2003; and O'Driscoll *et al.*, 2004). Many possible reasons for this escalation in work-family conflict have been posited including more dual career couples, greater participation of women in the workforce, changing conditions of employment, family-role expectations, and increasing pervasiveness of work in people's lives (Poelmans, 2001; Jones *et al.*, 2006; and Kossek and Distelberg, 2009). These reasons have increased the likelihood that

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employees of both genders have substantial household responsibilities in addition to their work responsibilities (Allen *et al.*, 2000). Brady (2002) noted that technological revolution which was supposed to free people from the office has in practice eroded the boundaries between work and leisure, placing greater expectation on individuals to work anytime, anywhere. The resulting imbalance between work and family has consequences for the individual, family, organizations and the society at large.

Work-family research by far has been carried out in the western world with little emphasis on developing countries like India. In India, the issue of work-family conflict can be even more concerning. India has undergone substantial economic growth since its independence in 1947. The changing economic and social demographics over the years have witnessed growing numbers of dual earner families and more women entering the workforce. According to the Industrial Relations (2005) statistics, although the workforce participation of Indian women has always been lower than men, there has been a significant increase in the participation rate of women in the workforce from 19.7% in 1981 to 26.7% in 2001. In March 2004, women constituted 19% of the total workforce in India. While the majority of women work in rural areas, during the period 2004-2005, the employment of women increased by 1.1% in the public sector by 2.5% in the private sector totaling to 49.34 lakh employed women.

Despite the increasing workforce participation of women, India remains largely a hierarchical male-dominated society. The cultural traditions and family role-structures have not changed significantly and women on average still bear responsibilities for daily household chores, such as cooking, shopping, providing care for children and aged family members (Aziz, 2004). Whilst it can be argued that the increasing participation of women in the workforce is a promising development, juggling work and family lives can become burdensome if meaningful supports are not available to them for managing their domestic unpaid responsibilities alongside paid work (Noor, 2004; and Voydanoff, 2005). Thus, attempting to balance work and family amidst pressures emanating from work and family roles have been associated with increased health risks, decreased family and job satisfaction and increased psychological strain (Grzywacz and Bass, 2003; Noor, 2004; and Aryee *et al.*, 2005). The primary focus of the present study is therefore, to explore the work-family conflict experiences of dual earner couples from three occupational groups in India: information technology, public service and social-welfare service. We begin with a discussion of the term work-family conflict followed by a discussion of the theoretical perspectives which have guided research in work-family conflict, and the consequences of work-family conflict.

DEFINING WORK-FAMILY CONFLICT

The most widely cited definition of work-family conflict in the literature is by Greenhaus and Beutell (1985) as "a form of inter-role conflict in which the role pressures from work and family domains are mutually incompatible in some respect, that is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role" (p. 77). In their definition of work-family conflict, Greenhaus and Beutell (1985) conceptualized three forms of work-family conflict: time-based conflict, strain-based conflict and behavior-based conflict. Time-based conflict builds on the utilitarian perspectives (Lobel, 1991) which posit that time is a scarce resource and therefore when an individual devotes time to the demands of one domain (work or family) he/she consumes the time that may be needed to meet the demands of the other domain (work or family). For example, a person who may be required to stay late in the workplace to meet a work deadline may be unavailable to attend to urgent matters at home. Strain-based conflict occurs when strain, dissatisfaction, anxiety and fatigue from one domain (work or family) makes it difficult for the individual to meet the demands of the other domain (work or family). For example, a person may have stayed up late at night attending to a sick child at home and may arrive at work feeling fatigued and anxious. *Behavior-based conflict* occurs when certain behaviors which an individual uses and are appropriate in one domain (work or family) are incompatible with the behaviors that are desired in the other domain (work or family). For example, as a manager at work a person may be required to be task-driven, ambitious and goal-oriented. Such behaviors may be incongruent with behaviors that may be desired at home, for example care, nurture, support and accommodation. These opposing behaviors may create tension between work and family, if used inappropriately.

Work-family conflict is conceived as bi-directional, that is, work can interfere with family-life contributing to Work→Family Conflict (WFC), and similarly family can interfere with work-life contributing to Family→Work Conflict (FWC) (Frone, 2003; and Grzywacz and Bass, 2003).

THEORETICAL PERSPECTIVES IN WORK-FAMILY CONFLICT

To date, work-family research has confined itself to a few dominant psychological theories. Role theory, which was derived from an early work on organizational stress by Kahn *et al*. (1964) has largely influenced the understanding of work-family conflict. The changing nature of work over the years with more women entering the workforce prompted the development of new theories which considered the linkages between 'work' and 'family'. More recently, work-family researchers have begun to explore other theoretical paradigms like ecological systems theory (Bronfenbrenner, 1979), conservation of resource theory (Hobfoll, 1989), and spillover theory (Staines, 1980) for understanding the linkages between work and family. Poelmans (2001) referred to these as 'interface theories' (p. 3) because what happens in one domain (e.g., family) can have a causal impact on what happens in the other domain (e.g., work) (Frone, 2003). They adopt an integrative and dynamic view of work and family which propose a reciprocal relationship between work and family domains such that they mutually influence one another.

ROLE-STRAIN THEORY

Goode (1960) postulates that societal structures are made up of several roles and individuals cannot satisfy the demands of all roles. People must therefore continuously bargain and make decisions on roles they must satisfy, thereby attempting to adjust to the demands placed on them by multiple roles. Multiple roles contribute to strain and other pathology because of their individual demands in terms of time, obligations and performance (Goode, 1960). Based on the tenets of this theory, researchers have postulated that role strain results in a variety of negative consequences for the individual, in both the workplace and the family (Greenhaus and Beutell, 1985; Williams and Alliger, 1994; and Grzywacz and Marks, 2000). Role-strain theory has been criticized by the expansionist views of scholars like Marks (1977) and Sieber (1974) who advocate that role accumulation has in fact many benefits to offer the individual, such as knowledge, skills, sense of fulfillment and purpose, and it does not necessarily contribute to strain and pathology.

SPILLOVER THEORY

Staines (1980) postulates that despite the physical and temporal boundaries between work and family, emotions and behaviors in one sphere carry over to the other (Clark, 2000). Spillover can be positive when skills, knowledge, experiences, values and attitudes that are acquired in one domain (work or home) can be put to use in other domain (work or home). Similarly, negative experiences, attitudes, behaviors of one domain can spillover to the other. Spillover theory has been influential in the understanding of the dynamics in work-family relationships. For example, an early research by Crouter (1984), examined the extent to which an employee's family life influenced his/her work-life and found that women with young children (aged 12 and under) were more inclined to perceive the impact of family upon their work as negative. This perception was precipitated by the extent of their family responsibilities which resulted in their being absent, tardy, inattentive, inefficient, or unable to accept new responsibilities at work. The pattern seemed to diminish for women with older children, suggesting that family-to-work influences are closely linked to stages of the family life cycle and the changing nature of the maternal role. Similarly, Rothbard's (2001) study of university workers in the USA found that the effect in response to one role, be it positive or negative, influenced the engagement and performance of the participants in other roles. Other work-family research has also found support that emotions, experiences, and resources from one domain can spillover and have an impact on performance in other roles (Grzywacz and Marks, 2000; Voydanoff, 2004; and Doumas *et al.*, 2008).

THE CONSERVATION OF RESOURCE THEORY

Hobfoll (1989) provides a useful basis for understanding the relationship between work-family conflict and resources that are available to an individual in their work and family domains. This theory posits that individuals tend to build and conserve resources which they may perceive as necessary for engaging with the environment. Resources are defined "as those objects, personal characteristics, conditions or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions or energies" (Hobfoll, 1989, p. 516). Resources, such as children, family, marriage, health, financial security, self-esteem, energies and those that the individual considers to be essential to their survival are considered as primary resources. Stress occurs when circumstances in the environment threatens the loss of resources or an actual loss or depletion of resources or when the resources invested fail to generate expected gains (Hobfoll, 2002).

The work-family interface theories discussed above provide a useful framework for understanding the dynamics that exist between work and family and helps in explaining the consequences associated with work-family conflict. The consequences of work-family conflict for work and family environment have been extensively researched in the international literature but few studies have considered these in the Indian context. In the following section, we present the key findings of interest to the present study.

CONSEQUENCES OF WORK-FAMILY CONFLICT

Reviews of the literature on work-family conflict carried out primarily in the western world provide growing evidence for the possible negative consequences of work-family conflict. These negative consequences include psychological strain (Frone, 2003; and Grzywacz and Bass, 2003), decreased job satisfaction (Frye and Breaugh, 2004; Aryee *et al.*, 2005; and Bass *et al.*, 2008), decreased family satisfaction (Aryee *et al.*, 1999; and Carlson and Kacmar, 2000), and reduced marital satisfaction (Kim and Ling, 2001; and Judge *et al.*, 2006). Although most studies cited have been conducted in western countries, linkages between work and family and its consequent impact on organizational performance and family functioning are equally applicable in India in the current environment of rapid economic growth. Organizational performance and family functioning are important markers of societal well-being (Edwards and Rothbard, 2000) making the investigation of the prevalence of work-family conflict in the current Indian context particularly important.

Studies with various occupational groups demonstrate that the consequences of work-family conflict can occur within its domain as well as across domains (Carlson and Kacmar, 2000; Boles *et al.*, 2001; Noor, 2002; and Bass *et al.*, 2008). For example, work-family conflict has been associated with reduced job satisfaction (within domain effects) and reduced family satisfaction (across domain effects). Allen *et al.*'s (2000) meta-analysis of 37 studies (N = 12,624) which examined the relationship between work-family conflict and job satisfaction with varied sample groups have reported a negative relationship between the two with a weighted mean correlation coefficient of –0.24. Similarly, Kossek and Ozeki's (1998) meta-analysis of 19 samples (N = 5,499) confirmed that WFC had a significant negative relationship with job satisfaction with weighted mean correlation coefficients of –0.23.

Fewer studies have investigated the relationship between work-family conflict and family satisfaction. Allen *et al.*'s (2000) meta-analysis of eight studies with varied sample groups (N = 2,053) reported a significant negative association between WFC and family satisfaction with a weighted mean correlation coefficient of –0.17. Similarly, Ford *et al.*'s (2007) meta-analysis (N = 8,301) reported a significant relationship between work domain stressors and family satisfaction (β = –0.15).

The association between work-family conflict and psychological strain has also been widely investigated. Empirical evidence confirms that higher levels of work-family conflict contribute to increased psychological strain (Major *et al.*, 2002; Noor, 2004; Franche *et al.*, 2006; and Gareis *et al.*, 2009). In a meta-analysis of 14 cross-sectional studies (N = 6,246), Allen *et al.* (2000) reported that all but one study found a positive association between work-family conflict and general psychological strain with a weighted mean correlation coefficient of 0.29. Similarly, in a recent study by Gareis *et al.* (2009) reported a significant association between increased work-family conflict and decline in mental health outcomes which included depression, anxiety and low mood among the participants.

Other studies in the USA have also reported significant findings. For example, in a large study employing a nationally representative sample of the adult labor force (N = 2,871), Grzywacz *et al.* (2002) investigated work-family spillover and daily reports of work and family stress by the respondents. This investigation employed multiple methods of data collection which included a survey, telephone interviews and a semi-structured daily inventory of stressful events experienced by the participants. The study reported that negative spillover from work to family was a robust predictor of stress experienced in the family domain. This negative spillover was noted to be significantly higher for participants between the ages of 24 and 44 years than those in the higher age group suggesting that perhaps work-family conflict tends to decline in later years.

This review points to the potential negative consequences of work-family conflict on work, family and stress-related outcomes. However, a recognized limitation of the work-family conflict literature is the lack of information about this phenomenon within non-western national and cultural contexts (Spector *et al.*, 2005). A second limitation is the dominance of quantitative methodology and self-report data to inform research in this arena (Poelmans, 2001). Some scholars have questioned the validity of this stream of research when the work-family conflict phenomenon occurs primarily within couple relationships (Poelmans, 2001; and Casper *et al.*, 2007). The present study will focus on qualitative explorations of personal stories and accounts of the experiences of work-family conflict among dual earner couples in India. With this focus, the present study aims at (a) to explore the personal experiences of dual earner couples from three diverse occupational groups in managing their work and family responsibilities; and (b) to explore the coping strategies adopted by these couples in managing their work and family roles.

RESEARCH DESIGN

This research was supported by a grant received from the Australian National University in Canberra, Australia by the second author. The study was located in the Indian Institute of Management, Bangalore, India. Bangalore is an appropriate city for the study for reasons that more recently, it has become the hub of rapid economic growth which attracts a vibrant migrant population from across India. However, despite its economic growth and development, Bangalore, like many other cities in India, largely conforms to traditional beliefs in respect to work and family role characterization, with women continuing to bear responsibility for family-related tasks despite taking on additional responsibilities of paid work (Aziz, 2004).

METHODOLOGY

A qualitative methodology involving in-depth interviews using a semi-structured interview guide was chosen for the collection of data. This methodology allowed the researchers to investigate the area of study in greater depth. It enabled the researchers to explore the personal stories and lived experiences of the participants in a culturally sensitive manner (Sarantakos, 2005).

SAMPLE

The research sample consisted of 21 dual-earner couples, with seven couples each from one of the three occupational groups: Information Technology (IT), public service and social-welfare service. These occupational groups were chosen because of their diversity in the nature of work pressures, work expectations and remuneration received. Dual-earner couples were specifically chosen to allow for the exploration of work-family conflict in situations where both partners were in employment and managing the demands from both work and family domains. The participants were chosen through snow-ball sampling method and personal contacts of the research assistants involved in the study. The criterion for participation in the study was for both partners to be in full-time employment. The main participants from the IT and public service occupational groups included four males and three females in each group. The main participants in the social-welfare service occupation included four females and three males. Table 1 presents demographic information on the sample.

Table 1: Demographic Profile of the Sample

Employment Category	Age Range	Years of Marriage	Number of Children	Monthly Income
IT	27-36	1-10	0-1	₹46,000-2,10,000
Public Service	37-47	8-17	1-2	₹19,000-50,000
Social Service	28-52	3-27	0-2	₹7,000-35,000

As seen in Table 1, the participants from the IT sector were younger in age (age range 27-36 years) than those in the public and social-welfare sectors. The age range of participants in the public service was 37-47 years, and in the social-welfare service, it was 28-52 years. The participants from the IT sector earned a much higher monthly income (range from ₹46,000-2,10,000) than those in the public service (range from ₹19,000-50,000) and the social-welfare service (range from ₹7,000-35,000). The numbers of dependent children were lower for couples in the IT sector (0-1), while for the public service and social-welfare service it ranged from 0-2 children.

METHOD

In-depth interviews were conducted using a semi-structured interview guide. The interviews were aimed to capture personal stories and lived experiences of the participants and their partners in managing work and family responsibilities, and the strategies adopted by them in coping with these dual responsibilities. The interviews were approximately one hour long. To ensure cultural sensitivity, the male participants were interviewed by a male interviewer and the female participants were interviewed by a female interviewer. Each couple partner was interviewed individually but at the same time by separate interviewers to allow objectivity and avoidance of any information being shared between the couple. The couples were paid each ₹1,000 as an incentive for their time and participation. The location of the interview was adjusted according to the convenience of the participants. While some participants were interviewed in an office room at the Indian Institute of Management, others were interviewed in their own homes. A pilot test was carried out with two couples which helped the researcher to refine the interview guide and their interviewing skills.

DATA ANALYSIS

The data were analyzed using thematic analysis which involved the following steps identified by Braun and Clarke (2006). In the first step, the researchers immersed themselves in the data by reading and comprehending the responses and making comments in the margin (Miles and Huberman, 1994). This process enabled greater familiarity with the information contained in the data.

The second step involved developing a manageable coding scheme by organizing the data into meaningful groups. This involved breaking up the data and analyzing its core content to determine what was significant in the data, and identifying the specific characteristics of the data (Patton, 2002; and Richards and Morse, 2007). A visual representation of colors was used for this purpose. Short-hand codes (labels) were written directly on the relevant data passages which had been color coded.

The third step involved analyzing the codes and considering what patterns existed and how different codes combined to form a theme. This classification was judged by using two criteria suggested by Patton (2002), that is, internal homogeneity and external homogeneity. Internal homogeneity refers to the extent to which the data that belong to a certain category hold together in a meaningful way. External homogeneity refers to the extent to which differences among categories and themes are clear (Patton, 2002). This step helped in producing a framework for organizing and describing the data.

The fourth phase involved reviewing the themes to see if there was sufficient data to support it. The final phase involved defining and naming the themes (Braun and Clarke, 2006).

RESULTS

WORK-FAMILY CONFLICT

Regardless of the occupational group, all the main participants and their partners reported that they experienced work-family conflict, and in particular, time-based conflict and strain-based conflict. The experiences of work→family conflict were more prevalent for the male participants, while the experiences of family→work conflict were more prevalent among the female participants. Table 2 provides evidence of

Table 2: Evidence of Work-Family Conflict: Themes and Quotes from Participants

Theme	Gender	Sector	Exemplary Quotes
Time pressures	Male	Social Welfare	"I work late and travel a lot between my office and residence, so the amount of time that I spent with my family has been drastically diminishing."
	Male	IT	"I have many tensions at work which makes me feel bad and depressed some time. I carry over these tensions to home also and I can't be that calm."
	Male	IT	"I actually took broadband connection at home, so that I can take work home and can work late."
	Male	Public Service	"When there is work, you are expected to work more. You cannot leave your work in the middle. I have to keep time-lines and that is expected from me so I will work very late if needed."

Table 2 (Cont.)

Theme	Gender	Sector	Exemplary Quotes
Inability to spend time with children'	Female	Social-Welfare	"What my mother has done for me, I have not given to my child, because my mother fully engaged and spent more time with us."
	Female	Public Service	"Children are a precious thing that God has given. It is a woman's responsibility to care them, because men cannot bear children."
Pre-occupation at work with family-related matters.	Female	Public Service	"Sometimes I cannot focus at work when there is pressure at home, or if my child is sick, or if the servant has not come."
Inability to spend time with family	Male	Social Welfare	"I can't give time to my family, that's the main problem. My wife always fights with me because I am not available in the family."
	Male	IT	"Sometimes I am not able to come home because I have deadlines to meet at work. I cannot simply leave my work and come home. It is just not possible to do."
	Female	IT	"I feel mentally stressed from work and need rest. There is so much to do at work and at home that we can't spend time together."
	Male	Public Sector	"If I am working then I am not able to concentrate much at home. This is one area we are lacking and we both feel it."
Inability to spend time as a couple	Male	Public Sector	"If I am working then I am not able to concentrate much at home. This is one area we are lacking and we both feel it."
Importance of work	Male	IT	"Yeah I think career is very important to each one of us and we want to give little more importance to career."
Importance of family	Female	Social Welfare	"Compared to job life, my family life is very important to me and I would like to spend more time with my family."

work-family conflict experienced by the participants and main themes identified in the data along with supporting quotes.

As seen in Table 2, the dominant theme for the male participants in all the three occupational groups was 'time pressures' at work which spilled over to the family domain and impacted on time spent with their children, time spent as a couple and time spent as a family. Being preoccupied with work-related matters at home was a common pattern observed among the male participants regardless of the occupational group. Concerns regarding time pressures at work, particularly adhering to strict time-lines reverberated throughout the data. What was also evident in the data is that work-family conflict impacted on couple relationships as well.

For many female participants, it was important not allow work to interfere with their family life and the dominant theme for the female participants was their 'inability to spend time with children'. Women reported experiencing more family → work conflict which meant that they were often preoccupied with family-related matters which interfered with their work. This was particularly evident during times of illness in the family, or if there was family dispute, or matters which concerned their children. Inability to spend time as a family was a concern expressed by all couples regardless of the occupational group.

It may be noteworthy that more men than women considered their paid work to be deserving of their time and effort much more than their family. For the female participants, work was important but so was family, and they considered their family to be deserving of time and attention.

COPING STRATEGIES

The participants were asked about strategies used by them in coping with their work and family demands. These following themes emerged in response to the question: belief in God, attitude to life, strength obtained from helping others and support from colleagues and family. Table 3 provides information on these themes and supporting quotes. Belief in God was identified as a mechanism for coping by most participants but was more dominant among those working in the social-welfare sector. General attitude to life and for some of the participants in the social-welfare sector in particular, strength gained from helping others was an important coping mechanism. Support received from family members was also identified as important in coping with work and family demands.

Many female participants reported that they received help from their extended family members including parents and parents-in-law with child care, assistance in times of emergency, or just peace of mind in knowing that their family would be available during times of need.

Interestingly, more men reported receiving support from their spouse than did women. This was supported in the following comment made by the spouse of a male participant:

"My work is to my family but 'his' (bolded for emphasis) work is for society."

Table 3: Coping with Work and Family Demands: Themes and Quotes from Participants

Theme	Gender	Sector	Exemplary Quotes
Belief in God	Female	Social Welfare	"Belief in God is one of the major parts in coping with stress…like when I come home we pray together. If anything comes up we settle it immediately, we don't keep it for the next week. We talk it over, and then pray over it and then reconcile."
	Male	Social Welfare	"If you believe in God and that things which are going to happen in your life will happen, and if you work hard then there is no need to stress."
	Female	Public Service	"You should not worry but we should have full faith in God, He will help us."
General attitude to life	Male	IT	"We should always think positive that's very important. When we think positive then we can grow and then our life will be happy."
	Male	Social Welfare	"See sometimes what we think may not happen, but at the same time we must not be disgusted or you should not feel bad because what is happening is good for the well-being of our people and for my family."
Strength gained from helping others	Female	Social Welfare	"We help people in the community who are all very poor and have problems. When we reach out, people are very happy and I can see it in their faces. This makes me very happy to help them."
	Male	Social Welfare	"At the end of the day when you come back home, relaxed and say I have done a good job today, I have helped somebody, and that's the most important thing for a person to be happy."
Family support	Female	IT	"My mother lives closeby and I know she will be there to help me if I need it."

Table 3 (Cont.)

Theme	Gender	Sector	Exemplary Quotes
Spouse support	Male	Social Welfare	"I have an understanding wife who understands me, and we both share a similar vision of serving people".
	Male	Public Service	"We are together and we both know what is happening, what is life, even through difficulties we are together".
Support from colleagues	Female	Public Service	"I have a nice team, we are like a family, and we share whatever happens at home and at work".
	Male	Social Welfare	"We have our team meeting and we allow some time for sharing our personal concerns which is very helpful".

Support from colleagues was also identified as an important mechanism of coping. Sharing concerns with colleagues whether these were work or family-related concerns was considered to be important by most participants.

DISCUSSION

Accumulating evidence in the work-family literature allows for unequivocal assertion that work-family conflict has detrimental consequences on the psychological well-being of individuals and on their levels of job satisfaction and family satisfaction. However, as alluded to earlier, the majority of the studies are based on North American samples using quantitative designs which have largely tapped the experiences of individuals rather than couples. The present study aimed at fill this research gap by investigating the work-family conflict experiences of couples across diverse occupational groups in India. The following section provides a discussion of the key findings in the present study.

EXPERIENCES OF WORK-FAMILY CONFLICT

The centrality of family as an institution in the Indian culture is an important contextual note in this research (Carson and Chowdhury, 2000). The family-role structures and larger societal beliefs within this society can generate gender-based social pressures whereby men are expected to excel in their career and for women to be a good mother, a good wife and a good homemaker even if she is working in full-time employment. These larger societal beliefs on gender-role responsibilities associate 'outside paid-work' with men and 'unpaid family-work' with women. Therefore, it is acceptable for men to give priority to paid work at the expense of their family and for women to give priority to their family over their paid work. A father's contribution to raising a family can be limited to general oversight of the needs of their children which is frequently negotiated with the mother. The findings in the present study that the male participants regardless of the occupational group reported experiencing more workàfamily conflict is consistent with the above argument. Specific work cultures can also influence ways in which fathers can be involved in family life (Christiansen and Palkovitz, 2001). For example, those employed in occupations which enforce stringent work deadlines can mean that these employees work longer hours and even carry over work at home. This was evident in a statement by a male participant from the IT sector, who reported bringing work home often to enable meeting work deadlines. Thus, while more men than women report experiencing work→family conflict, the larger societal culture, values and beliefs where men may not be expected to respond to family needs in similar ways to women, may rarely recognize the presence of work-family conflict among women and the need to resolve it (Daly *et al.*, 2008).

There is considerable empirical evidence in the literature to indicate that in dual earner homes, women are more likely than men to take responsibility for unpaid work in the family, such as providing care for children and family members who may be disabled or aged, and undertaking other household tasks, such as cooking (Daly *et al.*, 2008). Hence, the findings in the present study that the female participants reported experiencing more family→work conflict are consistent with the literature. The traditional family role structures, like in India, which perceive women to be central to parenting roles, can confine men to the periphery of parental role contribution. Daly *et al.* (2008) argued that it may be possible that women themselves may be unwilling to relegate some of the parenting/family responsibilities to men considering them to be not as competent in carry out parental responsibilities.

FAMILY AND COLLEAGUE SUPPORT

If the working woman is seen to be ambitious about her career, she stands the risk of being blamed for neglecting her primary role responsibility of raising a family. Women are faced with the burden of commitment to their work roles while simultaneously giving priority to their family role responsibilities. It was evident in the comments made by male and female participants in the present study that spousal support played an important role in providing a sense of security and stability in the home, and in reducing workàfamily conflict for women. In a study assessing the well-being of married working women, Rao *et al.* (2003) reported that the availability of spousal support was a significant predictor of women's well-being which was an underlying theme in the present study. Rao *et al.*'s study reported that the female participants in their study would not have been able to continue being employed after marriage had there been no support available to them from their spouse. Similar findings on the role of spousal support in reducing work-family conflict were confirmed by Rajadhyaksha and Bhatnagar (2000). Ramu (1987) observed in his study that men in dual-earner families in India enjoyed the economic benefits of their wives' employment, along with the public image of being benevolent, liberated men who permitted their wives to work outside the home.

RELIGIOUS COPING

An important finding in the present study was the widespread use of religious coping among Indian couples in dealing with stressful situations at work and in the family. Both male and female participants reported relying on their faith in God for dealing with adverse life circumstances. This finding is in concordance with a meta-analysis investigating White/European-American, Black/African-American and other ethnic samples that show religion as the single most important influence in their lives. In a recent meta-analysis involving 49 studies (N = 13,107) which investigated the influence of religious coping in psychological adjustment to stress (Ano and Vasconcelles, 2005). These scholars found that 72% of those surveyed identified religion as the single most important influence in their lives. The declared religious affiliations of individuals in these samples included Protestant (57%), Catholic (13%), Judaism, Buddhism and Islam (2%). The meta-analysis showed that individuals who used positive religious coping strategies experienced less depression, anxiety and distress.

Pargament *et al.* (2000) distinguished between positive religious coping strategies and negative religious coping strategies. Positive religious coping strategies included forgiveness, helping, seeking support from clergy/members, collaborative religious sharing, religious focus, active religious surrender, benevolent religious reappraisal, spiritual connection and marking religious boundaries. Negative strategies included spiritual discontent, demonic reappraisal, passive religious deferral, interpersonal religious discontent, reappraisal of God's powers and pleading for direct intercession. Although our interview data indicated that the couples used positive religious coping strategies to deal with life stressors; further investigation will be useful to examine, if the use of positive coping strategies resulted in better mental health outcomes.

IMPLICATIONS FOR ORGANIZATIONS

The findings of the present study provide evidence that the employees and their spouses experienced work-family conflict which had a negative impact on their psychological health and their job and family satisfaction. Work-family conflict and its detrimental impact on work, family and psychological well-being of employees must be recognized and addressed in the context of the larger social, economic, labor market and cultural environment, in which it occurs (Bailyn, 2006). Literature that has examined the impact of family-friendly initiatives on levels of work-family stress, work attitudes and job performance indicate that family-friendly work environments can reduce work-family conflict, promote positive work attitudes and enhance job satisfaction (Glass and Finley, 2002; and Greenhaus and Foley, 2007).

Some scholars argue that the existence of family-friendly policies alone is not a sufficient condition for reducing work-family conflict, rather the employees' perception of the usefulness of such policies and their satisfaction with the effectiveness of these policies is important in ameliorating work-family conflict (Rosin and Korabik, 2001; and Jahn *et al*., 2003). To achieve this, the culture of an organization which promotes the value of work-family balance with no perceived negative consequences for those who avail of these policies is vital (Poelmans, 2008). Employees can be reluctant to avail of work-family policies and programs if the work culture through actions of top managers promote workaholic hours and employees bragging about working long hours, thus inadvertently reinforcing workaholism (Andreassi and Thompson, 2004). Furthermore, certain prevalent views within the society and work organizations that may consider those employees experiencing work-family conflict to be 'less competent' than those who do not must be challenged (Lero and Lewis, 2008).

Other organizational factors, such as work-based support from colleagues and supervisor are important in buffering the negative effects of work-related stressors on levels of psychological strain. This was evident in the findings of the present study where support from work colleagues was identified to be imperative in sharing work and family related concerns. A work culture which fosters supportive work relationships among employees is likely to reduce work-family conflict in organizations (Poelmans *et al*., 2008). We discuss next strategies for addressing work-family conflict at individual, family and community levels.

STRATEGIES FOR INDIVIDUALS, FAMILIES AND COMMUNITIES

In the midst of daily pressures experienced by workers, Spreitzer (1995) suggests that it is vital for workers to empower themselves by developing: (a) a sense of meaning in the work they do by developing a level of congruence between the tasks and one's values, attitudes, and behaviors (Patton *et al*., 2003); (b) a sense of competence in the tasks they engage in, through the attainment of various cognitive, physical and social skills and a belief in one's ability to perform a given task (Bandura, 1986); (c) sense of self-determination through autonomy in initiating and regulating one's own actions (Deci *et al*., 1989); and (d) a sense of making an impact through their daily work and influencing important outcomes in their organization (Ashforth, 1989).

Voydanoff (2007) argues that the responsibility for balancing work and family lives rests not only with the individual but also with families and communities. Empirical evidence suggests that work colleagues, supervisors and family members can provide emotional support, instrumental support (in the form of time), informational support (e.g., advice and suggestions that may enable the worker to respond to a demanding situation), and appraisal support (in the form of feedback and affirmation) (Ayman and Antani, 2008). In view of evidence in the literature suggesting the significance of social support, it is important then that social workers develop and nurture supportive relationships at work, home and the community.

Work-family researchers now recognize that work and family domains are embedded within communities and the relationships between work, family and the community are interconnected (Voydanoff, 2005 and 2007). Hence the 'fit' between work and family life can be influenced by sources in the community (e.g., school). These sources can either support or hinder efforts made by individuals, families and organizations in enhancing work-family integration. Work-family integration therefore calls for unified approach by families and communities.

According to Voydanoff (2007) family resources, such as family adaptability and family cohesion are also vital for work-family integration. Family adaptability refers to the "extent to which a family is able to alter its power structure, relationships and rules in the face of challenges" (Voydanoff, 2007, p. 78). Literature on family support has largely focused on spouse support in influencing outcomes of job satisfaction, marital satisfaction, positive affect, life satisfaction, and psychological distress (Friedman and Greenhaus, 2000; and Grzywacz and Marks, 2000). Limited research that has explored the role of family adaptability and cohesion in alleviating strain and enhancing work-family enrichment exists. Olsen, McCubbin and Associates (1983, cited in Voydanoff, 2007) found evidence that family cohesion, such as emotional bonds among members of the family enhanced their problem solving capabilities.

Community-based supports are equally useful in assisting individuals in meeting their work and family responsibilities (Voydanoff, 2007). Often friendships developed at work are limited to the workplace, hence it is important that social supports in the community are developed and maintained (Sheafor and Horejsi, 2008). These supports can come from various sources, such as schools, child care centers, play groups, church, and community centers and can be in the form of transportation, after-school care, pick-up of school children, or simply as a means of emotional and instrumental support (Voydanoff, 2007). Ayman and Antani (2008) identified social supports at work, family and the community as important resources for coping with stress and in serving as an important buffer from the stresses and strains of everyday life.

CONCLUSION

In the present study which explored the experiences of work→family conflict and mechanisms adopted for coping by 21 dual earner couples from three diverse occupational groups. Three dominant themes were identified as: (a) the widespread experience of work-family conflict and its reported consequences including stress, and reduced time with family; (b) religious coping as a primary mechanism for dealing with work-related stress; and (c) spousal, family and colleague support as a mechanism for coping. Our findings regarding conflict experiences are broadly in concordance with the findings in the extant literature sourced in the west in a number of respects. However, the use of religious coping as a mechanism for dealing with life stresses appeared to be more widespread among Indian couples. The dominance of family as an institution in India makes it impossible for Indian women to work, without strong spousal support and support from extended family. Further research to establish link between positive religious coping and mental health would be useful. Given the paucity of research in this area, more quantitative and qualitative investigations to determine the extent and nature of work-family conflict experiences of Indian employees would be useful.

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Strategic Human Resource Management: A Three-Stage Process Model and Its Influencing Factors

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Strategic Human Resource Management (SHRM) has captured considerable attention in research and the practitioner world. Research in SHRM has primarily focussed on the link between Human Resource Management (HRM) systems and organizational performance. The development of theoretical perspectives and proper frameworks for the mediating processes linking HRM systems and organizational performance have not got adequate attention in this literature. In this paper, a three-stage model for the process of SHRM is developed. The three stages are: (1) The formulation of business and Human Resource (HR) strategy through one/two-way vertical fit; (2) The implementation of HRM systems and employee-related interventions; and (3) The evaluation/review of HRM systems for increased efficiency and best vertical and horizontal fit. The interlinkages in this dynamic model have been explored, and the organizational factors that have an enabling/deterring influence on the success of each of these three stages have been looked at. Enablers/deterrents for the three stages have been classified into structural, cultural, individual, and contextual factors for the first stage; structural, cultural, operational, and environmental factors for the second stage; and structural, operational, and behavioral factors for the third stage. The key players for each stage have been identified and the role of HR department in each of the three stages has been looked into. Research has shown that horizontal and vertical fit of HR practices can have an influence on the organizational performance and this paper provides a model of enactment of SHRM, and a practical approach to evaluating SHRM process in an organization.

INTRODUCTION

Organizations are increasingly looking at Human Resources (HR) as a unique asset that can provide sustained competitive advantage. The changes in the business environment with increasing globalization, changing demographics of the workforce, increased focus on profitability through growth, technological changes, intellectual capital and the never-ending changes that organizations are undergoing have led to

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an increased importance of managing HR (Devanna *et al.*, 1981; and Wright, 1998). In this scenario, a HR department that is highly administrative and lacks strategic integration fails to provide the competitive advantage needed for survival, thus losing its relevance. According to Ulrich (1998), one of the four roles of HR personnel is to become strategic business partners. Huselid and Becker (1997) found that there were noticeable financial returns for the organizations whose Human Resource Management (HRM) systems have achieved operational excellence and are aligned with business strategic goals. Youndt *et al.* (1996) found that firms employing HRM practices according to the stated strategy are regarded to have better perceptual performance. In the Indian context, Singh and Vohra (2005) found evidence of how strategic HR can play a role in a small enterprise in the engineering sector. In today's context, Strategic Human Resource Management (SHRM) has become a necessity for organizations. Wright and McMahan (1992, p. 298) define SHRM as "the pattern of planned HR deployments and activities intended to enable an organization to achieve its goals."

Applying this concept of fit to SHRM based on contingency theory, we find that the fit between HRM systems and business strategy can be viewed through a few modes such as, one-way vertical fit, two-way vertical fit and horizontal fit, which are explained below. The fit essentially looks at whether the HR strategy, systems, and processes are aligned to business strategy and also a perspective whether both are aligned to each other.

ONE-WAY VERTICAL FIT

Aligning HRM systems to the business strategy can be considered as a one-way vertical fit (Devanna *et al.*, 1984; Dyer, 1984; Golden and Ramanujam, 1985; Mirvis, 1985; Schuler and Walker, 1990; and Martell and Caroll, 1995). Brockbank (1999) conceptualizes this as a strategically reactive HR. This alignment is similar to the one conceptualized by the contingency approach of Delery and Doty (1996).

An appropriate HR strategy for the specific organizational and business strategies is discussed in literature. Miles and Snow (1984) studied the HR strategies adopted according to the organizational type namely: defender, prospector, analyzer and reactor. They discuss 'make' or 'buy' HR strategies where HRM systems focus on 'building human resources' or 'acquiring human resources'. Similarly, for competitive strategies namely: innovation, quality enhancement and cost reduction strategies (Schuler and Jackson, 1987a) and generic strategies like dynamic growth, extract growth and turnaround strategies (Schuler and Jackson, 1987b), the authors explore different kinds of HRM systems needed to align with the mentioned strategies.

TWO-WAY VERTICAL FIT

Two-way vertical fit is when HRM systems not only align to the business strategy, but also contribute to strategy formulation (Golden and Ramanujam, 1985; and Martell and Caroll, 1995). Lundy (1994) proposes a model where each of the functions contributes in the strategy plan formulation, which in turn leads to the development of various functional strategies including the HR strategy. Brockbank (1999) conceptualizes this as strategically proactive HR that involves creating future strategic alternatives. Hendry and Pettigrew (1990) collated different works in the SHRM literature to propose that HR department can be proactive in contributing towards strategy formulation, and in understanding the linkages between structure, culture, HRM and business strategy.

Smith (1982) points out inadequacies in the strategically reactive HR process and proposes a process of two-way interactive planning of business and HR strategies. In the two-way vertical fit proposed by Lengnick-Hall and Lengnick-Hall (1988), there is an interactive effect between business and HR strategies so that each contributes to the formulation of the other. This is similar to the integrative linkage conceptualized by Golden and Ramanujam (1985). As a process, the strengths, weaknesses, opportunities and threats of HR in an organization can define the business opportunities of the organization where it can excel (Huselid, 1993).

HORIZONTAL FIT

Gratton *et al.* (1999); and Truss and Gratton (1994) conceptualize the horizontal fit as linkages that express the connections between and within the people processes. Fombrun (1984) views this as the alignment of key HRM systems and processes with special reference to desired performance for bringing out the desired behavior and culture in the organization. The interactive effects of different HRM practices (Ichniowski and Kochan, 1996) lead to positive outcomes through the synergetic functioning of different HRM practices (Inchniowski and Shaw, 1997; and Delery, 1998). Delery (1998) classifies HRM practices into two groups: (1) HRM practices that bring out additive outcomes with other practices; and (2) HRM practices that have interactive effects and in concert with other practices bring out specific outcomes.

Wright and McMahan (1992) consider that not only HRM practices should be linked to organizational strategy, but these practices also need to be strategically linked to each other to ensure that they promote the same goals. In the configurational approach of Delery and Doty (1996), the focus is on coordinating HRM systems to enhance horizontal fit, and then linking these systems to business strategy to maximize vertical fit.

Singh (2003) gives a broader approach to SHRM by integrating various functions and establishing the linkage of these functions with the business plan. It is not only important to identify HR competencies in concurrence with the business needs and develop selection and development practices to secure those competencies, but also to evolve and implement a performance evaluation plan that links the performance of employees to strategic goals. According to Lawler (1984), once the strategic plan is developed, it is necessary to design reward systems which attract the right kind of people, motivate them to perform optimally, and create a supportive climate and structure.

INFLUENCING FACTORS

The strategy formulation process is influenced by a number of external and internal factors. Formbrun (1984) identifies technological, economical, socio-cultural and political environment as interrelated external factors that have impact on the strategy formulation of organizations. The changes in these factors that are manifested through better information processing, automation, changes in economic growth, or growth in specific sectors, changes in the demographics of work force, and political influences affect the strategic direction of the organizations and thus create the need for alignment of HRM to these changes. Lengnick-Hall and Lengnick-Hall (1988) categorize the external environmental factors into those that affect the competitive strategy formulation and those that specifically affect the HR strategy. Competitive strategy is influenced by economic conditions, industry structure, competitive advantage, product/ market scope and the distinct competence. The labor market dynamics, skills and values, economic conditions and the culture at large influence the HR strategy formulation.

Truss and Gratton (1994) discuss the social, technical, legal/political and economic changes that can influence SHRM. In addition to the demographic factors mentioned by Formbrun (1984), the authors also refer to Tsui (1987) and Freeman (1985) in pointing out the key external stakeholders like the government, media, environmentalists, local community organizations and consumer advocates who can influence the strategy formulation. The internal factors identified by Truss and Gratton (1994) are: organizational culture, dominant coalition, internal stakeholders like the employees and management, and characteristics of HR department. Lundberg (1985) discusses various organizational factors influencing business and HR strategies. The main factors considered by him are the dominant coalition, organizational culture, CEO leadership roles and organizational history. Similarly, Mello (2001) refers to key external environment and internal variables that influence strategy formulation. Competition, government regulations, technology, market trends and economic conditions are key external environment variables; and culture, structure, politics, employee skills and past strategy are key internal variables.

Sparrow and Pettigrew (1987) identify external factors like technology changes, political, social and economic climate that influence the HR strategy formulation in organizations. The authors point out that, internal factors like the structure, culture, internal politics, business direction and business outcomes interact with the external environment in the process of HRM.

Devanna *et al.* (1981) put forth a number of reasons why strategic orientation may lack in the HR function. A major one is that the top management does not perceive it important to include HR department in the decision-making process. Mike Losey, President and CEO, Society of HRM, in an interview (Huselid and Becker, 1999) notes that CEOs must realize that additional competencies are required for HR professionals. HRM currently entails more than basic proficiencies like administration, transactions, compliance and keeping complaints to a minimum. It is a profession that not everyone can perform and HR departments must develop competencies in dealing with strategic issues, business awareness and the ability to quantify its own contributions/significance. Tony Rucci, Dean, College of Business Administration, University of Illinois, Chicago, in the same interview states that "the three significant barriers to HR playing a more proactive role in the next 10 years are: Lack of basic economic literacy among HR professionals; lack of comfort among HR professionals to take risks; and HR professionals who do not demonstrate courage of conviction about their principles" (Huselid and Becker, 1999, p. 362). Research carried out on the competency requirements of HR professionals finds that knowledge of business, delivery of HRM practices and management of change are significant competencies of HR professionals. Also, they should have a high degree of personal credibility and should master HRM practices (Ulrich *et al.,* 1995).

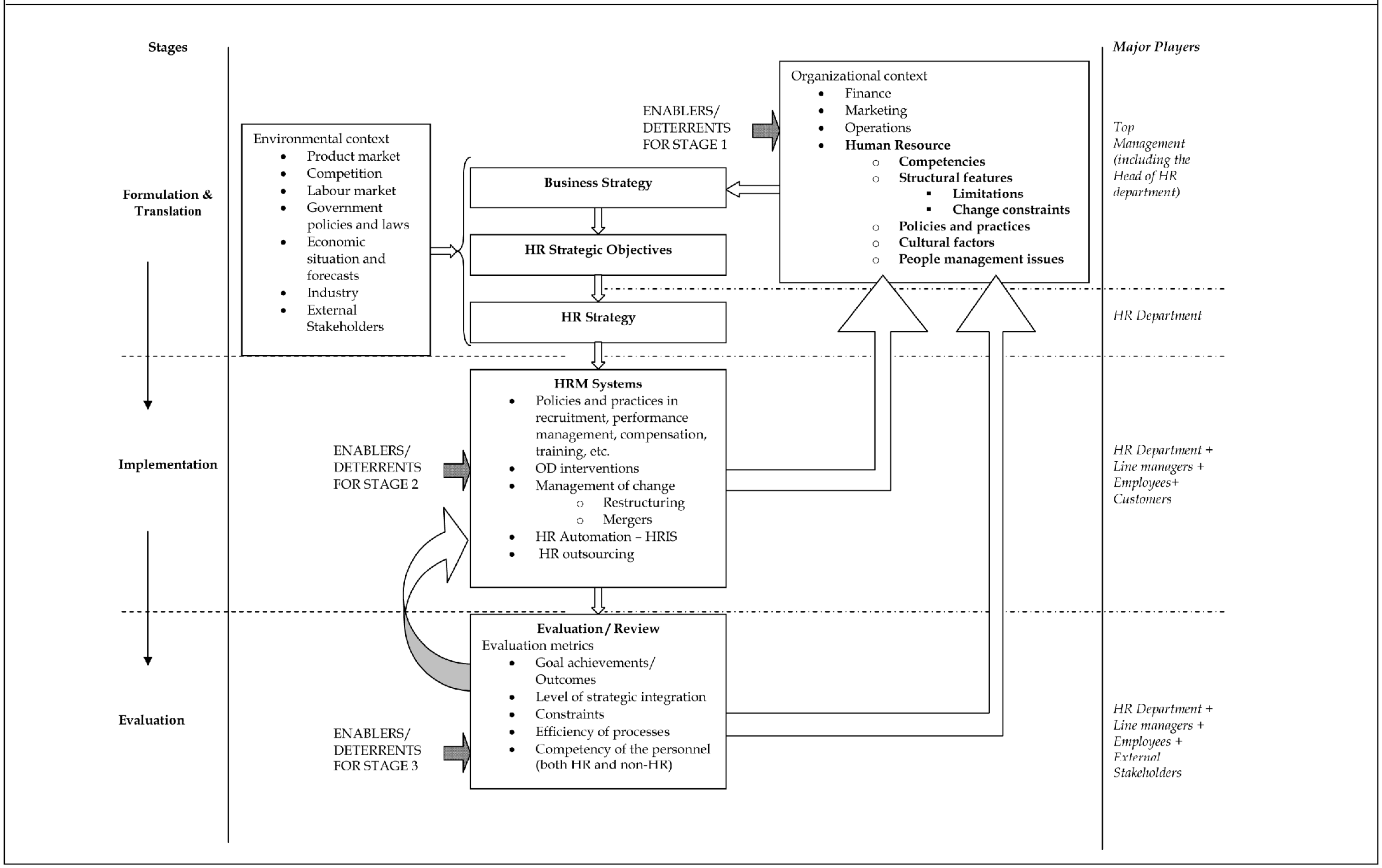
For SHRM to happen, cooperation of the line managers is critical (Ulrich, 1998). HRM is increasingly more of line managers' responsibility with an increasing strategic importance of HR (Brewster and Smith, 1990; Truss and Gratton, 1994; and Mello, 2001) and this requires a closer relationship between HR and line managers (Becker and Gerhart, 1996). Martell and Caroll (1995) look at the inclusion of line managers in the HR policy-making process as a critical element of SHRM. Line managers could be in a better position to respond to issues concerning the employees enabling HR managers to find more time to perform strategic functions related to HRM (Budhwar and Sparrow, 2002). However, effective participation may be constrained by factors like: lack of HR competence of the line managers; lack of training for taking up devolved HR responsibilities; inadequate time for people management issues; and emphasis on short term performance measures that cause lack of focus on achieving results through managing people (McGovern *et al.,* 1997).

This paper integrates the process of SHRM—formulation, implementation and evaluation. A dynamic model is proposed which looks at these three processes as being continuous. The model is examined at each of these stages to explore the various organizational factors that influence the process of SHRM.

THE PROCESS

The model proposes a three-stage process of SHRM. Figure 1 shows the details of the three stages. The first stage is the formulation of business strategy and translating it into HRM strategic objectives. HR strategy evolves from the HRM strategic objectives. The second stage is the implementation of HRM systems based on HR strategy. The final stage is the evaluation/review of the effectiveness and strategic integration of

Figure 1: Three-Stage Process of SHRM



HRM systems. The process of SHRM is dynamic and the three stages are closely inter-linked. The paper later discusses the enablers/deterrents for each of the three stages. The enablers/deterrents are those organizational factors whose presence/absence would facilitate/inhibit the process of SHRM.

This model is an extension of the two-stage process that looks at the horizontal alignment of HRM practices and linkages of these practices with strategic objectives (Wright and McMahan, 1992; and Delery and Doty, 1996). The three stages of the proposed model include all the five key elements of SHRM identified by Truss and Gratton (1994). These elements are: the external environment; the business strategy that affects and is affected by the SHRM process; the internal environment—the organizational context within which SHRM operates; SHRM comprising the HR strategy and individual HRM practices; and the outcomes of the process of SHRM.

THE FIRST STAGE

The formulation stage provides the ground for effective SHRM. The organization recognizes HR department as a business partner and provides it with avenues to play a proactive role. In this stage, the composition of the team formulating the business strategy is very important. The presence of head of the HR department in this team strengthens the proactive strategic linkage and depicts the proactive nature of HR as described by Brockbank (1999). This model follows the concept of Golden and Ramanujam (1985) and Lengnick-Hall and Lengnick-Hall (1988) of interactive business and HR strategies, so that each contributes to the formulation of the other.

The external and organizational contexts influence the strategy formulation. The external context is characterized by factors like product market situation (Lengnick-Hall and Lengnick-Hall, 1988), nature and extent of competition (Lundberg, 1985; and Lengnick-Hall and Lengnick-Hall, 1988), labor market situation including demography of the available workforce (Fombrun, 1984; Lengnick-Hall and Lengnick-Hall, 1988; and Lundy, 1994), government policies and laws (Sparrow and Pettigrew, 1987; and Lundy, 1994), economic situation and forecasts (Fombrun, 1984; Lengnick-Hall and Lengnick-Hall, 1988; and Lundy, 1994), industry perspective (Lundberg, 1985; and Lengnick-Hall and Lengnick-Hall, 1988), and external stakeholders like suppliers, competitors, etc. (Freeman, 1985; and Lundberg, 1985).

The organizational context refers to the organizational situation that is represented through various departments/functions. Inputs from functional areas are taken to formulate business strategy (Lundy, 1994). The head of the HR department plays a key role here in representing the organization in terms of HR related issues and providing information about competency status, structural features with their advantages and limitations, policies and practices that are followed, cultural factors and other people management issues.

Strategy formulation is influenced by factors like: whether there are needed competencies in the organization; possibility of training the employees for developing them; and the gaps that exist in terms of competencies of HR. A critical factor in the formulation of HR strategy is the understanding of required organizational competencies for the implementation of business strategy. Elements of HRM like acquiring, managing and developing the competencies are important for the success of strategy implementation.

Structural features look into the features of the organizational structure that may set limitations for strategy implementation or may set constraints in the changes required for strategy implementation. Inflexibility in these features in terms of reporting structures and layers of hierarchy in the organization and formal relationship among the various departments may impede communication and cause lack of alignment of various functions/departments for strategy implementation.

During strategy formulation, the head of the HR department should be able to appraise the top management about various policies and practices that are followed and the changes that are necessary for the effective implementation of business strategy. The policies and practices may be the written rules that are followed regarding jobs or behavior in the organization. In the organizational context, this may be related to cultural dimensions that are a set of unwritten rules that drive the work culture and behavior at the workplace.

The people management issues look into various employee-related factors that affect the productivity at work place and their impact on a business strategy formulation. Issues like high turnover of employees, lack of morale and motivation, low employee satisfaction, undesirable work-place politics, etc., are looked into and their likely impact on strategy implementation is examined.

HRM strategic objectives are identified according to business strategy. The business strategy may be based on any of the generic strategies like cost reduction, innovation or quality enhancement. The HR strategy is then derived from the HRM strategic objectives. This process is similar to Lundy's (1994) model of strategic management, which derives HR plan from a strategic plan based on implementation requirements.

THE SECOND STAGE

The second stage is the implementation of various HRM systems based on the HR strategy. The vertical, horizontal and temporal linkages conceptualized by Gratton *et al.* (1999) fit here. Various HRM systems like recruitment and selection, performance management, compensation, training and development, career management, etc., need to be aligned with the HR strategy. This is the vertical linkage. Policies and practices of various HRM systems are set or modified according to the strategy implementation needs. Based on the concept of horizontal linkage, HRM systems also need to be aligned to each other.

Implementation stage also includes initiating interventions required for organizational development or effectiveness and managing change during processes like restructuring or mergers. The latter is an example of temporal linkages. Temporal linkages deal with the sudden changes that are brought in due to strategic decisions.

Automating HRM practices and outsourcing some HRM practices can contribute to more effective functioning of the HR department. Automation of HRM practices through Human Resource Information System (HRIS) also improves HR department's capability to collect and provide information needed for strategy formulation.

HR department plays a key role at the implementation stage. However, processes and practices are implemented for the employees and therefore line managers, employees and customers play an important role in their successful implementation. The second stage has a two-way link with the first stage. Not only are HRM systems aligned with the HR strategy, but the HRM systems and their outcomes also provide information pertaining to organizational context for the formulation of business strategy. This two-way link strengthens the role of HR department as a strategic partner.

THE THIRD STAGE

The final stage of the model deals with the evaluation/review of the effectiveness of HRM systems and their strategic integration. Wright and McMahan (1992) and Truss and Gratton (1994) consider outcomes and relevance of various HRM systems in achieving strategic objectives as an integral part of SHRM. The extent of alignment of HRM systems with business strategy and the contribution of HRM systems in achieving strategic objectives need to be evaluated in order to determine the strategic integration of HRM (Tichy *et al.,* 1982; and Ulrich, 1989). Ulrich's (1989) relationship approach to assess HR effectiveness integrates business strategy, HRM practices and performance by analyzing the relationship among the three. Khilji and Wang (2006) studied the banking industry in Pakistan to understand the gap between the intended and the implemented HRM.

The evaluation stage in this model includes various surveys and evaluation processes. Evaluation of HRM systems is difficult because most of the organizations are not very clear as to what they want to evaluate—the efficiency of the HR processes/department; the services provided by the HR department, financial returns in terms of employee productivity, turnover, etc., or improved performance of employees of the organization (Ulrich, 1989). According to Gordon (1972), it is difficult to devise appropriate evaluation methods unless expected outcomes are unambiguous.

In the evaluation metric of this model, defining and measuring goal achievements or outcomes of various HRM practices and activities is the first step. This may also include organizational outcomes like employee turnover (Wright and McMahan, 1992), behavioral perspective of measuring the desired behavior of the employees (Wright and McMahan, 1992) or resource-based theory perspective of measuring the achievement of desired competencies for the organization (Kamoche, 1996). Performance reviews and associated actions are part of this stage. In order to determine the level of strategic integration, various HRM systems are reviewed and analyzed for their alignment to strategic objectives. The evaluation metrics also include constraints in the implementation of HRM systems, efficiency of HRM processes and level of competency of the personnel (both HR and non-HR) involved in the implementation process.

The information collected and analyzed on the evaluation metrics provides feedback for making necessary changes in the implementation process. This information is also important in the organizational context of business strategy formulation.

The model provides a generic framework for the process of SHRM. The next section discusses the organizational factors influencing each of the stages of this process.

ENABLERS/DETERRENTS FOR THE THREE STAGES

THE FIRST STAGE

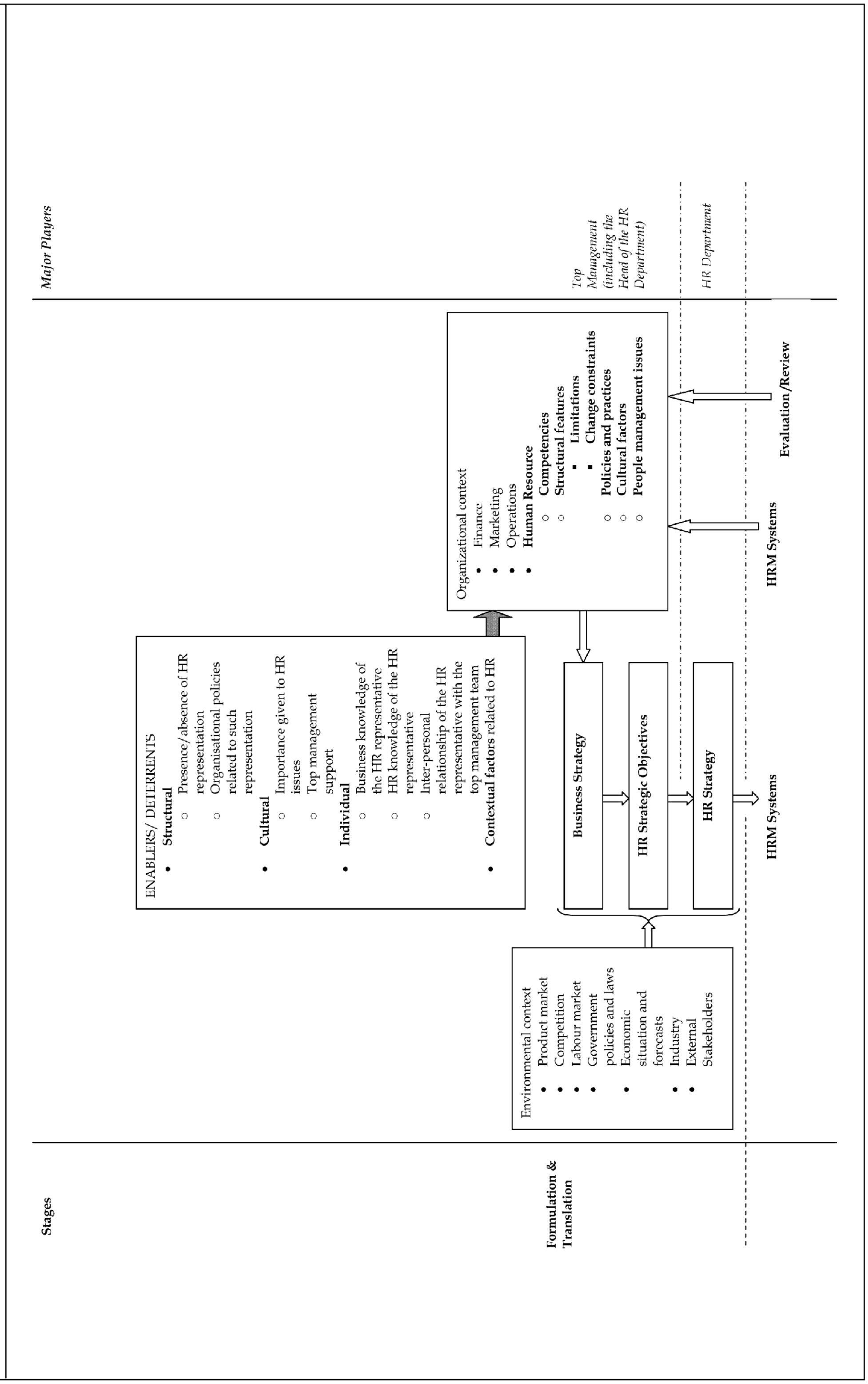
Figure 2 shows the enablers/deterrents in the formulation stage of the process of SHRM. These enablers/deterrents influence the strategic role played by the head of the HR department in the organizational context. These enablers/deterrents can be classified into structural, cultural, individual and contextual factors.

In the structural factors, the absence or presence of HR representative and the organizational policies regarding such representations play a significant role. If the HR department is not given a place in the strategy formulation team, many of the HR-related or the organization-related issues in which HR plays an active role would not be properly represented. The presence or absence of such representations can be a result of many factors. Some of the factors are: importance of HR in the organization; relevance and competence of the HR department; and the perception regarding their ability to contribute towards strategy formulation. Martell and Carroll (1995) found in their empirical study that top management teams differentiate between HRM executives and HRM function. HRM executives are considered valuable members of the team in spite of a relatively modest view of the importance of the role of the HRM functions.

Cultural factors like importance given to HR issues in general (Mello, 2001) and top management support for HR department and HR related issues help the HR representative in taking an active role. In many organizations HR department's function is considered to be just supportive and is not expected to take an active role in the top management decision making. In these cases, HR will only be in a strategically reactive or an operational role. Golden and Ramanujam (1985) consider top management's expectation from HRM function as an important factor in the integration of HRM with business strategy.

The next critical factor here would be individual factors related to the HR representative in the strategy formulation team. The competency of the HR

Figure 2: Enablers/Deterrents for First Stage



representative in her/his own field and his/her ability to represent efficiently are important factors. S/he needs to have solid knowledge of the business and organizational context. S/he needs to keep herself/himself informed about the changes happening in the external context and their influence on the business and people issues. Interpersonal dynamics can play a major role in the representation process. The ability of the HR representative to influence other representatives, including the CEO can play a significant role. S/he also needs to understand the informal power structure, which is a critical organizational factor for integrating HRM with business strategy (Golden and Ramanujam, 1985).

Lawson and Limbrick (1996) identify the competencies required in top HR professionals for their role in SHRM. These competencies are classified under five groups: HR technical proficiency; business knowledge; influence management; functional and organizational leadership; and goal and action management.

Last but not the least, are the contextual factors related to people management issues. The contextual factors are the situations (mostly detrimental) that may arise unexpectedly in the organization. Very high employee turnover and severe skill shortage are examples of such contextual factors. Such a scenario would force the top management to take note of HR issues even if these issues are generally neglected at other times.

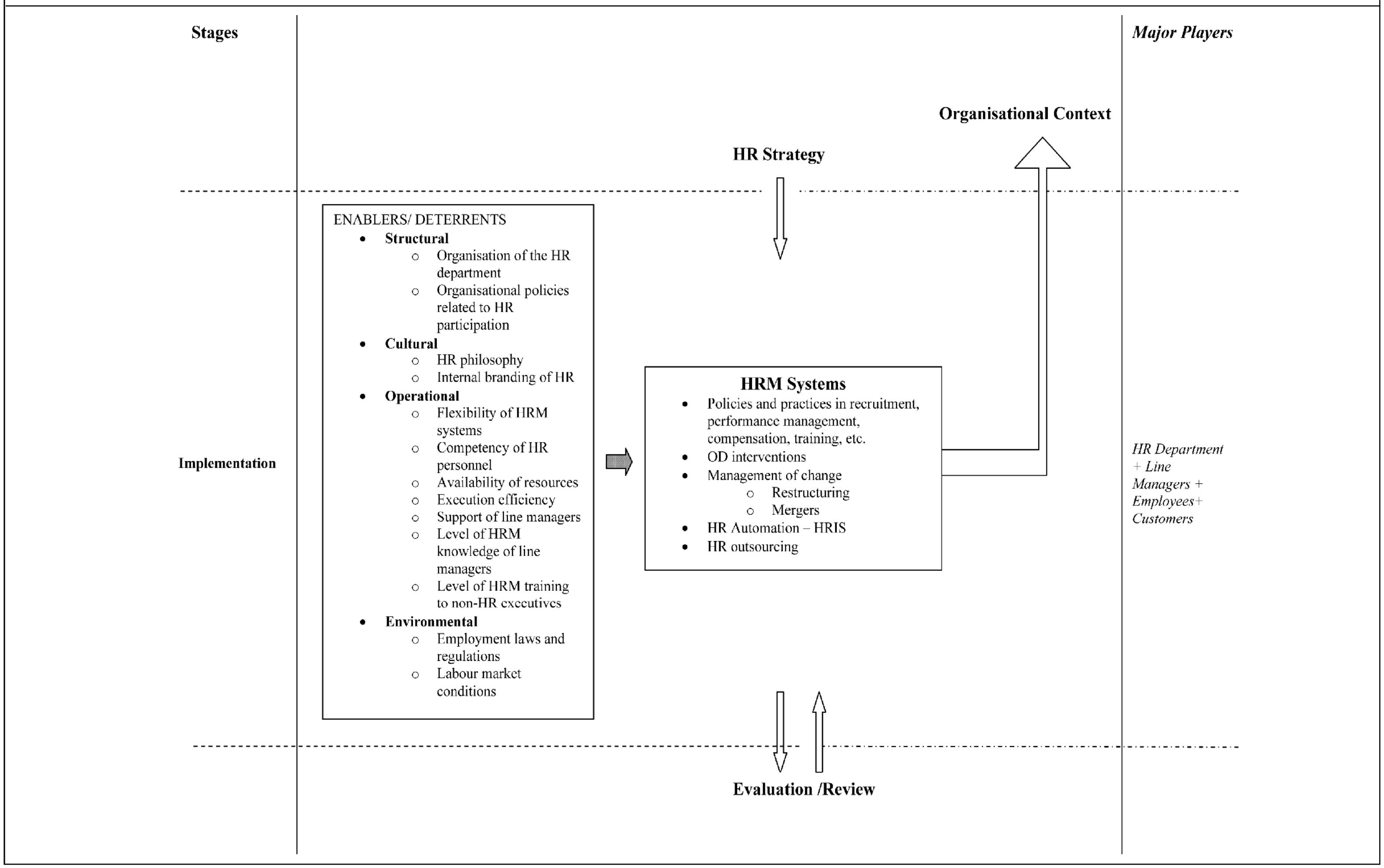
THE SECOND STAGE

Figure 3 shows the major enablers/deterrents involved in the implementation stage. The various influencing factors may be categorized into structural, cultural, operational and environmental factors.

In the structural category, the organization of the HR department and the various organizational policies regarding the roles to be played by the HR department are included. The first structural factor deals with the organization of the HR department in terms of staffing pattern of the HR department, the roles entrusted to the HR personnel, the access of the HR department to various other business units, the reporting structure within the department, etc. Proper organization will help in implementation and responding to implementation related issues. The second structural factor deals with the organizational policies regarding the HR department's participation. These policies mainly provide guidelines regarding the situations in which the HR department can intervene in the organizational functioning and the scope of changes that it can make there.

The cultural factors include the HR philosophy and the internal branding of HR. The HR philosophy integrates the various beliefs and the value systems that determine the way the organization manages its employees. In view of these beliefs and values, certain policies or practices may be unacceptable to the organization in the implementation of HRM systems. One of the key challenges faced by the HR

Figure 3: Enablers/Deterrents for Second Stage



department is to reconcile its two roles—strategic partner and employee champion (Brown *et al.,* 2009). The second factor here is the internal branding of the HR department. The internal branding of the HR department is determined by perceptions regarding its effectiveness in the organization, its role in enhancing employee performance, and its capability in supporting various organizational and employee-related initiatives. Tsui (1984) suggests that an effective functioning of the HR department depends on its reputation among the users of its services. Demonstrating the successes of the department can enhance its reputation. Golden and Ramanujam (1985), in their empirical study, find that demonstration of HRM expertise through HRM successes considerably enhances HRM function's credibility amongst top management.

Operational issues include flexibility of HRM systems, competency of HR personnel as identified by Ulrich *et al.* (1995), availability of resources, execution efficiency, support of line managers, level of HRM knowledge of line managers and level of HRM training of non-HR executives. HRM practices in the organization tend to become permanent and lose flexibility to change (Mello, 2001). Lack of flexibility adversely affects the operational efficiency of the systems as well as their ability to contribute to business strategy. Competency of HR professionals is another important factor for this stage. The HR executives should have sound business knowledge (Golden and Ramanujam, 1985). This would help them to understand the relevance of the strategy that is formulated and to design and implement HRM systems that facilitate strategy implementation. Also, HR professionals should have good grasp of the functional area they are working in and the competency to manage change. The implementation process requires resources that should be made available to the HR department. These resources may be in terms of providing better infrastructure or more personnel to do the job. HR department's efficiency in executing decisions also plays an important role at this stage.

A critical element for effectiveness of strategy implementation is the support of the line managers (Ulrich, 1998; and Mello, 2001). The implementation of the HR strategy inevitably involves the cooperation of line managers. For the line managers to be effective in partnering with the HR department, they should have necessary understanding of the HRM processes and practices. They need to be provided necessary training and so the level of HRM training of the non-HR executives also influences the success of the implementation stage.

The last category of factors that influences the strategy implementation is the environmental factor. Employment laws and regulations and the labor market situation influence the strategy implementation. Regulations may act as deterrents to the implementation of certain strategies. The skills available in the labor market and the competition faced by the organization for those skills may influence the HRM policies and practices.

THE THIRD STAGE

Figure 4 explores the factors that act as enablers/deterrents for the effectiveness of the evaluation and feedback stage. This stage provides feedback to the organizational context influencing the business strategy formulation and the implementation process. The factors that influence this stage may be categorized into structural, operational, and behavioral factors.

The structural factors include: scope of the evaluation and feedback process; level of formalization of the evaluation and feedback process; proper selection of assessors; and periodicity of evaluation and feedback. The scope of the process determines the extent to which the effectiveness and level of strategic integration of HRM systems is to be evaluated. If the level of strategic integration is not properly evaluated, then organizations take much longer to identify the gap between strategy and practices or the mismatch among practices. Higher level of formalization will strengthen the process in terms of content and regularity of feedback. Proper selection of assessors or evaluators is also important and this selection depends to a large extent on the evaluation metrics. HR professionals, line managers, employees, and/or applicants can assess the effectiveness and level of strategic integration of HRM systems (Tsui, 1984). In addition to the applicants, other external stakeholders like customers and suppliers can also provide data for assessment. The periodicity of evaluation and feedback is another important factor because evaluation needs to be a continual process.

The operational factors are: availability of the required data, proper measurement techniques, required analytical skill, technological support for data collection and analysis, and man-hours spent on evaluation and feedback. One of the major problems in evaluating HRM systems or their strategic linkages is the unavailability of the required data. Data collection in organizations for HRM systems, not being prompted by explicit objectives for its utilization, is generally unsystematic. Also, there is lack of coordination in assembling the data collected from various sources. Evaluating the impact of HRM systems is a challenge for measurement techniques because the effects of environmental and personal factors are inter-mixed with it (Gordon, 1972). Valid interpretation may not be obtained because of faulty measures or lack of appropriate measures. HR professionals may not have the required analytical skill for the evaluation process so, they either need to be given special training or provided help of experts (Gordon, 1972). Chenevert and Tremblay (2009) found in the context of measuring the effectiveness of various fits in SHRM, that results are influenced by the methodology used in the study. Technological support should also be available for data collection and analysis. A properly designed HRM system makes data collection and analysis faster, consistent and more accurate. Large amount of data from various sources can also be easily put together. Lastly, the process should not be done in such a hurry that quality of the process is compromised.

The behavioral factors include the purported use of the evaluation results, transparency in the evaluation process, perceived and real fairness of the process,

Figure 4: Enablers/Deterrents for Third Stage

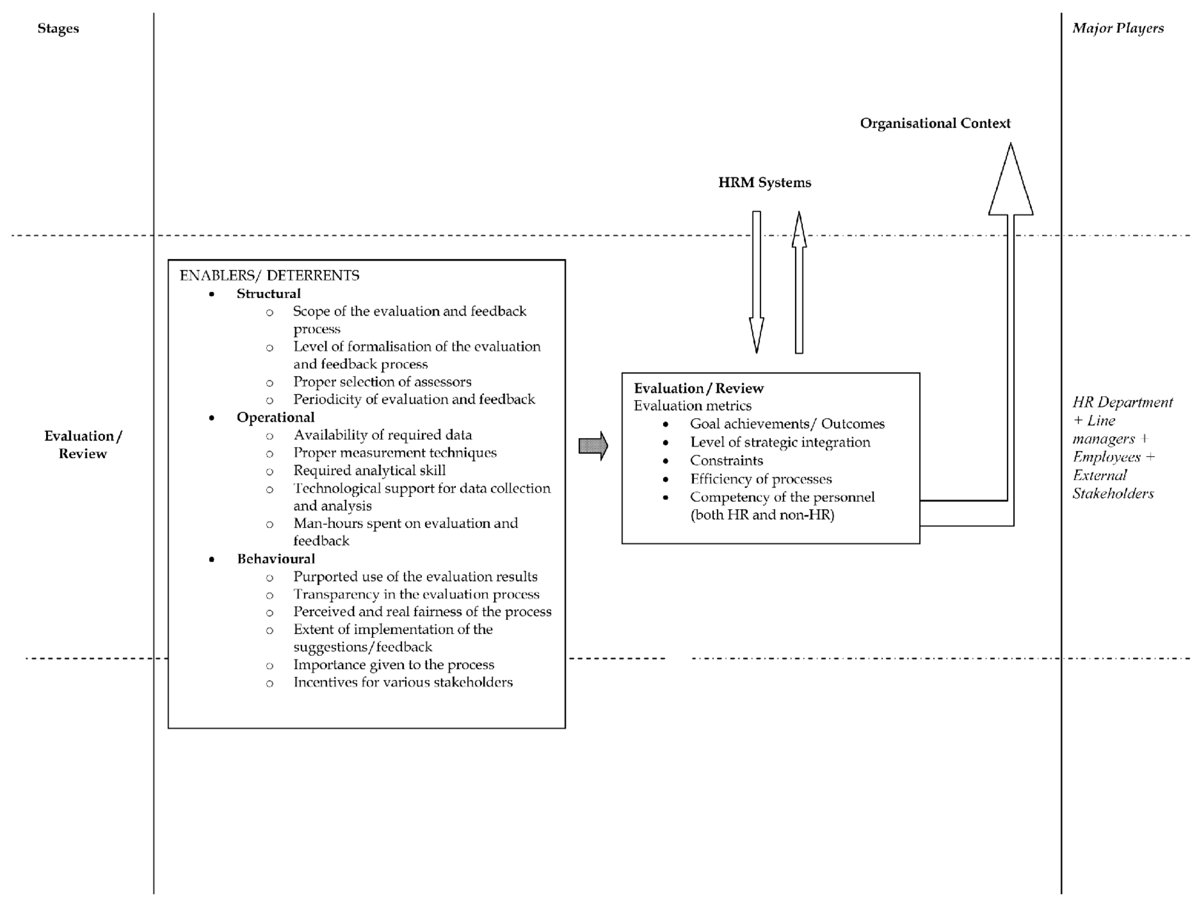
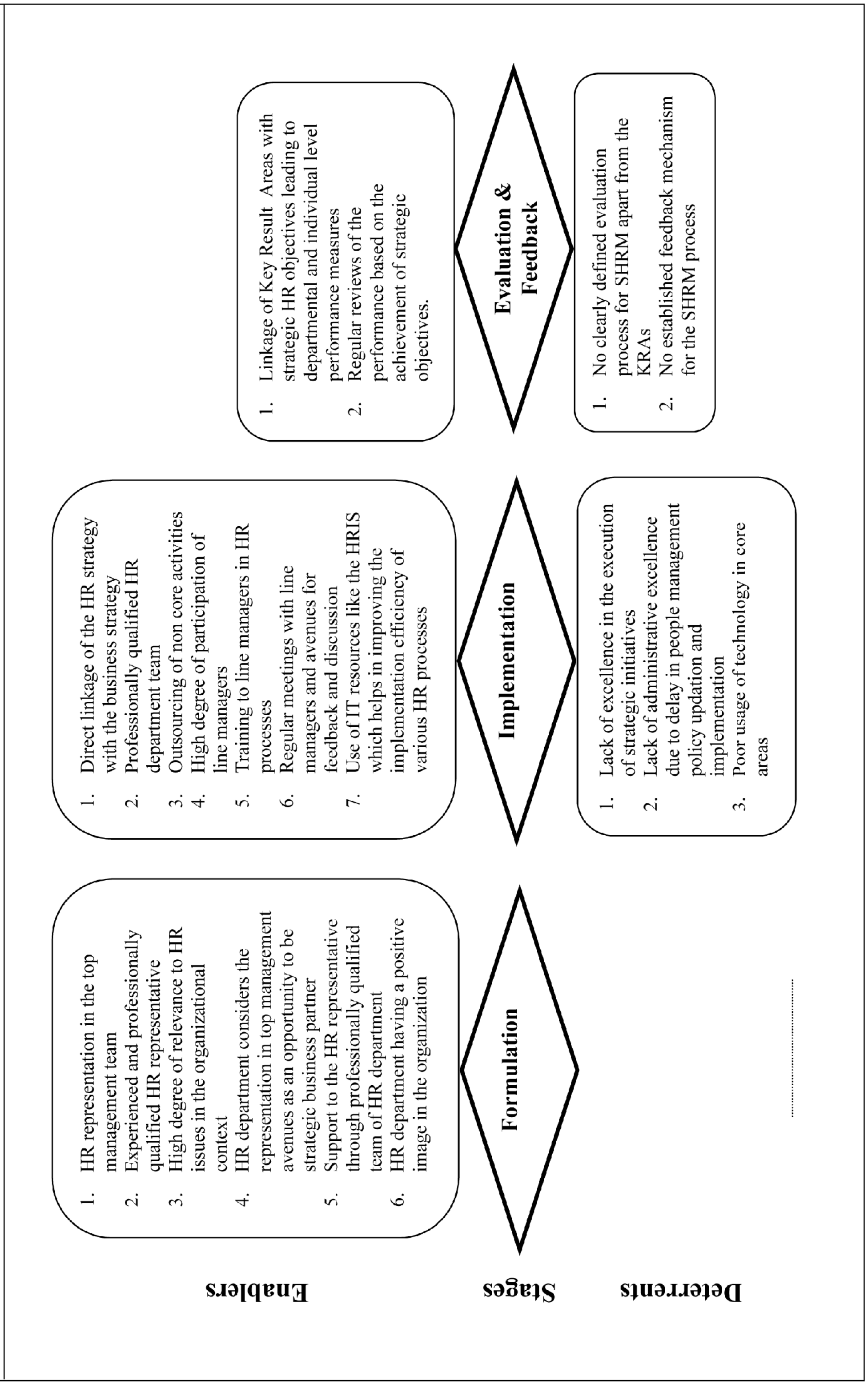


FIGURE 5: Enablers and Deterrents to SHRM : Approach toward practical evaluation



extent of implementation of the suggestions/feedback, importance given to the process, and incentives for various stakeholders. Purported use of the evaluation results is a very vital factor for the success of the implementation stage. As the results of the evaluation may be used to influence the perception of effectiveness of HR department/ HR professionals or the resource allocation based on the performance, the evaluation may be influenced by organizational politics (Ulrich, 1989). One of the major factors for the failure of evaluation stage is that HR professionals perceive it as a threat (Gordon, 1972). HR professionals may not be keen to get their performance evaluated for two reasons: (1) They were not used to being evaluated in the past; and (2) Such evaluations may involve a lot of subjective assessment.

Transparency in the evaluation process is another important factor for the success of the evaluation and feedback process. The following two aspects to transparency in this process: transparency in collecting data for assessment; and transparency in sharing the results. Level of transparency in collecting data should depend on the comfort level of the assessors otherwise the data may not be honest and reliable. Results of this process may be available only to the HR professionals or may be shared with line managers or all the employees in the organization (Ulrich, 1989). If the results are available only to HR professional, then their own anxiety may be less but on the other hand, others will not be able to see the outcomes and implications of the process and may lose interest in the process.

Both perceived as well as real fairness of the evaluation methods are critical. The success of the evaluation and feedback process also depends on the extent to which the suggestions/feedback given by the process in the past were found to be useful and have been implemented. Importance given to the evaluation also determines the success of this stage. As the implementation stage includes various stakeholders, the evaluation of their participation and the linkage with reward and training will be significant in improving the implementation. Figure 5 provides a practical approach towards how these three stages can be evaluated in an organization.

CONCLUSION

Literature in the field of SHRM has developed up to the two-stage process with a two-way vertical fit and horizontal fit (Wright and McMahan, 1992; Delery and Doty, 1996; and Singh, 2003). The third stage developed in this paper has not been explicitly taken up in the existing literature. This stage is mainly derived from Ulrich's (1989) relationship approach to assess HR effectiveness. The two-stage model does not clarify how the fit will be assessed and achieved. In order to assess both vertical and horizontal fit, the evaluation and feedback stages are vital for any process of SHRM. This third stage will help in establishing self-correcting mechanisms in the process. It will also help in maintaining a better fit between the intended and actual strategy discussed by Gratton *et al.* (1999). The evaluation stage will also help in demonstrating HR successes and increasing the credibility of the HR department.

The model provides all the interactive linkages present in the process of SHRM, thus giving a comprehensive picture of this complex and dynamic process. The effectiveness of the process lies in giving due importance not only to each stage, but also to each linkage. The process of SHRM cannot be implemented in a piecemeal manner. Anything less than the complete process described in the model increases the possibility of failure. Organizations can no longer ignore the necessity of an integrated three-stage process for SHRM that should at least include:

- Efficient and inter-linked HRM systems linked to business strategy; and
- Monitoring mechanisms to identify and correct any sort of misalignment.

The enablers/deterrents for each stage are another important contribution of this paper. A clear knowledge of organizational factors influencing each stage provides a framework for assessing the barriers to the process of SHRM. Strategy formulation and translation are influenced by organizational factors like presence/absence of HR representation, organizational policies related to such representation, importance given to HR issues, top management support, business knowledge of the HR representative, HR knowledge of the HR representative, inter-personal relationship of the HR representative with the top management team, and contextual factors related to HR like severe skill shortage**.** The implementation stage is influenced by organization of the HR department, organizational policies related to HR participation, HR philosophy, internal branding of HR, flexibility of HRM systems, competency of HR personnel, availability of resources, execution efficiency, support of the line managers, level of HRM knowledge of line managers, level of HRM training to non-HR executives, employment laws and regulations, and labor market conditions.

The evaluation and feedback process is influenced by factors like scope of evaluation and feedback process, level of formalization of the evaluation and feedback process, proper selection of assessors, periodicity of evaluation and feedback, availability of required data, proper measurement techniques, required analytical skills, technological support for data collection and analysis, and man-hours spent on evaluation and feedback,. This process is also influenced by factors like purported use of the evaluation results, transparency in the evaluation process, perceived and real fairness of the process, extent of implementation of the suggestions/feedback, importance given to the process, and incentives for various stakeholders. Organizations need to ensure the presence of relevant organizational factors in each of the three stages so that they become enablers rather than deterrents for the process of SHRM.

The paper emphasizes the key role of the HR department in the process of SHRM. HR professionals perform critical roles in each stage of the process. This underlines the importance of the competencies required for top HR professionals in the first stage as identified by Lawson and Limbrick (1996), the competencies required for HR professionals in the second stage as identified by Ulrich *et al.* (1995), and the skills required for the evaluation process as discussed by Gordon (1972). Increasingly, in most of the functions, top management expects HR to be a bridge between employees and business leadership and convey business requirements (Krishnan, 2011). However, importance of other major players should not be underestimated. The success of the process of SHRM is not limited to the capability of the HR professionals, but encompasses all the major players discussed in the model.

As HRM evolves as a strategic partner, organizations need to look at the three stages as dynamic processes and formulate enabling processes and facilitating mechanisms for effectiveness. As Becker and Huselid (2006) point out, the challenge of HRM to become a strategic partner is to have the architecture in place to fit with the business strategy. The paper has brought together three stages of SHRM, namely formulation, implementation and evaluation, where considerable work has been done without emphasizing the inter-linkages or outlining the enabling/deterring factors. This paper is an attempt to fill these gaps. As the three stages involve many players and stakeholders, synergy in their working within each stage and across stages is vital. This is critical in formulating the HR strategy and implementing them as a tight fit at all stages can influence employee performance, productivity, and efforts that can lead to enhanced organizational performance.

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Attributes of Companies Making IPOs in India: Some Observations

G Sabarinathan

A growing volume of literature on Initial Public Offerings (IPOs) by Indian firms has sought to explain the efficiency of pricing and the post issue performance of companies that make IPOs, in terms of institutional features of the securities market or certain features of the issuers. These studies pertain to different windows of IPO activity, starting with the establishment of the Securities and Exchange Board of India (SEBI) in 1992. However, no study so far has examined the evolution of the attributes of the issuer. This paper is based on the view that understanding the evolution of IPOs since the establishment of SEBI may help in understanding the phenomena in the IPO market better. The paper also tries to relate the changes in the profile of the issuers to certain regulatory developments which may have been intended to influence those attributes of issuers and issuances. The observations in this paper provide useful pointers for further research which may unravel the working of the Indian IPO market better. More importantly, they may be useful in designing a new securities market which could serve as an alternative to or complement the existing market mechanisms.

INTRODUCTION

There is a steadily growing volume of literature documenting the underpricing of Initial Public Offerings (IPOs) in the Indian market. These articles attempt to explain underpricing in terms of some institutional development or the other. Table 1 summarizes the published literature that we have come across (It is quite likely that there is a volume of unpublished dissertations. These have not been included in this review). Nearly all the literature examines IPOs that were made during specific time windows. Further, the literature seems to examine the impact of various institutional details such as the pricing mechanism, grading, age of the issuer, industry, price and oversubscription levels on underpricing.

Research relating to markets other than India also suggests that features such as the business/industry that the issuer company is engaged in (Ritter, 1991), the age of the issuer (Ritter, 2003) and pricing of the issue in relation to the book value can explain outcomes such as efficiency of pricing in the IPO market or the long run performance of IPOs. However, the emerging profiles of issuers across time has not been analyzed along these dimensions. Given that the literature seems to hypothesize a possible relationship between various attributes of the issuer and the market outcomes

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Table 1: Overview of Academic Literature on Indian IPOs

No.	Study	Sample/Data	Major Findings
1.	Shah (1995)		Listing delay less for larger issues. Volume of issue in month x influenced by lagged market returns between month $x - 2$ and $x - 4$. Underpricing in month x influenced by lagged market return month $x - 5$ and $x - 8$ Small issues experience higher underpricing. IPOs have trading frequency of 74% against A group frequency of 94%. Return of 40% over market in first 200 trading days.
2.	Narasimhan *et al.* (1996)	2,057 IPOs from April 1992-March 1995	Large issues do not face higher underpricing than small issues. Highly-priced issues face lower underpricing. Underpricing increases with the level of subscription.
3.	Madhusoodanan and Thiripalraju (1997)	1,922 IPOs listed on BSE during 1992-1995	High initial returns in India compared to other countries. Firm allotments to MFs delivered low long term returns. Positive link between market conditions and initial return. No merchant banker shows superior ability in pricing IPO correctly. Lower listing delay does not mean lower underpricing or better long term performance.
4.	Krishnamurthi and Kumar (2002)	386 IPOs opened for subscription between July 1992 and December 1994	Par issues face systematic underpricing. Smaller issues face higher underpricing. Higher subscription level leads to lower underpricing. Concentration of issue management activity among some merchant bankers.
5.	Madan (2003)	1,597 IPOs during 1989-1995	Underpricing inversely related to size, offer price, age, time to list. Pre SEBI underpricing higher than post SEBI underpricing. Market return prior to issue positively related to underpricing. Long run returns positive for one year, declines thereafter.
6.	Baral and Obaidullah (2004)	433 IPOs listed on BSE between October 10, 1994 and December 31, 1995	Overpricing backed by artificial support. Thin trading post IPO obfuscates inferences on underpricing.

Table 1 (Cont.)

No.	Study	Sample/Data	Major Findings
7.	Sinha and Madhusoodanan (2004)	92 IPOs listed on BSE and NSE during January 1999 to November 2003	Underpricing in book built and fixed price issues not different. Small issues more underpriced than large issues.
8.	Bubna and Prabhala (2007)	250 IPOs during 1999-2005	Degree of oversubscription has a positive influence on degree of underpricing. Book built IPO have mean underpricing of 34% against 77% for fixed price IPOs Age inversely-related to underpricing. Book building preferred by older and larger firms and less by technology firms. Removal of discretionary allocation increases underpricing.
9.	Pande and Vaidyanathan (2007)	55 IPOs that listed during March 2004-October 31, 2006	Listing delay had positive effect on underpricing. Marketing spend—No significant impact. Demand for issue had positive impact. One month return negative.
10.	Khurshed *et al.* (2010)	218 book built IPOs during March 1999- March 2008	NII and retail subscriptions follow penultimate day QIB subscriptions. Offer prices higher for more mature firms, higher demand issues and higher QIB demand issues. More reputed undewriters underprice more. Post listing underpricing influenced by NII and retail oversubscription. Market underpricing related to market returns between close of book building and listing and negatively-related to pre-book building underpricing.
11.	Janakiramanan (2008)	116 IPOs during 2000-2001	Initial market adjusted return of 17.2%. Positive cumulative abnormal return depends on choice of CAPM (264%) versus Fama French model (548%).
12.	Khurshed *et al.* (2008)	251 book built IPOs including 47 graded IPOs during 1999-2008	No monotonic relationship between grading and underpricing. No effect of grading on retail or NII susbcriptions, QIB subscriptions increase monotonically. Underpicing not related to rating agency that gives the grade. Higher grades associated with more reputed investment bankers.

Table 1 (Cont.)

No.	Study	Sample/Data	Major Findings
			higher offer prices, presence of venture capitalists, higher NII subscription levels and older firms. Transparency of book building influences retail subscription more than grade.
13.	Sahoo and Rajib (2009)	43 IPOs during 2001-2005	Inverse relationship between investment bank prestige and initial returns. Significant difference between underpricing across three prestige categories of investment banks. Older firms and large issues more likely to be managed by prestigious investment banks.
14.	Neupane and Poshakwale (2009)	280 IPOs during January 2001 to December 2008 including 113 with new bank loans	New bank loans reduce underpricing. New bank loans reduce instance of downward price revision. Large issue means less underpricing. Demand for shares positively related to underpricing. Prestigious underwriter reduces underpricing.
15.	Sahoo and Rajib (2010)	92 IPOs during 2002-2006	Higher post issue shareholding retention by promoters leads to higher underpricing. Firm age, book value, market volatility, leverage and ex ante uncertainty have no effect on underpricing. Manufacturing reports lower underpricing than other sectors.

in terms of underpricing or short or long run performance of the issuer, it may be worthwhile to develop- a picture of the IPO issuers along the lines of these attributes, such as " the size of the issuer, the stage of evolution in terms of new companies in contrast to companies with outgoing operations at the time of issuance, the extent of promoters' shareholding in the company after the issuance and the industry that the issuer company is engaged in".

Another key factor in the development of the securities market in India in general and that of the IPO market in particular is the role played by the Securities and Exchange Board of India (SEBI). SEBI was established in 1991 to oversee the working of securities market and to promote its development, following a major scam in the Indian securities market (For a detailed discussion of the scam of 1991 and its mechanics, please refer to Barua and Varma (1993)).

Several articles trace SEBI's role. (See for example Gokarn (1996), Shah (1999), Shah and Thomas (2000a), Shah and Thomas (2002), Goyal (2005) and Sabarinathan (2010)). Sabarinathan (2007) critiques the important developments in SEBI's regulation of the Indian IPO market. Table 2 lists the more important among the developments, in our opinion, and the impact they are likely to have had on the IPO markets. The developments have been based on an

Table 2: Important Regulatory Announcements from SEBI Relating to the Primary Market

Effective	Provision	Likely Significant Impact
April 96	Access criteria stipulating minimum track record	Restricts entry to companies with track record
May 99	Access criteria stipulating minimum networth	Restricts entry to larger companies with track record
Aug. 03	Access criteria stipulating minimum size	Restricts entry to larger companies with track record
June 92	Minimum promoters' contribution	Issue size limited by promoters' resources
June 92	Lock in of promoters' contribution	Issue size limited by promoters' resources
June 92	Restrictions on issue of bonus share	Restricts flexibility of capital structure and consequently makes it more difficult for young companies to qualify for making IPOs
May 94	Removal of restrictions on issue of bonus shares	Allows IPOs by smaller/younger companies
June 92	Disclosure at public offering	Improves quality of issuers
March 96	Enhancement of disclosure at public offering	Allows better screening of issuers by investors and improves quality of issues/issuers
June 92	Vetting of prospectus	Restricts number of issues, improves issue quality
Dec. 96	Withdrawal of prospectus vetting	Allows more issues, may/not affect issue quality
Aug. 03	Minimum number of 1,000 shareholders	Sets minimum dilution limits and ensures minimum distribution of public shareholding
July 01	Minimum dilution from 25% to 10%	Reduces average dilution at IPO
1999-00	Book building	Increases size and institutional participation
1999-00	Mandatory dematerialization of IPOs	Facilitates institutional participation
2000-01	Clause 49 to apply to IPOs	Facilitates institutional participation
Oct. 99	Free pricing	More premium issues

analysis of the Issuance of Capital and Disclosure Requirements (ICDR), promulgated by SEBI. The ICDR is at the centre of a web of regulations governing the issuance of securities in the Indian securities market.

This paper examines whether there is an association between the various institutional developments and the activity/outcomes in the market. Establishing a precise cause effect link between the regulatory actions of SEBI and the outcomes in the market is not easy empirically, given the numerous other variables that could have possibly affected the market outcomes, as pointed out in Gokarn (1996). We therefore, develop some tentative observations which could then become the basis of further research. This and subsequent work on these lines can potentially inform policy relating to market design and regulation in future. The rest of the paper is organized as follows. Section 2 deals with the data and the methodology. Section 3 analyzes total issuance activity in the primary market, except rights issues, Section 4 analyzes IPO activity level while Section 5 discusses the sectoral break up of IPOs, Section 6 analyzes the percentage of equity offered at the IPO to the public, and next section analyzes the listing pattern among IPOs; and the last section provides a conclusion to this paper.

2. DATA AND METHODOLOGY

Our analysis proceeds as follows. We capture some key information relating to IPOs that is available from a commercial database on IPOs from Prime Database (referred to as Prime hereafter). In our analysis we leave out (1) debt securities (2) hybrid securities and (3) securities issued by listed companies, also referred to as Follow on Public Offerings (FPOs). The economics of debt is different from that of equity shares. Hybrid securities are debt or preference shares that are convertible into equity and/or contain embedded rights or options to own equity in the issuing company and so are different from equity shares. Companies whose securities are already listed and when they are making a follow on public offering, already have a trading history on the stock exchanges. Hence they do not pose issues of the same complexity as IPOs. Starting with the full set of IPOs for which Prime has data we proceed as follows. We removed all records relating to—issues that combined rights and public offerings, issues which had features, such as dual pricing or convertibility or warrants or similar features, certain records where the data appeared to be inconsistent with our intuitive understanding of market trends or practices. We also removed records where data relating to industry was not readily available. The resulting input files comprised of IPOs of straight equity shares offered at one offer price. Our period of analysis starts from 1993-94, from when on we have data broken down into IPOs and FPOs based on the year.

3. ANALYSIS OF IPO ACTIVITY

Summary descriptive statistics relating to the volume of IPOs is provided in Table 3.[1] The number and volume of IPOs increased up to 1995-96 and then started declining all the way up to 1998-99. Activity level picked up in terms of number of issues from 1999-2000 to 2000-01, although it was still low in comparison to the earlier years. In 2001-02 and 200-03, the decline in the number of issues was even more considerable. The mean size of issues

[1] Prime provides two measures of size, Gross Amount and Net Amount. Net Amount is defined as Gross Amount less firm allotments to promoters. The regulations at that time required that firm allotments made to promoters at the time of the public issue be included in the issue through the prospectus and hence the definition of Gross Amount. Since the regulations require that all issues at the time of the public issue be defined as the issue through the prospectus we use the Gross Amount as the measure for all analysis of issue sizes.

appears to fall in three size bands associated with three different time windows: 1993-94 to 1996-97, 1997-98 to 2000-01 and 2001-02 to 2008-09. The relatively high standard deviation/ mean of the issue size indicate that even during the early years there were a few large issues that accounted for the variability in size. The variability in size declines from 1997-98, pointing to a certain convergence in the Indian IPO market.

It is possible that the trend in the average size of IPOs across the years point to the following fundamental changes in the primary market which are described as follows. (1) Indian firms had higher requirements of capital as they grew in size and scale so as

Table 3: Descriptive Statistics of IPO Sample

Year	No.	Gross Issue Amount (₹ in lakh)			
		Total [1]	Mean [2]	SD [3]	SD/Mean
1993-94	631	3,14,140	512	675	1.32
1994-95	1,126	5,73,368	509	1370	2.69
1995-96	1,275	4,34,097	340	713	2.09
1996-97	671	4,18,071	623	4,238	6.80
1997-98	46	88,323	1,920	5,546	2.89
1998-99	18	37,930	2,107	2,638	1.25
1999-00	51	2,58,716	5,073	12,963	2.56
2000-01	113	2,46,806	2,184	7,499	3.43
2001-02	5	1,00,755	20,151	36,043	1.79
2002-03	6	1,03,868	17,311	14,668	0.85
2003-04	19	3,19,111	16,795	24,372	1.45
2004-05	23	14,66,232	63,749	1,55,156	2.43
2005-06	75	10,76,455	14,353	24,402	1.70
2006-07	75	28,38,668	37,849	1,16,453	3.08
2007-08	84	4,13,2345	49,195	1,52,464	3.10
2008-09	21	2,08,234	9,916	41,620	4.20

Note: [1] Gross Issue Amount as stated in the prospectus, including reservations and preferential allotments.
[2] Simple arithmetic mean of Gross Issue of IPOs during the year.
[3] SD = Standard Deviation of Gross Issue Amount of Sample of IPOs during that year.

Source: Prime – Analysis by researcher

to be globally competitive and therefore came up with larger issues; (2) the increasing fixed costs of making a public offering, compared to that of raising private capital, restricted public issuance to larger companies/offerings; (3) in terms of supply of capital, certain institutional developments that we outline later provided the impetus for larger institutional investors to participate in the market. These investors had the financial resources to absorb large issues.

In order to further understand the patterns in the issuance activity we classify IPOs in terms of the pricing of the issue and the stage of evolution of the issuer and carry out a cross tabulation analysis along these two dimensions. Par issues are issues priced at the face value of the shares. Premium issues are priced higher than the face value. The idea of par and premium issues is with respect to the face value of the shares, an aspect of significance in the Indian company law regime. Issuers may also be categorized into (1) companies with on-going operations and (2) greenfield units with a relatively limited or no history of operation. We refer to the former as 'existing' companies and the latter as 'new' companies. The results of the analysis are presented in Tables 4-6.

Pricing an issue at par results in a higher dilution for the incumbent (pre-public offer) shareholders. This also leads to a high cost of equity to the firm. This has been borne out by the higher underpricing documented in the literature cited earlier. The data in Table 4 shows that par issues dominated in terms of number of issues until 2001-02, with 1999-2000 being an exception. Premium issues dominated the amount of capital raised from 1996-97. On average par issues were of smaller size, with the difference in size between par and premium issues increasing from 1996-97. Two possible explanations may be advanced for the small size of par issues. One is that good quality issuers may like to limit the high dilution that results from par issues. They might even consider using the par priced IPO as a means to building a trading history which they can then use to make a follow-on public offering as proposed in the model in Allen and Faulhaber (1989). Another explanation could be that marketing large par issues may not be easy, because of the concern that the market may perceive these to be poor quality issues. This raises the question of what would be the characteristics of the issuers (apart from those that are required by law to price their shares at par) who might have wanted to make par issues at all and why?

Companies may have chosen to make par issues for three possible reasons. One, until 1995-96 ICDR restricted issues at a premium to those companies that had been profitable for three out of the five most recent years prior to the IPO. Conversely, companies without the track record could still make a public offering of equity shares, but the issue would have to be priced at par. Second, issuers may have technically met the regulatory norms for pricing securities at a premium; however, that may not have been sufficient to justify a premium from investors. The third but somewhat related reason may be worsening market conditions that may have made it difficult to market securities at a premium, irrespective of the quality of securities on offer.

The classification of issuers into new and existing companies assumes significance because of the information problems posed by new and early stage companies with a limited operating history. It is quite likely that most, if not all the new and early stage companies represented risky businesses. The logic underlying the inference is as follows: Larger issue sizes possibly mean larger issuers, on an average, in terms of paid up capital. Larger issuers on an average possibly mean larger more competitive businesses.

Table 4: Break up of IPOs into Issues at Par and Issues at Premium [1] (₹ in Lakh)

Year	Par	Par	Premium	Premium	Par (%)	Par (%)	Premium (%)	Premium(%)	Mean [6]	Mean [6]	Total	Total
	No. [2]	Amount [3]	No. [2]	Amount [3]	No. [4]	Amount [5]	No. [4]	Amount [5]	Par	Premium	No.	Amount
1992-93	350	1,49,032	89	1,00,830	80	60	20	40	426	1,133	439	2,49,862
1993-94	473	2,01,457	142	1,12,933	77	64	23	36	426	795	615	3,14,391
1994-95	814	2,44,917	313	3,28,610	72	43	28	57	301	1,050	1,127	5,73,527
1995-96	1073	2,90,747	202	1,43,350	84	67	16	33	271	710	1,275	4,34,097
1996-97	604	2,06,628	69	2,11,593	90	49	10	51	342	3,067	673	4,18,221
1997-98	44	11,337	8	77,194	85	13	15	87	258	9,649	52	88,531
1998-99	11	5,700	7	32,231	61	15	39	85	518	4,604	18	37,930
1999-00	17	22,395	33	2,12,093	34	10	66	90	1317	6,427	50	2,34,487
2000-01	71	54,385	43	1,92,420	62	22	38	78	766	4,475	114	2,46,806
2001-02	3	905	2	99,850	60	1	40	99	302	49,925	5	1,00,755
2002-03	1	10,000	5	93,868	17	10	83	90	10000	18,774	6	1,03,868
2003-04	5	4,896	8	3,14,215	38	2	62	98	979	39,277	13	3,19,111
2004-05	1	800	22	14,65,432	4	0	96	100	800	66,611	23	14,66,232
2005-06	0	0	74	10,76,455	0	0	100	100	–	14,547	74	10,76,455
2006-07	0	0	75	28,38,668	0	0	100	100	–	37,849	75	28,38,668
2007-08	0	0	84	41,32,345	0	0	100	100	–	49,195	85	41,32,345
2008-09	1	1,373	20	2,06,861	5	1	95	99	1373	10,343	21	2,08,234

Note: [1] Classification based on issue price reported in Prime.
[2] Total number of issues of that category made during the year.
[3] Total of Gross Issue Amounts stated in the prospectus of all issues in that category during the year. Gross Issue Amount as defined in Table 3.
[4] % of number of Par (Premium) issues is [No. of Par (Premium) Issues during each year/Total No. of Par and Premium Issues during that year].
[5] % of amount of Par (Premium) issues = [Total of Gross Issue Amount of Par (Premium) Issues during each year/Total No. of Par and Premium Issues during that year].
[6] Mean size = Simple arithmetic mean of all Gross Issue Amounts in that category during that year.

Source: Prime – Analysis by Researcher

Table 5: Break up of IPOs into Issues from New and Existing Companies

(₹ in lakh)

Year	New	New	Exist	Exist	New	New	Exist	Exist	Total	Total	New	Exist
	No. [2]	Amount [3]	No. [4]	Amout [3]	No. (%) [4]	Amount (%) [5]	No. (%)[4]	Amount (%) [5]	No. [2]	Amout [3]	Mean [6]	Mean [6]
1992-93	199	75,484	240	1,74,379	45	30	55	70	439	2,49,862	379	727
1993-94	265	1,33,464	350	1,80,926	43	42	57	58	615	3,14,391	504	517
1994-95	370	1,50,690	757	4,22,837	33	26	67	74	1,127	5,73,527	407	559
1995-96	353	1,13,477	922	3,20,620	28	26	72	74	1,275	4,34,097	321	348
1996-97	195	91,515	478	3,26,706	29	22	71	78	673	4,18,221	469	683
1997-98	11	3,924	41	84,607	21	4	79	96	52	88,531	357	2,064
1998-99	1	1,986	17	35,944	6	5	94	95	18	37,930	1,986	2,114
1999-00	2	330	48	2,34,157	4	0	96	100	50	2,34,487	165	4,878
2000-01	13	3,555	101	2,43,250	11	1	89	99	114	2,46,806	273	2,408
2001-02	1	180	4	1,00,575	20	0	80	100	5	1,00,755	180	25,144
2002-03	2	22,082	4	81,787	33	21	67	79	6	1,03,868	11,041	20,447
2003-04	0	0	13	3,19,111	0	0	100	100	13	3,19,111	0	24,547
2004-05	1	5,880	22	14,60,352	4	0	96	100	23	14,66,232	5,880	66,380
2005-06	1	3,112	73	10,73,343	1	0	99	100	74	10,76,455	3,112	14,703
2006-07	2	13,88,879	73	14,48,789	3	49	97	51	75	28,38,668	6,94,440	19,846
2007-08	0	0	84	41,32,345	0	0	100	100	84	41,32,345	0	49,195
2008-09	0	0	21	2,08,234	0	0	100	100	21	2,08,234	0	9,916

Note: [1] Classification of firms into New + Existing is as in Prime.
[2] Total no. of issues of that category made during the year.
[3] Total of Gross Issue Amounts stated in the prospectus of all issues in that category during the year.
[4] % of number of New (Existing) issues is [No. of New (Existing) Issues each year/Total No. of New + Existing Issues during that year].
[5] % of amount of New (Existing) issues: [Total of Gross Issue Amount of New (Existing) Issues each year/Total No. of New + Existing Issues during that year.
[6] Mean size = Simple arithmetic mean of all Gross Issue Amounts in that category during that year.

Source: Prime – Analysis by Researcher

Larger issue sizes therefore, may possibly mean that on an average better quality issuers had been approaching the market. The data suggests that during 1992-93 to 1994-95 there were a large proportion of new issues, in comparison to later years. This was perhaps due to the rush of companies trying to go public quickly to take advantage of a window of opportunity that had just been made available by a new liberal regime for public offerings which was announced in 1992, following the rescinding of the repressive regime under the CCI. There were no restrictions on even start-up firms making an IPO. That would have meant high dilution as noted earlier. There was the other ICDR requirement that not less than the higher of 20% of the post issue capital or 20% of the size of the proposed issue was to be brought in by the promoters and the shares acquired as part of the minimum contribution were subject to a mandatory lock in for a three year period. This additional requirement meant that promoter groups which did not have large liquid pools of capital that they could offer to be locked-in could not promote large companies. The small average issue size during these years is thus the outcome of these two apparently conflicting forces: On the one hand an attempt made by companies to take advantage of a receptive market by aggressively making IPOs, even if prematurely; and the attempt by SEBI to ensure that only issuers in which the promoters had a minimum equity stake were eligible to make public offerings.

The number of new companies declined in the later years with the regulatory announcement in 1996 that companies required a track record for making an IPO. The high proportion of new companies in the initial years makes one wonder if the buoyancy in the initial years was the result of the public capital markets inappropriately playing the role of a venture capitalist! The lack of activity on the primary markets was attributed to the bad experience of investors with the poor performance of the issues that they had subscribed to in the earlier years (The proportion of new issues from 2000-01 to 2002-03 is an exception in that it is higher because of the small number of issues, overall).

Issues from existing companies were larger in size on average, with the difference between the mean size of issues from new and existing companies increasing from 1997-98. The explanation for the larger size issues from existing companies must be due to the observable track record of existing companies and therefore, the ease in marketing the same. Because of their observable record, their shares could be priced closer to their intrinsic worth, resulting in lower underpricing than in the case of new issues and/or issues priced at par. Existing companies may have also had larger requirements of capital, being firms with on-going operations.

Most new issuers priced their securities at par. Among existing companies the proportion of companies making par issues seems to be higher than those making premium issues up to 1998-99. Interestingly the percentage of existing companies making par issues increased as the level of issuance activity in the IPO market declined from 1995-96 to 1998-99. If it turns out that those existing companies who met the regulatory criteria for a premium issue ended up making a par issue during this period, it may be possible to hypothesize that the market has been a greater influence on the pricing of issues than the regulator.

The larger proportion of existing companies making premium issues in the later years of the analysis, the virtual disappearance of IPOs by new companies and the overall increase in size of issues which may be viewed as a proxy for size of issuers suggest that public offerings during the later years of the review may have been mainly from larger and better quality issuers.

These trends suggest a line for a more formal enquiry into the quality of issues and possible explanations based on regulatory initiatives. For example in 1995-96, the criteria introduced for companies to make public offerings of securities, seem to have more or less eliminated issues by new companies. Book building guidelines underwent substantive modifications in 1997-98, 1998-99 and 1999-2000. Disclosures in the prospectus as well as on a continuing basis were enhanced in 2000-01. Compulsory trading of IPOs in dematerialized form was introduced in 1999-2000. The time taken for finalizing allotment in book built issues was reduced from 30 days to 15 days in 2000-01. Most of these developments relate to the primary market while a few, such as the continuing disclosure requirements relate to the secondary market. All of these must have attracted institutional investors with large investible funds to the Indian securities market. They may have paved the way for large issues from well-established and good quality issuers to the market. These issues may have partly crowded out the poor quality issuers. It will be interesting to see if those developments of the period around 1999-2000, which are not directly related to the primary market, have impacted the trends in the composition of issuers directly or indirectly and if these have resulted in a better quality of issuers.

In summary, the size of issues and the break-up of issues in terms of issue price (par versus premium issues) and the stage of evolution of the issuer into new and existing companies, suggest that fundamental changes may have occurred in the profile of the issuers during this period, with a shift in favor of large issues being made at a premium by existing companies. In turn, these reflect a change in the quality of issuers that accessed the primary market. In a sense, this could be seen as a sign of the maturing of the market, where investors appear to have sought greater evidence of sustainable performance from companies. This might suggest that investors in IPOs may have been seeking longer term investment opportunities in addition to, if not in contrast to, short term profits from the after market.

Table 6: Cross Tabulation of Existing and New IPOs into Par and Premium Issues

(₹ in lakh)

Year	Existing Companies								New Companies							
	Equity Par				Equity Premium				Equity Par				Equity Premium			
	No. [1]	Amount [2]	No. (%) [3]	Amount (%) [4]	No. [1]	Amount [2]	No% [3]	Amount (%) [4]	No. [1]	Amount [2]	No. (%) [3]	Amount (%) [4]	No. [1]	Amount [2]	No. (%) [3]	Amount (%) [4]
1993-94	216	72,705	35	23	134	1,08,222	22	34	257	1,28,752	42	41	8	4,712	1%	1
1994-95	456	1,18,504	40	21	301	3,04,333	27	53	357	1,26,254	32	22	12	24,277	1	4
1995-96	725	1,81,405	57	42	197	1,39,215	15	32	348	1,09,342	27	25	5	4,135	0	1
1996-97	408	1,15,591	61	28	68	2,10,965	10	50	194	90,887	29	22	1	628	0	0
1997-98	28	7,784	61	9	7	76,615	15	87	10	3,345	22	4	1	579	2	1
1998-99	10	3,714	56	10	7	32,231	39	85	1	1,986	6	5	–	–	0	0
1999-00	15	22,065	29	9	34	2,36,322	67	91	2	330	4	0	–	–	0	0
2000-01	57	50,830	50	21	43	1,92,420	38	78	13	3,555	12	1	–	–	0	0
2001-02	2	725	40	1	2	99,850	40	99	1	180	20	0	–	–	0	0
2002-03	1	10,000	17	10	3	71,787	50	69	–	–	0	0	2	22,082	33	21
2003-04	5	4,896	26	2	14	3,14,215	74	98	–	–	0	0		–	0	0
2004-05	1	800	4	0	21	14,59,552	91	100	–	–	0	0	1	5,880	4	0
2005-06	–	–	0	0	74	10,73,343	99	100	–	–	0	0	1	3,112	1	0
2006-07	0	0	0	0	73	14,49,789	97	51	0	0	0	0	2	13,88,879	3	49
2007-08	0	0	0	0	84	41,32,345	100	100	0	0	0	0	0	0	0	0
2008-09	1	1,373	5	1	20	2,06,861	95	99								

Note: [1] Total no. of issues of that category made during the year.
[2] Total of Gross Issue Amounts stated in the prospectus of all IPO issues in that category during the year.
[3] % of number of issues in that category during each year/Total No. of all IPOs during that year.
[4] % of total amount of issues (Gross Issue Amount) in that category during each year/Total of Gross Issue Amount across all categories during that year.

Source: Prime – Analysis by Researcher

4. SECTORAL BREAK-UP

Our analysis classifies each company making an IPO into one of 28 different sectors[2], based on their sole/principal line of business. Companies that do not classify readily into any of these have been classified into two residuary catch all categories, named miscellaneous manufacturing and miscellaneous services. The number of IPOs from each industry, the volume of capital raised by industry and the percentage analyses of these were calculated. For the sake of brevity these analyses have not been presented in this paper.

To understand which of the 28 industry categories have been more dominant either in terms of number of offerings or in terms of volume of capital mobilized, we further tabulate the data by identifying sectors in each year that account for not less than 5% of the number of offerings and/or the volume of capital raised. The cutoff point of 5% was arrived at on the following simplistic method. If all sectors had been equally important they would each have accounted for roughly 3.6% of the number and volume of capital issuance activity respectively. We thus decided that 5% is a number that suggests larger than average presence or participation for a given sector in a year. We use the size and the number parameters severally instead of collectively because we believe that certain sectors may not necessarily be capital intensive. Financial services and software are two examples. To use volume of capital as a necessary criterion along with numbers might mean missing the activity of those sectors in the primary markets. This consideration becomes all the more important because the Indian primary markets have been open to receiving a large number of small-sized issues for a considerable part of the period under review.

This analysis is presented in Table 7.

The following are the key observations that emerge from the analysis.

- Twenty four out of the 28 sectors find a place in the table; but it must be remembered that we have adopted a fairly liberal criterion for including a sector in this table.
- Thirteen sectors are present in the table in five or more years. These are agricultural products and services, chemicals, banking, financial services,

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2 The sectors are Agricultural Products and Services, Autoparts and Automobiles, Banking, Cement, Chemicals, Construction/Contracting, Consumer Products, Electronics, Financial Services, Food and Dairy Products, General Engineering, Computer Hardware, Computer Software Services, Healthcare services, Hotels and Hospitality, Media, Non Ferrous Metals, Miscellaneous Manufacturing, Miscellaneous Services, Oil and Gas, Paper and Packaging, Pharmaceuticals, Power, Steel, Sugar, Telecommunication, Textiles and Trading. It must be admitted that the sectoral classification can be more scientific, based on a SIC code or equivalent thereof. Equally, the details of the business of the issuer firm should be more ideally hand collected from the prospectus. It must be admitted that the sectoral classification can be more scientific, based on a SIC code or equivalent thereof. Equally, the details of the business of the issuer firm should be more ideally hand collected from the prospectus.

Table 7: Sectors Accounting for More than 5% of Number and Volume of IPOs

Year Ending March 31	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Agricultural Products and Services	+	+	+	+										+		
Autoparts and Automobiles	+										+					
Banking	+	+			+	+	+	+	+	+	+	+	+			
Chemicals	+	+	+	+	+										+	
Construction	+			+									+	+	+	+
Financial Services	+	+	+	+	+	+	+						+	+	+	
Food/Dairy	+	+	+													
Gen Engineering+	+	+		+	+									+	+	+
Paper and Packaging							+									
Power						+						+			+	
Textiles	+	+	+	+		+					+		+	+		+
Pharma	+	+			+		+			+	+					+
Steel	+	+				+					+		+			
Misc Mfg	+	+	+		+	+										
Miscellaneous Services						+				+		+		+	+	
Non ferrous metals		+			+											
Telecom		+						+	+							+
Computer Software						+	+	+	+	+	+	+	+	+	+	+
Healthcare							+									
Media								+		+		+	+	+		
Trading				+	+											
Hotels and Hospitality						+										
Oil and Gas											+					
Consumer Products	+															

Source: Prime Financial – Press Analysis by Researcher general engineering, textiles, pharmaceuticals, miscellaneous manufacturing, software, construction, media, miscellaneous services and steel.

- Of the above, only banking, financial services, chemicals, software and textiles found a place on the combined criteria of number and value in five or more years.
- Many industries that accounted for a reasonable share of issuance during the early years of the period (up to 1996-1997) practically disappear in the later part of the review period. These include sugar, other agricultural products and services, electronics, food and dairy products, general engineering, and computer hardware manufacturing, non ferrous metals, hotels and hospitality and financial services.
- A few industries such as telecommunication, software services, media, banking and construction entered the public markets during the later years, after 1997-98.
- Finally, towards the end of the review period, the wide diversity in the sectors accessing the public markets appears to have reduced. Taken together with the increase in size of issues these developments seems to suggest that in the later years of the review period the primary markets have been receptive to companies of international scale and size and in sectors in which Indian industry had a comparative advantage, albeit fewer in number than in the earlier years.

The decline in or absence of issues from sectors that were popular in the earlier years can possibly be construed as evidence of inference (Wurgler, 2000) that well-functioning capital markets selectively drive capital to those sectors that have the potential to offer a competitive rate of return. It is possible that institutional developments may have led to these outcomes in the following way. The numerous developments in the primary and secondary markets attracted several large and sophisticated international institutional investors into the Indian primary and secondary markets. Thus there was a steady migration of capital over these years to more competitive firms and sectors.

Of the various sectors noted above, the case of financial services is noteworthy for the rapid increase in volume of activity and an equally rapid decline and for the amount of issuance activity that it accounted for in the period as a whole. These companies were mostly engaged in leasing and hire purchase and/or fee-based (advisory services such as merchant banking) or fund-based activities (such as investing in securities) relating to the capital market. Between 1993-94 and 1996-97 the sector came up with 926 issues representing 28.1% of all IPOs in our sample and raising ₹3,012 cr which represented 17.3% of capital raised during those years.

The booming financial markets made financial services an attractive business, while low entry barriers and a zero gestation period made it possible for nearly every aspirant to successfully float a financial services firm. The sharp decline in the number of these firms making public offerings post 1996-97 may be attributed to (1) the decline in the fortunes of the securities industry (2) restrictions imposed by the RBI on the acceptance of fixed deposits, which may have made it difficult for the new entrants to the industry to build up an asset base (3) the regulation that SEBI introduced in 1997-98 that required financial services companies to separate their merchant banking activities from all other activities, whether related to the capital market or not. By restricting the ability of financial services firms to deploy funds raised for hire purchase into the securities market this regulation, as had been the practice among nearly all financial services firms, the regulation may have indirectly forced many firms to exit the industry.

5. DILUTION

A public offering of shares reduces (dilutes) the shareholding of the owner-managers in the issuer firm. The literature reviewed in Table 1 treats the promoters' (owner-managers') shareholding in the company after the public issue as an explanatory variable. We track the percentage offered in the issue because Indian securities law (section 19 (2) (b) of the Securities Contracts (Regulation) Rules, 1957) has historically mandated this percentage. The extent of shareholding may be viewed as a credible commitment on the part of the management to let itself be disciplined by external shareholders as suggested by Pagano *et al.* (1998). The corollary to this is that owner managers who seek discretionary control over the cash flows of the company may like to minimize the extent of dilution. On the other hand, when owner managers are willing to dilute their equity freely they may be perceived by investors as being indifferent towards ownership of the firm and therefore signaling poor quality of the issuer. It is useful to add here that in the Indian context, holding 76% of the equity of the company provides nearly unfettered rights over the management of the company, while 51% provides simple majority. It is possible to achieve an effective control over the cash flows with smaller shareholding percentage, depending upon the ownership of the non-promoter piece of the equity.

We analyze dilution in terms of the percentage of equity to the public. Table 8 provides a summary of the percentage of equity offered as part of the public offering. We have calculated the same in the following manner.

Percentage of equity offered at IPO = [(Net Issue Amount[3]/Price per Share)/(Post Issue Capital/Face Value per Share)].

The mean dilution was high in the initial years but has declined over the years from 1997-98. The decline is marked from 1999-2000. Until October 1999, the minimum

[3] We use Net Issue Amount here because we find that the bulk of the firm allotments and reservations out of the Gross Issue Amount is made to promoters whereas the Net Issue Amount is the effective allotment to the public investor.

dilution for all companies was 25% of the post issue capital to be offered to the public under the regulation noted above. In October 1999 the minimum dilution was reduced

Table 8: Analysis of Percentage of Equity[1] Offered at IPO Across the Years

Year	Offer (%) Mean [2]	Offer (%) SD [3]	Offer (%) SD/Mean
1993-94	56.4	15.0	0.27
1994-95	45.4	16.7	0.37
1995-96	47.7	14.3	0.30
1996-97	51.2	14.1	0.28
1997-98	43.3	15.8	0.36
1998-99	39.2	13.6	0.35
1999-00	27.7	8.9	0.32
2000-01	30.0	13.3	0.44
2001-02	28.4	14.2	0.50
2002-03	25.0	11.0	0.44
2003-04	24.3	13.3	0.55
2004-05	26.7	15.5	0.58
2005-06	31.0	9.4	0.30
2006-07	29.9	13.2	0.44
2007-08	25.1	14.1	0.56
2008-09	38.1	19.2	0.51

Note: [1] Percentage of equity offered at IPO defined as Net Offer to Public/Post Issue Paid up Capital.
[2] Mean dilution is simple (equally weighted) arithmetic average of the percentage of equity offered a IPO by all the companies that made an IPO during the year.
[3] SD is the standard deviation of the percentage of equity offered at IPO by all the companies during the year.

Source: Prime – Analysis by Researcher

to 10% in the case of information technology companies. In July 2001, the minimum dilution was reduced across the board to 10%. With the reduction in the mandated minimum dilution the extent of equity offered to the public appears to have declined too. The high standard deviation to mean ratio in the later years suggests that issuers have been offering a widely varying percentage of their equity over these years, possibly in line with the specifics of the issue and in line with the expectations of the market and less constrained by regulation.

In an attempt to further understand the relationship between the percentage of equity offered and the other dimensions of the issue we analyzed the dilution in terms of existing versus new companies, par versus premium issues and then cross tabulated the extent of dilution along these parameters together. The results of this cross tabulation are presented in Table 9. For reasons of brevity we merely report some of the more interesting results. Analysis of the equity percentage offered at IPO by new and existing companies seems to suggest that existing companies suffered less dilution. Analysis of the dilution in terms of par and premium pricing and existing and new firms suggests that companies that made par issues experienced higher dilution even if the issues were made by existing companies. Thus *ceteris paribus*, pricing seems to account more for the dilution at the IPO than the stage of evolution of the issuer.

6. LISTING PATTERN ON STOCK EXCHANGES (SEs)

Simon (1989) and Cheffins (2001) suggest that the choice of exchanges on which firms list may indicate their attitude towards investor protection. That makes it interesting to examine the listing pattern of IPOs. Indian Stock Exchanges (SE) were in general considered to be dominated by the interests of the brokers who owned and/or managed them, except the National Stock exchange (NSE), which is believed to have had a better record of investor protection and led the transformation of Indian securities exchanges, as a demutualized exchange from the start. That said, the importance of the ownership and control of the exchange should not be overstated. For example, the OTCEI is the first demutualized SE but it did not create the same impact as the NSE. That raises the question of whether the demutualized structure of the NSE is by itself an adequate explanation for the impact it made on the market. The summary of the listing trend among IPOs is provided in Table 10.

Overall, there is a declining trend in the number of exchanges on which issuers have sought listing. This may be a result of the declining role of various regional SEs as investors migrated towards the two national SEs, namely, the Bombay Stock Exchange (BSE) and the NSE. Issuers may have chosen to list on multiple exchanges in the early years to facilitate marketing of the issue across a wider geographical area, especially in the case of larger issues. The low correlation coefficient of 0.12 between the number of exchanges and the size of the issue, across the years, however does not support this explanation. We calculate the average number of SEs on which new companies list and the number of SEs on which existing companies list. We do a similar analysis for par and premium issues (Results not reported here, but available with the author). We expect that if listing is a means to more aggressively market issues for companies without an adequate track record new companies are likely to list on more SEs. We do not expect a similar difference in the case of par issues and premium issues because we believe that the lower price (at par) may be a compensation for companies which are less likely to appeal to investors and hence they may not need the additional distribution push from listing on more SEs. We find the average number of SEs to be 3.13 and 2.94 respectively in the case of new and existing companies while it is 2.98 and 3.06 respectively in the case of par and premium issues. These results are consistent with our expectation.

Table 9: Cross Tabulation of Percentage of Equity Offered at IPO1 by Stage of Development and Par versus Premium Pricing

Year	Existing Companies						New Companies					
	Equity Par			Equity Premium			Equity Par			Equity Premium		
	Mean (%) [2]	SD [3]	SD/Mean [4]	Mean (%) [2]	SD (%) [3]	SD/Mean [4]	Mean (%) [2]	SD (%) [3]	SD/Mean [4]	Mean (%) [2]	SD (%) [3]	SD/Mean [4]
1993-94	47	13	0.28	35	12	0.34	45	14	0.31	41	16	0.39
1994-95	39	13	0.33	28	7	0.25	39	13	0.33	31	7	0.23
1995-96	37	12	0.32	29	8	0.28	36	12	0.33	33	9	0.27
1996-97	41	14	0.34	29	9	0.31	39	13	0.33	25	–	–
1997-98	39	15	0.38	22	13	0.59	35	11	0.31	25	–	–
1998-99	41	15	0.37	26	7	0.27	30	–	–	–	–	–
1999-00	28	7	0.25	25	8	0.32	24	2	0.08	–	–	–
2000-01	29	9	0.31	29	11	0.38	27	9	0.33	–	–	–
2001-02	32	10	0.31	14	6	0.43	27	–	–	–	–	–
2002-03	26	6	0.23	–	–	–	28	–	–	15	14	0.93
2003-04	33	10	0.30	20	12	0.60	–	–	–	44	–	–
2004-05	32	–	–	26	15	0.58	–	–	–	41	–	–
2005-06	30	8	0.27	–	–	–	–	–	–	–	–	–
2007-08	–	–	–	25	14	0.56	–	–	–	–	–	–
2008-09	82	0	0	36	17	0.47	–	–	–	–	–	–

Note: [1] Simple arithmetic mean of Percentage Equity Offered at IPO by all companies in that category that made an IPO during that year.
[2] Standard Deviation of Percentage Equity Offered at IPO by all companies in that category that made an IPO during that year.
[3] Coefficient of variation of Percentage Equity Offered at IPO by all companies in that category that made an IPO during that year.

Source: Prime – Analysis by Researcher

Table 10: Listing Trends Among IPOs

Year	Mean [1]	SD [2]	Max. [3]	Min. [4]	SD/Mean [5]
1993-94	3.43	1.18	7	1	0.34
1994-95	3.21	1.18	8	1	0.37
1995-96	2.92	1.06	8	1	0.36
1996-97	2.60	1.01	7	1	0.39
1997-98	2.11	1.04	6	1	0.49
1998-99	2.39	0.85	4	1	0.40
1999-00	2.43	0.64	4	1	0.26
2000-01	2.44	0.74	6	1	0.30
2001-02	2.40	0.55	3	2	0.23
2002-03	2.00	0.00	2	2	–
2003-04	1.95	0.52	3	1	0.27
2004-05	1.96	0.37	3	1	0.19
2005-06	1.91	0.29	2	1	0.15
2006-07	1.93	0.38	4	1	0.20
2007-08	1.91	0.33	3	1	0.17
2008-09	1.67	0.49	2	1	0.29

Note: [1] Arithmetic mean of the number of exchanges on which companies sought listing of shares by all companies that made an IPO during that year.
[2] Standard Deviation of the number of exchanges on which all companies making an IPO during that year sought listing.
[3] Highest number of exchanges on which companies making IPO sought listing of shares among all IPOs during that year level.
[4] Least number of exchanges on which companies sought listing of shares among all companies that made an IPO during that year.
[5] Coefficient of variation of the number of exchanges on which companies making IPOs during that year sought listing of shares.

Source: Prime – Analysis by Researcher

The number of issues listed on each of the major exchanges each year is provided in Table 11.

The BSE has clearly accounted for the most number of listings and the maximum amount of capital raised from among our sample of companies. In an interesting contrast the second highest amount of capital has been raised on the NSE although the number of listings on the NSE has been the third lowest. Clearly, the NSE seems to have been targeting larger issues. (NSE's evolution has been traced in Shah and Thomas (2000b). The year-wise analysis however indicates the declining importance of the older SEs, especially starting 1997-98. The proportion of companies listing on the BSE declined

Table 11: Analysis of Number of IPOs Listed on Various Stock Exchanges

Year	Mumbai	National	Ahmedabad	Delhi	Calcutta	Madras	Bangalore	Hyderabad	Vadodara	Pune	OTCEI	Others
1993-94	585	1	439	289	150	137	37	97	72	15	18	241
1994-95	1,077	0	691	443	241	295	61	149	72	38	27	470
1995-96	892	7	769	461	225	324	51	159	76	43	43	566
1996-97	269	12	436	215	118	120	27	116	52	58	14	32
1997-98	14	7	25	12	15	4	2	5	6	6	0	1
1998-99	8	5	5	3	4	2	4	2	0	4	1	5
1999-00	25	16	7	9	7	8	16	22	0	0	6	0
2000-01	54	22	31	8	22	19	45	66	2	7	0	3
2001-02	3	2	1	2	0	1	1	2	0	0	0	0
2002-03	5	3	1	0	1	1	0	1	0	0	0	0
2003-04	13	14	2	1	5	0	0	1	0	0	0	1
2004-05	21	23	0	0	0	0	0	0	1	0	0	0
2005-06	75	67	0	0	0	0	0	0	0	0	0	0
2006-07	75	67	0	0	1	1	0	0	0	0	0	1
2007-08	85	76	0	0	0	0	1	0	0	0	0	0
2008-09	21	14	0	0	0	0	0	0	0	0	0	0

Note: 1. Each column indicates the number of companies IPOs that sought listing of shares during that year.

2. Total Number of IPO listings in each of the years (row totals) as per this table will be greater than the number of IPOs during that year due to multiple listings sought by companies making IPOs.

Source: Prime – Analysis by Researcher

during 1995-96, 1996-97 and 1997-98. It started picking up again in 1998-99. The proportion of capital raised from BSE however continued to be high during the period, suggesting an increase in the size of the issues that listed on the exchange. The drop in the number of listings on the BSE during that period is probably attributable to the increase in the minimum paid up capital specified by the BSE from ₹5 cr to ₹10 cr. The demand for listing from smaller issuers seems to have been met by the Ahmedabad SE, Delhi SE and Calcutta SE during that period. The Ahmedabad SE, in particular, experienced an increase in the proportion of firms listing during the period (that the BSE experienced a decline) without a corresponding increase in the proportion of capital mobilized, suggesting thereby that many of the smaller issues that did not qualify for listing on the BSE under the new criteria got listed on the Ahmedabad SE.

CONCLUSION

The analysis above indicates that there have been some interesting changes in the characteristics of the companies that made IPOs during the period 1993-94 to 2008-09. The features of companies making IPOs are interesting because IPOs are an important source of supply of new investment opportunities in the securities market. The changes in characteristics have been in terms of the size of the issue, size of the issuer as measured by the post issue paid capital, the stage of evolution of the issuer, the pricing of the issue, fraction of shareholding of the issuer that has been offered for public ownership, the industry/business that the issuer is engaged in and the exchanges on which the shares were listed. Briefly, it emerges from the analysis that over the years the market has been receiving fewer issues, but of increasing size from larger firms with an established track record. Issuers seem to be offering a smaller fraction for public ownership at the IPO and have been listing on fewer exchanges. Fewer issues are priced at par during the later part of the period of analysis than the initial years. The sector-wise analysis of issuances points to fundamental changes in the Indian industrial economy such as the emergence of new sectors such as media, banking and information technology. The listing pattern across SEs points to significant changes in the marketplace for securities trading and suggests a strong preference for large national SEs.

The characteristics that we track in this analysis are of interest because they might be indicative of the quality of the issuer. Various studies of IPOs in the Indian context have analyzed the relationship between these characteristics and underpricing. Further, the changes that we note appear to happen around the time of certain regulatory pronouncements from SEBI. If the evolving profile of issuers can be viewed as suggestive of an improvement in the quality of the issuer, it could be said that the increasing volume of IPO activity in India over the years has been driven by larger and better quality issues. Although a serious research challenge in terms of methodology, it would also be interesting to see if the profile that emerges is the result of a regulatory development or an institutional initiative such as the increase in minimum paid up capital specified by the stock exchange(s). This would provide another substantial case for the role of the regulator in the development of the Indian securities market, in addition to those documented in the literature and referred to in this paper. More importantly, this analysis would help in evolving a market design and/or a regulatory mechanism for the proposed Small Medium Enterprise (SME) exchanges in India. While the ICDR provides for such exchanges several announcements have been made recently about the intention to set up SME Exchanges in India (See Gooptu and Acharya (2009) and Economic Times (2010) for two such press announcements). The experience in the early days of the IPO market might provide some useful pointers for designing a more effective system, because experience across the world would suggest that setting up successful and enduring second tier markets has not been easy.

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Distribution of Risk and Return: A Test of Normality in Indian Stock Market

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Efficient capital market theory postulates the random walk behavior of stock market, i.e., risk and return are normally distributed. Capital asset pricing models, which assume the normality in risk and return, deal with how risky securities are valued in an efficient capital market. The present study applies a set of parametric and non-parametric tests to examine the normality of return and risk of daily, weekly, monthly and annual returns in Indian stock market. The study examines the prices of Bombay Stock Exchange (BSE)-listed indices: Sensex, BSE 100 and BSE 500 for the period 1996 to 2006, and three sub-periods (January 1996 to December 1999, January 2000 to December 2002, January 2003 to December 2006) and reports the significant findings. The returns are negatively skewed for all the indices over the period. Asymmetry is found in risk and return in case of daily and weekly returns. Monthly and annual returns, however, are found normally distributed for all three indices over the period of time. These findings bring out the importance of time horizon in investment strategy for the Indian stock market.

INTRODUCTION

Stock market efficiency is a matter of interest for investors for formulating short- and long-term investment strategy. An efficient stock market is said to fully reflect all the publicly available information. It provides unbiased estimates of risky securities, which result in eliminating the possibilities of earning abnormal return under the condition of certainty. Under such situation, investors value risky securities on the basis of risk and return expectations (Kumar and Dhankar, 2009). Fama (1991) describes stock market efficiency in terms of investors' preferences to stock return subject to risk. An efficient capital market makes investors earn extra return with respect to bearing extra risk. The modern portfolio theory provides how risky securities are valued in the competitive and efficient capital market. In a competitive capital market, investors have homogenous expectations pertinent to stock performance and earnings. Being

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risk averse, they tend to choose stocks with high expected return, when two or more stocks will have the same risk level. They tend to choose risky portfolios with the expectation of extra return. However, a number of studies have demonstrated market inefficiencies by identifying systematic variations in stock returns with respect to time-varying forces. These variations are subject to calendar anomalies and company size effect. The most common are the day-of-the-week effect (Aggarwal and Rivoli, 1989; and Berument and Kiymaz, 2001), monthly effect (Ariel, 1987; and Boudreaux, 1995), and company size effect (Keim, 1993; Muneesh and Seghal, 2004; and Seghal and Tripathi, 2006). These studies report that stock returns on the respective day or month are significantly different from rest of the days or months. The existence of such a phenomenon in stock market suggests market inefficiencies. Such situation evolves the possibility of earning abnormal returns by the investors. It can also result in the possibilities of market manipulation and thereby investors earn abnormal return incommensurate with the degree of risk. If efficient capital market holds true, it documents the random walk behavior of stock prices, i.e., stock returns are normally distributed. The present study examines the hypotheses of normality of risk and return of the Indian stock market over the time period.

REVIEW OF LITERATURE

Lee (1990) brings out the importance of time horizon in formulating the investment strategy. The study considers 60 stocks during the period 1926 to 1985. It maintains that when the risk is defined as a variability in annualized returns, diversification over time reduces risk; yet when the risk is defined as a variability in holding period returns, lengthening the investment horizon increases the risk. The proposition of the optimal mean-variance efficient portfolio invested in stocks increases as investment horizons increase. Poshakwale (1996) examines the daily prices of BSE 100 companies for the period 1987 to 1994. The study uses Kolmogorov-Smirnov test to examine the normality of returns of the Indian stock market. The study reports that the frequency distribution does not fit either normal or uniform distribution. It also reports the day-of-the-week effect, i.e., returns of Monday and Friday are significantly different from the returns of rest of the days. Hameed (1997) shows that the lead-lag pattern between large and small market value portfolio returns is consistent with differential variations in their expected return components. The results report the large predictability of returns of small stocks portfolio where in they tend to high exposure in these firms to persistent latent factors. Significant cross-autocorrelation exists between current returns on large stocks and lagged returns on small stocks when trading volume is high. Cagnetti (2001) examines the implication of Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT) on the Italian stock market. The study examines the monthly return of 30 stocks for the period January 1990 to June 2001. Firstly, it tests the normality of the Italian stock market return and reports that stock returns are normally distributed over the period of time. Also, the study involves two phases of regression. The first phase of regression estimates stock returns and beta values. The second phase is cross-sectional, wherein portfolios return is regressed to the portfolios beta. The study reports that the relationship between stock returns and beta is weak, and CAPM coefficients are also not statistically significant. These findings question the application of CAPM in determining the asset pricing, and in establishing a trade-off between risk and return. The study also examines arbitrage pricing theory, wherein five explanatory factors are considered in determining the asset pricing. The beta values of all the explanatory variables are statistically significant. It provides that the behavior of stocks in the Italian stock market is complex and cannot be fully explained by a single explanatory variable (market return). A large number of systematic factors affect the returns of stocks and portfolios. The study validates the APT, and questions the CAPM in determining stock pricing. Marisetty and Alayur (2002) examined the BSE 500 companies and three other indices namely BSE Sensex, BSE 100 and BSE 200 for the period 1991 to 2001. The study reports high skewness and kurtosis in stock returns and thereby holds the asymmetry in return and risk in the Indian stock market. Kiymaz and Berument (2003) investigated the day-of-the-week effect on the volatility of major stock market indexes for the period 1988 to 2002 by using the conditional variance. The results report that the day-of-the-week effect is present in both return and volatility pattern.

Kumar and Dhankar (2009) examined the cross-correlation in stock returns of South Asian stock markets, their regional integration, and interdependence on global stock market. The findings report the autocorrelation in stock returns in all the Asian stock markets. It rejects the relationship between stock returns and expected volatility; however, the relationship is significant with unexpected volatility. It brings out that investor's adjust their risk premium for expected variations in stock prices, but they expect extra risk premium for unexpected variations. Further, Kumar and Dhankar (2010) applies GARCH (1, 1) and T-GARCH (1, 1) to investigate the conditional heteroskedasticity in time series of the US stock market returns, and the asymmetric effect of good and bad news on volatility. The study also analyzes the relationship between stock returns and conditional volatility, and standard residuals. It uses S&P 500 and NASDAQ 100 for the period January 1990 to December 2007. The results suggest the presence of the heteroskedasticity effect and the asymmetric nature of stock returns. It also reports a negative significant relationship between stock returns and conditional volatility. However, the relationship between stock returns and standardized residuals is found to be significant.

Kumar and Dhankar (2011) investigate the asymmetric nature of the US stock market returns, heteroskedasticity effect on stock return volatility and the relationship between stock returns and conditional volatility, and standard residuals. The study uses S&P 500 for the period January 1950 to December 2007. The results suggest the presence of non-linearity, heteroskedasticity effect and asymmetric nature of stock returns. It also finds no correlation between stock returns and conditional volatility, however, the relationship between stock returns and standardized residuals is found to be positively significant. These findings bring out the essential elements of the modern investment theory that investors adjust their investment decisions with respect to expected volatility; however, they tend to earn extra risk premium for the unexpected volatility.

DATA AND RESEARCH METHODOLOGY

The data set consists of daily, weekly, monthly and annual data of the three BSE-listed indices, BSE Sensex, BSE 100 and BSE 500 for the period January 1996 to December 2006. BSE Sensex consists of 30 large cap stocks representing all the industries. In the same line, BSE 100 consists of 100 large and mid cap stocks. On the other hand, BSE 500 is based on the collective performance of 500 large, mid and small cap stocks. The sample period exhibits a mixed set of economic environment in the Indian economy. The early period (June 1996 to December 1999) of the study can be categorized as decline phase with an average low growth rate of 6.3%. However, the later period (January 2003 to December 2006) was growth-oriented, when the economy started to register an impressive average growth rate of 7.7%. These prices are adjusted to the bonus issue, rights issue and other corporate actions. The data has been taken from Prowess, a database maintained by Center for Monitoring Indian Economy (CMIE). All the indices which cover all the industry category stocks are value-weighted. They assign weights to all constituent stocks in proportion to market capitalization as well as trading volume. The natural logarithmic mode is used to measure the return of stocks. The logarithmic difference between the movements of prices is symmetric, and is expressed in percentage terms for ease of comparability. Symbolically, it can be written as:

$$R_{it} = \text{Log}_e \left[\frac{I_t}{I_{t\text{-}1}} \right] * 100 \qquad \ldots(1)$$

where R_{it} is realized return on index in time period t, Log_e is natural logarithm, P_t is the price of index in time period t, P_{t-1} is the price of index in preceding time period t-1. This measure of return takes into account only appreciation/depreciation of stock and neglect the dividend yield.

To test the statistical reliabilities of descriptive statistics, F-test and K-S test are used. The K-S test determines how well a random sample data fits a particular distribution (uniform, normal or poisson). It is based on comparison of the sample cumulative distribution against the standard cumulative function for each distribution. K-S tests the goodness of fit, which shows 0.000 probabilities for the Z-value at 5% level of significance for both normal and abnormal distribution. The F-test examines whether all the samples have emerged from the same population or not.

EMPIRICAL FINDINGS

DISTRIBUTION OF RISK AND RETURN: DAILY RETURN

Table 1 outlines the summary of descriptive statistics of daily return for the period 1996 to 2006 of three indices. The negative skewness of all three indices, exhibits that daily returns are negatively skewed. The statistical significance of K-S test values signifies the non-normality of daily return of three indices. It outlines that daily return is not normally distributed. Widely documented day-of-the-week effect holds true in the Indian stock market. Return of particular day/s is significantly different from the returns of the rest of the week. BSE 500 has given maximum return to the investors on daily basis compared to other indices.

Table 1: Daily Return for the Period January 1996 to December 2006

Index	Average Return	Standard Deviation	Skewness	Kurtosis	K-S
Sensex	0.06	1.61	–0.04	3.43	2.45*
BSE 100	0.06	1.68	–0.42	5.15	3.22*
BSE 500	0.08	1.63	–0.76	4.53	3.49*

Note: * Significant at 5% level of significance.

Table 2 provides the statistical summary in three sub non-overlapping periods, i.e., January 1996 to December 1999, January 2000 to December 2002, January 2003 to December 2006. In the sub-period, daily returns of three indices are negatively skewed. The *F*-value of Sensex and BSE 100 indicates that the risk for three sub-periods is not significantly different from each other, i.e., all the three samples have emerged from the same population. However, in case of BSE 500, risk during three periods is significant from each other's. The K-S values of all the indices during the sub-periods are significant. It signifies that returns are not normally distributed over the period of time. In sub-periods, BSE 500 has comparatively provided higher returns to the investors.

Table 2: Statistical Summary – Daily Return

Index	Period	Average Return	Standard Deviation	Skewness	Kurtosis	K-S	*F*
Sensex	1996-99	0.05	1.72	0.29	2.00	1.33*	0.68**
	2000-02	0.02	1.62	–0.39	2.42	1.89*	
	2003-06	0.11	1.46	–0.98	8.63	2.37*	
BSE 100	1996-99	0.07	1.74	–0.02	6.27	1.80*	0.52**
	2000-02	0.02	1.75	–0.05	2.41	2.34*	
	2003-06	0.10	1.49	–1.08	8.77	2.63*	
BSE 500	1996-99	0.27	1.80	–0.24	1.36	0.67*	5.70*
	2000-02	0.02	1.61	–0.53	2.33	1.89*	
	2003-06	0.11	1.53	–1.39	10.22	2.92*	

Note: * Significant at 5% level; ** Not significant at 5% level.

DISTRIBUTION OF RISK AND RETURN: WEEKLY RETURN

Table 3 provides the statistical summary of the weekly return of all the indices for the period 1996 to 2006. The K-S value of three indices are significant at 5% level of significance, which indicates that the returns of three indices are not normally distributed. On a weekly basis, BSE 500 has offered maximum return compared to other indices. Table 4 provides the statistical summary of three indices for three sub-periods. The *F*-value of Sensex and BSE 500 for all the three sub-periods is significant at 5% level. It outlines that the risk is not normally distributed, i.e., the level of risk for three sub-periods is significantly different from each other. However, the *F*-value of BSE 100 is not significant, which indicates that risk is normally distributed. The K-S value of three indices during decline and recession periods is not statistically significant, which indicates that returns are normally distributed during these periods. However, the K-S values of three indices during the growth period are significant. It provides that weekly returns of three indices during growth period are not normally distributed.

Table 3: Weekly Return for the Period Januray 1996-December 2006

Index	Average Return	Standard Deviation	Skewness	Kurtosis	K-S
Sensex	0.26	3.48	–0.25	1.70	1.11*
BSE 100	0.28	5.11	–0.92	2.00	2.74*
BSE 500	0.41	3.61	–0.83	2.27	1.42*

Note: * Significant at 5% level.

Table 4: Statistics Summary – Weekly Return

Index	Period	Average Return	Standard Deviation	Skewness	Kurtosis	K-S	F
Sensex	1996-99	0.23	3.77	0.43	0.38	0.57**	3.07*
	2000-02	–0.23	3.91	–0.49	2.17	1.09**	
	2003-06	0.67	2.73	–1.00	2.60	1.29*	
BSE 100	1996-99	0.28	7.01	–0.81	1.20	2.48*	1.70**
	2000-02	–0.30	4.35	–0.44	1.55	1.07**	
	2003-06	0.69	2.93	–1.07	3.02	1.41*	
BSE 500	1996-99	1.24	3.90	–0.56	1.26	0.72**	7.47*
	2000-02	–0.25	4.15	–0.47	1.27	1.05**	
	2003-06	0.72	3.01	–1.36	3.02	1.36*	

Note: * Significant at 5% level; ** Not significant at 5% level.

DISTRIBUTION OF RISK AND RETURN: MONTHLY RETURN

Table 5 outlines the statistical summary of monthly return. It provides that K-S value is not statistically significant at 5% level, i.e., return is normally distributed. On a monthly basis, BSE 500 has offered maximum return to the investors. Table 6 outlines the statistical summary of three indices for three sub-periods. The K-S value of three indices is not statistically significant, i.e., returns are normally distributed. The *F*-values of three indices for three sub-periods are statistically significant. It provides that risk levels of three sub-periods are significantly different.

Table 5: Monthly Return for the Period January 1996 to December 2006

Index	Average Return	Standard Deviation	Skewness	Kurtosis	K-S
Sensex	1.18	7.38	–0.33	–0.52	0.82**
BSE 100	1.26	8.17	–0.50	–0.08	0.77**
BSE 500	1.75	8.34	–0.85	0.66	1.00**

Note ** Not significant at 5% level.

Table 6: Statistical Summary – Monthly Return

Index	Period	Average Return	Standard Deviation	Skewness	Kurtosis	K-S	*F*
Sensex	1996-99	1.13	8.17	–0.01	–1.02	0.75**	3.12*
	2000-02	–1.09	6.90	–0.26	–0.78	0.72**	
	2003-06	2.93	6.53	–1.00	1.47	0.69**	
BSE 100	1996-99	1.42	8.40	–0.09	–1.02	0.73**	2.84*
	2000-02	–1.26	9.00	–0.50	–0.27	0.56**	
	2003-06	2.98	6.86	–0.83	1.60	0.84**	
BSE 500	1996-99	5.67	9.17	–1.30	1.34	0.69**	6.71*
	2000-02	–1.16	8.84	–0.72	0.02	0.68**	
	2003-06	3.12	7.17	–0.95	2.01	0.70**	

Note: * Significant at 5% level; ** Not significant at 5% level.

DISTRIBUTION OF RISK AND RETURN: ANNUAL RETURN

Table 7 provides the annual return of three indices during the pool period. The table provides that BSE 100 has offered maximum annual return to the investors subject to lower risk as compared to BSE 500. The negative skewness of all three indices signifies the negative skewedness of annual return. The K-S values of all indices are not statistically significant. It provides that the annual returns of all the three indices are normally distributed.

Table 7: Annual Return for the Period January 1996 to December 2006

Index	Average Return	Standard Deviation	Skewness	Kurtosis	K-S
Sensex	15.00	29.00	–0.005	–1.55	0.54**
BSE 100	16.33	32.94	0.142	–1.04	0.42**
BSE 500	15.41	35.24	–0.030	–0.32	0.57**

Note: ** Not significant at 5% level.

CONCLUSION AND SUMMARY

The present study attempts to examine the distribution of risk and return of the Indian stock market. It brings out the time interval as the significant factor in adjusting the stock prices with regard to market and non-market events. The findings report that that the daily and weekly returns are not normally distributed, i.e., significant negative asymmetry is found in the stock market returns. However, monthly and annual returns are symmetric, i.e., return is normally distributed. These findings document the calendar anomalies like day-of-the-week-effect, week effect, and month effect in the Indian stock market. The study supports the findings of a number of studies on the Indian stock market which examines the calendar anomalies and systematic variations in stock returns (Aggarwal and Tandon, 1994; Karmakar and Chakraborty, 2003; Jarrett and Kyper, 2005; and Dhankar and Chakraborty, 2007). The study also supports the findings of Lee (1990) and Jarrett and Kyper (2006), which brings out the importance of time horizon in investment strategy. Indian stock market is not a safe avenue for intraday investors. Risk and return relationship seems inconsistent in case of daily and weekly returns. Investors will not earn high returns by investing correspondingly in high risk portfolios.

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Food and Grocery Retail: Patronage Behavior of Indian Urban Consumers

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India is referred to be a nation of shopkeepers with about 15 million retail outlets of all kinds. Of these, the majority are small neighborhood grocery stores called "kirana stores". Food and grocery constitute a major portion of the private consumption. This offers a large potential market for the organized retail companies to tap into. However, the high proliferation of local kirana stores with their unbeatable advantage of proximity and customer familiarity questions the success of organized retail in this category. This study tried to find the responses and patronage behavior of urban customers towards traditional and modern food and grocery retailers. This paper reviewed various literatures to understand the factors which affect the patronage of various retail formats, especially in food and grocery purchase. Differences perceived by customers between the kirana stores and modern retailers are covered in the study to understand the influence of specific decision variables in the selection of a particular retail format. The inference is that "location convenience", "customized services" and "easy goods return/exchange facilities" drive a customer towards kirana stores while "product choice", "efficient store-management" and "value-enhancing services" attract customers towards modern retailers. This understanding of the patronage behavior helps the modern retailers to strengthen the elements of their retail offerings, which the customers value more.

INTRODUCTION

Retailing is the largest private industry in India and second largest employment sector after agriculture. It contributes about 10% to the GDP of India and generates 6-7% of employment. According to Images F&R Research (2007), India has the highest retail density in the world having over 15 million retail outlets. This sector witnessed significant developments in the past 10 years—from small, unorganized family-owned retail formats (commonly known as 'kirana stores') to organized retailing. Liberalization of the economy, rise in per capita income and growing consumerism have encouraged large business houses and manufacturers to set up retail formats; real estate companies (like Raheja Builders, DLF) and venture capitalists (like ICICI ventures) are investing

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in retail infrastructure. Many foreign retailers like Metro and Wal-Mart have also entered into the market through different routes such as wholesale cash-and-carry, local manufacturing, franchising, etc. In spite of the recent developments in retailing and its immense contribution to the economy, retailing continues to be one of the least evolved industries in India. Over a period of 10 years, the share of organized retailing in total retailing has grown from 10% to 40% in Brazil and 20% in China, while in India it is only about six percent (Images F&R Research, 2009). Within the organized retailing industry in India, the growth of food and grocery category has been particularly slow. The problem that has been taken up for this study was that why, even after almost 15 years of the growth of organized retailing in the country, food and grocery sector has not grown at a pace seen in other emerging economies. A study was undertaken which explores the factors that lead customers to choose modern retailers in food and grocery sector over other formats—based on their perceptions.

In India, retail trade is primarily divided into two segments—organized retailing and unorganized/traditional retailing. These two segments of retailing can be understood as follows (ICRIER, 2005).

Organized Retailing

Any retail outlet chain (and not a one shop outlet) that is professionally managed (even if it is family run), can be termed as organized retailing in India if it has the following features—accounting transparency (with proper usage of MIS and accounting standards), organized supply chain management with centralized quality control and sourcing.

Unorganized Retailing

Any retail outlet that is run locally by the owner or the caretaker of the shop. Such outlets lack technical and accounting standardization. The supply chain and the sourcing are also done locally to meet the local needs.

RETAILING IN INDIA – PRESENT AND FUTURE

According to Images F&R Research (2009), the Indian retail market stood at ₹13,300 bn in 2007 with an annual growth of about 10.8%. Of this, the share of organized retail was estimated to be only 5.9%, which was ₹783 bn.

FOOD AND GROCERY CATEGORY

Grocery has three components (CII-McKinsey & Company, 2005): (1) Branded grocery products (including packaged foods, soaps and detergents, toiletries and household items); (2) Dry unprocessed grocery (including grains and cereals); and (3) Fresh grocery (including fruits and vegetables, meat and dairy products). Unbranded category accounts for nearly 60% of all food sales. Fresh groceries in India account for 40% of the food business, including 18% in milk, 13% in fruits and vegetables, and 9% in meat and fish.

FOOD AND GROCERY RETAILING IN INDIA

According to ICRIER (2005), food and grocery is the largest retail sector worldwide. Food and grocery presents the most significant potential in the Indian context also. In the overall retail sales pie, food and grocery stood at 59.5% share in 2007. It is the single most dominant category in private consumption in India, valued at ₹7,920 bn. In the organized retail segment, Food and Grocery is valued at ₹90 bn. This organized market constitutes barely 1.1% of the total food and grocery retail market (Images F&R Research, 2009). Herein lies a tale of unused retail opportunities in India. Ideally, the share of food and grocery in organized sector should be close to its share in overall retail sales. The following points give some more information on the existing situation of food and grocery category in India.

- The significant share of food-related items in retail sales may account for the large number of kirana stores in the Indian retail sector (almost 7.5 mn). Over the past few years, a number of organized players have come up. This segment presents the most significant potential in the Indian context, as consumer spending is highest on food.
- Apart from the kirana stores, food and grocery is being sold in India through modern formats like supermarkets, hypermarkets, discount stores and convenience stores. Table 1, given below, shows the characteristics of strategic models of food retail formats in India (The Economic Times Retail, 2003).
- Nielsen's Shoppers' Trend Study, 2008 has revealed some changes in consumer shopping behavior and purchase pattern in the advent of modern trade. Some of the key insights are as follows (Images F&R Research, 2009):
  - Shoppers are shopping at supermarkets more frequently than a year back and the average basket size per trip is also increasing.
  - The local grocer/general store, although still supreme, is seeing a steady erosion of customer base and spends.
  - Supermarket shoppers are increasingly shopping at Supermarkets (SM) for fresh fruits and vegetables with a whopping six times increase in the share of supermarket in fresh food (among SM shoppers). Correspondingly, the share of local vendor has fallen by half.
  - Wet markets, at present, have managed to retain their customer base.
  - The modern format is no longer catering only to the upper socioeconomic groups. The Socio-Economic Class (SEC) A demographic now comprises

Table 1: Strategic Models of Food Retail Formats in India

Model Type	Mom-n-Pop (Kirana)	Supermarket Chain	In Mall	Hypermarket
Rationale for Offering Food Retail	Food retail (grocery) as core business	Food retail (grocery) as core business	Complete the experience and offer	Draw in customers, complete the offer
Food Division	Large part of the shop	Large part of the supermarket	Part of mall management, normally outsourced	Separate division or department
Range of SKUs	Medium-Large	Large	Not Large	Large
Pricing Strategy	Matches market rates	Matches supermarket positioning, may discount	Matches mall positioning	Discount below market rates
Type of Products	Dry, chilled, packaged, non-foods. Wet products not normally stocked	Dry, chilled, packed, fresh limited wet stock	Dry, packaged, chilled	Dry, wet, chilled, fresh, packed
Supply Chain Models Observed	Self-managed	Self-managed or outsourced or DC driven (hub and spoke) logistics	Outsourced logistics, royalty based or franchized	Outsourced logistics, hub and spoke, direct supply from main sources
Private Labels	Local labels, may not be high	High and increasing	Depends on retailer in mall	High and increasing

Source: The Economic Times Retail (2003)

less than half of the customer base with both SEC B and more so, SEC C seeing an increase in the proportion. Given the growing importance of this segment, retailers need to keep in mind the needs of both their primary and secondary customers while deciding on brand and SKU stocking.

– The attributes that a customer looks for while selecting a store also are almost unchanged, with locational convenience still supreme followed by perceived value for money, range and quality of stocking.

– Indian consumers are rapidly evolving and accepting modern retail formats. By 2011, India will have an additional 280 hypermarkets, 3,200 supermarkets, 400 department stores and approximately 1,200 mega specialty stores (the category killers) and 20,000 exclusive brand outlets.

PURPOSE OF THE STUDY

There is a growing need to evaluate the true drivers of shopping behavior in the Indian context. The Indian retailing scenario seems to be driven more by euphoria. To a large section of customers the new formats are perceived to add insufficient additional value, except for novelty. The new expansions are adaptations of western formats fetching moderate to lukewarm success. Several successful chains are currently holding back new expansions. Store choice and patronage have been widely studied across the world. There is still vast scope for research and analysis as the retailing environment changes rapidly, leading to changed shopper expectations and realignment of the choice set of stores. This phenomenon gains greater significance in the Indian market, with the introduction of larger and more diverse retail formats by organized retailers. It is providing new experiences and options to shop for the consumer. A variety of formats are being rolled out, with mixed success. Both retailers and shoppers are currently in an evaluation phase with no clear verdict as to what may drive the choice of stores in the longer term.

The problem that has been identified for this study is that why even after almost 10 years of the growth of organized retailing in the country, food and grocery sector is not growing at the desired pace, though such a humongous opportunity in food and grocery retail is so visible. On the face of it, food and grocery segment shows the most attractive potential for a modern retailer to enter into. While most observers have accepted the role of large format organized retail in clothing and lifestyle markets, there are still lingering doubts on how organized retail will perform in the food and grocery segment in India. The underlying issue is—can organized retail in food and grocery compete with the mom-and-pop stores, which offer the unbeatable advantages of convenience of access and home delivery (*The Economic Times Retail*, 2003). The trademark of Indian retailing, the small kirana shop with a high level of personalized service, is making shoppers reluctant to depart from traditional ways of shopping. Tuli and Mookerjee (2004), in their study of shop patronage behavior of Indian rural consumers, have also given further direction of research by stating that a study on the lines of their research could also be conducted on urban consumers' demographic profiles. This understanding can be applied to corporate retail format decision.

This study was undertaken to understand the various factors in terms of decision variables which influence the consumers' preference and in understanding the criticality of these factors in choosing between the two major competing formats for food and grocery category, i.e., traditional (kirana) stores and modern (organized) retailers.

Significantly, it is the consumer's perceptions of the relative merits of the retail attributes present in both these formats which are of critical importance to the marketer. The importance of perceptual attributes goes beyond the physical features of stimuli since consumers link attributes to benefits of purchasing and consuming. These benefits or consequences lead to certain end states or values that consumers wish to achieve (Aaker *et al.,* 1992; Mowen, 1993; and Belch and Belch, 1995).

LITERATURE REVIEW

INTERNATIONAL STUDIES ON STORE CHOICE

Store choice and patronage have been widely studied across the world. However, there have been few studies done in India on these issues, since organized retailing has been a very recent phenomenon. Of late, there has been tremendous interest generated in this sector by practitioners as well as researchers and some body of work is now emerging. Varshney and Goyal (2005) have done a review of outshopping paradigm by studying papers from across the world and extended the concept to Indian context. Outshopping refers to the practice of going outside the local community to buy goods for better prices, or more stores, and so on. In early years, studies were aimed to understand the movement of people from smaller urban settlement to adjoining, larger urban retail establishment in search of better deals. However, in later years studies were also done to study the movement of people from down town centers to regional shopping malls which came up as result of crowding in down center retail areas. In the context of this research work, the outshopping paradigm is extended to people switching from traditional retailers (kirana stores) to modern retailers for food and grocery purchase. The variables given in the paper include shopping area attributes like prices, product variety, quality of service at the store, shopping environment, price reduction (promotions), parking facility, accessibility, distance of the store, convenience in travel, etc. Store choice is recognized as a cognitive process. Zeithaml (1988) discussed the consumer perceptions of price, quality and value. He has argued that from the consumer's perspective, price is what is given or sacrificed to obtain a product. Full price models in economics (Becker, 1965) acknowledge that monetary price is not the only sacrifice consumers make to obtain products. Time costs, search costs (energy), and psychic costs (effort) all enter either explicitly or implicitly into the consumer's perception of sacrifice. Until the benefit of shopping at a new format or location outweighs this sacrifice, the consumers will not be satisfied with the experience. To some consumers, the monetary sacrifice is pivotal; they will look at the best prices, bargain and promotions to choose the store. Less price-conscious consumers will find value in store proximity, ready-to-serve food products, and home delivery—because time and effort are perceived as more costly. Supermarket shoppers have cited fast checkout as more important than low prices in selecting grocery stores (Food Marketing Institute, 1985 and 1986).

According to Berry (2001), the best retailers create value for their customers in five interlocking ways. The key is to focus on total customer experience—superior solution to their needs, treat them with respect (store staff's courtesy and behavior), connect with them on emotional level, fair prices and ease of purchase (good layout, product placement, signage, fast checkout, etc.). Focusing on solutions means employing helpful salespeople and extending services like goods return facility, goods exchange facility, and helpful and attractive store ambience. Many consumers lack time. As per the author, studies by America's Research Group indicate that 83% of women and 91% of men have ceased shopping at a particular store because of long checkout lines. To compete most effectively, retailers must offer convenience in four ways—convenient retail location and operating hours, access convenience through telephone and the Internet, search convenience inside the store and possession convenience by maintaining a high rate of in-stock items and by delivering the orders swiftly. They also, must let the consumers complete or amend transactions quickly and easily (transaction convenience). Howard (1989) identified the three key dimensions of a retail store image: convenience of the store's location, the price of its products and the information it provides about its products. These dimensions were further exploded into seven attributes: food prices, quality of meat, quality of produce, selection of foods, personnel, check-out speed, and locational convenience in the study by Woodside and Trappey (1992). Tigert (1983) found that locational convenience is the most determinant attribute for retail food store-choice followed by low prices.

Lindquist (1974-75) reviewed the published results of some 19 studies on retail store image and synthesized their frameworks into a set of nine store image attributes. His classification of these attributes is as in Table 2.

Table 2: Nine Store Image Attributes for Retail Stores

Attribute	**Variables included in it**
Merchandize	Quality, assortment, styling, guarantees and pricing. Merchandize itself is taken to mean the goods and services offered by a retail outlet
Service	Service-general, salesclerk service, presence of self-service, ease of merchandize return, delivery service, and credit-policies of the store
Clientele	Social class appeal, self-image congruency, and store-personnel
Physical Facilities	Store layout, infrastructure, architecture, washrooms, lighting, air conditioning, elevators, etc.
Convenience	Convenience-general, locational convenience, parking
Promotion	Sales promotion, advertising, displays, trading stamps, and symbols and colors
Store Atmosphere	Customer's feeling of warmth, acceptance or ease
Institutional Factors	Conservative-modern projection of the store, reputation and reliability
Post-Transaction Satisfaction	Merchandise in use, returns, and adjustments

Source: Lindquist (1974-75)

Various other image schemes have been presented in the retailing literature. Two prominent examples are Fisk's (1961-62) six-category framework (i.e., location convenience, merchandize suitability, value for price, sales effort and store service, congeniality of store and post-transaction satisfaction), and Kunkel and Berry's (1968) twelve-factor scheme (i.e., price of merchandize, quality of merchandize, assortment of merchandize, fashion of merchandize, sales personnel, locational convenience, other convenience factors, service, sales promotion, advertising, store atmosphere and reputation on adjustments). Price competitiveness, courtesy of sales personnel, cleanliness, variety of stores, merchandize quality and product selection in the stores are the primary shopping motives (Yavas, 2001). Attributes identified by the consumers as determinant in store choice are location, assortment and low price (Arnold and Luthra, 2000).

Pricing is central to retail decision making: "Nothing is more important in business than getting the pricing strategy right" (Tang *et al*., 2001). The authors have given a perceived utility framework for explaining store choice which rests on two premises. First, on each shopping occasion, a consumer chooses a store based on the perceived utility from that store (i.e., benefits minus costs). Second, a customer's perceived utility associated with a shopping trip can be divided into fixed and variable components. The fixed benefits include the ease of shopping derived from habitual experience at a store (e.g., knowledge of store layout and product shelf location) and the value attached to service quality (e.g., parking space, cleanliness, friendliness). A large assortment facilitates "one-stop shopping" which eliminates consumers' need to make separate trips to other stores. The fixed costs are driven by the time and effort involved in reaching the store. Beside expected prices and store-specific discounts, price image is also driven by store-specific habitual category experience. Lillis and Hawkins (1974) revealed in their study that residents were generally satisfied with grocery sellers within the small town and friendliness of the sales personnel and personal service, along with convenience, were the major advantages of shopping in the small town.

Leszczyc *et al*. (2000) studied consumer store choice dynamics for grocery stores, and found that the dynamic store choice decision can be conceptualized as a problem of deciding where and when to shop. Store choice is dependent on the timing of shopping trips, as consumers may go to a smaller local store for short 'fill-in' trips: and go to a larger store for regular shopping trips (Kahn and Schmittlein, 1989). Many researchers contend that household grocery store shopping behavior consists of three decision process, the timing of the shopping trip, store choice and the amount to spend. In the academic environment, several factors have shown to affect the retail patronage decision such as location, service level, pricing policies, and merchandize management (e.g., Schary and Christopher, 1979; Morey, 1980; and Craig *et al*., 1984). The patronage decision has been shown to also be influenced by the store environment. The authors gave the hypotheses that this influence is manifested more when consumers are choosing between stores of the same type rather than between stores in different categories. This is relevant in to the current study context when the factors leading to people switch from traditional stores to organized retailers in food and grocery category are being researched. Kotler (1973) has proposed atmospherics as an important part of retail marketing strategy. The shopping experience, as created by the store environment, has been found to play an important role in building store patronage. Along with the merchandize, it triggered affective reaction among shoppers (Baker *et al.*, 1992). It also contributes to creating store patronage intentions (Baker *et al.*, 2002). As per the paper, shopping experience costs, which include consumers' time and effort in obtaining products, as well as the psychological cost of shopping (e.g., irritation caused by loud music or crowding) have been suggested as potential determinants of merchandise value (Zeithaml, 1988) and store choice (Bender, 1964). The authors have proposed a model in which the following store environmental dimensions influence consumers' perceptions of store choice criteria, namely, interpersonal service quality, shopping experience costs, and merchandize value (mediated through perceived quality, price, and shopping experience costs). These perceptions, in turn, affect store patronage intentions.

All of these studies try to explain the influence of various decision variables on the grocery shopping behavior and store patronage decision by customers.

STUDIES ON RETAILING IN INDIA

Mulky (2005) stated that only a small proportion of India's population owns self-transportation vehicles. Lack of public transport systems, overcrowding and high commute times, roads that are often choked with traffic, make it difficult for commuters to travel long distance. The infrastructure of roads and transport is even less-developed in rural areas. Hence, a large majority of India's population is compelled to make most of their retail purchases, especially of daily necessities from shops located in their neighborhood. Traditional retailing has been established in India for some centuries. It is a low cost structure, mostly owner-operated, has negligible real estate and labor costs and little or no taxes to pay. Consumer familiarity that runs from generation to generation is one big advantage for the traditional retailing sector. In contrast, players in the organized sector have big operating expenses to meet, and yet have to keep prices low enough to be able to compete with the traditional sector. Organized retailing also has to cope with the middle class psychology that the bigger and brighter sales outlet is, the more expensive it will be. Organized food retailing is moving towards modernization and systemization offering quality, standardization, variety of products, etc., at competitive prices. The cheap prices are a big attraction to the Indian consumer, who is highly price-driven and value conscious.

The formats and types of the retail market are quite varied in India. As per Anand and Nambiar (2003), there is an excellent food retailing system that has been established by kirana (mom-n-pop) stores that continue to meet all the retail requirements albeit without the convenience of shopping as provided by the retail chains. Some of the several co-existing types and formats are the road side hawkers and the mobile (pushcart variety) retailers: the kirana stores (the Indian equivalent of the mom-n-pop stores of the US), within which are of two categories—open format in more organized outlets and small to medium food retail outlets.

The unorganized sector is serviced mostly by the mobile retailers. They can be seen in every Indian bylane and are, therefore, difficult to track, measure and analyze. Most retailing of fresh foods in India occurs in *mandis* and roadside hawker parks, which are usually illegal and entrenched. Semi-organized retailers like kirana grocers and provision stores are characterized by more systematic buying and selling from fixed structures. For a long time, the corner grocery store was the only choice available to the consumer, especially, in urban areas. This is slowly giving way to international formats of retailing like supermarkets/grocery chains, convenience stores and fast-food chains. The traditional grocers, by introducing self-service formats as well as value-added services such as credit and home-delivery, have also tried to redefine themselves. The Indian customer has always shopped at *mandis* for fruits, vegetables and dry grocery and is habituated and comfortable with buying after getting a feel of the products (Prasuna and Sughanda, 2005). This characteristic of the Indian consumers has led the organized food retail players to set up separate areas in the supermarkets catering to fresh produce. Some players also offer value-added services such as home delivery, *sabzi mandi* (vegetable market) on phone, etc., thereby, capturing the 'Indianness' in their business.

When comparing the how kirana stores fare with respect to supermarkets, Gupta *et al.* (2002) find that retailers who have a strong local touch can better estimate demand for products and assess profiles of the products that can sell, based on their familiarity with local tastes, consumer preferences and consumption patterns. Kirana stores in India seem to fare better than modern retailers on this count. According to Aggarwal (2000), in India, the kirana shop has the edge over supermarkets for many reasons. One reason is that Indian housewife is reluctant to go further than the nearest kirana for items of daily use. Home delivery is free and accounts are settled at the customers' convenience, interest free. In India the kirana shop has an edge over supermarkets for several reasons: proximity, service and price (Business Today, 1999). To be successful in India essentially means to draw away shoppers from the roadside hawkers and kirana stores to supermarkets (Anand and Nambiar *et al.*, 2003). To counter the unbeatable advantage of convenience of a hop, skip and jump access and home delivery, organized retailers seem to have just one option—offer attractive prices. Krishnan (2001) has also written that small retail outlets have traditionally served the markets efficiently, making customers accustomed to getting the products within easy reach. These small retail outlets are made viable by the low cost of infrastructure and operations in India. Sinha and Banerjee (2004) found that overall proximity and merchandize were the primary reasons for shoppers choosing their store. More than 70% of the respondents indicated these as their strongest reason for choice. Then came the reasons like ambience (8%) and patronized store (8%). The authors have said that grocery and fruit and vegetable stores were visited by shoppers based on more proximity and patronization. The importance of relationship/comfort level with the retailer is stressed with regard to grocery stores. Shoppers perceive stores in a multidimensional way and that the dimensions vary significantly across the types of stores frequented. Consumers at grocery/fruit and vegetable stores report the most diverse set of observations regarding these stores. Their basic premise is that the drivers of store loyalty (an antecedent of store choice) can be categorized into three broad groups—utilitarian dimensions also termed as "Risk Reducers (proximity, quality of merchandize, personal relationship)", "Choice Enhancers (convenience, availability and spread, design-format)", and "Shopping Experience Enhancers (ambience, customer service, entertainment)". Their study does indicate that new formats are being chosen based on parameters different from the old format, such as merchandise, ambience and service.

In a KSA Technopak study presented by Business Today (1999), the reasons why housewives prefer to purchase grocery from the neighborhood supermarket (modern retail store) are listed as location convenience (easily approachable on foot), stock of everything from scrubs and mops to fresh fruits (product variety and assortment), enough parking facility (in case the customer drives down to the store) and convenient operating hours. Other variables which affect the retail outlet choice are value-for-money, quality of products, polite and courteous salespeople, exchange/returns policy, non-interfering salespeople, product choice, product width, and product information. Tuli and Mookerjee (2004) studied the patronage behavior of Indian rural consumers to identify the decision variables influencing the patronage of various retail formats such as village shops and periodic markets (haats) using Tea as the product. They concluded that village shops are perceived to be low on shopping activity cost in comparison to periodic centers, where as periodic markets are perceived to have high probability of lower prices and high product variety. Rural consumers prefer to meet their immediate and day-to-day needs from village shops; at the same time bulk purchases will drive them to the periodic markets.

Given the rapid rate at which new retail formats have been introduced in the Indian market in recent times, many with limited success, it is imperative for Indian businesses to understand changing shopping behavior among consumers, especially with regard to their preferred points of purchase. There is still vast scope for research and analysis as the retailing environment changes rapidly, leading to changed shopper expectations and realignment of the choice set of stores. Thus, consumer purchasing behavior can be termed as patronage behavior of the consumer. From the above given literature review, the study of the patronage behavior of consumers in food and grocery category has been identified as a hitherto unexplored area and the research study has been conducted in this area.

RESEARCH PROBLEM

The extensive literature review helped to evolve the basic framework the study. To understand the perceptual difference between kirana stores and modern food and grocery retailers, 17 retail format attributes or characteristics were gleaned out of the review of earlier researches, viz., convenience of location, parking facility, product variety, product quantity per trip, prices, phone order, home delivery, sales-promotion schemes, credit facility, bargaining facility, product quality, self service, time convenience, working hours convenience, goods return facility, goods exchange facility, loyalty programs. These attributes are relevant to both the formats of retail undertaken in the study. Apart from these, six additional attributes were also selected that are exclusively present in modern retail outlets, viz., atmospherics of the store, visual merchandizing, courtesy of store staff, product knowledge of store staff, store layout and regular availability of products.

The use of elicitation technique provides a set of decision variables for study and limits the analysis to only those attributes which are likely to be considered during the retail patronage decision process while the customer is planning to buy food and grocery products.

HYPOTHESES

In order to determine the relevant decision variables influencing the selection of a neighborhood kirana store or a modern trade store for the purchase of food and grocery, the study proposes a set of hypotheses upon certain projected decision variables. For each variable, the null hypothesis is as below:

H(0): There is no significant perceptual difference in the importance attached to each variable influencing the customer's decision on choosing between the two retail formats to buy food and grocery.

This means that if the hypothesis is not accepted, there is a significant perceptual difference on account of particular variables between the two retail formats. These decision variables have been finalized after careful consideration of the variables coming out of the extensive literature review. The opinion of experts' was considered in finally selecting those which were relevant in the context of this study.

Decision Variables Common to both Kirana and Modern Retail Stores

Given below are the various decision variables which are common to both kirana and modern retail stores which are considered in this study.

Convenience of Location: Anywhere in India, generally a customer can expect to find a kirana store within half a kilometer of his residence, while the presence of supermarkets and convenience stores is mostly in urban areas and that too not very wide-spread. Hypermarkets are generally located in out-of-town locations.

Parking Facility: With, more people using own means of transportation (two-wheelers and four-wheelers) to go to the preferred stores, a preference for adequate and free parking very close to the store has gained importance. For modern retailers, who position themselves as one-stop shops, such a facility is a must near their stores. The consumers are not likely to value travelling frequently for longer distances required to reach such stores.

Product Variety: Total number of products (variety in terms of brands and their Stock Keeping Units (SKUs). Their availability at modern retail stores is more than the neighborhood kirana shop.

Product Quantity: Larger volumes are purchased at modern retail stores compared to small traditional shops per shopping trip.

Prices: Price of a particular item can be explained as economic value advantage that a customer perceives to have acquired by purchasing that item from any store. Prices at modern retailers are generally lower than that available at kirana shops due to bulk-purchases and disintermediation.

Phone Order: This is the facility extended by the retailers where the customer can place his or her order over phone and can later pick up the ordered items from the store at his/her convenience.

Home Delivery: This is defined as the service provided by the retailer to get the customer's ordered items delivered to his residence (generally extended by most of the retailers in combination with the phone ordering facility). The kirana shops are trying to fight the competition by extending these facilities to their customers.

Sales-Promotions: These are the sales incentives extended by the retailers to customers for an increase in off-take of that particular brand.

Credit Facility: Generally a close personal knowledge of the customer is a prerequisite for extending the credit facility and this aspect is available only at neighborhood kirana shops.

Bargaining Facility: The scope for negotiating the price of an item at a retail setup is available more in unbranded grocery and fresh grocery, where there are no printed Maximum Retail Price (MRP) or the MRP seems to have no significance. This facility is extended only by kirana shops.

Product Quality: In India, traditionally, freshness is of prime importance in buying food and grocery products. Modern retailers with their long supply chain and storing capacity are perceived to be selling food items (especially wet groceries) which are comparatively less fresh than kirana stores or fruit and vegetable vendors.

Self-Service: Self-service is the facility given by virtue of the store-layout to the customer so that they can browse through the merchandize in order to pick and choose the items as per the individual's choice. Usually the kirana shops in India have the traditional way of selling where the customer stands behind a counter and asks for an item, which is handed over by the seller.

Time Convenience: It can be explained as the average time spent per shopping trip at a retail setup. It will include the time required for ordering, getting the delivery of the order, paying for the purchase and checking out (perceptual product acquisition cost for the customer).

Working Hours Convenience: It is defined as the timings in the day when a particular store remains open for customers to make purchases. Generally kirana shops have a longer working duration as they open early in the morning and close late in the evening.

Decision Variables Relevant to Modern Retail Stores Exclusively

Given below are the various decision variables which are exclusively to modern retail stores as considered in this study.

Atmospherics of the Store: Atmospherics refers to the design of an environment via visual communications, lighting, colors, music and scent to stimulate customers' perceptual and emotional responses and ultimately to affect their purchase behavior (Kotler, 1973; and Yalch and Spangenberg, 1990).

Visual Merchandizing: Visual merchandizing comprises graphics, signs and theatrical effects, both in the store and windows which helps boost sales by providing information on products and suggesting items or special purchases. Signs and graphics also help customers find a department or merchandize (Levy and Weitz, 2004).

Courtesy of Store Staff and Product Knowledge of Store Staff: Even with self-service formats, customers in India want to have courteous and knowledgeable staff at the store, which can help them find the right products or give them proper advice about an unknown brand. This aspect has a deep impact on the retail experience which the customer carries back with him or her.

Store Layout: The store layout should entice customers to move around the store to purchase more merchandize than they may have originally planned. However, if the layout is too complex, customers may find it difficult to locate the merchandize they are looking for and decide not to patronize the store (Levy and Weitz, 2004). The layout also means how complimentary products are displayed together to create adjacencies of use.

Regular Availability of Products: Technically, this aspect is called fill-rate. A high-fill rate means that in-store merchandize availability increases resulting in fewer stock-outs (Levy and Weitz, 2004). For modern retailers, this is a critical element to foster customer satisfaction. Unlike kirana stores, modern retailers cannot expect their customers to make frequent repeat visits to buy an item which was out of stock in the previous visit. Customers go to modern retailers, generally to make bulk purchase and get the convenience of one-stop shopping. They may stop patronizing any store if they perceive it to generally have a high stock-out rate.

RESEARCH DESIGN

Single cross-sectional design was used, where in only one sample of respondents is drawn from the target population and information is obtained from the sample only once.

SURVEY METHOD

The study involved a field survey conducted across different stores in the National Capital Region (NCR) of India (Delhi metro + satellite towns of Noida, Gurgaon and Faridabad). The NCR comprises of the entire National Capital Territory of Delhi, eight districts of Haryana, one district of Rajasthan and five districts of Uttar Pradesh with a population of over 371 lakh in 2001 (IMRB, 2003). To overcome the problem of the demographic heterogeneity of this area, 60 responses were taken from each cluster of the area, viz., North Delhi, East Delhi, West Delhi, South Delhi, Gurgaon, Noida and Faridabad. The survey was conducted using an intercept technique (Sudman, 1980), both at the modern retail outlets and the traditional kirana stores after the respondents had finished their shopping and were leaving the store. It was felt that shop intercept (exit interviews) would capture the recency effect. There was a risk that an interview away from the shop might bring only visualized perceptions and not the real experience which would be still fresh in the memory. The bias caused due to the store was addressed by choosing respondents randomly at stores that belonged to traditional as well as modern food and grocery retailers. To avoid the potential bias owing to non-probability sampling, the intercept surveys were conducted over a seven day period, from Monday to Sunday and throughout the day and evening hours. Respondents were requested to complete a structured questionnaire as soon as they exited from the stores.

INSTRUMENT OF DATA COLLECTION (QUESTIONNAIRE)

The first question in the questionnaire was a qualifying question, so that only the respondents who had experienced shopping at both the traditional and modern food retailers were surveyed (since the study was a comparative analysis of both the formats of retail). If a respondent had not shopped at modern retail format at all, he went to the last section of the questionnaire to fill in his or her demographic profile. The next question was a single choice question where the respondents had to pick their preferred format for buying food and grocery for discriminating their preference. The next section had questions meant to find the significant variables which influence customers to buy food and grocery from traditional retail outlets (kirana stores). As described earlier, 17 variables were derived from the literature survey and the responses were taken for these from the respondents. On a seven point Likert type scale, the respondents were asked to indicate the level of importance they attached to each variable (7 = most important, 6 = important, 5 = slightly important, 4 = not sure, 3 = slightly unimportant, 2 = unimportant, 1 = least important). The following section had questions meant to find the significant variables which influence customers to buy food and grocery from modern food and grocery retail outlets. Seventeen variables were the same as given in Section B of the questionnaire (since they are common to both formats of retail) while six additional variables were included (which are relevant to modern retail formats only; described earlier). Similar to the previous section, the respondents were asked to indicate the level of importance they attached to each variable on a seven point

Likert type scale. Finally the profiling section contained questions like sex, age, education, family size, monthly household income, average monthly spend on food and grocery and ownership of vehicles such as four-wheels/two-wheelers.

PILOT STUDY AND CHECKING THE SCALE RELIABILITY

The pilot study was done on a sample size of 50. As per the test for reliability, a high scale reliability (alpha = 0.0.7647) was obtained for the section pertaining to traditional retail stores and (alpha = 0.9110) for the section pertaining to modern retail stores. Since the survey tool was found to be reliable, it was administered to rest of the samples without any changes.

SAMPLE CHARACTERISTICS

Once, the scale reliability was found to be satisfactory, the survey was conducted on a total sample of 420 respondents. Out of the 420 questionnaires, 352 were available for data analysis and the remaining were not used as they had unusable responses. This means an 83.8% response rate, which is highly acceptable. As per Malhotra (2007), personal, in-home, mall-intercept and computer-assisted interviews yield the highest response rate (typically between 60-80%).

The profile of the 352 accepted responses in the sample is given in Table 3.

Table 3: Demographic Characteristics of the Sample

		N	Percent
Gender	Male	187	53
	Female	165	47
Age (Years)	<20	17	4.8
	20-29	160	45.3
	30-39	134	38.2
	40-49	35	10.0
	50 and above	6	1.7
Education	Higher secondary	32	9.1
	Graduation	136	38.7
	Post graduation and above	173	47.3
	None of the above	11	2.8
Members in the Family	1	44	12.5
	2	35	10.0
	3	72	20.5
	4	99	28.1
	5 and more	102	28.8

Table 3 (Cont.)

		N	Percent
Profession	Service	168	47.9
	Business	43	12.3
	Not Working (housewife, unemployed, etc.)	74	21.1
	Student	67	18.6
Monthly Family Income (MFI in ₹)	< 10,000	31	8.8
	10,000-19,999	77	21.9
	20,000-29,999	122	34.8
	30,000 and above	122	34.8
Average Monthly Spend on Food and Grocery (in ₹)	< 5,000	153	43.3
	5,000-9,999	147	41.8
	10,000-14,999	45	12.8
	15,000 and above	7	2.0
Ownership of Four-Wheelers	Yes	159	45.3
	No	193	54.7
Ownership of Two-Wheelers	Yes	185	52.7
	No	167	47.3

Fifty-three percent of the respondents were male and 47% female. The female to male ratio of the sample comes out to be 886:1000 while the same ratio in the population of NCR is 865:1000 (IMRB, 2003). More than 90% of them had a monthly family income of more than ₹10,000 (which is along the expected lines since the adoption of modern trade has been the maximum in upper or upper-middle class customers). About 75% of them were either graduates or had even higher levels of education. 45.3% of the sample owned a four-wheeler and 52.7% owned a two-wheeler (these are not mutually exclusive groups as there can be respondents having both four-wheelers and two-wheelers). The sample demographic values are very much comparable to the population characteristics of the NCR area and are consistent with the known phenomenon of adoption of new retail formats by the upper/upper-middle class segment of shoppers in India. Thus, the sample can be said to be satisfactorily representative of the population under the study.

RESULTS AND DISCUSSION

The results from the study showed that almost 80% of the respondents had first hand experience of purchasing at least once from the modern retailers. Using chi-square, it was analyzed that out of the number of respondents who have had the experience of purchasing food and grocery products from both the kinds of formats, significantly high number (57.7%) prefer to shop food and grocery products from modern retailers. This indicates that the overall benefits and the total shopping experience at the modern retail outlets can influence a high degree of store patronage behavior. Even if we consider the overall population, the study indicated that 46.6% prefer to purchase food and grocery from modern retail shops. This again depicts a high level of positive attitude of the customers towards the new format of retailers.

Chi-square analysis done on the means of transport used to reach the most preferred local (kirana) store indicates that significantly high (almost 70%) of the urban consumers do not use any vehicle to reach their most frequented kirana store. About 26% use their own vehicle to reach these stores. However, in the case of reaching the most preferred modern food and grocery store, significantly high (almost 72%) of the urban consumers use their own vehicle.

Table 4 gives the results of the paired *t*-test done on the data collected from the sample. Separate repeated measure of paired sample t-test was run on each of

Table 4: Mean Values and Paired *t*-Test

	Variables	Kirana Shop Mean	Organized Retailers Mean	Paired *t*-Test Sig. (2-tailed)
Pair 1	Distance – Convenience of Location	5.94	5.44	0.000
Pair 2	Parking Facility	3.41	5.62	0.000
Pair 3	Product Variety	6.01	6.33	0.000
Pair 4	Product Quantity to be Purchased	5.52	5.92	0.000
Pair 5	Expected Prices	5.80	5.93	0.186
Pair 6	Phone Order Facility	4.50	4.38	0.403
Pair 7	Home-Delivery Facility	5.31	4.86	0.001
Pair 8	Sales Promotion Schemes	4.61	5.15	0.000
Pair 9	Credit Facility	4.88	4.62	0.056
Pair 10	Bargaining Facility	4.74	4.12	0.000
Pair 11	Product Quality	6.45	6.06	0.219
Pair 12	Self-Service Facility	4.89	5.70	0.000
Pair 13	Time required for Shopping – Convenience of Quick Purchase	5.79	5.66	0.185
Pair 14	Odd Hours of Shop – Convenience of Any Time Purchase	5.52	5.37	0.198
Pair 15	Goods Return Facility	5.62	5.36	0.028
Pair 16	Goods Exchange Facility	5.89	5.43	0.014
Pair 17	Availability of Loyalty Programs	4.35	5.03	0.000

the decision variables to determine specific perceptual difference between the two retail setups.

Customers' opinions on convenience of location, parking facility, product variety, product quantity, home-delivery facility, sales promotion schemes, bargaining facility, self-service facility, goods return facility, goods exchange facility and availability of loyalty programs were significantly different for the two setups. The implication is that these variables play a significant role in governing the choice of the customer towards a particular retail setup and hence the null hypotheses related to these 11 variables were rejected. For rest of the six variables, expected prices, phone order facility, credit facility, product quality, time required for shopping, odd hours of shop, there is no significant difference in customers' perceptions about the two retail setups.

Based on a study of the means between the variables and the significance in the paired *t*-test, it can be inferred that the customers favored kirana shops on account of convenience of location, home delivery facility, bargaining facility; goods return facility and goods exchange facility. On the other hands, decision variables like parking facility, product variety, quantity of goods to be purchased, advantage of sales promotion schemes, self-service facility and advantage of loyalty programs drive the customers to organized retail stores.

Clearly location advantage is very critical for kirana shops plus more personalized services like home-delivery. The psychological benefits of being able to bargain and at the same time also compel the retailer to exchange or return goods are perceived to be more easily available at kirana shops. Organized retailers are perceived to be having better parking facilities, more variety and assortment of merchandize (hence giving much better product choice), self-service (hence the power of holding and evaluating the merchandize), advantage of better discounts/schemes and loyalty programs to incentivize repeat purchases.

As far as the insignificant decision variables are concerned, the mean value of expected prices shows that the perceptions of prices are lower for kirana shops compared to organized retailers. Kirana are also perceived to be better on account of phone order facility and credit facility than organized retailers. The product quality is perceived to be better at kirana shops for food and grocery products. This can be explained by the strong choice criteria of 'freshness' in case of food products in India. For convenience of purchase—whether it is short time to complete the purchase process or the shop being available at odd hours, the kiranas are patronized by customers.

FACTOR ANALYSIS

Factor Analysis for Decision Variables Pertaining to Traditional Retail (Kirana) Stores

Factor analysis was used to reduce the number of variables. An exploratory factor analysis was used to detect the structure in the relationship between variables so as to allow classification of variables (in both the cases—traditional as well as modern stores decision variables).

The following table shows the result of the KMO and Bartlett's Test for kirana stores (Table 5).

Table 5: KMO and Bartlett's Test for Kirana Stores

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.814
Bartlett's Test of Sphericity	Approx. Chi-Square	1,113.546
	Df	136.000
	Sig.	0.000

The KMO measure is coming to be 0.814 which shows that the data is more than adequate to conduct the factor analysis. Bartlett's Test is coming out to be significant which shows that the nature of the data is also very appropriate for conducting factor analysis.

Five factors were extracted with eigenvalues of 1 or greater which are able to explain approximately 60.65% of total variance in case of kirana shops. This indicates that the variables considered in the study are not adequate to explain higher level of variance and some more research is required to be conducted in this direction. The same inference can be shown graphically through the scree plot in Figure 1.

Figure 1: Scree Plot for Factors for Kirana Stores

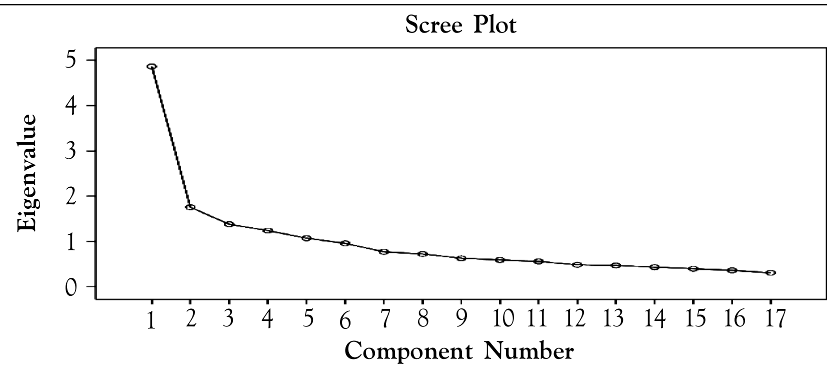

Table 6 shows the extracted factors with eigenvalues more than 1 (only the important factors being listed). Rotated Component Matrix has been used for the same.

Using Principal Component Analysis, five factors were extracted. Factor 1 showed high loading on variables such as "product variety", "quantity of product to be purchased", "expected prices" and "product quality". All the variables covered in Factor 1 match closely and this factor is termed as: Product choice (k).[1] Factor 2 has such variables "phone-order facility", "home-delivery facility", "sales-promotion schemes", "credit-facility" and "bargaining-facility". This implies the personalized services provided by kirana shops on individual-to-individual basis. It was termed as: Customized conveniences (k). The variables under Factor 3 are "goods return facility"

[1] (k) denotes kirana stores.

Table 6: Rotated Component Matrix of the Factor Analysis for Kirana Stores

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Distance – Convenience of Location					0.774
Parking Facility				0.878	
Product Variety	0.736				
Product Quantity to be Purchased	0.707				
Expected Prices	0.707				
Phone Order Facility		0.659			
Home-Delivery Facility		0.659			
Sales Promotion Schemes		0.675			
Credit Facility		0.628			
Bargaining Facility		0.673			
Product Quality	0.600				
Self-service Facility					
Time required for Shopping – Convenience of Quick Purchase					
Odd Hours of Shop – Convenience of Any Time Purchase					
Goods Return Facility			0.818		
Goods Exchange Facility			0.821		
Availability of Loyalty Programs					

and "goods exchange facility". These variables underline the post sales problems and the factor has been termed as: Dissonance reducing measures (k). Factor 4 showed high loading on one variable "parking facility". This factor has been given the name as: parking convenience (k). Finally Factor 5 also has one variable under it "distance". This factor has been called as: Location convenience (k).

Factor Analysis for Decision Variables Pertaining to Modern Retail Stores

There are 23 decision variables to be considered in order to check the perception of the customers about organized retailers, as explained earlier. Table 7 shows the result of the KMO and Bartlett's Test for modern retail stores.

Table 7: KMO and Bartlett's Test for Modern Retail Stores

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.847
Bartlett's Test of Sphericity	Approx. Chi-Square	2,310.824
	Df	253.000
	Sig.	0.000

The KMO measure is coming to be 0.847 which shows that the data is more than adequate to conduct the factor analysis. Bartlett's Test is coming out to be significant which shows that the nature of the data is also very appropriate for conducting factor analysis.

There have been five extracted factors with eigenvalues of 1 or greater which are able to explain approximately 59.76% of total variance in case of organized retail stores. This indicates that the variables considered in the study are not adequate to explain higher level of variance and some more research is required to be conducted in this direction. The same inference can be shown graphically through the scree plot in Figure 2.

Figure 2: Scree Plot for Factors for Modern Food and Grocery Retail Stores

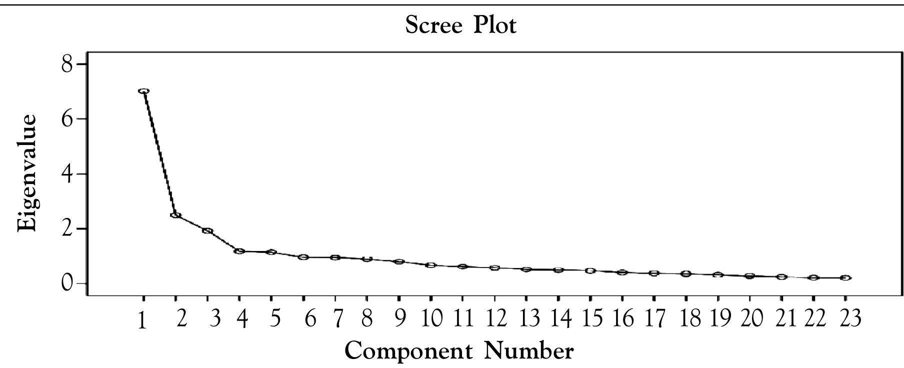

Table 8 shows the extracted factors with eigenvalues more than 1 (only the important factors being listed). Rotated Component Matrix has been used for the same.

Table 8: Rotated Component Matrix of the Factor Analysis for Modern Food and Grocery Stores

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Distance – Convenience of Location					
Parking Facility					
Product Variety	0.770				
Product Quantity to be Purchased	0.753				
Expected Prices	0.689				
Phone Order Facility			0.779		
Home-Delivery Facility			0.790		
Sales Promotion Schemes					0.676
Credit Facility			0.562		
Bargaining Facility			0.717		
Product Quality					

Table 8 (Cont.)

Variables	**Factor 1**	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**
Self-Service Facility					
Time Required for Shopping – Convenience of Quick Purchase					
Odd Hours of Shop – Convenience of Any Time Purchase					
Goods Return Facility				0.780	
Goods Exchange Facility				0.801	
Availability of Loyalty Programs					0.824
Looks of the Store					
Simple and Easy Signage		0.565			

In case of organized retailers, again five factors were extracted using Principal Component Analysis. Factor 1 has three variables with high loading namely "product variety", "quantity to be purchased" and 'expected prices". It was termed as: Product choice (o).[2] Factor 2 showed high loading on variables such as "simple and easy signage (good visual merchandizing)", "courtesy of the store staff", "knowledge of the staff" (customer handling skills), "similar products at one place (efficient store-layout)" and "regular availability of stocks (good inventory management)". All of these characteristics covered by factor 2 have been termed as: Store management (o). Factor 3 showed high loading on "phone order facility", "home-delivery facility", "credit-facility" and "bargaining facility". This factor is the result of customers' long standing experience with kirana shops and the modern retailers have been forced to adopt them in order to be competitive. The name given to this factor is: Value-added services (o). The variables under factor 4 are "goods return facility" and "goods exchange facility". These variables underline the post sales problems and the factor has been termed as: Dissonance reducing measures (o). Factor 5 showed high loading on two variables "sales-promotion schemes" and "loyalty-programs". This factor has been called as: CRM activities (o).

Therefore, the two retail setups are chosen based on the tacit cost of shopping activity (influenced by location convenience), customized conveniences, transaction conveniences, product choice and dissonance reducing measures associated with a particular retail setup. Due to the high stress on freshness of food products in India, quality factor is also a big reason for customers favoring kirana shops.

DISCRIMINANT ANALYSIS

The factor analysis done earlier was used to reduce the number of decision variables for both the formats of the retail stores. Using SPSS, the generated factors were saved as new variables. To understand which of these new variables explain the significant

[2] (o) denotes organized retail stores.

part of inter-group differences in mean profiles, discriminant analysis was used. It was run on a randomly chosen sample of 20% of the cases to assess the respondents' opinions regarding the decision variables with respect to their preference of buying food and grocery from local kirana store or modern retail outlets.

The discriminant function was not statistically significant at 95% confidence level with eigenvalue of 0.579 (Table 9), Canonical Correlation of 0.606 (Table 9), Wilk's Lambda value of 0.633 (Table 10) and significance 0.067 (Table 10). The results are:

Table 9: Eigenvalues

Function	Eigenvalue	Percent of Variance	Cumulative Percent	Canonical Correlation
1	0.579[a]	100.0	100.0	0.606

Note: a – First 1 canonical discriminant functions were used in the analysis.

Table 10: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-Square	Df	Sig.
1	0.633	17.363	10	0.067

Table 11: Functions at Group Centroids

	Function
Preference of store to purchase food and grocery from	1
Local kirana store	–1.002
Modern retailers	0.553

Note: Unstandardized canonical discriminant functions evaluated at group means.

The Canonical Discriminant Function denoted by Z, the Coefficients of the variables are given in (Table 12).

From the above table, we get the discriminant function

$$Z = 0.142 + 0.607PCk + 1.478CCk + 1.161DRMk - 0.285PCnk + 0.599LCk - 1.168PCo - 0.765SMo - 1.120VASo - 0.120DRMo - 0.208CRMo$$

On analyzing the group centroid functions (Table 11) along with the canonical discriminant function coefficients, we can interpret that factors with high coefficients will act as discriminating variables. The rule for prediction of the store patronage behavior, given by this model, is that persons with Z score less than –0.225 prefer local kirana stores while those having Z score higher than –0.225 prefer modern retailers for food and grocery purchases.

To validate the discriminant function, the technique of model generation followed by model testing was used. The discriminant function, generated from the random

Table 12: Canonical Discriminant Function Coefficients

Discriminating Variables	Function
	1
Product Choice (k) (PCk)	0.607
Customized Conveniences (k) (CCk)	1.478
Dissonance Reducing Measures (k) (DRMk)	1.161
Parking Convenience (k) (PCnk)	–0.285
Location Convenience (k) (LCk)	0.599
Product Choice (o) (PCo)	–1.168
Store Management (o) (SMo)	–0.765
Value-Added Services (o) (VASo)	–1.120
Dissonance Reducing Measures (o) (DRMo)	–0.120
CRM Activities (o) (CRMo)	–0.208
(Constant)	0.142

Note: Unstandardized coefficients.

sample of 20% of the cases, was used to compute a predictor variable for all the remaining 80% of the responses. The process was done using SPSS where validation was done on these 80% of the responses and the summary table was generated using 'Leave-one-out' option for cross-validation purpose. On analyzing the result, we see that the hit-ratio for testing the discriminant model came out to be 68.9% (correct classification of cross-validated cases). It clearly showed that some modifications are required in the existing set of decision variables to improve the predictability of the discriminant function. From the discriminant analysis, it can be concluded that major comparative factors which lead to the choice of either type of format by a customer are customized conveniences (k), dissonance reducing measures (k), product choice (o), store management (o) and value-added services (o).

Analysis of the results thrown up by discriminant and factor analysis indicated the importance of a limited set of variables in a customer's choice for favoring a particular retail setup. At the same time factor analysis also showed the difference in the nature of factors influencing patronage in the case of the two retail formats.

CONCLUSION AND RECOMMENDATIONS

The data collected and its analysis were able to provide answers for the research objectives of the study. The major advantages which kirana stores are enjoying over modern retailers are location convenience, customized convenience and easy goods return/exchange facilities. With the highest retail density in the world, the customers are sure to find a local food and grocery retailer, very close to their homes. This fact is also proved by the analysis that about 70% of the population does not require the usage of any means of conveyance to reach to the most frequented local store. Without the trouble of incurring any additional cost in product acquisition on account of fuel/transportation charges, the attractiveness and ease of reaching to the local store are immense. Apart from location advantage, another factor creating patronage for kirana shops is more personalized services like home-delivery. The psychological benefits of being able to bargain and at the same time also compel the retailer to exchange or return goods are perceived to be more easily available at kirana shops. This becomes possible due to familiarity of the customer to the local shop owner who, based on individual customer's relation and goodwill, can be very flexible in extending such customized conveniences to him or her. The general perception is that prices are lower for kirana shops compared to organized retailers. Kirana stores are also perceived to be better on account of phone order facility and credit facility than organized retailers. The product quality is perceived to be better at kirana shops for food and grocery products. This can be explained by the strong choice criteria of 'freshness' in case of food products in India. Again for convenience of purchase—whether it is short time to complete the purchase process or the shop being available at odd hours, the kiranas are patronized by customers.

With so many factors stacked against them, the modern retailers require some strong value-propositions to wean away customers from the traditional stores. The first major value which the customers perceive very important for the modern food and grocery retailers to provide is the product choice. With large merchandize assortment available under one-roof, the urban customer can fulfill most of his/her monthly requirement in one shopping trip and avoid making frequent trips to various kirana stores. This value will overcome his/her increased cost in the acquisition of products from the modern retailer. It is this factor, which is likely to make hypermarkets or large supermarkets likely to be more successful in food and grocery category in urban India. Additionally, the factor and discriminant analysis indicates that modern retail outlets have to strengthen their store-management skills to foster the customer's preference for them. Proper ambience, neat visual merchandizing, regular product availability, complimentary product layout and efficient check-out process will enhance the shopping experience for the customers. Another value-enhancer for the modern retailers can be extending value-added services (like phone-order and home-delivery), goods exchange/return policy, packaging services, carry-bags, etc. Finally, an important factor which can lead to increased patronage at the modern retailers is customer relationship management activities like loyalty bonus/discounts, special customer cards, free-parking facility and so on.

This study can provide insights to the modern food and grocery retailers on how the urban consumer in India perceives their advantages/disadvantages, vis-à-vis traditional kirana stores. They would do well to strengthen the above detailed value-enhancers in their retail strategy so that they are able to overcome all the advantages and the age-old habits which still make customer patronize the traditional kirana stores.

This study is limited to the NCR region in India, which is the most potent area for organized retail as the per capita income is higher than any other region in India. There is scope for further research along these lines in Tier I and Tier II towns of the country to see what strategies do modern retailers need to adopt in there. Also, this study does not make any distinction between branded grocery, dry unprocessed grocery, and fresh (wet) grocery as defined by CII-McKinsey & Company (2000) and considers food and grocery as one category. It is possible for a future researcher to conduct a study for understanding patronage behavior for any of these subcomponents of grocery separately. This can be especially important in the case of wet grocery, which constitutes almost 40% of the total food and grocery spend by average Indian customer and in which the overwhelming patronage is shown by the customers towards local, traditional retailers like fruit and vegetable sellers and meat-shops.

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Case Study

Lean Manufacturing: A Case Study of a Sri Lankan Manufacturing Organization

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This paper presents an application of the Lean Production System in a manufacturing environment. It discusses the most important elements of lean practices through a case study, carried out in a Food processing facility in Sri Lanka, where lean system was implemented. Further it illustrates the impact of lean consumption on bottom-line results of business processes. It was found that leanness of the business process is below the expectation as its process cycle efficiency is around 12.4%. It means that most of the activities (nearly 88%) of the Jar-process consist of Business Non-Value Added (BNV) and Non-Value Added (NVA) activities. Therefore improving this process would bring in a lot of financial gain as well as the lead time reduction.

INTRODUCTION

Toyota Production System (TPS) is a buzzword today in manufacturing circles. It is known as a flexi and cost-effective production model all over the world. TPS was conceptualized by Taiichi Ohno at Toyota Motor Company in 1950s (Motwani, 2003). In fact, TPS is the result of a series of best practices, which have been tested at Toyota Motor Corporation over the several decades. The goal of implementing TPS in an organization "…is to increase productivity, reduce lead-times and costs, improve quality, etc." (Sriparavastu and Gupta, 1997; Sánchez and Pérez, 2001).

Kasul and Motwani (1997) in their study find that companies that employ TPS have benefits such as "reduced lead times, just-in-time management, decreased costs, levelled production, continuous flow production, increased job satisfaction for employees, higher productivity, lower inventories, and higher quality levels." Japanese companies have been able to successfully implement this system and hence been able to reduce the time for turnaround from when the customer orders to delivery and cash received. This reduction in time has helped companies through tough times and helped in maintaining their profitability.

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CONCEPT OF LEANNESS

Lean means producing more with less. The concept highlights the importance of less consumption of resources in all aspects of the business i.e., throughout the value creating process. Interest in the concept of leanness has expanded and evolved to include concepts of agility and responsiveness (Soriano-Meier and Forrester, 2002).

Soriano-Meier and Forrester (2002) state that increasingly in competitive markets the concept of leanness is gaining importance for the practitioner since it is an amalgamation of the processes of TQM, Just-In-Time (JIT) management, and computerized aspects of the design process, and factory and supply chain management. Implementing the aspects of leanness takes time and hence getting the gains of the lean concept can be viewed as a strategic process which does not give short-term benefits such as short-term competitive pressures. The concept of leanness is also of interest to the academic since there are few studies which have defined the concept in operational terms or addressed the measurement of its adoption in firms.

Lean consumption paves the way for creating business processes which consume less resource and produce more tangible outputs. A lean process consumes *time* and *materials* only and when the buyer demands (pull system in a lean process). Further lean processes are made up of *actions* that are paid by the buyer. All other possible non-paid actions are supposed to be eliminated. Any action that is not paid by the buyer is called non value added actions. Hence variables of consumption are; time, materials and un-paid activities

Practical application of lean tools provides us with some elegant solutions, which eliminate or mitigate root causes of wasters from the business process. The delivery on demand, one piece flow, pull system and load leveling and six sigma quality are the fundamentals to reduce consumption.

CASE STUDY

The methodology used for presenting the case study is explored in this section. First the research method is explained, followed by a brief description of the company (confidentiality of the company is maintained) and the results are presented.

RESEARCH METHOD

The research method is similar to that used by Kasul and Motwani's (1997) study. The primary approach for conducting this study was the case study method. Interviews, observations and archival sources were the sources from which data was collected. Interviews were conducted with the director of operations, unit managers and quality managers. In person interviews were conducted with those who were most familiar with the manufacturing process. The other sources of data were unstructured interviews from other management and non management personnel during the period of this study.

Observations were made on the shop floor and data were collected by way of a time study. A door to door processing time and lead time were collected to develop the current state map of the process. Value Stream Mapping tools were applied to develop the current sate map and the future state map. Another source of documentation was the archival sources which were used in the research.

BACKGROUND OF THE COMPANY

The company studied was a medium -size food processing facility located in one of the Industrial Zones of Sri Lanka. The company is an ISO-9001-2008 and Hazard Analysis Critical Control Point (HACCP) certified food processing subsidiary of a large conglomerate in Sri Lanka. The Company exports variety of food products made out of locally cultivated vegetables and fruits. Product families of the company are based on the customer requirements. Never ending escalation of operational cost and heavy pressure on prices due to competition in the international markets has resulted in shrinking of its profit margins. Therefore the company has decided to bring in the best manufacturing practices on to the production floor with a view to reduce cost of manufacturing so that it would be able to enjoy a unique cutting edge over its rivals.

In fact the company has been implementing TPS tools in isolation over a period of five years. The company implemented TPS tools such as visual management system through Japanese 5S method, Quality control Circles, Kaizen suggestion schemes, Total productive maintenance and six sigma systems. However, management of the company is of the view that there is a lot of room for improvement in the business processes. In order to realize its true potentials the company has decided to implement the TPS in total. This paper is the study of one of its business processes and the future state of the same after applying the lean principles.

OBJECTIVES OF THE STUDY

The study was carried out with a purpose of achieving following specific objectives.

- Study the current consumption levels (current state) of the process.
- Identify areas where lean consumption principles and tools are applicable.
- Design a new process (Future state) which consumes the least amount of resources.
- Assess the impact of lean consumption of future state on bottom-line results of the Process.

EVALUATING THE DEGREE OF LEANESS OF THE PROCESS AND ITS PRODUCT FAMILY

The major elements of the TPS which are taken in to account in evaluating the degree of leanness and a brief explanation on each follows.

One-Piece Flow: Kasul and Motwani (1997) state that "One-piece flow is defined as moving/making only what is needed, when it is needed…". This minimizes work in process inventory, which in turn enhances efficiency and reduces response time. For line balancing, calculating the takt time is required. In Kasul and Motwani's (1997) study, takt time is defined as the time taken to produce a single component or a complete product based on the demand. The calculation for takt time = operable time per day (in seconds)/required number of pieces per day (Kasul and Motwani, 1997).

Standard Set-Up: The series of steps required for the changeover from one production of one product to another is referred to as the standardized set-up. The worker, machine and the materials are the key considerations in this process. Zero change over time is aimed for with the process being measured from the last good piece produced before the changeover to the first good piece after the changeover (Kasul and Motwani, 1997).

Pull System (Kanban): Kasul and Motwani (1997) state that kanban is a scheduling system, with production instructions that state what materials needs to be replaced or used up in the current process, for the subsequent process to follow smoothly. Minimal inventories and its ability to adjust to demand easily are hallmarks of the system (for a more detailed understanding refer Kasul and Motwani, 1997).

Perfection (Jidoka): Kasul and Motwani (1997) state that "Jidoka is defined as a system of ensuring that defect-free product is passed from one operation to the next. Quality is designed into the operation beginning at the product/equipment design phase utilizing prevention techniques." (Kasul and Motwani, 1997). Two techniques for producing these defect free products are poka-yoke (mistake-proofing) and andon (signaling).

Load Leveling (Heijunka): Kasul and Motwani (1997) state that "Heijunka is a production planning method which evenly distributes the production volume and production variety over the available production time….Heijunka is the overall levelling in the production schedule of the variety and volume of items produced in a given time period" (for a more detailed understanding refer Kasul and Motwani, 1997).

DISCUSSION AND RESULTS

The process in question manufactures more than 50 different items of products and caters to four major buyers. (See Table 1). The process produces both brined products as well as fresh products depending on the season.

PRODUCT FAMILIES

Product Families have been identified based on the type of buyer. It appears that some buyers need specific requirements and process will change accordingly. Hence grouping is done on the basis of the buyers. A family consists of more than 30 different items while the B family is made up of 11 items. C family consists of 03 different items and D family has more than 12 items.

For the study, a product from family A with a net drained weight of 295 + 60 g was selected. It was observed that the process is designed in a straight line from feeding up to shipping. It is made up of seven door to door sub-processes and five of them are manual processes. The manual processes are:

- Feeding of raw materials
- Weighing
- Unloading
- Palletizing and wrapping and
- Labeling

Out of them batch processing was observed at three sub-processes listed below. Others are continuous one piece flow and follow the Toyota Pull principle.

- Feeding
- Palletizing
- Labeling

Table 1: Product Families and Process Requirements

Product Family	Pitch	Process Specialty/Changes
A	Carton	With weighing and labeling
B	Pallet	No labeling, no weighing
C	Pallet	With weighing and no labeling
D	Carton	With weighing and labeling

Further study of the process shows that the Pacemaker activity of the process is filling . It is a continuous process with the highest cycle time. In the pacemaker process; the pasteurizer decides the capacity of the process.

CURRENT STATE MAP

Processing time of each sub-process was obtained after observing the movement of material with a capacity of 3,000 jars from the point of feeding to the labeling. Cycle times, number of workers and total processing time are given in the Table 2.

The total processing time from feeding to labeling for a batch of 3,000 jars is 278 min (nearly 4.5 hr). However, currently there is a cooling process of three hours just after unloading jars from the pasteurizer. As a result labeling is not done on the same day of the production.

TIME CONSUMPTION AND WASTES IN THE PROCESS IN QUESTION

Labeling consumes more time while the filling less time than the labeling time. Since the labeling is a manual process, filling of jars will be the pacemaker as it hits the takt time

Table 2: Processing Times for a Batch of 3,000 Sweet Pickle Jars

Activity	Processing Time (min)	Unit Processing Time (s)	No. of People
Feeding	09	0.19	2
Filling of jars	84	1.68	29
Unloading of jars	68	1.36	2
Palletizing	15	0.30	1
Transport to warehouse	06	0.12	1
Labeling	96	1.92	10
Total	**278**	**5.57**	**45**

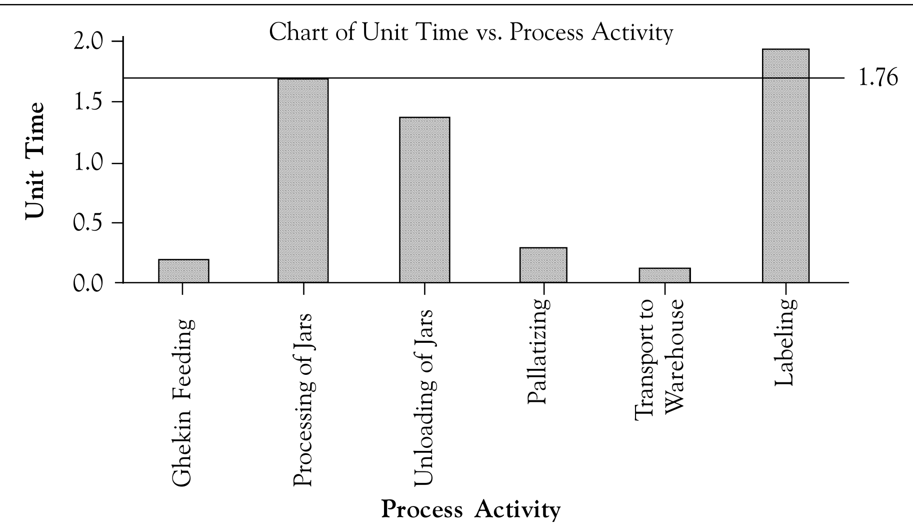
– Time given by the buyer to produce a jar. (1.76 s). It was observed that the process is not a balanced production line and time is wasted at all activities except filling of jars. (see Figure 1).

It was observed that time is wasted at feeding; palletizing and labeling-all are manual processes due to lack of load leveling.

PROCESS CYCLE EFFICIENCY (PCE)

PCE measures the percentage of value added time from the total lead time of a particular Process. PCE can be calculated by obtaining value-added time (approximately the total processing time) and dividing it by the lead time.

Figure 1: Processing Time Against the Takt Time



(It should be noted that time taken from labeling to shipping was not considered in calculating the PCE as the Company has a financial procedure to obtain cash in advance for shipments to be done.)

A lean process is defined as a process with the PCE is more than 25%. Since PCE of the process is 12.34%, it can be concluded that the process in question is not a lean process and there is a potential of doubling the performance.

FUTURE STATE MAP AND FUTURE PLANS

In making the future state map, it is important to look at the following areas:

- Calculate the takt time.
- Identify Pacemaker Process and required capacity based on the takt time.
- Line Balancing to reduce waste.
- Create a flow where ever it is possible by designing a Kanban System.
- Establish the schedule and load leveling.

Before developing the future state map it is necessary to consider the process metrics and to see what opportunities available to make the process lean.

Takt Paced Production

Takt time is the time given by the buyer to produce a unit of output. It has to synchronize the speed of production with the sales.

Takt time = Available time (work time – rest time)/Daily demand

In calculating the daily demand, it was decided to take the full capacity of the pacemaker – Pasteurizer. As this is the bottle neck in the process, it is necessary to optimize the capacity of pasteurizer which ranges from 3,000 jars to 6,000 jars per cycle.

Available time	= 26,400 s
Daily demand	= No of cycles * capacity of the pasteurizer
No of cycle	= Available time/processing time
	= 26,400/5,040 = 5.24 (approximately 05 cycles)
Daily demand	= 5 * 3,000 = 15,000 jars
Therefore, takt time	= 26,400/15,000 = 1.76 s

The process must be able to produce a finished jar at every 1.76 s to meet the daily demand and the full capacity of pasteurizer without overtime. As the standard minute cost of the process is LKR 304 value of the takt time is LKR 8/92. Therefore, producing less than the takt rate, will lose nearly LKR 9 for every unit.

Current Process Cycle time = Total Processing time/Capacity

= 278 min * 60/3,000 = 5.56 s

Currently the process consumes 5.56 s to produce a finished bottle while the required takt rate is 1.76 s. Hence it is necessary to reduce the time taken to take off a finished product from the process. This can be done by reducing the lead time. Therefore it is necessary to create the flow with the following process metrics.

- Pacemaker process and scheduling point: Pasteurizer
- No of Cycles per Day: 5
- Takt Time: 1.76 s
- Capacity: 3,000 jars

Line Balancing of the Process

Due to the imbalance of the process, it is impossible to meet the takt rate of production. Out of seven major processes, labeling, feeding, cooling of jars and some of sub-processes of the jar making such as post sorting of material, weighing of bottles, capping are considered to be major wastages. It was observed that labeling process takes more than the takt time and other processes take less than the takt time. Both ways the company loses until the optimum condition is reached i.e. takt time equals the processing cycle time.

Figure 2: Line Balancing

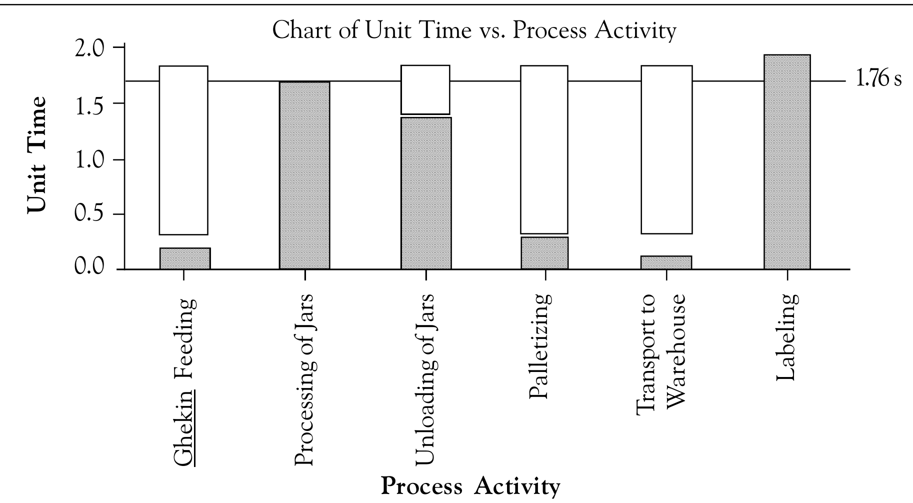


Figure 2 show that all processes except filling of jars are not utilizing their resources up to the optimum level, i.e., the takt time of 1.76 s. Processing time of labeling is also higher than the takt time due to inefficiency. Hence it is necessary to make a balance in all processes of the process in line with the takt time. People and the tools of material feeding, palletizing and transport of jars to warehouse are underutilized.

Labeling process is highly inefficient. The following recommendations are made to streamline the process to meet the takt rate.

Creating a Continuous Flow

The following recommendations have been made after studying the current state map.

- Eliminate Current Labeling process and combine it with palletizing and wrapping:It is a must that labeling process has to be brought back to the jar section and with a new labeling machine. As the current process is located far away from the cell, it is necessary to combine it with palletizing process so that labeling will become a pull process of the palletizing
- Automate the cooling process by using a dehumidifier so that time taken for cooling can be minimized.

  Currently cooling process takes 180 min to condition the jars after pasteurization. This is considerable amount of waste of time in the process due to WIP accumulation at the process.
- Eliminate weighing of jars by installing automatic weigher for lower limit:

  Weighing of jars creates stopovers of the process due to variation of size of material and the skills of people. Due to interruptions of the process, capacity of pasteurizer is underutilized. This has increased the cost of production of a jar.
- Change the supplier of the caps and improve the quality of capping process:

  An interruption at the capping point was noted. It was due to the fact that the quality of caps of the current supplier was inferior. Hence change of supplier is recommended.
- Eliminate Post-sorting by outsourcing or do away the process outside the Process:

  It was observed that post sorting consumes lots of time of Inspectors. Further it creates time traps in the process as well. Hence it is recommended to do away with his process by sourcing graded material.

Process Cycle Efficiency and Savings

Table 3 shows that there is an increase of 11.6% of the PCE and LKR savings of 2 million per annum after implementing the TPS Project.

Table 3: PCE Before and After the TPS Project

Criteria	Before TPS Project	After TPS Project
Actual Processing Time	278 min	164 min
Total Lead Time	2,252 min	687 min

Table 3 (Cont.)

Criteria	Before TPS Project	After TPS Project
Process Cycle Efficiency	12.34%	23.94%
Savings (number of minutes)		114 (278-64)
LKR savings per cycle of 3,000 jars @304.70 per min (for processing time reduction only)		34,735
LKR savings per day (5 cycles per day)		173,679
LKR Savings per Annum from the TPS Project		**2,084,148**

CONCLUSION

It was found that leanness of the process is below the expectation as its process cycle efficiency is around 12.4%. *It means that most of the activities (nearly 88%) of the Jar-process consist of Business Non-Value Added (BNV) and Non-Value Added (NVA) activities.*

However the process has been running as continuous—one piece flow except in a few sub-processes. What is lacking is balancing the line and its load leveling. The study identified areas where TPS principles have not been implemented to improve the process cycle efficiency. As a result, there is a greater potential of financial gain as well as the lead time reduction which brings in lot of positive changes in the bottom-line results.

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Book Reviews

Financial Intermediation in a Less Developed Economy: The History of the United Bank of India

By Indrajit Mallick and Sugata Marjit

Sage Publications, New Delhi, 2008; Pages: 274; Price: Rs. 795

ISBN: 978-0-7619-3656-5

At the outset, I would like to caution the readers that for this book one should try to understand the intention of the authors only by reading the complete title *Financial Intermediation in a Less Developed Economy: The History of the United Bank of India*, otherwise there is every possibility to think that it is financial intermediation in the country, although the authors delve with the basic queries of the nature of banking and the characteristics of financial intermediation and the need for a robust financial system in the process of financial intermediation and the relationship with economic growth and development. The authors have used the case of United Bank of India (UBI) and observed that the theoretical framework is inadequate in many respects to answer the important institutional questions and can be delved extensively only through a proper historical investigation.

The entire book consists of seven chapters, apart from the introduction, where the authors present the arguments of eminent scholars in the area like Allen, Gale, Gurley, McKinnon, Miller, Schumpeter, Kunt, Levine, Greenhood, Robinson, Keynes, Goldsmith, etc. and observed that the financial system in general and banking in particular play a crucial and critical role in the process of economic development. Banking translates economic growth into costly useful financial innovation—leading to risk sharing, liquidity and the return on capital ultimately achieving the economic growth.

To present the state of Bengal as a case for discussion in terms of less developed economy, the authors narrate the status of banks in Bengal. They observe that the banks could contribute to the economic development of small peasants, artisans, traders, transport operators, etc., in the post-nationalization era and on the other hand, industrial sickness in the key sectors like jute, tea and heavy engineering, poor performance of agriculture and outflow of capital in Bengal brought about the labor unions, etc., robbed the chances of banks to earn a higher return on assets.

In the first chapter, "The Roots", the authors discuss the socio-economic background of banking in the state of Bengal and observe that the stringency and inelasticity of money and credit supply of the colonial money system continued to exist in the system in Bengal. The growth and expansion of financial institutions was hurdled with the diversion of funds towards the two world wars and also the basic nature of money being fiat. Discussing the history of banking in Bengal, the authors perceive that the uncertainty of currency, disrupted credit networks and colonial legislation, did not allow the banks in Bengal to grow and as well lead to failures. The authors then discuss the growth and development of Bengal Central Bank Ltd., Comilla Banking Corporation Ltd., and New Standard Bank which acted as the roots in the process of formation of United Bank of India, along with a brief discussion of financial entrepreneurs and the socio-economic factors influencing the formation and growth of the above banks.

In the second chapter, "Banking Crisis and the Merger", the authors discuss the legal environment of banking and the changes made by the different acts to define banking in India, followed by the Banking Crisis and the reasons substantiating the crisis. The authors believe that the Second World War and the Bengal Agricultural Debtor's Act, lowering the loan amount to half without interest, have put the banks in an unstable position. And, also feel that in the first half of the 20th century, Bengal faced enormous macroeconomic risks which were unhedged. The authors also observe that the banking system could not smooth out the inter-temporal risks through accumulation of reserves and good capital base sufficiently, due to their involvement in lending for the assets in the boom time arising out of speculation. The chapter also discusses the importance of deposit insurance vis-à-vis the merger and quotes the then governor of RBI, "This merger was the solution to the great Banking crisis of the recent years". Another observation the authors bring out from the existing literature is that having a deposit insurance could have evaded the situation of the banking crisis.

In the next chapter, "Post-Merger Developments (1950-69)", the authors discuss the developments in banking during the period 1950-1969. The authors observe that during this period there were a series of mergers leading to stabilization and growth of banks and also acted as detrimental to competition. However, the mergers lead to expansion of branches to other states though to a limited extent and also a robust growth with an increase in the introduction to risks. Banking Regulation Act 1949, and First and Second Five Year Plans have regulated the banking system. Also, the First and Second Five Year Plans, along with the industrial policies of 1948 and 1956, created public sector and huge investments in heavy engineering, machine making, etc. which lead to a huge demand and robust growth of the banking sector. The authors also observe that Indian banks have grown both in scale and scope and complemented well in the process of meeting the economic aspirations and acted as tools to implement five year plans. In the process, the banks have become inappropriate to small savers and borrowers including the primary sector—agriculture. The authors, while describing the macroeconomic factors, attempt to compare how UBI performed during this period. The authors observe that the bank had to take care of restructuring needs and once they were taken care and consolidated, then they thought of expansion. The authors also observe that B K Dutt's efforts to be more random in nature was a part of his wide-ranging sketch for diversification over other parts of the country. They give a brief performance evaluation of the UBI in comparison with other banks.

Authors in the next chapter, "Nationalization and the Organizational Challenge", discuss about the introduction of the idea—development banking, for the vital cause of improvement of credit to small and medium enterprises and as well to the agriculture; and the observation prior to nationalization was that the banks were favoring large and established business houses. The authors observe that the agriculturists have been articulating their apprehension that the credit agencies were not able to meet their financing requirements. This led to a debate and introduction of the Policy of Social Control of the banking system in the parliament to ensure an equitable and purposeful distribution of credit, within the resources available to the priorities and developmental needs of the country. The authors present the thoughts of UBI leaders on the socialization of banking system and lead bank scheme leading to the fundamental shift in the approach of the banks in the post-nationalization phase and the challenges of reorganization of the bank (UBI) in terms of structure, design and functioning.

"The Years of Development Banking" chapter focuses on the performance of UBI during the post-nationalization up to 1985. The authors observe that during this period the focus of evaluating a bank shifted to opening up of new branches, mobilization of deposits, efficiency in disbursements of advances to the priority sectors like agriculture and small-scale industry and this demanded the redesigning of the organization. Discussing about UBI, the authors observe that in terms of branch expansion, the bank was faring very low, whereas in terms of deposit mobilization, the bank fared average. The authors also discuss the financing of UBI to small-scale industries and agriculture and the efforts of UBI in terms of regional development.

In the subsequent section titled, "The Crisis Years (1985-2000)", the authors bring forth various banking reforms proposed and implemented during this period to strengthen the public sector banks, improve their efficiency and competitiveness in the banking system under the stabilization and structural adjustment program. The authors brief the various committees' terms of reference and their recommendations in general and the Verma Committee Report in particular. They observe that the committee cited overstaffing, low productivity, profile of senior or higher aged employees and lack of skills in specialized areas like treasury management and foreign exchange management were some of the major causes for poor performance, apart from lack of training facilities.

The last unit of the book titled, "Recovery and Beyond", the authors focus their discussion on the turnaround of UBI and the de facto exit from the "weak bank" status quickly. This chapter also focuses on the new initiatives taken by UBI in the process of recovery in terms of strategy planning, organizational restructuring, internal control measures and the provision of performance-based incentives to employees. The authors also observe that UBI has recognized strategy, risk management and business process innovations as important factors for success apart from the growth of lending and branch network expansion.

Over all, the book gives a very good understanding to the reader about the Bengal economy, changes in the economy and the history and growth of the United Bank of India.

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How the Mighty Fall: And Why Some Companies Never Give In?

By Jim Collins

Random House Business, London, 2009; Pages: 240; Price: ₹750

ISBN: 9781847940421

The financial crisis of 2008 saw several giant corporations opting for Chapter 11 (Liquidation), especially in the financial and real estate sectors, in a surprisingly accelerated manner, slowly engulfing other sectors and spreading to become a worldwide phenomenon. The background for *How the Mighty Fall* cannot be more appropriate. Exploring the dark and grim sides of a firm's performance, it is downfall, the book tries to address two important contextual questions: "What are the factors which led to the fall of great companies?" and more significantly, "How the managers and leaders can identify the downslide early enough and what actions, if any, can be taken to prevent it?" The book had its origin when the author was having a discussion with the leaders from military, business and social domains. He was perplexed by the enquiry from one of the participants, a CEO of a large company: "How will you recognize symptoms of downslide if you are at the pinnacle and success blinds the early signals of decline?" In this book, the author, using comparative case study method, tries to identify the patterns in the downfall of once great companies, and delineate stages of decline, comparing the phenomenon with a cancer creeping into a healthy body, initially asymptomatic but potentially lethal. He posits prescriptive guidelines to leaders and managers about suspecting and identifying the downward slide, and taking appropriate actions to prevent it.

The book is addressed, specifically to managers and leaders, who strive to identify the signs of impending collapse before it becomes apparent and to take precise preventive and corrective actions, important for sustaining their company's competitive advantage and strong performance. The book is entirely based on the theoretical paradigm of "strategic choice" (Child, 1972) rather than the "environmental determinism" of population ecology model (Hannan and Freeman, 1977). The author reiterates his contention, similar to his earlier works, namely "Good to great" and "Built to last", that performance of a firm absolutely depends upon strategic directions adopted by the leaders, discounting the population ecologists' deterministic view that it is the "environment" that "selects" and "retains" the "variations" produced by strategic actions. The preferred paradigm of strategic choice is evident as the author quotes, "Whether you prevail or fail, endure or die, depends more on what you do yourself than on what the world does to you." The conclusions drawn by the author could thus be colored with their overemphasis on strategic choice. This is especially important as "Environmental determinism" (population ecology) model and strategic choice act at different levels of analysis, the former at the population level and the latter at the firm level.

The author mined out companies from the databases used for "Built to last" (Collins and Porras, 1994) and "Good to great" (Collins, 2001) and then selected 11 companies from the original list of 60, which fit the pre-decided criteria of downfall. Companies studied included A&P, Addressograph, Ames, Bank of America, Circuit City, HP, Merck, Motorola, Rubbermaid, Scott Paper and Zenith. The list includes stalwart firms from various domains including technology, commodity, finance, pharmaceutical industry, etc. Similarly, 11 successful companies were selected to serve as a contrast, in the same period, on the basis of similarities in parameters like industry, size, performance, age, etc. The corresponding contrasting firms were Kroger, Pitney Bowes, Wal-Mart, Wells Fargo, Best Buy, IBM, Johnson and Johnson, Texas Instruments, None Qualified, Kimberly-Clark and Motorola. Major firm collapses, like Fannie Mae and other financial institutions, which got excluded from the study due to selection criteria, are discussed separately in the appendix. The firms were studied over a long-term period spanning over decades and across domains like financial ratios, culture, strategy, technology, markets, etc. Though the methodology provides triangulation benefits, it can't be considered as totally free of the "halo effect" identified by the American psychologist Edward Thorndike (1920). It denotes a human tendency to draw specific inferences on the basis of general impressions. In the business sense, it implies that once the dependent variable (in this case the performance outcome) is known, the reports and analyses tend to attribute success/failure factors to corresponding strategy, leadership, culture, etc. (Rosenzweig, 2007). However, accepting the limits and delineating the strengths of historical analysis, the author posits that his findings reveal "correlations" between variables and not "causations". In the absence of a typical double blind controlled sampling, as possible in natural sciences, historical analysis with sufficient triangulation and comparative study, as carried out by the author can be considered to be rigorous.

The author identified five stages of decline, named self descriptively: "Hubris born of success", "Undisciplined pursuit of more", "Denial of risk and peril", "Grasping for salvation", and "Capitulation to irrelevance or death". The sequence through the stages is more or less maintained, but the speed and duration spent in each varies from firm to firm, environment to environment. In the first stage leaders, blinded by arrogance of achievement, shift focus from the "why" of success and start taking performance for granted. The firm slips into second stage when the leaders, influenced by stage one, tend to overdo pursuit of growth, however unreasonable and unrelated to the core. The third stage kicks in when the top management brushes aside the internal negative signs, attributing them to external factors. They magnify the positives and exhibit ostrich phenomenon to the danger signs, which have started to emerge. The fourth stage sets in when the symptoms of disease become strikingly clear, and the management, almost in panic, searches for radical solutions instead of sticking to the basics they adhered to, while on the journey up. Popular strategies at this stage include inducting an external visionary charismatic leadership, game changing acquisition, etc. The more frantic and prolonged the fourth stage, the more likely that the firm will be dried of its financial and emotional resources, pushing the firm to the fifth stage, an irreversible one. It ends in sell out, atrophy or demise of the firm.

The second stage, when obsession with "growth" leads to unreasonable decisions, is an important factor rightly emphasized by the author. Here the author stresses on one more theoretical paradigm, that of a balance between exploitation and exploration (as proposed by March, 1991), between continuity and change. Exploitation broadly refers to concentrating on core strengths and encashing the incumbent competitive advantage. Exploration, on the other hand, involves looking for new frontiers and opportunities, even beyond one's core competencies. The latter carries significant costs and risks but offers much higher potential for growth, especially in turbulent and uncertain environment. The author maintains that innovation, change, experimentation and exploration are important for a firm, but unreasonable obsession with growth leading to aggressive risk taking behavior on the part of the leaders is what tips the firm off the cliff. Here the author resonates with the root cause of the financial downturn of 2008.

The book is a simple and lucid read, illustrating each stage with appropriate examples. Markers of each stage listed in a box at the end of each chapter, tabular comparisons between contrasting companies and easy representation of each phase in a graphical form add to the richness of this coherent read.

The relevance of the book lies in collapse of the mighty corporations across the world during the financial crisis of 2008, the ripples of which are still affecting the world economy. The contribution of the book lies in reflecting on to the business school mindset, being continuously instilled into the gray matter of future managers and leaders, that "growth" is the sole purpose of organizations and the only yardstick of its performance, and that "aggressive pursuit of change" is "the" way to achieve it. The author, appropriately, instills caution on this notion.

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Promoting Economic Cooperation in South Asia: Beyond SAFTA

By Sadiq Ahmed, Saman Kelegama, Ejaz Ghani (Eds.),

Sage Publications, New Delhi, 2010; Pages: 435; Price: Rs. 850

ISBN: 978-81-321-0311-0 (HB)

During the last three decades, economic growth and development across all the regions in the world, especially in South Asia, have had two increasingly distinct emerging trends and dimensions. One relates to the progressive and dynamic economic growth led by the organized sectors and competitive markets, which have benefitted from Liberalization, Privatization and Globalization (LPG) within and across countries. The other is slow if not stagnant or even regressive growth and development in the unorganized non-market sectors, which have lagged behind at least partly due to LPG. But for the neoliberals at home and abroad, TINA! Or, as Albert Maslow has put it: When the only tool available is a hammer (LPG), everything begins to look like a nail (liberalizable, privatizable, globalizable).

But, as the Independent South Asian Commission on Poverty Alleviation[1] had pointed out, South Asian countries need to "walk on two legs." To paraphrase, one is that of competitive markets for private goods; the other is of providing access to merit, mixed public and free public goods through non-market, public and civil society interventions and cooperation. As the experience of the East Asian Miracle countries brought out, the invisible hand of the market needs to be guided by the visible arm of the government (and aided by the nimble fingers of the NGOs).

The trends in India in recent decades towards uneven and dichotomous development of organized (formal) and unorganized (informal) sectors, employment of capital and of labor, gains for upper-middle groups and bottom-of-the-pyramid classes, and industrial-urban and agricultural-rural sectors have been eminently elicited by a great deal of recent empirical data and analysis by the National Commission for Enterprises in the Unorganized Sectors (NCEUS). This analysis, conceptually extendable to other South Asian countries and the region as a whole, also highlights, perhaps most importantly, the distance between policy promises and achievements at the ground level.[2]

1 "Meeting the Challenge" (Report), Independent South Asian Commission on Poverty Alleviation, SAARC Secretariat, Kathmandu, 1992.

2 For an excellent review of the NCEUS Report, "The Challenge of Employment in India: An Informal Economy Perspective", see Jan Breman (2010), "India's Social Question in a State of Denial", *Economic and Political Weekly*, Vol. XLV, No. 23, June 5.

The learned papers in this volume grapple with these and similar dichotomous dimensions of growth, development, and regional cooperation in South Asia. The volume contains 17 papers in four parts: The Imperative for Cooperation; SAFTA and Beyond; Private Sector Perspectives; and The Political Economy of Cooperation. Most of the contributors are economists/social scientists from autonomous policy and research institutions in Bangladesh, India, Pakistan, Sri Lanka and USA. Others are representatives of regional offices of the World Bank and ADB, and of national chambers of commerce and industry and trade organizations, and the Commonwealth Secretariat.

As a backdrop to the need for effectively enhancing regional cooperation in South Asia, a few papers have convincingly brought out (a) the increasing divergence in economic growth within and between South Asian countries, including a map showing 60% of the region indicated as lagging behind (Ahmed and Ghani); (b) the plight of the economically weaker and smaller economies, population segments and sub-regions which stand to gain much more from regional cooperation (Razzaque); (c) the inflationary impact of rising prices of food on the poor due to various sub-regional differences (Vokes and Jayakody); and (d) the ineffectiveness of SAARC's Food Reserves and related policies and, more generally, of the ineffectiveness and unaccountability of SAARC's Integrated Programmes of Action and SAARC Summits' Declarations ["rhetoric" on Poverty Alleviation, Control of Terrorism, etc. (Lama)].

These broad disparities and official neglects at national and regional-cooperative levels have contributed to other developmental problems and issues, as discussed by some of the contributors. One such issue is migration within and across and beyond South Asian countries. This has been at least partly due to inadequate formulation and regional coordination of migration, employment and HRD policies and legal frameworks (Khatri).

These have impacted more adversely on women, one aspect reflected in their increased trafficking within and across borders. Those unable to escape to presumably greener pastures may then resort to half-hearted and dishonest economic participation, strikes (*bandhs*), economic and social sabotage, including crime, and ultimately violence and terrorism, as witnessed especially in the more populous countries in the regions, and as insightfully and prophetically articulated by Albert Herschman in a seminal paper in 1972 on tolerance for increasing inequalities during the development process.

This raises the chicken-and-egg issue of whether more inclusive development is a precondition for economic and personal security, or policed and militarized security for attaining economic and social justice.

In this background, it has been argued in this volume that there is a need for a fundamental paradigm shift in regional and national policies, by putting humanity, nature and cooperation above (skewed) economic growth based on competition and free markets. Such a shift is especially required to help resolve the India-Pakistan conflicts (Akmal Hussain).

This view is to be juxtaposed to the recommendation elsewhere in the volume that economics and politics should be separated, especially to promote private sector-led growth (Amin). But in all the papers on national private sector perspectives from Bangladesh, India, Pakistan and Sri Lanka, it has been rightly argued that private sector cooperation needs to be politically and governmentally supported at national and regional levels (Harun, Jain, Amin, Jayaratne).

Not only the private sector but economic growth and broad-based development also need to be supported by effective regional policies and programs for enhancing cross-border investments (Dutz), trade facilitation, transport connectivity, and transit facilities (Roy and Bannerjee, Dey *et al.*, and Rahmatullah). To these may be added the need for enhancing regional connectivity in communications, R&D and HRD, and culture, as brought out in the recently held Regional Consultations.[3]

Unhindered, efficient and smart cross-border movements can significantly reduce the costs of cross-border trade, which SAFTA has attempted to increase. But SAFTA's potential to deliver regional economic benefits is constrained by several limitations (Weerakoon). Apart from long negative lists, SAFTA's potentially realizable benefits are limited by exclusion of investment and services. These restrictions in SAFTA and inefficient cross-border connectivity also reduce the potential for economic benefits from trade and investment flows to and from other regions, especially East and South-East Asia, as well.

Against this background of below-potential realization of economic benefits from SAFTA (and other plurilateral and multilateral arrangements), regional countries have recently gone for bilateral FTAs: India-Sri Lanka, Pakistan-Sri Lanka (del Mel), and India-Bangladesh (in the pipeline). Bhutan and Nepal have had bilateral free trade and investment agreements with India for decades. Some regional countries—India, Sri Lanka among them—have even entered into bilateral FTAs with countries and regions outside South Asia, such as Thailand, ASEAN, EU, with many others in the pipeline. These multifarious bilateral agreements are based on specific bilateral demands and concessions, which have tended to contribute to the dilution of potential gains from regional (SAFTA) and multilateral (WTO) agreements.

Restrictions and inefficiencies in cross-border movements also adversely affect movements of people. This limits the movement of businessmen and investors, as well as of tourists (de Alwis), reducing the potential for widening and deepening economic as well as social and cultural cross-border connectivity.

[3] Friedrich Ebert Stiftung (2010), "Regional Consultations on Enhancing Intra Regional Connectivity: Issues and Approaches in South Asia", *Report and Recommendations*, New Delhi.

Broadly speaking, the papers in this volume suggest that economic and developmental gains from regional cooperation in general and SAARC in particular remain far below their expected and desired levels. This dichotomy between expectations and ground realities is linked to the divergence between effectiveness of markets, national and regional governance mechanisms, and involvement of civil society groups to deliver the desired growth and development outcomes.

Policies and strategies to raise the levels of regional benefits have been suggested by all the contributors in areas of their specific concerns. But the reader would have benefitted if the editors had added an Introduction/Overview to the volume, and drawn some common policy implications for enhancing the benefits from regional cooperation.

Many of the contributors have acknowledged that there are ultimate political constraints to enhance regional cooperation in South Asia. But as professional economists—not political economists—they have not attempted to suggest any solutions to these critical and over-riding constraints. Also, it would have been more appropriate to refer to this scholarly gathering as Economists Summit rather than as Economic Summit, because there were no economic policy makers present.

Nevertheless, the papers in this volume provide a set of diverse perspectives on potentials and constraints in economic cooperation in South Asia, buttressed by some recent empirical data and useful insights, for the benefit of economists, policy makers and interested social scientists.

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(If it is an article in an edited book): Kanter R M (1988), "When a Thousand Flowers Bloom", in Staw B and Cummings I (Eds.), *Research in Organizational Behavior,* pp. 169-211, JAI Press, Greenwich, CT.

Notes: Do not use footnotes. Minimize notes. If they are unavoidable, number them serially in the text using superscript and list them together on a separate sheet under the heading NOTES immediately following the text of the paper. Notes are not for citing a reference but for offering a significant explanation which is important for understanding the text but is tangential to the main idea discussed therein.

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Association of Management Development Institutions in South Asia
(AMDISA)

The leading business schools in the SAARC region initiated the Association of Management Development Institutions in South Asia (AMDISA) in 1988. This is the only Association which networks management development institutions across the eight South Asian Nations through exchanging information, facilitating inter-country research initiatives especially at the doctoral level and conducting regional conferences, workshops, colloquia and programs, and thereby providing a forum for interaction among academics and business leaders.

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AMDISA is closely associated with National Networks in India like AIMS and has helped establish networks in Bangladesh (AMDIB), Nepal (ADMIN), Pakistan (AMDIP) and Sri Lanka (ASLIM).

Since its inception, AMDISA has organized ten biennial South Asian Management Forums (SAMF) by rotation in all the South Asian (SAARC) countries. The 10th SAMF on the theme "Change and Continuity: Management Prospects and Challenges" was organized at Royal Institute of Management in April 2009. AMDISA has also organized 20 Regional Workshops for Faculty, 13 Regional Workshops for Deans and Directors, 3 South Asian Management Colloquia, 13 Regional SAQS Workshops, and 1 South Asian and 2 country-specific Training Programs. It has also initiated two medium-term quality initiatives, the Commonwealth-AMDISA Regional Doctoral and Post Doctoral Fellowship Program, and the South Asian Quality Assurance System (SAQS). A total of eight regional Fellowships have been awarded. Five reputable Management Schools (4 in India and 1 in Pakistan) have been accredited by SAQS, while 12 more schools (8 from India, 3 from Pakistan and 1 from Bangladesh) are in the process.

AMDISA is the founder-member of global Management Network INTERMAN which hosts a Global Management Forum every four years. The venues for earlier forums were Geneva (1986), Montreal (1990) Barcelona (1994), Chicago (1998) and Bangkok (2002).

AMDISA

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