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Chairman's Overview



Academic and business circles have very often discussed the term, **designing optimal sales compensation**. Organizations treat sales force with great degree of concern and high level of attention to win their confidence in different cycle stages. But the author, Pankaj M. Madhani in “Managing Sales Compensation : Career Life Cycle Approach” deviates from the general views and conceptually demonstrates that sales employees’ compensation structure has a bearing on their career stage. The author with acumen and dexterity substantiates his views on this topic on the strength of advanced research studies on compensation strategy.

Kishore G. Kulkarni and Heather Randall scan the relationship between income inequality and human development in Brazil between 2004 and 2012. They ask: Why inequality is significant for Brazil? How it impacts the country’s human development? Why Brazil struggles with high levels of inequality? The paper states that the real inequality in Brazil is evident at regional level. National level data do not vouchsafe connections between inequality and human development.

The present Issue comprises several such papers on topics of current business and management areas of research. I hope the readers will relish them.

Dr. G. P. C. NAYAR

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Editorial



Individual and Society

An individual is a social atom. Society is an agglomeration of social atoms. We find no dependency, no bond. However, a bond emerging from the individual self interest might be undertaken. Social bonding should emerge from our interactions with each other. Language, money, and law are social entities. They rely on societies for their existence and their function.

Society is a mysterious kind of 'thing.' It's a mysterious crowd of individuals. It is less mysterious if we consider the emergence of social relations from the interactions of individuals. Such relations are the relations of communications for which we need *language*. We need relations of transactions whereby goods and services are traded for which we need *money*. We need relations of guidelines for behavior for which we need *law*. Thereby we have a set of structures. Therefore, individuals are bound to each other in complex webs of relationships. These structures are fragile. They can collapse under us, though they were once in place. This makes the task of understanding and sustaining all the more important.

An economic market is one populated by homo economicus, the rational trustee of his own interests. The market would then deliver rational and efficient results. The efficient market hypothesis suggested that financial markets populated by information-sensitive, rational and competitive players, would always set prices that reflected a sum total of available knowledge. Nobody could trump the market. Government intervention would always lead to a worse outcome than if it were left to itself. Bitter experience is showing that markets are not streamlined law governed machines effortlessly pointing themselves at the best possible outcomes. The weather, or earthquakes, or turbulent flow in water pipes, chaotic, constantly at the mercy of the unpredictable and populated by players whose sentiments and beliefs are highly various and highly susceptible to infection from others.

It is this social bonding that is the main prerogative in business. Money sustains social bonding, language externalizes it, and law controls it.

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Managing Sales Compensation: Career Life Cycle Approach

Pankaj M. Madhani

A b s t r a c t

Designing an optimal sale compensation plan can be challenging as sales organization has to clearly specify a few major variables impacting sales compensation. Incorporating career stage perspectives into sales force compensation design can offer sales organizations yet another dimension to more efficiently and effectively manage salespeople. The salespeople vary in their motivation systematically across four career stages: exploration, establishment, maturity, and disengagement. As motivation of salespeople is an important antecedent to performance, it needs to be managed carefully across different stages of career life cycle. This research focuses on how sales organizations design effective compensation structure to better tap into the skills, abilities and motivational level of salespeople at different stages of career life cycle. The paper provides insight into the changing pay mix preference of salespeople across career stages through the lens of expectancy theory.

Key Words : Sales compensation, Career life cycle, Motivation, Fixed pay, Variable pay, Pay mix



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Designing an optimal sale compensation plan can be challenging as well as complicated as sales organization has to clearly specify a few major variables impacting sales compensation. Sales organizations must look at the big picture to understand why a salesperson acts in a certain way in a given situation. In this context, this research suggests that sales organizations can achieve better performance from their salespeople by treating their salesforce like a portfolio of stock investments that require different levels and kinds of attention over a period of time in terms of portfolio rebalancing. Hence, it is important to view sales employees' present job in the organization within the context of their overall career path as sales employees require different levels and kinds of attention in different life cycle stages. Career is defined as "the individually perceived sequence of attitudes and behaviours associated with work-related experiences and activities over the span of the person's life" (Hall, 1976).

In many organizations, sales compensation plan has little effect on overall sales performance, as it fails to consider

impact of salesperson's career life cycle (CLC). Incorporating career stage perspectives into salesforce compensation design can offer sales organization yet another dimension to more efficiently and effectively manage salesforce. Compensation strategy decisions regarding pay level (total earnings generated) and pay mix are both vital in sales compensation. Pay level tends to reflect industry patterns, while pay mix is more a function of the marketing efforts of the firm. Less research, however, has considered how sales organizations can best deal with the changing job attitudes of salespeople throughout the CLC stages by effectively designing proper pay mix (relative proportion of variable pay to fixed pay).

Hence, this research specifically looks into this and identifies the relationship between CLC stages of sales people and pay mix strategy of sales organization. This paper focuses on how sales organizations design effective compensation structure to better tap into the skills and abilities of salespeople at different stages of CLC and hence, provides insight into the changing pay mix preference of salespeople across career stages.

Different Stages of CLC: Key Features

Individual's career moves through different stages similar to the biological model of growth and decay. Each career stage is associated with different developmental tasks, concerns, needs, values, and activities (Hall and Morgan, 1983). Career development refers to the changes that will occur over an adult's life with respect to motives, needs, values, abilities, and attitudes, related to work and occupation (Schein, 1980). Managing salesforce effectively across different CLC stages is a challenge because of the changes in motivation and performance commonly associated with their tenure. The CLC represents age and performance relationship, according to which a salesperson's performance passes through different stages producing a performance functions similar to product life cycles (PLC) curve (Jolson, 1974). Salespeople motivation and personal circumstances also loosely follow a cyclical pattern that reflects their time with the current employer (Madhani, 2012).

As shown in Figure 1, a salesperson's performance passes through four stages of CLC – exploration or preparation (ages 20-30), establishment or development (ages 31-45), maturity or maintenance (ages 45-60), and disengagement or decline beyond 60 (Cron, 1984). The salespeople vary in their motivation systematically across four career stages. As salesperson motivation is an important antecedent to

performance (Albers, 2002), it needs to be managed carefully across different stages of CLC. Different stages of CLC along with pay preference of sales employees in terms of pay mix are explained below:

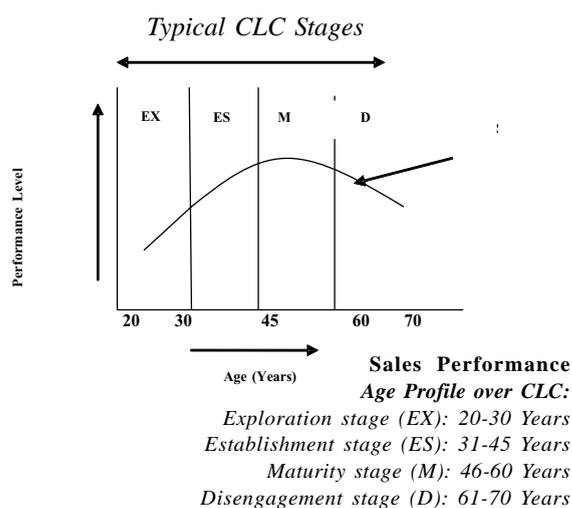


Figure 1: A Typical CLC
(Source: Chart developed by author)

Exploration stage

In the first stage of CLC, new sales employee is concerned with finding a suitable occupation and prospective employer, when he is new to the occupation of selling, new to his present firm, or new to the product he is now selling (Stumpp and Colarelli, 1980).

Salespeople usually are concerned with finding an occupation in which they can succeed and mainly focus on self-discovery and developing a professional self image (Mehta, Anderson and Dubinsky, 2000). During search of a job in which they will be successful and comfortable, salespeople have difficulty in judging whether their abilities match those required by the job. Unfortunately, they frequently lack the information necessary to make this judgment because of their limited professional work experience.

In this stage, the superior/subordinate relationship is likely to be very important to salesperson's development because at the exploration stage, sales employee depends on the supervisor for learning, support, and guidance (Baird and

Kram, 1983). In the exploration stage, salespeople often do not perceive their supervisor as being open and supportive as they are still adjusting with organizational culture, do not feel very much pressure to produce, and feel they have been given very little power to make significant decisions. In this circumstance, higher fixed pay in pay structure will be seen as control tool by salespeople (Madhani, 2013). Hence, it will further hinder superior/subordinate relationship.

In the exploration stage, personal commitment to an occupation is usually not very high and several changes in occupation may occur during this stage. This stage is associated with uncertainty and the need for mobility. Employees have less need for security during exploration stage and can be expected to be less concerned with their fringe benefits and long term incentives (Balkin and Griffeth, 1993). Younger salespeople in this stage may value autonomy and view variable pay as a more moderate indicator of their job autonomy and freedom.

The salespeople in the exploration stage will strive to project a competent professional image. According to self-determination theory (Ryan and Deci, 2000) employee can enhance perceived competence through external cues (e.g., immediate feedback in terms of short term incentives such as variable pay or commissions earned) when such cues are used as information feedback for competence of an employee. Salespeople may be seeking knowledge of their competence and finding the most tangible form of feedback or confirmation of this in the form of quick financial rewards.

Financial rewards provide tangible evidence and a form of validation much sought by those early in their career stages. Because variable pay or commission ties itself directly to the achievement of sales output, it could be seen by sales employees as having a high informational value. Salary or fixed pay, on the other hand, provides less information about the achievement of short-term specific outcomes. As a result, the salesperson in the exploration stage may be expected to react more favourably to the information provided by variable pay as it projects professional competency.

Establishment Stage

The salesperson who has survived the exploration stage must now convert his learning into productive sales results. In the establishment stage, performance of sales employees increases as they focus on developing specialized competences, broadening their business knowledge and consolidating their career choices. Often quantification of

such results is not feasible and salespeople are appraised subjectively by activities rather than results, hence in this stage more emphasis is placed on higher fixed pay in pay structure. As salespeople progress into the establishment stage, goal achievement, self esteem, promotion, and competition become more integral concerns to the salesperson. During this stage, a conscious commitment is made by sales employees to sales occupation field and they try to stabilize themselves and seek security.

In the establishment stage of CLC, promotion is an important aspect of the personal "success ladder" of salespeople. Promotion signifies personal growth as well as corporate acknowledgement for a job well done (Bardwick, 1986). Promotion is of primary concern at this time and salespeople prioritize the opportunity for promotion. The psychological success resulting from high performance during this time period is expected to add to greater work involvement (Miao, Lund and Evans, 2009). Due to the salesperson's significantly improved skills and desire to succeed in the establishment stage, they will demonstrate a higher level of challenge seeking behaviour (i.e. challenging goals and tasks) than salespeople in the other stages. Therefore, sales organizations may want to consider assigning more challenging goals (e.g., new account acquisition and retention; customer complaint management; application of adaptive skills in selling, etc.) to salespeople who are in the establishment stage.

Sales organizations may find their ability to satisfy promotion aspirations of salespeople limited because of a lack of openings mainly in sales management function. Research has shown that a corporation's business strategy has a significant influence on a person's attitude, on job behaviour, and on when a person might reach a career plateau (Slocum, *et al.*, 1985).

The plateaued employee is defined as individual whose productivity has levelled off or declined over a period of time due to lack of motivation (Hall, 1997). A novel strategy by sales organization is to deemphasize the importance of promotion in the organization's corporate culture. For accomplishing this change, sales organizations need to introduce significant rewards in the form of higher base pay in pay structure for successfully managing sales challenges.

Maturity Stage

In this stage, greater commitment to sales organization is likely because salespeople in this stage are less prone to

switch organizations. The rate of career and organizational moves will decrease significantly from the earlier stage (Veiga, 1973), so does the desire for peer competition. At this stage, sales employees experience a variety of physiological changes associated with aging. Major challenges include maintaining motivation and facing concerns about aging. Needs of sales employee during this stage include security, reduced competitiveness and support for maintaining motivation and productivity. The first sign that a salesperson has reached the maturity stage is a leveling off of his motivation and productivity level. Keeping salespeople motivated in the maturity stage will be a challenge for the sales organizations. Maturity stage salespeople are typically not as aggressive in pursuing challenging goals as those in the establishment stage (Flaherty and Pappas, 2002).

Sales organization can extend the length of the maturity stage by retraining and boosting motivation of sales employees by providing various incentives, including sales contests, meetings, recognition, and promotion opportunities. Recognition seeking is the affective dimension of extrinsic motivation. Salespeople in the maturity stage will exhibit the highest concern for formal recognition. Although, recognition seeking can be an important motivation element during the establishment stage, it will be even stronger during the maturity stage. As salespeople in these stages are competent, they seek formal recognition (Cron, Dubinsky, and Michaels, 1988).

At this stage, it is possible that sales employees be motivated by utilizing their ability to lead and provide advice, rather than to solely reach sales targets. Hence, they may be used as pace-setters, mentors, and field trainers as this profile offers more security, and prestige in the form of new and more exciting job. In this stage, the salesperson will try to retain and maintain what he has achieved earlier in the establishment stage (Super, 1957) and is frequently associated with the cessation in upward mobility (FERENCE, Stoner, and Warren 1977). Sales employees are seen as stabilizing their own positions and performance in their sales occupation and desire for promotion diminishes (Slocum and Cron, 1985).

Disengagement Stage

In this stage, sales employee exhibits low performance in terms of declining sales and profitability and downward qualitative ratings by his peers and managers. Salespeople are characterized as “psychologically separating” from the

job, no longer committed to the career, and tend to be lower performers (Cron and Slocum, 1986). When a salesperson enters the disengagement stage, they begin preparing for retirement and start to psychologically disengage from work (Cron, Dubinsky and Michaels, 1988). Consequently, at this stage, challenge seeking should be fairly low. To figure out how much job challenges are worth taking, the basic approach adopted by salespeople in this stage is to calculate the quantum of salesforce efforts to reach the point of reward maximization. It is based on taking additional job responsibilities and challenges till marginal efforts exceed marginal reward.

Such top down approach calculates the reward contribution and sales efforts associated with additional job challenges and then seek job challenges until the increased reward contribution equals to the incremental efforts of sales employee. As shown in Figure 2, challenge seeking behaviour of salesforce occurs when the incremental reward from all products and markets is substantially higher than the incremental salesforce efforts. This *Incremental* approach states that a salesperson should seek challenging selling task until the sales reward on new task is equal to the efforts of salesperson in terms of time and energy.

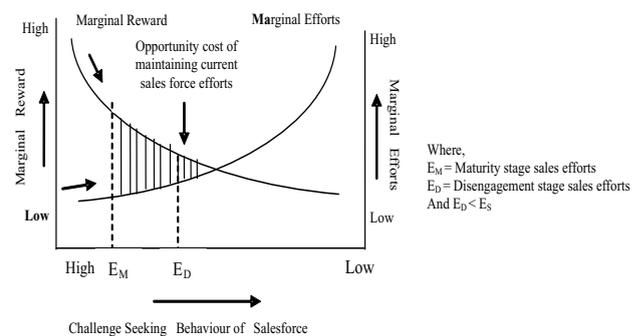


Figure 2: An Optimal Challenge Seeking Behaviour: Reward/Efforts Matrix

(Source: Matrix developed by author)

In disengagement stage, salespeople are expected to lose motivation to expend additional effort, as by now, they have learned that there are diminishing marginal returns to devoting additional time and energy to the selling task. As marginal reward / efforts payoff is not more attractive (Figure

2), consequently, challenge seeking behaviour of salespeople should be fairly low at this stage. In this stage, sales employees make their transition from working to retirement and see a decline in their energy for and interest in their sales domain and ultimately decline in sales performance. As salesperson enters in this stage, sales organization may take quick steps to raise employee motivation. In some instances, a multiproduct firm will find it beneficial to shift a salesperson in disengagement stage of CLC to another product, job task or territory.

Expectancy Theory and CLC Stages

For many organizations, salespeople provide a unique opportunity for a sustainable competitive advantage. Hence, motivation of the sales force is widely recognized as an essential component of organizational strategy (Pullins, 2001). Rynes and Gerhart (2000) have suggested using motivational theories such as expectancy theory to further our understanding of compensation programs. Expectancy theory is a process theory of motivation and is applied in this research to understand motive and behaviour of sales employees across CLC. Expectancy theory is focused on motive and describes how behaviour of sales employee is energized, directed and sustained. Sales employees will decide to behave or act in certain way because they are motivated to select a specific behaviour over other behaviours as they expect the result of such behaviour. Building on Vroom's (1964) work of expectancy theory, a salesperson's motivation level is determined by three sets of perceptions - valence, expectancy, and instrumentality (Walker, Churchill, and Ford, 1979). Together, the three components affect the level of salesperson's motivation as given by following formula:

$$\text{Motivation} = \text{Valence} \times \text{Expectancy} \times \text{Instrumentality}$$

Valence refers to a salesperson's desire to obtain additional amounts of a given lower order (e.g., pay, job security, fringe benefits) or higher order reward (e.g., feelings of self-fulfilment, personal growth, career development). Previous studies have shown that different employees are attracted to and motivated by different rewards (Dubinsky, Anderson, and Mehta 2000), supporting expectancy theory. *Expectancy* is a salesperson's estimate of the probability that increased effort will lead to higher levels of performance; in essence, it is a salesperson's perception of the linkage between effort and performance. *Instrumentality* is a salesperson's estimate of the probability that higher levels

of performance will lead to greater rewards; basically, it is a salesperson's perception of the linkage between job performance and attainment of various rewards. Cron *et al.* (1988) hypothesized that career stage influences the valences, expectancies, and instrumentalities of salespeople. Pappas and Flaherty (2006) found that characteristics of the individual salespeople according to CLC such as career development and risk attitudes influence the relationship between compensation and components of motivation (valence for reward, expectancy perceptions, and instrumentality perceptions).

As purported in expectancy theory, valences for rewards play an important role in motivating salespeople to focus on achieving tasks. Therefore, a key challenge for a sales organization is to identify the rewards that motivate their salespeople and develop a quality salesforce. Offering preferred rewards may enhance performance if salespeople perceive a relationship between the performance and the reward. In turn, the rewards may increase job satisfaction, reduce turnover, and improve retention rates. Each stage of CLC is characterized by evolving life concerns and changing levels of motivation in terms of valence, expectancy, and instrumentality. Career stage theory provides strong theoretical rationale as to how and why salespeople will differ in their motivation across the four career stages of CLC.

In particular, individual-level variables of a salesperson such as CLC stage moderate the relationship between pay mix strategy and expectancy perceptions, as well as instrumentality perceptions. Cron *et al.* (1988) found that salespeople in exploration stage have lower instrumentality estimates than salespeople in establishment stage. Further, salespeople in disengagement stage have lower instrumentality estimates than salespeople in maintenance stage. The underlying logic is that as salespeople become more involved with the job and the organization, they are likely to become internalized leading to stronger instrumentality estimates. Similarly, what pay mix motivates salespersons at early stages in their CLC could be different for salespeople at later stages of CLC. Hence, this context, expectancy theory provides insights concerning motivation of the salesforce and compensation design. In this research, an assessment is made of how the three elements (valence, expectancy, and instrumentality) of the expectancy model differ across four career stages - exploration, establishment, maturity, and disengagement (Figure 3).

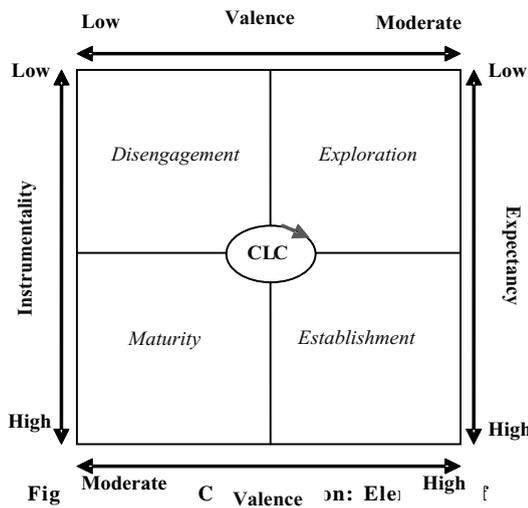


Fig. 1 Career Life Cycle (CLC) Matrix

(Source: Matrix developed by author)

Exploration Stage and Elements of Motivation

Salespeople in the exploration stage often have inadequate job knowledge and career information, and have only a vague idea about what skills and abilities are required, as well as what is necessary to perform effectively. In addition, these salespersons are likely to be uncertain about whether they are pursuing an appropriate career. This lack of clarity is likely to produce relatively low expectancy estimates among salespeople in this stage. The exploration-stage salespersons do not feel that they will be rewarded for being effective performers. Generally, on average, they have the lowest levels of performance in both dollar volume of sales generated (sales revenue) and percentage of quota (sales target) achieved. Hence, many of them may be sceptical about their ability to achieve high sales results.

These salespeople may be less certain about the chances for obtaining various organizational rewards associated with exceeding quota because they have not yet surpassed it. Salespeople will have perception that certain higher order rewards (e.g., respect, promotion, security or personal success) will not result from exceeding quota only once. These rewards may require consistently exceeding quota over a period of time. Hence, salespeople in this stage have significantly lower instrumentality estimates. In this stage salespeople typically have lower expectancy and instrumentality (Gray and Wert-Gray, 1999). In the exploration stage, overall motivation of sales employee may be enhanced by boosting valence for lower order reward.

Establishment Stage and Elements of Motivation

In the establishment stage of life cycle, salespeople are more committed to a chosen sales career and organization. The stronger commitment of salespeople in this stage may involve providing more job inputs (such as greater effort) in the sales organization. In these stages of CLC, salespeople are also becoming more competent. Salespeople who feel competent are more likely to take on more tasks and enjoy the pursuit of those tasks, and it further enhances job input (Guay, Boggiano and Vallerand, 2001). Hence, during this stage valence for higher order reward is high. For the salespeople in establishment stage, sales organizations provide higher order rewards in terms of additional responsibilities and key account assignments.

As salespersons progress through their career stages, knowledge base and role clarity should increase. With increased job knowledge, salespeople should be able to clarify the requirements for effective performance and this leads to higher expectancy estimates of salespeople. They are able to determine clearly what they are supposed to do on the job, how they are to do it, and how they are to be evaluated. Hence, salesperson in establishment stage has higher instrumentality estimates.

As salespeople become more involved with their sales jobs and more committed to sales organizations over time, the values, norms, and goals of the selling job and organization are likely to become internalized. Hence, establishment stage of CLC is associated with corresponding increase in instrumentality values. During establishment stage of CLC, when greater confidence exists for salespeople, higher proportion of fixed pay can be used as symbol of recognition to bolster feelings of competence and also to encourage salespeople to continue developing their skills. Hence, higher proportion of fixed pay will also increase instrumentality.

Maturity Stage and Elements of Motivation

Salespeople typically have higher skill levels during maturity stage and also have higher expectancy and instrumentality. Valences for higher-order rewards will not be so high during this stage. Some salespeople seem to reach a “rated operating capacity” beyond which they are unable or unwilling to go. These salespeople may be content with their present performance in terms of sales volume and income such that extra efforts and sacrifices may not be perceived as worthwhile. Hence, they have low valence for

rewards. During maturity stage, increased skill based learning and a broadened work perspective is attached with high expectancy estimates of salespeople.

Disengagement Stage and Elements of Motivation

Salespeople in the disengagement stage have adequate knowledge with which to perform the job, however, they do not exhibit a higher level of job involvement. The disengagement stage aligns the salesperson with planning for retirement, accompanied by an increased focus on life outside of work. In this stage, salesperson may begin to tire easily due to sheer physical fatigue, emotional exhaustion, lost interest in their work, feelings of inadequacy, insecurity and anxiety. The effects are often wide spread and cyclic, as loss of confidence reduces the ability to serve customers and solve their problems. Inability to solve problems increases tensions and insecurity. As they begin to believe they no longer can perform the job effectively, they may conclude that greater effort will not lead to better performance and thus have low expectancy estimates.

In the disengagement stage, a salesperson generally faces an unstaged career. Unstaged careers are careers in which advancement upward within the hierarchy is generally not possible. The optimal pay mix scheme for sales employee must balance variable pay (short term performance based monetary incentives) and fixed pay (long term career incentives). As career incentives decrease over time, it is optimal to boost variable pay incentives for employees close to retirement (Gibbons and Murphy, 1992). In this stage, involvement and commitment level of sales employee further decreases, with a commensurate decline on the strength of the instrumentality estimates. Hence, salespeople are encouraged by short term incentives as it will enhance desire for reward and ultimately increase valence.

Sales Compensation: Rebalancing Fixed and Variable Pay according to CLC

Compensation and reward structures are key methods of motivating and influencing salespeople’s behaviour and performance. Offering preferred rewards may enhance performance if salespeople perceive a relationship between the performance and the reward (Lopez, Hopkins and Raymond, 2006). Changing needs of customers, shortened PLCs and the increased pressure to enhance profitability have motivated HR managers to identify and implement effective compensation plans for sales employees (Madhani, 2009). Sales organizations need to predict how alternative and relatively complex compensation schemes would affect

sales revenues and profits, as well as their likely impacts on salesforce morale and turnover (Darmon, 1997). Changing pattern of sales compensation across CLC stages is shown in Figure 4.

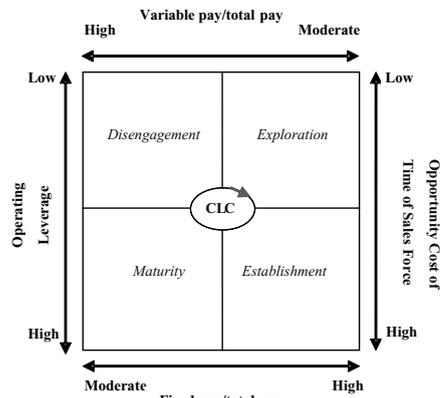


Figure 4: Sales Compensation across CLC Stages

(Source: Matrix developed by author)

During exploration stage, salespeople focus efforts on persuading customers to buy the organization’s product. Salespeople in exploration stage do not exhibit a particularly higher level of challenge seeking behavior as they typically have lower skill levels and have not had the experience of surpassing their quotas. Because the job challenges and complexity are lower, more variable pay in the compensation structure is advocated.

During establishment stage of CLC, sales employees need to represent multiple products, markets, territories and selling activities. At the same time, sales efforts are targeted to extend the products offered and involve new business, market or territory acquisitions or expansion to increase market share. Hence, there is increasing complexity in terms of the selling task, coordination, products/markets and geographic dispersion. As a result, incentive systems become more difficult to design, implement and control.

Ensuring non contingent rewards for conducting the highly skilled and difficult task of selling new products or acquiring new customers and territories is necessary to attract and retain qualified salespeople in a challenging job environment. In establishment stage, as the role of sales employees is more differentiated with increased job challenges and complexity, a relatively higher proportion of fixed pay in the pay structure will motivate the salesforce. The salesperson needs to be recognized for his or her sales efforts. Higher base pay fosters better performance and effective commitment through higher intrinsic work motivation (Kuvaas, 2006). Thus, during the establishment

stage, a higher proportion of fixed pay is advocated as shown in Figure 4.

To maintain performance level during the maturity stage of CLC, the salesforce still requires considerable efforts. During establishment and maturity stages, salesperson's diverse activities such as service, contact development, information seeking, learning and planning do not show results in the short term. Hence, during these stages, fixed pay is advocated as salesperson's efforts are difficult to measure. Thus, during the establishment and maturity stages, a higher proportion of fixed pay is advocated for their multi-dimensional skills. During the disengagement stage, the salesforce's challenge seeking behaviour decreases drastically and accordingly, the opportunity cost of time for the salesforce is also likely to decrease. The opportunity cost of time is negatively associated with the ratio of variable to fixed pay (Madhani, 2010). Hence, organizations should reduce commitment to fixed pay by raising variable pay.

Illustration

Table 1, shows a hypothetical illustration of a sales organization that rebalances the fixed and variable pay of the salesforce according to the different stages of the CLC. Fluctuations in motivation level and sales performance are normal outcomes in different stages of the CLC. In this scenario, it is very challenging for the sales organization to manage compensation cost of sales employees. As calculated in Table 1, operating leverage is a function of sales organization's cost structure and defines the relationship between fixed costs and total costs. As shown in Figure 4 as well as in Table 1, establishment and maturity stages have high operating leverage while exploration and disengagement stages have low operating leverage. By rebalancing pay structure in terms of fixed and variable pay, sales organization is able to manage compensation cost (as % of sales) of sales employee across various stages of CLC.

Table 1: Rebalancing Fixed and Variable Pay of a Sales Organization across CLC

No.	Calculation	Career Life Cycle Stages			
		Exploration	Establishment	Maturity	Disengagement
1	Aggregate sales performance (units)	70,000	88,200	90,850	70,000
2	Change in sales (Units %)		26	3	-23
3	Unit selling price (\$)	7.50	7.50	7.50	7.50
4	Sales revenue = (1) x (3) (\$)	525,000	661,500	681,375	525,000
5	Threshold sales (units)	50,000	65,000	62,500	50,000
6	Unit variable cost (\$)	3.50	3.50	3.50	3.50
7	Commission rate (%)	12	10	10	12
8	Variable pay = ((1) - (5)) x (3) x (7) (\$)	18,000	17,400	21,263	18,000
9	Fixed pay (\$)	14,000	22,950	20,300	14,000
10	Total pay = (8) + (9) (\$)	32,000	40,350	41,563	32,000
11	Variable pay /unit = (8)/(1) (\$)	0.26	0.20	0.23	0.26
12	Total variable cost /unit = (6) + (11) (\$)	3.76	3.70	3.73	3.76
13	Unit contribution margin = (3) - (12) (\$)	3.74	3.80	3.77	3.74
14	Contribution margin = (1) x (13) (\$)	262,000	335,400	342,138	262,000
15	Fixed cost (selling process) (\$)	90,000	145,000	140,500	89,000
16	Total fixed cost = (9) + (15) (\$)	104,000	167,950	160,800	103,000
17	Total variable cost = (1) x (12) (\$)	263,000	326,100	339,238	263,000
18	Total cost = (16) + (17) (\$)	367,000	494,050	500,038	366,000
19	EBIT (earning before interest and taxes) = (4) - (18) (\$)	158,000	167,450	181,338	159,000
20	BEP (Break Even Point) (units) = (16) / (13)	27,786	44,166	42,698	27,519
21	BEP (Break Even Point) (\$) = (20) x (3)	208,395	331,243	320,238	
22	Fixed pay / total pay = (9) / (10) (%)	44	57	49	44
23	Variable pay / total pay = (8) / (10) (%)	56	43	51	56
24	Fixed cost / sales revenue = (16) / (4) (%)	20	25	24	20
25	Operating leverage = (14) / (19)	1.66	2.00	1.89	1.65
26	Compensation cost as % of sales = (10) / (4) (%)	6.10	6.10	6.10	6.10

(Source: Calculated by Author)

For various stages of CLC, break even point (BEP) is calculated in Table 1 and is also shown separately in Figure 5 through Figure 8. As shown in Figure 5 and Figure 8, exploration and disengagement stages have low BEP because of low operating leverage.

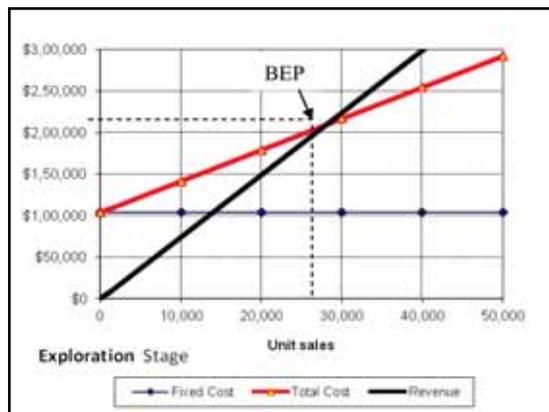


Figure 5: BEP Chart for Exploration Stage of CLC
(Source: Chart developed by author)

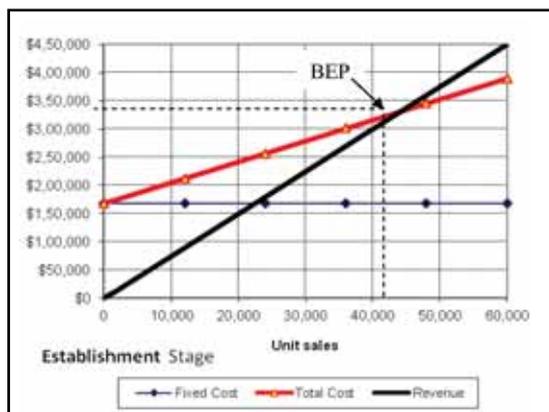


Figure 6: BEP Chart for Establishment Stage of CLC
(Source: Chart developed by author)

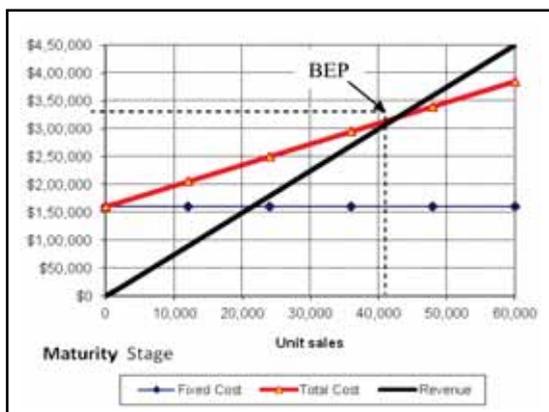


Figure 7: BEP Chart for Maturity Stage of CLC
(Source: Chart developed by author)

As shown in Figure 6 and Figure 7, establishment and maturity stages have low BEP, caused by low level of operating leverage.

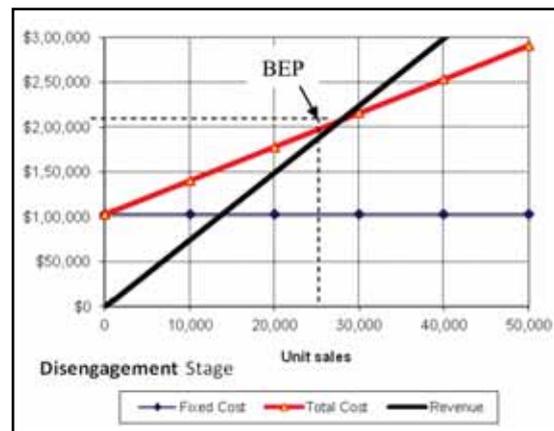


Figure 8: BEP Chart for Disengagement Stage of CLC
(Source: Chart developed by author)

Managerial Implications and Conclusion

Compensation strategy based on effective pay mix is of utmost importance in sales organization. Despite this, prior research has largely ignored the idea that the effectiveness of the pay mix may be contingent on other factors such as CLC stage of sales employee. By conceptually demonstrating that sales employees' pay mix in compensation structure is influenced by career stage, this study has made a contribution to the extant sales compensation literature in several ways. First, it provides thorough examination of how job satisfaction and motivational aspects of salespeople differ across various CLC stages. Second, the study suggests, how sales organizations can fine tune decisions concerning pay mix during different stages of CLC to better align the job attitudes and enhance motivation of salespeople. Third, the study provides a look at how sales organizations can design pay mix according to CLC stages through the lens of expectancy theory.

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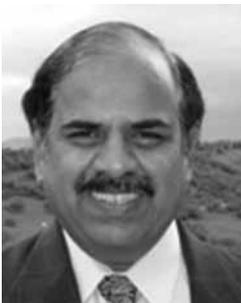
Income Inequality and Human Development: Brazil 2004-2012

Kishore G. Kulkarni and Heather Randall

Abstract

The paper examines the relationship between income inequality and human development in Brazil between 2004 and 2012, by providing an overview of the literature around this issue, including reasons why inequality is significant for Brazil and how it can impact the country's economic and human development in the long-term. It then explores some of the more prominent reasons provided in the literature for why Brazil struggles with such high levels of inequality. It provides data related to income inequality and human development in Brazil, using the Gini coefficient as a measure of inequality and the Human Development Index as a measure for human development over time. It mostly relies on Simon Kuznets' inverted-U curve hypothesis, which claims that countries tend to increase in measures of inequality until they reach a turning point, at which inequality begins to decline and gross national income (GNI) per capita increases. It is found that, on the national level, Brazil has followed the inverted-U hypothesis proposed by Kuznets, supporting the analysis with data that demonstrate a declining Gini coefficient and an increase in GNI per capita. The paper concludes, however, the real inequality in Brazil is evident at the regional, state or even municipal level, and that national-level data are not sufficient to draw connections between income inequality and human development.

Key Words: Sales compensation, Career life cycle, Motivation, Fixed pay, Variable pay, Pay mix



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Despite Brazil's rapid economic growth between 2004 and 2012, during which time the country increased its GDP from \$663.7 billion to \$2.25 trillion, the country continues to face challenges related to income inequality and, as a result, unequal human development.¹ Indeed, Brazil continues to face major challenges to equitable development, including high levels of poverty, inequality, unequal land distribution, social inclusion and environmental degradation.² This paper concentrates on the issues of income inequality as it relates to human development throughout Brazil. Data are drawn upon the World Bank's World Development Indicators as well as the Human Development Index to understand the relationship between Brazil's economic and human development between 2004 and 2012. The paper further focuses on the

1 The World Bank. World Development Indicators. Gross Domestic Product, Brazil. Last updated March 7, 2014. Accessed 26 May

2 Todaro, Michael P. and Stephen C. Smith. Economic Development, 2009. 10th ed. Boston: Pearson, p. 30-32.

period between 2004 and 2012 for two primary reasons. First, there has not been as much research done on income inequality and human development in Brazil during this period. Second, this period represents a significant period of time for Brazil in terms of economic growth. While this growth has benefited many, it has also left others behind. It is this disparity that we are interested in for the scope of this paper.

The outline of the paper is as follows: The paper begins with a review of the literature on economic development in Brazil with a focus on income inequality and human development then it looks at historical data related to income inequality and human development in Brazil, along with information available through World Bank reports and research conducted by other scholars. It outlines a number of reasons why income inequality is important for Brazil, drawing on a wealth of research that suggests specific issues of concern for Brazil in terms of income inequality and the country's overall economic development, and review a few of the more persistent reasons used to explain the rampant inequality seen in Brazil, which ranges from a lack of political power among the poor to the issue of surplus labor and, as a result, suppressed wages for many unskilled Brazilian workers. Following the literature review, it provides an analysis of the data regarding income inequality and human development in Brazil from 2004-2012. Finally, the paper concludes by providing a review of the analysis, arguing that smaller-scale research in Brazil is necessary to reach a better understanding of how income inequality impacts human development throughout the country.

Literature Review

The World Bank has played a major role in conducting research on Brazil's economic development over the years. Indeed, the World Bank has been heavily involved with Brazil's economic and social development programs, providing \$9.58 billion in loans to the country between 2010 and 2012 alone.³ In a report from July 2004, *Inequality and Economic Development in Brazil*, the World Bank outlines

the basics of inequality in Brazil, including why income inequality matters for Brazil's development, some underlying causes of Brazil's inequality, and policy recommendations for decreasing the level of inequality in Brazil.⁴ Other scholars have also examined the relationship between inequality and development in Brazil, and many of their perspectives will also be incorporated below.

Why Income Inequality is Important for Brazil

In terms of why inequality is an important issue for Brazil, the study makes several key arguments that show how income inequalities are actually hampering Brazil's economic development. First, the study argues that income inequality also leads to inequality of opportunities for the Brazilian population, leaving the poorer communities with fewer options for advancement out of poverty.⁵ The World Bank report also agrees with Kremer and Chen in their argument that low-wage workers are more likely to have more children than high-wage workers due to a lower opportunity cost, and those children of unskilled parents are more likely to also become unskilled workers, therefore contributing to the cycle of poverty and inequality.⁶ The World Bank argues that this could also be the case for Brazil, and as more uneducated parents continue to have more children than educated families, but that the long-term impacts of the "fertility differential" can be mitigated if the state can implement educational programs for poorer children at an earlier stage in life.⁷ Early education, the World Bank argues, is one powerful policy initiative that can increase the proportion of skilled labor in Brazil and serve to limit future income inequality, although the window for the success of this policy initiative is very limited in order to be effective.⁸

In addition to the "fertility differential" and the idea that children of unskilled parents are likely to also become unskilled workers, Bourguignon, Ferreira and Menéndez also show how income inequality can have a significant impact on education.⁹ Bourguignon, Ferreira and Menéndez draw on the development approach designed by Amartya Sen that emphasizes the power of opportunities for individual development, arguing that income inequality severely limits

3 The World Bank. "Brazil Projects & Programs." Accessed 27 May 2014. <http://www.worldbank.org/en/country/brazil/projects>

4 The World Bank. *Inequality and Economic Development in Brazil*. (Washington, DC, July 2004).

5 *Ibid.*, p. 6-7.

6 Kramer, Michael and Daniel Chen, "Income Distribution Dynamics with Endogenous Fertility." *National Bureau of Economic Research Working Paper 7530*. February 2000.

7 The World Bank. *Inequality and Economic Development in Brazil* (Washington, DC, July 2004), p. 7.

8 *Ibid.*

9 Bourguignon, François, Francisco H.G. Ferreira, and Marta Menéndez. "Inequality of Outcomes and Inequality of Opportunities in Brazil." *World Bank Policy Research Working Paper 3174*, December 2003.

those opportunities and therefore is a hindrance to development.¹⁰ The authors used data gathered from 1996 Brazilian household surveys and found that children often followed their parents' footsteps in terms of educational attainment, in large part due to the long-term impacts of income inequality. They argue that inequality of opportunities "is responsible for a very substantial proportion of total outcome equality in Brazil. It accounts for 8-10 percentage points of the Gini coefficient for individual earnings. Fifty-five to 75 percent of this share can be attributed to parental schooling alone, and 70 to 80 percent when the father's occupation is added."¹¹

Gori-Maia also argues that income inequality can lead to a depression in self-reported subjective well-being for individuals and families.¹² Gori-Maia's study examines two self-reported indicators, income and food sufficiency, along with self-reported measures of well-being to estimate what connections there are between income and/or food insufficiency and well-being. The results showed that in 2009, approximately 147 million people reported at least some income difficulty and 37 million reported extreme difficulty living on their family income.¹³ Food insufficiency rates were lower, as many people prioritize food given a limited budget, but 20 million people still reported that the quantity of food they usually consumed was not enough.¹⁴ Gori-Maia's results also found that there were a variety of social characteristics related to reports of income and food insufficiency, writing, "For example, families headed by women, black, brown and Indian people tend to be more affected by income and food insufficiency. On the other hand, the secondary education diploma of the family head increases significantly the propensity to income and food sufficiency."¹⁵ Gori-Maia argues that equality is one of the most effective factors for increasing an individual's subjective sense of well-being, and that the government should work towards promoting equality and providing opportunities to increase equality, such as cash transfers or increased educational opportunities. These ideas for

addressing inequality are not so different from many of the others found in the literature on income inequality and its implications in Brazil.

Significantly, the World Bank argues that income inequality in Brazil is actually a burden to the entire country's economic development.¹⁶ One market-based argument for greater income equality in Brazil is based on the system of loans. If loans are only made to those who can afford to pay them back (the more wealthy portion of the population), and that percentage of the population represents a very small piece of the total population, then the majority of potential borrowers are being left out of the system.¹⁷ The poor are either not offered loans at all or are forced to pay incredibly high interest rates as a result of their poor or nonexistent credit history, the latter of which serves to discourage poorer individuals from applying for loans in the first place. This means that the entire economy is held back by failing to allow the poor the opportunity to contribute their projects, businesses and ideas to the larger economy, which could potentially serve as an opportunity to bring them out of poverty. Lastly, the report argues that there can also be political ramifications for having large income disparities throughout Brazil. The argument states that, since wealth is often associated with political power and social dominance, the poor have fewer opportunities for advocating for social or political programs that could improve their lives.¹⁸ The report offers an example to illustrate this concept, stating that, "the dominant coalition in society might be a group that prefers to underfund basic public services, so as to pay less tax, even though total output might have been higher if those productive public services had been produced, so that the poorer beneficiaries would have been able to compensate the richer taxpayers for the extra tax paid."¹⁹ Essentially, when the poor are not given decision-making power, the wealthier elites, who already have access to things like healthcare and education, may not make the choice to fund social programs that benefit the poorer members of society, focusing only on the priorities of the wealthier classes.

10 Sen, Amartya, "The Concept of Development," in H. Chenery and T.N. Srinivasan(eds), *Handbook of Development Economics, Volume I*, 1998. Amsterdam: North-Holland.

11 Bourguignon, François, Francisco H.G. Ferreira and Marta Menéndez." Inequality of Outcomes and Inequality of Opportunities in Brazil." World Bank Policy Research Working Paper 3174, December 2003, p. 26.

12 Gori-Maia, Alexandre. "Relative Income, Inequality and Subjective Wellbeing: Evidence for Brazil." *Social Indicators Research* (113): 2013, 1193-1204.

13 Ibid., p.1198.

14 Ibid.

15 Ibid., p. 1201.

16 Ibid.

17 The World Bank. *Inequality and Economic Development in Brazil* (Washington, DC, July 2004), p. 8.

18 Ibid.

19 Ibid.

This continues to perpetuate a cycle of poverty and inequality and does not help to decrease the gap between the rich and the poor over time. This argument is related to that which states that inequality also reduces the rate of poverty reduction, despite the overall growth rate of the economy.²⁰ Research by Ravallion and Barros, Henriques and Mendonça supports the notion that poverty reduction efforts are hampered by widespread inequality in Brazil.^{21,22} This could be related to the concentration of political power among the wealthier classes, but it can also be viewed as an independent factor that serves to strengthen the relationship between poverty and income inequality in Brazil.

Another perspective on inequality in Brazil focuses on the differences among the regions of the country, as illustrated by Baer in the book *The Brazilian Economy: Growth and Development*.²³ Baer argues that, historically, different regions of Brazil were favored at different times due to the changes in the international trade market, and each region experienced peaks of relative wealth and subsequent decline in that wealth as their primary export shifted from being more to less desirable in the international market.²⁴ When Brazil began to industrialize in the twentieth century, however, this rotation of favoritism ceased and the southeast became more prominent in the economy, exporting more goods than the other regions and therefore reaping the financial benefits from those exports.²⁵ Baer supports these claims with data that demonstrate that the southeast region of Brazil received more than half of the entire country's GDP in 1997, and that the region received more than 70% of the country's income from industry alone through at least 1995.²⁶ This regional disparity demonstrates that Brazil has faced serious challenges with income inequality for decades, and since the country industrialized in the early twentieth century, the vast majority of the country's wealth has been focused largely in the southeast region.

20 Ibid.

21 Ravallion, Martin, "Can High-Inequality Developing Countries Escape Absolute Poverty?" *Economic Letters* 56 (1997):51-57

22 Barros, R. P., R. Henriques, and R. Mendonça. 2000. "Pelofim das deí cadasperdidas: educac'ao e desenvolvi- mentosustentado no Brasil." In Ricardo Henriques, ed., *Desigualdade e Pobreza no Brasil*. Rio de Janeiro: Instituto de Pesquisa Economica Aplicada.

23 Baer, Werner. *The Brazilian Economy: Growth and Development* Boulder: Lynne Rienner Publishers, 2008.

24 Ibid., p. 323.

25 Ibid.

The *Inequality and Economic Development in Brazil* report also demonstrates that inequalities in Brazil are not just related to the urban/rural dichotomy, but the income inequalities also fall along racial and gender lines.²⁷ The study shows that, "some 12 percent of income inequality in Brazil is accounted for income differences by skin color. The same figure for the United States is 2.4 percent."²⁸ This could also be related to differences in educational attainment, where black students complete only 2/3 of the years of schooling as white students.²⁹ Women also suffer as a result of income inequality, earning 29% less than their male colleagues on average, despite having received roughly one year more of education.³⁰ With income inequality spread across so many social groups and geographic regions in Brazil, it is no wonder that so many people are affected and that the country has faced so many challenges to addressing the disparities.

Causes of Income Inequality in Brazil

As noted above, income inequality in Brazil comes as the result of a number of different causes, including pay disparities between genders, limited access to education for some sectors of the population, in particular for the rural poor, political power dynamics that silence the voices of the poor, and limited economic opportunity (such as access to loans) for large sectors of the population. Additionally, as Baer demonstrates, income inequality is an issue for Brazil not just at the country level but at the regional level as well, as the southeast region has historically received the vast majority of the country's wealth from industry.³¹ While the literature surrounding income inequality in Brazil points to a number of complex and significant causes of income inequality in Brazil, we focus on a few key causes in this section.

The first key cause of income inequality in Brazil is that there is a wide gap in the incomes between skilled and unskilled laborers in Brazil, as has been pointed out by

26 Ibid., p. 325-326.

27 The World Bank. *Inequality and Economic Development in Brazil* (Washington, DC, July 2004), p.XVIII.

28 Ibid.

29 Ibid.

30 Ibid.

31 Baer, Werner. *The Brazilian Economy: Growth and Development*. Boulder: Lynne Rienner Publishers, 2008.

Tolosa and Skidmore.^{32, 33} These authors also argue that, as in many developing countries, Brazil suffers from having a surplus of labor that results in lower wages, a phenomenon that is particularly true for unskilled laborers, who are in greater supply than skilled laborers. Indeed, Tolosa points out that in 1973, approximately 7.5 million people working in non-agricultural sectors were earning less than the local minimum wage, accounting for 12% of the total urban population of Brazil.³⁴

Skidmore also argues that the fact that political power is concentrated among Brazil's elite classes results in fiscal policies that favor the rich at the expense of the poor.³⁵ This relates back to the issues discussed above, where the wealthy, powerful classes maintain control over economic decision-making and therefore tend to make decisions that benefit the wealthy rather than promoting economic policies that could support developmental policies that would benefit the poorer classes as well. As a result, economic development does not play as large of a role in economic policy in Brazil as it could, leading to slower development and limited economic development for the poor.

In addition to the surplus of labor in Brazil that drives down wages and unequal distribution of political power, the World Bank suggests four primary explanations for the high level of inequality throughout Brazil. The four main explanations outlined in *Inequality and Economic Development in Brazil* are as follows:

1. The underlying *distributions of assets across the population* might be more unequal than those in other countries. Important assets are educational attainment, land, and capital.
2. Price differentials of these assets – notably education – might be steeper in Brazil than elsewhere. If the wage differences for each extra year of schooling in Brazil are much higher than those in comparable countries, then more income inequality would be generated from the same underlying distribution of education.

3. It could be that Brazil's excess inequality arises neither from unequal distributions of assets nor excessive wage differentials by skill, but from behavioral differences or differential patterns of use of these assets. Labor force participation, occupational choice, and fertility decisions could account for very substantial differences in the distribution of household per capita incomes.
4. The distribution of claims and entitlements to state transfers might be less progressive than in other countries. Particular interest should be paid to retirement pension programs.³⁶

The four potential explanations listed above, in addition to the labor supply and the unequal political dynamic in Brazil, represent the most significant arguments that explain why Brazil continues to suffer from gross inequalities. It is clear from this list that the challenges that face the government of Brazil in terms of rectifying the country's income inequalities are vast and complex, but it is also important to recognize that there is a human side to economic development as well, and the factors that impact economic development also impact human development. In the next section, we examine the impact of income inequality on human development in Brazil, using the Gini coefficient as a measure of inequality and the Human Development Index and supplemental data as measures of human development.

Income Inequality and Human Development in Brazil, 2004 - 2012

One of the most widely used calculations for measuring inequality is called the Gini coefficient, which was designed by an Italian statistician in 1912.³⁷ The Gini coefficient ranges from 0 (perfect equality) to 1 (perfect inequality). The Gini coefficient is derived from a simple ratio calculation based on the Lorenz curve, shown below in Figure 1. The Lorenz Curve illustrates the degree of inequality present in any given economy, based on the distance of the Lorenz curve (shown on the right in Figure 1), and the line of equality, a 45-degree line from the origin. The Gini coefficient is

32 Tolosa, Hamilton C. "Causes of Urban Poverty in Brazil." *World Development* 6 (1978): 1087-1101.

33 Skidmore, Thomas E. "Brazil's Persistent Income Inequality: Lessons from History." *Latin American Politics and Society* 46 (2004): 133-150.

34 Tolosa, Hamilton C. "Causes of Urban Poverty in Brazil." *World Development* 6 (1978): 1099.

35 Skidmore, Thomas E. "Brazil's Persistent Income Inequality: Lessons from History." *Latin American Politics and Society* 46 (2004): 146.

36 The World Bank. *Inequality and Economic Development in Brazil*. (Washington, DC, July 2004), p. 20-21.

37 Todaro, Michael P. and Stephen C. Smith. *Economic Development*, 2009. 10th ed. Boston: Pearson, p. 214.

calculated by dividing the total area under the line of equality by the area between the line of equality and the Lorenz curve.³⁸ The closer to one the result, the greater the inequality in the economy.

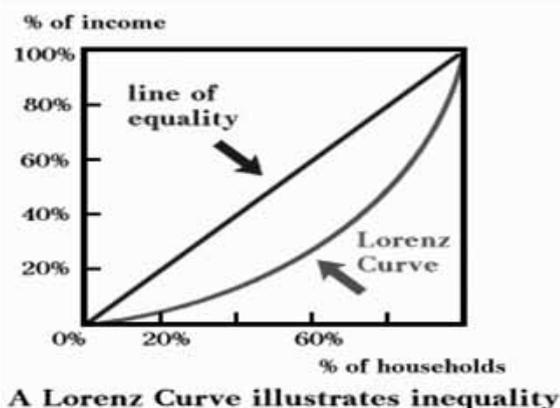


Figure 1: Lorenz Curve ³⁹

Table 1 below shows the Gini coefficient and GNI per capita for Brazil between 2004 and 2009. Data for the Gini coefficient for 2010-2012 were not available, but despite this limited availability of data, it is clear that Brazil has successfully lowered its Gini coefficient by nearly 3 points in just six years, showing a substantial decline in inequality over this period. This decline in inequality is coupled with an increase in GNI per capita, as discussed below.

Table-1 Gini Coefficient, Brazil: 2004 -2009 ^{40,41}		
Year	Gini Coefficient	GNI Per Capita (Constant 2005 USD)
2004	57.68	4506
2005	57.42	4603
2006	56.77	4753
2007	55.89	5014
2008	55.07	5207
2009	54.69	5165

38 Ibid.

39 "Measuring Income Distribution." Accessed 28 May 2014. <http://ingrimayne.com/econ/AllocatingRationing/MeasuringIncomeDist.html>.

40 The World Bank. "Brazil: World Development Indicators." Accessed 27 May 2014. http://data.worldbank.org/country/brazil#cp_wdi.

Economist Simon Kuznets argued that income inequality, measured by the Gini Coefficient, and economic growth, measured by gross national income (GNI) per capita, had a U-shaped relationship, where, in the early stages of a country's development, inequality would grow until it reached a turning point and began to decline.⁴² The initial increase in inequality could represent the structural changes necessary as economies shift from primarily agricultural to primarily industrial, for example.^{43,44} After the economy has fully adjusted to a more modern economic structure, then the level of inequality begins to decline, according to the Kuznets hypothesis. Indeed, Todaro and Smith argue that there have been a number of cases in which the Kuznets hypothesis has been proven correct, including Taiwan, South Korea, Costa Rica, and Sri Lanka.⁴⁵ However, Samy and Daudelin have argued that the opposite is true in the case of Brazil, and that there is a "straight-U" curve phenomenon that has resulted in higher inequality even as per capita income has increased in Brazil after the 1990s.⁴⁶ Samy and Daudelin use municipal-level data from Brazil to gather a more clear understanding of how income inequality and GNI per capita are related, which may account for their argument against the Kuznets hypothesis in the case of Brazil, as other scholars have found truth in the Kuznets hypothesis for Brazil on a national level.

For example, Ferreira, Leite and Litchfield examined inequality in Brazil in terms of the country's Gini coefficient and two of the Thiel indices, which also measure inequality, over the period from 1981-2004 to determine whether or not inequality followed the Kuznets inverted-U curve.⁴⁷ They determined that inequality in Brazil did follow an inverted-U path over this period, rising from 0.574 in 1981 to 0.625 in 1989, giving Brazil the second-highest Gini score in the

41 Data for Gini coefficient between 2010-2012 not available.

42 Todaro, Michael P. and Stephen C. Smith. *Economic Development*, 10th ed. Boston: Pearson, p. 227.

43 Ibid.

44 Kuznets, Simon, "Economic Growth and Income Inequality." *The American Economic Review* 45 (1955): 1-28.

45 Todaro and Smith, p. 228.

46 Samy, Yiagadeesen and Jean Daudel in. "Globalization and Inequality: Insights from Municipal Level Data in Brazil," *Indian Growth and Development Review* (6): 128-147.

47 Ferreira, Francisco H.G., Phillippe G. Leite and Julie A. Litchfield. "The Rise and Fall of Brazilian Inequality: 1981-2004." World Bank Policy Research Working Paper 3867, March 2006.

world at the time, following Sierra Leone.⁴⁸ However, by 2004, Brazil's Gini coefficient had fallen to 0.564, putting the country at number ten in the world for inequality.⁴⁹ While this is still quite high, the decline is significant and does follow Kuznets' prediction of an increase in inequality until a certain point, after which inequality begins to decline. Below, we continue along this path of research and examine inequality in Brazil using the Gini coefficient supplemented with data from the Human Development Index to analyze the relationship between the two from 2004-2012, where data are available.

Figure 2 below shows the traditional Kuznets inverted-U curve hypothesis and Figure 3 illustrates actual data from Brazil, including the Gini Coefficient and the per capita income, measured in constant 2005 U.S. dollars, between 2004 and 2009. Data regarding the Gini Coefficient for Brazil were not available for 2010-2012. Figure 3 demonstrates that the Gini Coefficient for Brazil, while still quite high, has actually declined by nearly 3 points between 2004 and 2009, down from 57.68 in 2004 to 54.69 in 2009. This decrease is correlated with an increase in GNI per capita over the same time period, up from \$4506 in 2004 to \$5165 in 2009 as shown in Table 1 above. While Samy and Daudelin may have found that the inverted-U Kuznets curve did not apply in Brazil on the municipal level, on the larger country-level scale it appears that the Gini Coefficient does tend to fall as GNI per capita increases.

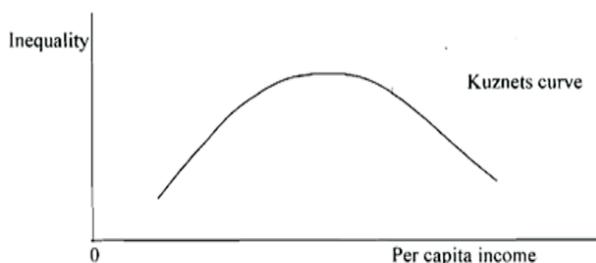


Figure 2: Kuznets Inverted-U Hypothesis Curve⁵⁰

48 Ibid., p. 2.

49 Ibid.

50 Economics Exposed. "Kuznets Inverted U-Curve." Accessed 27 May 2014. <http://economics-exposed.com/kuznets-inverted-u-curve/>.

51 United Nations Development Programme. Accessed 27 May 2014. http://data.worldbank.org/country/brazil#cp_wdi.

Figure 3 also illustrates the decline in the Gini coefficient as GNI per capita increases in Brazil, further supporting Kuznets' prediction that inequality would ultimately decline as the country continued to develop.

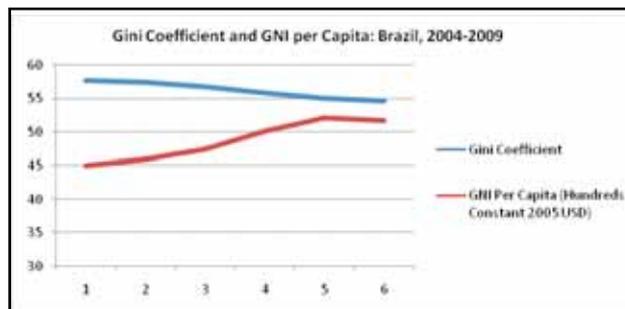


Figure 3: Gini Coefficient and GNI per Capita: Brazil, 2004-2009⁵¹

Human Development in Brazil

The Human Development Index (HDI), designed by the United Nations Development Programme, is one of the most widely used data sets to measure development on a national scale. The HDI combines indicators of life expectancy, educational attainment and income to derive a composite score between 0 and 1 by country to serve as a measure of economic and social development, with rankings closer to 1 representing higher human development and rankings closer to 0 representing lower human development.⁵² Education is measured by mean years of schooling for adults aged 25, capped at 18 years.⁵³ Life expectancy is measured by using a minimum value of 20 years and a maximum value of 83.57 years, and income is measured by GNI per capita, using the logarithm of income to reflect the diminishing importance of income with increasing GNI.⁵⁴ Data are collected primarily from the United Nations Population Division, the United Nations Educational, Scientific and Cultural Organization Institute for Statistics and the World Bank.⁵⁵ The use of such international data sets helps to ensure that the data used for the HDI are comparable across countries, therefore making the index more useful as a tool for measuring human development on a global scale.

52 United Nations Development Programme. Human Development Index (HDI). Accessed 27 May 2014. <http://hdr.undp.org/en/statistics/hdi>.

53 Ibid.

54 Ibid.

55 Ibid.

As shown in Figure 4 below, Brazil’s Human Development Index score has continued to rise over time, showing a steady and significant increase beginning around 2003. Indeed, Brazil’s HDI score rose from 0.67 in 2004 to 0.73 in 2012.^{56,57}

This places Brazil in the category of “high” human development, and in 2012 Brazil ranked 85th in the world in terms of its HDI.⁵⁸

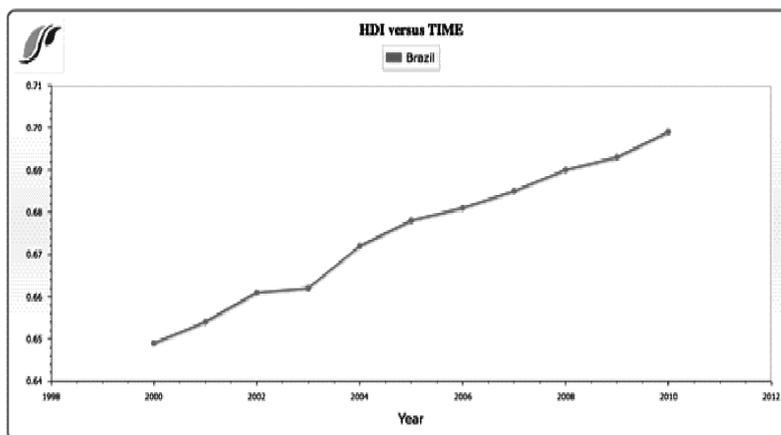


Figure 4: Human Development in Brazil over Time⁵⁹

Figure 5 below shows the Human Development Index scores for the Latin America & Caribbean region as a whole (the top line), Brazil (the middle line) and for all World Bank Upper-Middle Income Countries, which is the group in which Brazil is classified (the bottom line). This graph demonstrates that Brazil, while sometimes thought of as being an outlier in

terms of its rapid economic growth, is representative of improved human development across Latin America. Brazil is also, however, clearly more successful in terms of its human development index score than many of its counterparts in the Upper-Middle Income Country list designated by the World Bank.

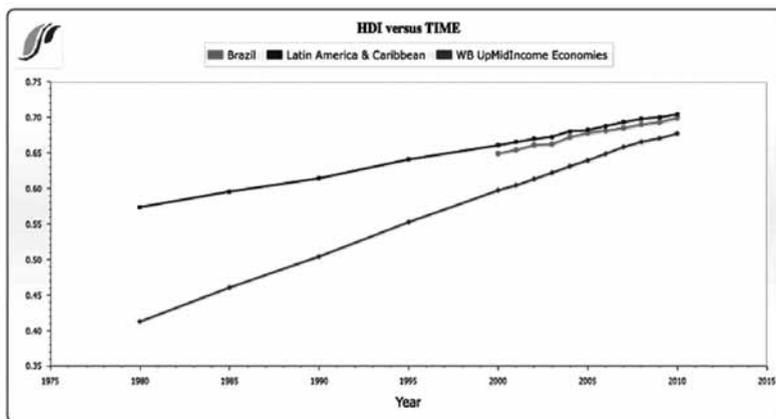


Figure 5: Human Development Index over Time: Latin America & the Caribbean, Brazil, and World Bank Upper-Middle Income Countries

56 International Futures (IFs) modeling system, Version 7.00. Frederick S. Pardee Center for International Futures, Josef Korbel School of International Studies, University of Denver, Denver, CO.

57 United Nations Development Programme. *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*. 2013.

58 Ibid.

59 International Futures (IFs) modeling system, Version 7.00. Frederick S. Pardee Center for International Futures, Josef Korbel School of International Studies, University of Denver, Denver, CO.

The data shown above indicate that, although the Gini coefficient remains high in Brazil, indicating that inequality remains a major concern in the country, it is not clear that inequality has had a major impact on human development in Brazil. Indeed, it appears that Brazil has followed Kuznets' hypothesis that there will be growth of inequality until a certain turning point, after which GNI per capita continues to increase but inequality declines. The Gini coefficient in Brazil declined almost 3 points between 2004 and 2009, which is no small feat. GNI per capita has increased \$659 over the same time period. It is not possible to know what could have occurred in Brazil in terms of human development if inequality were not as high, but the data displayed above indicate that Brazil is faring far better than other countries in the World Bank's Upper-Middle Income economy category, and that Brazil is on par with its counterparts in Latin America in terms of human development.

It is possible, however, that the levels of human development vary widely depending on the region of the country, as Samy and Daudelin implied in their study of inequality by region in Brazil. Those differences may not be readily apparent by looking solely at national-level data, which unfortunately is all that is available through the Human Development Index. Evidence from Gori-Maia's research on food and income sufficiency related to subjective well-being also indicates that a large proportion of Brazilian society is falling behind in terms of meeting basic needs like food and income. It may be argued, therefore, that the HDI, which is measured on the national level, is not sufficient to address the intersection of human development and inequality, which may vary widely from region to region, depending on that region's relative wealth and political power within Brazil as a whole.

Conclusion

It is clear from analyzing the Gini coefficient, GNI per capita and the Human Development Index results for Brazil from 2004-2012 that the country still has a long way to go in terms of reducing inequality, particularly for the more marginalized regions and social groups in Brazilian society. The World Bank and others have proposed that a surplus in the labor market, particularly for unskilled workers, has led to a problem of income disparity due to depressed wages for the lower classes. Other arguments have included discussions about the gender gap in income, educational disparities and a lack of infrastructural and political support to promote education for the poor. It is true that Brazil faces a number of significant challenges to decreasing the income

disparities between the rich and the poor, and it is very likely, as some scholars have pointed out, that income inequality has limited economic advancement opportunities for the poor and that the lack of political will among the wealthy classes to change this is likely to continue to slow economic development for the country as a whole. However, data from the Human Development Index is not sufficient to make these claims, as the HDI ratings for Brazil demonstrate an increase in human development nationwide while the Gini coefficient declines and GNI per capita continues to increase. What may be more useful for understanding the relationship between income inequality and human development, rather, is a series of regional or even state- or municipal-level studies throughout Brazil to design micro-level indices of human development and income inequality. While standardized data of this kind are not currently available for all states or regions of Brazil, potentially due to the high cost and time commitment required to conduct such studies, the results of such an undertaking would likely prove more useful for analyzing the true scope of inequality and human development throughout Brazil.

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Learning Preferences of PG and UG students: Application of VARK

Anjali Ganesh and Ratnakar U.P.

Abstract

Learning style is an accepted concept in psychology. People can learn best if they know their learning styles. Since education is supposed to identify how people learn best, the concept of learning styles remains extremely popular. The present paper makes an earnest attempt to understand learning preferences of PG and UG students through the application of VARK developed by Neil Fleming. Attempt has been made to understand the association between the gender and the VARK mode as well as the VARK style assessed. There is no correlation between gender and the VARK mode as well as the learning style preference and performance. This probably proves that no learning style is higher; learning in the preferred style only makes learning easier. Learning is never a burden if the new information to be grasped is presented in a style that is advantageous to students. The performance in examinations will also subsequently improve.



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Learning styles are a popular concept in psychology. Education is supposed to identify how people learn best. In this respect, the concept of learning styles remains extremely popular. There are many different ways of categorizing learning styles including Kolb's model and the Jungian learning styles. Kolb's model of learning styles is one of the best-known and widely used learning style theories. He believed that our individual learning styles emerge due to our genetics, life experiences, and the demands of our current environment in addition to describing four different learning styles Kolb (2001). Kolb (1984) also developed a theory of experiential learning and a learning style inventory. Mark K. Smith (2001) argued that Kolb's model is supported only by weak empirical evidence and that the learning process is actually far more complex than the theory suggests. He also noted that the theory fails to fully acknowledge how different experiences and cultures may impact the learning process. Another learning style theory is based on the work of analytical psychologist Carl Jung, who developed a theory of psychological types designed to categorize people in terms of various personality

patterns. Jung's theory focuses on four basic psychological functions: viz., Extraversion vs. Introversion, Sensation vs. Intuition, Thinking vs. Feeling, and Judging vs. Perceiving (Kendra Cherry, 2010). This theory later led to the development of the now-famous Myers-Briggs Type Indicator. In addition to influencing personality assessment, Jung's dimensions can also be used to assess and describe various learning styles. While each dimension represents a unique aspect of a learning style, it is important to remember that one's own individual learning style may include a combination of these dimensions. For example, one's learning style might include elements of extroverted, sensing, feeling, and perceiving learning styles. Neil Fleming's VARK model is one of the most popular representations. In 1987, Fleming developed an inventory designed to help students and others learn more about their individual learning preferences (Fleming, N.D. and Mills, C. 1992). This paper makes an earnest attempt to understand learning preferences of PG and UG students through the application of VARK.

Learning style is defined as the composite of characteristic cognitive, affective and physiological characters that serve as relatively stable indicators of how a learner perceives, interacts with, and responds to the learning environment (Baykan Z. and Nacar M., 2007). Educational researchers postulate that each individual has a unique learning style (Murphy R.J., et al., 2004). Students learn best when teaching methods match their learning style. Researchers in other fields have studied the impact of learning styles on student performance in introductory courses see, for example Bartlett, Hallock, Kellogg *et al.* (1996), and Thomas *et al.* (2002). Their results are mixed; some conclude that learning style can impact student success, while others find no significant relationship. Charkins *et al.* (1985) searched for a link between teaching styles and learning styles, and tried to identify any impact of such a link on student learning. These authors use a questionnaire that classifies teacher and student learning as dependent, independent or collaborative. Borg and Shapiro (1996) use the Myers-Briggs Type Indicator (MTBI) to evaluate macroeconomic principles in students and professors to see if personality type affects student grades and if students with personality types similar to those of their professor perform better. They conclude that students whose personality type suggests a preference for a structured learning environment perform significantly better in macroeconomic principles courses than those whose personality type suggests a preference for either independent learning or extensive interaction during class.

In addition, consistent with Charkins *et al.* (1985), these authors find that students who share a personality type with their professor perform significantly better. Ziegert (2000) tests the hypothesis that faculty and student personality types affect student abilities to understand economics, as measured by the TUCE (Test of Understanding of College Economics) and course grade. Like Borg and Shapiro, she uses the Myers-Briggs personality type indicator and finds that "thinking" students (those that make objective judgments) outperform feeling "students" (those that make decisions based on personal values). Her research also suggests that "intuitive" students (those that focus on the larger picture prior to details and learn from insight) outperform "sensing" students (those that prefer experience-based learning). Ziegert (2000) finds no evidence of a gender gap in her study; once personality differences have been accounted for. Gender is not a statistically significant predictor of success in economics. Finally, contrary to Borg and Shapiro (1996) and Charkins *et al.* (1985), Ziegert's (2000) research does not suggest that commonality between instructor and student personality type improves student performance.

There are many methods available for assessing learning styles, with each method offering a distinctly different view of learning style preferences. The method used in this study defines the preference in learning style in terms of the sensory modality in which a student prefers to take in new information. Four sensory modalities of learning have been defined: visual, auditory, read-write and kinesthetic (Forest, 2004). Visual learners prefer the use of symbolic devices such as diagrams, graphs, flow charts and models that represent printed information. Auditory learners prefer to hear information and, thus, learn better through discussions, lectures, tutorials and talking through material with themselves or others. Read-write learners prefer printed words and texts as a means of acquiring new information; they thus prefer textbooks, lecture notes, handouts, lists and glossaries. Kinesthetic learning employs a combination of sensory functions; such learners have to feel or live the experience to learn; they prefer simulations of real practices and experiences, lessons that emphasize on performing an activity, field trips, exhibits, samples, photographs, case studies, real-life examples, role-plays, and applications to help them understand principles and advanced concepts. Some learners have a preference for any one of these learning modalities (uni-modal learners), whereas multimodal learners do not have a strong preference for any single method. They

rather learn via two or more of the modalities. Multimodal learners thus are sub-classified as bi-, tri-, and quad-modal learners, who prefer to use two, three, or four styles, respectively (Fleming, N.D. and Mills, C. 1992). The learning style can be assessed by using the visual, auditory, read/write and kinesthetic (VARK) questionnaire developed by Neil Fleming. The validity of the VARK model as well as other learning style theories has been questioned and criticized extensively. One large scale look at learning style models suggested that the instruments designed to assess individual learning styles were questionable, while other critics have suggested that labeling students as having one specific learning style can actually be a hindrance to learning.

Despite the criticism and lack of empirical support, the VARK model remains fairly popular among both students and educators. Many students immediately recognize that they are drawn to a particular learning style. Others may find that their learning preferences lie somewhere in the middle. For example, a student might feel that both visual and auditory learning are the most appealing. We rely on the VARK inventory to assess learning styles. In our view, this inventory provides a valuable measure of learning style because it directly assesses how students prefer to learn, rather than indirectly predicting their learning strengths through a personality assessment.

There is a strong intuitive appeal in the idea that teachers and course designers should pay closer attention to students' learning styles by diagnosing them, by encouraging students to reflect on them and by designing teaching and learning interventions around them. However aligning teaching strategies to learning styles may or may not be effective as the existing research has found that matching teaching methods to learning styles had no influence on educational outcomes. Students might find that understanding their own learning preferences can be helpful. For instance, if the student knows that visual learning appeals to him/her most, using visual study strategies in conjunction with other learning methods help in remembering the subject better. The above research studies enrich us with lot of knowledge and practicalities with respect to VARK as a means to assess the learning style of students in particular and everyone else in general. By analyzing the literature in the area of VARK learning styles, there exists a wide gap in the area of micro study on learning styles of students at the PG and undergraduate levels. Thus, here lies the underlying motivation to take up a study on, 'Learning Style preferences of students' through the identification of following problems.

Application of VARK and possible outcome

The VARK questionnaire developed by Neil Fleming (1995) version 7.0 has sixteen questions that generate the profile of modal preferences regarding information processing, presentation and learning. These preferences are about the ways in which they want to take-in and give-out information. The modalities are: visual, aural/auditory, read/write, and kinesthetic. Each VARK question presents a situation likely to be within the respondent's experience and asks him to select from among alternative actions. Each answer represents a modal preference. Respondents may select multiple answers and all answers are counted. The questionnaire was developed to identify which sensory modalities subjects prefer to employ when learning or presenting information.

VARK provides students with an indication of their preferences for learning and as such it will indicate stronger and weaker preferences. It would be wonderful if students could explore their weaker preferences and enhance them by using all the VARK strategies associated with them. A student with a strong Read-Write preference might learn to use visual strategies for note-taking or expressing his or her learning. A student with a strong visual preference might attend a course to assist with kinesthetic ways of taking information in or for expressing it. Some students seek opportunities to learn new strategies at every opportunity that is not general. Many students in higher education are at critical points in their search for employment or partners or self-esteem and they often cling to the strengths and preferences that they have, rather than extending themselves into unknown areas. Application of VARK also helps them in venturing into unknown areas where the opportunities and challenges are more in terms of learning and growth.

Statement of the problem

Everyone has some type of learning style and a different information processing patterns. Once one understands how our brain works best in processing and grasping the information, one feels confident and elated. However, the students fail to make a deep understanding of the concept as they are not aware of their true learning styles. The superficial understandings of the subjects make them struggle in the examination as they come out with poor performance. Once students are no longer struggling with a subject as they know how to prepare for it, they will feel

better about themselves and won't be stressed out about tests or papers. Keeping this view in mind, study focuses on the learning style and preferences of students.

Objectives

Keeping the above problem areas in mind, the study, 'Learning preferences of PG and UG students through the application of VARK' is carried on with the following objectives:

1. To know the learning style of the students as per VARK,
2. To understand the learning preferences of the students,
3. To identify the association between the gender and the learning preferences,
4. To know the association between the gender and the learning modes,
5. To make a comparison between the learning preferences of medical students of KMC and PG and UG students of affiliated colleges in Mangalore, and
6. To understand the relationship between the marks scored by PG and UG students in SSLC, PUC and University exams and their VARK mode.

Methodology

The study is a micro study and has been confined to Mangalore region of Dakshina Kannada District of Karnataka state, India. The study was conducted in PG departments of the affiliated colleges as well as the UG departments in Mangalore. The responses were received from 250 UG students and 250 PG students. The UG students comprised Engineering graduates from the Electrical, Electronics, Mechanical and civil background. The PG students are comprised of M.Com, MBA, Journalism and MCA background. The sample respondents were interested in finding out their learning style as per VARK and took interest in filling the questionnaire promptly. The questionnaire VARK version 0.7 developed by Neil D. Fleming (2001) with 16 questions to test the learning styles and preferences was administered to students. The permission was taken from Neil Fleming as the study was making use of the copyright version of the VARK questionnaire developed by him. Along with the VARK questionnaire another structured questionnaire was also prepared to understand the background of the students. The questions were asked to understand their scoring pattern in 10th, PU as well as University marks. The nature of the students in matching their study habits to their learning preferences was also understood. Influence of gender in

learning style preferences was assessed. SPSS version 15 was used and t-test, Chi-square, ANOVA, were applied to analyze the data.

A parallel study was also conducted in the Department of Pharmacology, Kasturba Medical College (KMC), Mangalore, Manipal University. Permission of Institutional Ethics Committee was obtained before conducting the study. Permission of the head of the department of pharmacology and authorities of Manipal University was obtained to access marks of past examinations. Individual consent was obtained from those who volunteered to participate in the study. Self Response VARK questionnaires were administered to students attending classes in the department of Pharmacology. All students present on the day of the study were offered the opportunity to participate in the study. Participation was voluntary. The VARK questionnaire in which subjects recorded their responses was administered as a hard copy to be completed in the class. No interaction among participants was allowed while answering the questionnaire. Personal information including marks obtained in three previous examinations, viz., Class 10 and Class 12 or equivalent conducted by the State or Central Board of Education and MBBS Part I conducted by the Manipal University were recorded in a separate response sheet. The VARK score was compared to the marks obtained in previous examinations and gender related differences in learning style preferences were assessed. One way ANOVA was applied to find out the relationship between the gender and their VARK mode.

Findings and discussion

1. Influence of gender on different VARK style, VARK mode and uni-modal or multi-modal style of learning: Out of the 500 sample respondent students, 229 were male and 271 were female students. They exhibited different VARK styles such as K, A, V, R, AK, AKR, AKRV, AKV, AKVR, AR, ARK, ARKV, ARVK, AV, AVK, AVKR, AVR, AVRK, KA, KAR, KARV, KVA, VRKV and many more. Total number of uni modal respondents were 183 comprised of 37 per cent of the respondents and 317 respondents were multimodal making it to 63 per cent of the total respondents. With a view to understanding the association between the responses of male and female students of both PG and UG branches regarding the VARK style according to the survey result, chi square test was used. The results are shown in Table 1. Relationship between gender and the VARK mode of the respondents was also analysed with the help of t-test. The results are interpreted in Table 2.

Table 1: Association between gender and the VARK style of the respondents

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	142.133 ^a	47	.000	.000 ^b	.000	.000
Likelihood Ratio	179.230	47	.000	.000 ^b	.000	.000
Fisher's Exact Test	140.020			.000 ^b	.000	.000
N of Valid Cases	500					

a. 74 cells (77.1%) have expected count less than 5. The minimum expected count is .46.

Output from Table 1 shows that 74 cells (77.1%) have expected count less than 5, Fisher's Exact Test is applied. $P=0.000 < 0.05$ and there is a significant relationship between the gender and the VARK style exhibited by the respondents. The male students tended to be more visual or kinesthetic than the female students as 70 per cent of the males either chose visual or kinesthetic medium for learning but just 40 percent of the females opted for the same. The results showed that female students were multi modal than uni modal. Output from Table 2 states that since P value 0.011 is less than $\alpha = 0.05$ the results are significant. This shows that there is significant relationship between the gender and VARK mode. However, this had to be substantiated by

further statistical analysis to authenticate the finding. Therefore, to understand the association between the gender and uni-modal learning style or multi modal learning style chi-square test was applied. The output is shown in Table 3. Pearson Chi Square (χ^2)=1.793 df=1 $\alpha=0.05$ $P=0.181 > 0.05$ which shows that there is no statistically significant association between gender and uni-modal or multi-modal style of learning. Out of 229 male student respondents 91 were uni-modal and 138 were multi-modal and out of 271 female respondents 92 were uni-modal and 179 were multi-modal. In the present study though the number of female students opting for multi modal are more it is because of the more number of female students than the male students in the survey.

Table 2: t-test showing the relationship between gender and the VARK mode

VAR mode	Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value	P value
Male		229	2.2707	1.23405	0.08155	-3.073	0.011
Female		271	2.6236	1.31601	0.07994		

$\alpha = 0.05$, t value = -3.073, P value= 0.011 <0.05, Df= 498

Table 3: Association between gender and uni-modal or multi-modal style of learning
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	1.793(b)	1	.181	.193	.106	
Continuity Correction(a)	1.552	1	.213			
Likelihood Ratio	1.791	1	.181	.193	.106	
Fisher's Exact Test				.193	.106	
Linear-by-Linear Association	1.789(c)	1	.181	.193	.106	.030
N of Valid Cases	500					

0 cells (.0%) have expected count less than 5. The minimum expected count is 83.81.

2. Association between gender and self assessment of learning style: With a view to understanding the association between the gender and the learning style assessed by self chi-square test was used and the results are depicted in Table 3. The purpose of conducting the chi square test was to understand the disparity between their VARK style as per Neil D. Fleming (2001) and the learning style assessed by the respondent sample students through their overall learning experience. The output is shown in Table 3. Pearson Chi Square (χ^2)=42.343 df=14 $\alpha=0.05$ $P=0.000<0.05$ which

shows that there is statistically significant association between gender and self assessment of learning style. Erica A. et. al.(2007) also stated that there is an association between gender and the learning style assessment by the individuals. There is statistical similarity the way the gender plays a role in determining the VARK style and also the self assessment of the learning style though there is not much congruence between VARK style and self assessment of learning style on a real basis. This can be understood by observing the output in Table 4.

Table 4: Association between gender and self assessment of learning style Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	42.343 ^a	14	.000	.000 ^b	.000	.000
Likelihood Ratio	48.153	14	.000	.000 ^b	.000	.000
Fisher's Exact Test	44.214			.000 ^b	.000	.000
N of Valid Cases	500					

a 4 cells (13.3%) have expected count less than 5. The minimum expected count is 2.29.

3. VARK style, learning style assessed by self and the strength of VARK style:

The Table 5 states certain important observations such as VARK style, learning style assessed by self and also the strength of VARK style. There is some gap between VARK style according to the study developed by Neil D. Fleming and the learning style assessed by self in real terms. Respondents who have opted for all four modes of learning such as Visual, Auditory, Reading and Kinesthetic learning styles in different combinations were 128 but according to the self assessment VARK mode were adopted by 64 respondents. Respondents who fell in the category of K, A, R, V were 52, 98, 27 and 03 respectively through VARK study though the self assessment of learning for K, A, R, V comprised of 36, 24, 69 and 44 respondents which leaves a substantial gap between VARK assessment and self assessment. There is little research on the quality, reliability of the VARK questionnaire. However, in their review of learning style instruments Hawk and Shah (2007) note that the VARK model is the only one of five studied that contains the read/write and kinesthetic dimensions. According to the VARK website 58 percent of individuals report a match between the questionnaire results and their own perceptions of learning preferences. This finding corroborates the finding of the present study that either there could be some bias by the respondents in responding or as the VARK study takes into account the learning styles in various permutations

and combinations it feels that there is gap in real assessment and VARK assessment of learning style.

The findings also state that 317 respondents were multimodal and 183 respondents were uni-modal with mild, strong and very strong attributes. These results are based on the Algorithm developed by Fleming for interpreting the VARK score. It says that if the difference between the scores for the respondent's highest and the next highest mode score is 2, 3, 4 and 5 the preference is 'mild', the difference score 4, 5, 6 and 7 the preference is 'strong', the difference score 6, 7, 8 and 9 the preference is 'Very Strong' viz- a- viz the total VARK score that lies between 14 and 21, 22 and 27, 28 and 32, and 32 and above respectively. VARK scoring system is preferable to those of other learning style inventories. According to Boatman, Courtney, and Lee (2008) as the study distinguishes between mild, strong and very strong preferences, we can assess the importance not only of learning style preference, but that of preference strength. Second, the scoring system identifies respondents with multimodal preferences, rather than forcing them into a particular category. This scoring feature adds a subtle dimension to the inventory that is lacking in other learning style assessment methods. Thus the present study has categorized respondents based on their preference towards 'mild,' 'strong,' and 'very strong' as well as multimodal preference.

Table 5: Descriptives on VARK style, learning style (self) and the strength of VARK style

VARK style	Frequency	Percent	Self style	Frequency	Per cent	Strength of VARK	Frequency	Per cent
AK	1	.2	A	24	4.8	Multimodal	317	63.4
K	52	10.4	AK	20	4.0	Mild 'A'	68	13.6
A	98	19.6	AR	10	2.0	Mild 'K'	42	8.4
AK	28	5.6	AV	2	.4	Mild 'R'	24	4.8
AKR	8	1.6	K	36	7.2	Mild 'V'	1	.2
AKRV	17	3.4	KA	4	.8	Strong 'A'	10	2.0
AKV	7	1.4	KV	1	.2	Strong 'K'	20	4.0
AKVR	27	5.4	R	69	13.8	Very strong 'A'	15	3.0
AR	13	2.6	RK	18	3.6	Very strong 'R'	3	.6
ARK	18	3.6	RV	1	.2	Total	500	100.0
ARKV	23	4.6	V	44	8.8			
ARVK	9	1.8	VA	44	8.8			
AV	2	.4	VAK	18	3.6			
AVK	1	.2	VAR	29	5.8			
AVKR	6	1.2	VARK	64	12.8			
AVR	2	.4	VK	39	7.8			
AVRK	7	1.4	VR	72	14.4			
KA	14	2.8	VRK	5	1.0			
KAR	6	1.2	Total	500	100.0			
KARV	18	3.6						
KAV	3	.6						
KAVR	4	.8						
KR	7	1.4						
KRA	4	.8						
KRAV	8	1.6						
KRVA	7	1.4						
KVA	7	1.4						
KVAR	9	1.8						
R	27	5.4						
RAK	4	.8						
RAKV	2	.4						
RAVK	8	1.6						
RK	3	.6						
RKA	3	.6						
RKAV	7	1.4						
RKVA	6	1.2						
RVAK	6	1.2						
RVKA	1	.2						
V	3	.6						
VA	5	1.0						
VAK	5	1.0						
VARK	4	.8						
VK	1	.2						
VKA	5	1.0						
VRK	3	.6						
VRKA	1	.2						
Total	500	100.0						

4. Parallel study comparisons

a) Outcome of the learning habits of medical students of KMC Mangalore: Two hundred and fifteen students surveyed in KMC Mangalore, 105 males (48.8%) and 110 females (51.2%) returned the completed questionnaire voluntarily. The responses were tallied and assessed for learning style preference, gender difference in learning style preference and correlation between learning style and performance in examinations.

As per the results derived from Table 6, 63 students [(31 males and 32 females) 29.3%] preferred unimodal learning.

Among the unimodal learners two (0.3%) students preferred visual, 31 (49.2%) preferred auditory, seven (11.1%) preferred read-write and 23 (36.4%) preferred kinesthetic mode of learning. There was a wide diversity in learning style preferences among students irrespective of the gender, with majority of the students 152 [(74 males and 78 females) 70.7%] preferring multimodal instruction. Among the multimodal learners 38 (25%) students preferred bimodal, 37 (24.3%) preferred tri modal and 77 (50.66%) preferred quadri modal learning. The auditory modality was the most preferred unimodal learning style among both male (45.1%) and female (54.9%) students, followed by the kinesthetic mode (52.1% males and 47.9% females).

Table 6: VARK Score and gender preference

VARK mode	Males (%)	Females (%)	Total (%)
Unimodal			
Visual	1 (50)	1 (50)	2 (0.3)
Auditory	14 (45.1)	17 (54.9)	31 (49.2)
Read-Write	3 (42.8)	4 (57.2)	7 (11.1)
Kinesthetic	12 (52.1)	11 (47.9)	23 (36.5)
Total	31 (49.2)	32 (50.8)	63 (29.3)
Multimodal			
Bimodal	24 (63.2)	14 (36.8)	38 (25)
Trimodal	18 (48.6)	19 (51.4)	37 (24.3)
Quadmodal	32 (42.1)	45 (57.9)	77 (50.7)
Total	74 (48.7)	78 (51.3)	152 (70.7)

No gender differences were observed in the learning style preferences.

No significant correlation was observed between the learning style preference and performance in all the three previous examinations that were considered in this study. In the Class 10 or equivalent examination the mean (\pm SD) percentage of marks obtained by students who preferred uni-modal learning and multimodal learning was 85.41(\pm 8.4) and 85.12(\pm 7.7)

respectively, ($p=0.962$). In the Class 12 or equivalent examination the mean (\pm SD) percentage of marks obtained by uni-modal learners and multimodal learners was 83.55(\pm 8.75) and 82.15(\pm 9.02) respectively, ($p=0.755$). In the MBBS Part I examination the mean (\pm SD) percentage of marks obtained by students who preferred uni-modal learning and multimodal learning was 70.76(\pm 6.27) and 69.01(\pm 8.68) respectively, ($p=0.429$). These results are derived from the output of Table 7.

Table 7: Learning style preference and performance

VARK Mode	Mean Class 10 marks (\pm SD)	Mean Class 12 marks (\pm SD)	Mean MBBS part I marks (\pm SD)
Unimodal	85.41 (\pm 8.4)	83.55 (\pm 8.75)	70.76(\pm 6.27)
Multimodal	85.12(\pm 7.7)	82.15(\pm 9.02)	69.01(\pm 8.68)
P value	0.962	0.755	0.429

Table 8: ANOVA showing the relationship between learning style preference and performance in the three major examinations

		Sum of Squares	df	Mean Square	F	Sig.
SSLC Marks	Between Groups	228.487	3	76.162	.904	.439
	Within Groups	41778.756	496	84.231		
	Total	42007.243	499			
PUC Marks	Between Groups	435.218	3	145.073	1.351	.257
	Within Groups	53253.092	496	107.365		
	Total	53688.310	499			
University Marks	Between Groups	335.590	3	111.863	1.599	.189
	Within Groups	34693.857	496	69.947		
	Total	35029.448	499			

Table 9: Gender and VARK Mode Cross tabulation

			VARK Mode				Total
			Uni-modal	Bi-Modal	Tri-Modal	Quadri-modal	
Gender	Male	Count	91	45	33	60	229
		% within Gender	39.7%	19.7%	14.4%	26.2%	100.0%
	Female	Count	92	25	45	109	271
		% within Gender	34.3%	9.2%	16.2%	40.2%	100.0%
Total		Count	183	70	78	169	500
		% within Gender	36.8%	14.0%	15.4%	33.8%	100.0%
		% within VARK Mode	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10: Cross tabulation of Gender Vs Uni-modal OR Multimodal style of learning

			Uni modal	Multimodal	Total
Gender	Male	Count	91	138	229
		% within Gender	39.7%	60.3%	100.0%
	Female	Count	92	179	271
		% within Gender	33.9%	66.1%	100.0%
Total		Count	183	317	500
		% within Gender	36.6%	63.4%	100.0%
		% within Unimodal OR Multimodal	100.0%	100.0%	100.0%

b) Outcome of the learning habits of PG and UG students of affiliated colleges in Mangalore: From the survey conducted in engineering college as well as MCom and MBA colleges, 183 students [(91 males and 92 females) 36.6%]

preferred uni-modal learning. Among the uni-modal learners 21(11.48%) students preferred visual, 47(25.68%) preferred auditory, 55(30.05%) preferred read-write mode, 60(32.79%) preferred kinesthetic mode of learning. Three hundred and

seventeen students [(138 males and 179 females) 63.4%] preferred multimodal learning. Among the multimodal learners 128 (40.37%) students preferred bimodal, 117 (36.90%) preferred tri-modal and 132 (50.67%) preferred quadri modal learning. Gender differences were not observed in the learning style preferences. Unlike the study conducted by Erica A. et al. (2007) we did not find any gender differences in either the learning style or the performance. In the Class 10 or equivalent examination the mean (\pm SD) percentage of marks obtained by students who preferred uni-modal, bi-Modal, tri-modal and quadric-modal learning was 85.63 (\pm 8.60), 84.33 (\pm 7.99), 86.45 (\pm 8.61) and 84.82 (\pm 10.80) respectively. In the Class 12 or equivalent examination the mean (\pm SD) percentage of marks obtained by uni-modal learners and multimodal learners was 81.70 (\pm 10.18) and 82.17(\pm 11.08) respectively. In the university part I examination the mean (\pm SD) percentage of marks obtained by students who preferred uni-modal learning and multimodal learning was 72.01(\pm 7.20) and 70.93 (\pm 9.55) respectively. Since ($F= 0.904$ $DF=3$ $P=0.439 >0.05$), ($F= 1.351$ $df=3$ $P=0.257 >0.05$), ($F= 1.599$ $df=3$ $P=0.189 >0.05$), there is no statistical significance and relationship between the learning style preference and the performance in all the three previous examinations that were considered in the present study

There was a wide range and differences in learning style preferences among students irrespective of the gender, with majority of the students 317(63.4%) preferring multimodal instruction, i, e more than single mode of learning. Nearly 33.8 per cent ($N=169$) of the students preferred to use all four modes of learning, followed by nearly 14 per cent and 15.4 per cent students who preferred either bimodal or tri-modal learning respectively. The Auditory modality was the most preferred uni-modal learning style among both male and female 98(19.6%) students, followed by the Kinesthetic mode 52 (10.4%), then by Read –Write mode 27(5.4%) and least by Visual mode 3 (0.6%) by both male and female students which can be understood from Table 5. There was no difference between the parallel study comparisons between KMC students and the students of affiliated colleges in Mangalore from both PG and UG streams. This shows that the learning style could be very well generalized to student community irrespective of the stream in higher education.

Conclusion: No correlation between the learning style preference and performance which probably proves that no

learning style is superior; learning in the preferred style only makes learning easier and interesting. Learning is never a burden if the new information to be grasped is presented in a style that is favourable to students. If learning is made pleasurable, the performance in examinations will improve. The obligation is on the teacher to understand the students' style and deliver the topics by combining all modes of learning viz., Visual, Auditory, Read-write and Kinesthetic to make the sessions effective and also to enable the students of different learning styles to learn better.

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Firm Size and Corporate Leverage: Cement Industry

R. Azhagaiah and D. Silambarasan

Abstract

The study is an attempt to analyze the impact of firm size on the determinants of corporate leverage of 29 listed firms in BSE. The study proves that return on capital employed (ROCE), return on debt (ROD), and return on equity (ROE) have significant impact on the operating leverage (OL); net worth (NW), borrowings (B) and investments (I) have significant negative co-efficient on OL while reserve fund (RF) has a significant positive co-efficient on OL hence there is a high volatility of them for all the size categories (small, medium, and large) of firms of cement industry in India.

Key Words: Capital structure, Corporate leverage, Size of the firms, Return on capital employed, Return on debt, Return on equity



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A lever is a rigid piece that transmits and modifies force or motion where forces are applied at two points and it turns around a third. The physical principle of the lever is intuitively appealing to most; hence it is the principle that permits the magnification of force when a lever is applied to a fulcrum. Therefore, it is an increased means of accomplishing some purpose. Generally it brings an increase in income volatility. In business, leverage is the means of increasing profits, which may be favorable or unfavorable. The former reduces profit, while the latter increases it. Hence it is essentially related to a profit measure, which may be a return on investments or on earnings before taxes, etc. and hence it is an important tool of financial planning.

Further, 'leverage' is the ability of a firm in employing long-term (LT) funds having a fixed interest, to enhance returns to the owners. Therefore, it is a means of accomplishing power for gaining an advantage. It also represents the impact

of one financial variable over some other related financial variables. In other words, it is the employment of *fixed assets (FA)* or funds for which a firm has to meet fixed cost (*FC*) or fixed rate of interest obligation irrespective of the level of activities attained or the level of *operating profit (OP)* earned. The higher the leverage, the higher will be the profit and *vice versa*, however a higher leverage obviously implies higher outside borrowings and hence riskier if the business activity of the firm suddenly takes a dip. But a low leverage does not necessarily show prudent financial management, as the firm might be incurring opportunity cost for not having borrowed funds at *FC* to earn high profit. There are many ratios used to measure the leverage effect

on the performance of a firm, which is broadly classified in to two categories viz *operating leverage* and *financial leverage*.

Operating Leverage (OL) refers to the existence of *FC* element in total cost structure of a firm and its impact on firm's ability. It is expressed as *Contribution / EBIT*. A high *OL* indicates a large proportion of *FC* causing low net profit and the *EBIT* will tend to vary more with sales.

Financial Leverage (FL) refers to the use of debt component in capital structure (*CS*) and the effect of payment of fixed interest on firm's profitability. It is expressed as *EBIT / EBT*. A high *FL* indicates a high percentage of debt in the *CS* when compared to the equity.

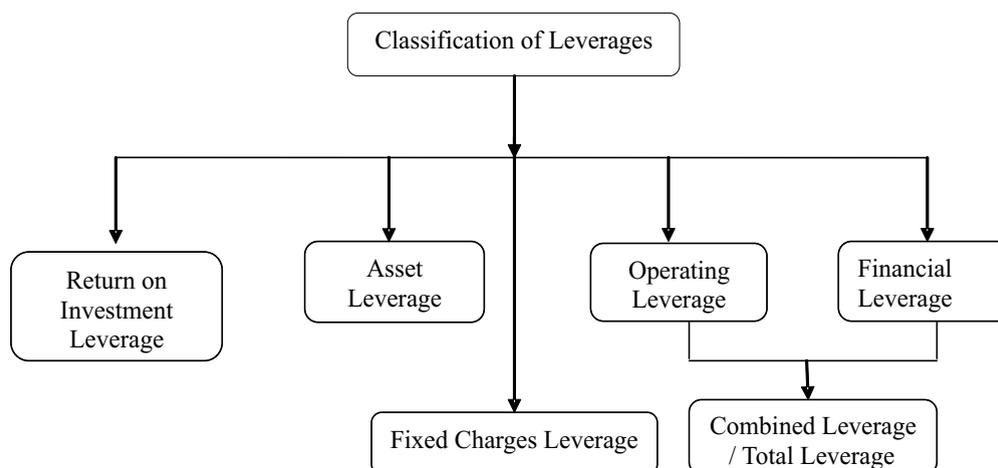


Figure – A: Classification of Leverages

Source: Kulkarni and Satyaprasad, *Financial Management*, Himalaya Publishing House, 421.

Combined Leverage (CL) / Composite leverage / Total Leverage (TL)

The *CL* may be referred to as the potentiality to use *FC*, both operating and financial, which indicates the effect of sales volume change on the *EPS* of a firm, hence the *TL* is also called as *CL*. A brief classification of leverages is shown in figure-A.

Review of Literature

The size of non-debt corporate tax shields like tax deductions for depreciation and investment tax credits may affect the leverage (Modigliani and Miller, 1958). Trading on equity (*TOE*) increases the expected return per common stock, but it also increases risk (Peterson, 1964). Equity yields increase with leverage (Wipperfurth, 1964). However, there was a

negative association between variance of net operating leverage (Baxter, 1967). In a perfect capital market where the interest rate is constant any *CS* is efficient and that the cost of capital is therefore constant (Shahar, 1968). Gupta (1969) analyzed the *industry effect*, the *size effect*, and *growth effect* on the financial structure (*FS*) and found that total debt ratios (*TDR*) were positively related to growth and negatively related to size.

Remmers *et al.* (1974) proved that industry was a determinant of debt for manufacturing firms in five developed countries viz., *France, Japan, Netherlands, and Norway* and appear to be a determinant of corporate debt in the manufacturing firms of *Netherlands, Norway and the US*. Carleton and Silberman (1977) showed that the rate of return was the ultimate determinant of leverage; and the *ROI* was negatively correlated with the debt ratios. Ferri and Jones (1979) stated

that *OL* influenced the proportion of debt in a firm's *FS* and the relationship between these two types of leverage was quite similar to the negative, linear form which financial theory suggests.

Lev (1979) found that the differences in the production process affecting the relative share of fixed to variable cash (i.e., the operating leverage (*OL*)) were found both analytically and empirically, to be associated with risk differentials. Specifically, other things being equal, the higher the *OL* i.e. the lower unit of variable cost the larger will be the overall and systematic risk of the stock. Bhat and Ramesh (1980) found a negative relationship between dividend payout and leverage ratio, though cause-and-effect was related with leverage; the degree of *OL* did not influence the use of debt; and *FL* and debt service capacity were found to be negatively related. Thomas and Conine (1980) found a correlation between the return of a levered firm and market portfolio, and stated that a primary input to the measurement of diversification relative to the market can be influenced by financing decision of the firm.

Schneller (1980) studied the impact of taxes on capital gains and concluded that for the dividend paying firms interior solution for the *CS* decision was possible due to the disparity between capital gains and dividend tax rates and thereby there was a possibility of illiquidity. Masulis (1983) stated that the senior security prices were negatively related to the debt ratio and the changes in firm's values were positively related to the changes in firm's debt level. Mandelker *et al.* (1984) investigated the joint impact of both asset structure and *CS* on systematic risk and found that the degree of *OL* and *FL* explained large portion of the variation in beta.

Kane *et al.* (1985) showed that meaningful measure of the advantage to debt was the extra rate of return (*ROR*), net of a market premium for bankruptcy risk earned by a levered as well as unlevered firm. Kolondy and Suhler (1985) showed that shareholders of firms announcing new equity issue experienced *significant, abnormal, negative returns* and that these returns were inversely related to the magnitude of the *CS* caused by new issue, however no relationship was found between shareholders' return and the firm's pre-issue degree of *FL*. Barton and Gordon (1988) found that a corporate strategy perspective, with its emphasis on managerial choice, might provide a behavioral basis for understanding the *CS* of large *US* firms at the firm level which was complementary to the traditional finance paradigm at the level of the economy.

Bhide (1988) attempted to analyze the leverage across the world, over the years and proved evidence that proper use of leverage can lead to shareholders' wealth maximization. Titman and Wessel (1988) analyzed the explanatory power of some of the recent theories of optimal *CS* and extended empirical work on *CS* theory in three ways *first*, it examined a much better set of *CS* theories, many of which have not previously been analyzed empirically. *Second*, since the theories have different empirical implications, the authors analyzed measures of short-term, long-term, and convertible debt rather than an aggregate measure of total debt. *Third*, the study used a factor-analytic technique that mitigated the measurement problems encountered when working with proxy variables.

Sidney *et al.* (1988) found that a corporate strategy perspective may complement the traditional financial paradigm in explaining *CS* in large *US* corporations. Baylers and Diltz (1990) utilized recent developments in capital lease modeling to develop a new specification of the relationship between the expected returns to debt, *levered equity and unlevered equity of firms* that lease a portion of their assets. Harris and Raviv (1990) showed evidence that the debt was a default because it allows creditors the option to force the firm into liquidation and generated information useful to the investors, which characterized the time path of the debt level and obtained comparative results on the debt, probability of default, probability of reorganization etc.

Appelbaum (1992) analyzed firms whose contractual agreements involve both consumers and debt holders and showed that if consumers were *risk averse, whereas equity and debt holders were risk neutral, the firm uses its CS to shift risk* away from the consumers. Balakrishnan and Fox (1993) showed that firm-specific effects contributed most to the variance leverage, suggesting a strong link between strategy and *CS*.

Perotti and Spier (1993) showed that industries that were not very profitable but had strong investment prospects may use a phase of high leverage it transfers a leverage portion of the return from the new investment to the shareholders. Michael *et al.* (1994) found that the firms trade off their *OL* and *FL* to manage their overall risk. Spiegel and Spulber (1994) showed that the firm's *CS* has a significant effect on the regulated price. Consequently, the firm chooses its equity and debt strategically to affect the outcome of the regulatory process. Sheel (1994) stated the leverage behavior of 33 firms in two industry groups - the hotel industry and the manufacturing industry that all the leverage determinants studied, excepting firm size were significant in explaining

leverage variations in debt behavior. Rajan and Zingales (1995) investigated the determinants of *CS* choice by analyzing the financial decision of public firms in the major industrialized countries and found that the factors identified by the previous studies as correlated in the cross-section with firms leverage in the *US* were correlated in the other countries as well.

Belt (1998) showed that the medieval catapult weapon known as the trebuchets provided a useful physical analog for the impact of the many leverage effects that existed in a business firm and its performance. Sunder and Myers (1999) focused on a sample of 157 firms and used simulated data and showed that *CS* had auto correlation and operational earnings were cyclical. As a result, finding a pecking order coefficient near one would not disprove the trade-off theory. Stein (2001) supported the model of dynamic *CS* strategy of a firm when it had the option to increase debt level in the future. Bhaduri (2002) suggested that the optimal capital structure (*OCS*) choice could be influenced by factors such as growth, cash flow, size, and product and industry characteristics. Bhaduri (2002) attempted to study the *CS* choice of less developed countries through a case study of the Indian corporate sector and stated that there was unobservable nature of the attributes - influenced by factors such as growth, cash flow, size and product and industry characteristics.

Pandey (2002) vindicated service-shaped relationship between *CS* and profitability because of the interplay of agency costs, costs of external financing and interest tax shield and power had a positive influence and growth, risk and ownership had a negative influence on *CS*. Kasseeach (2004) showed that some firm characteristics, such as profitability and size affected the leverage decision of the firm, while other characteristics such as collateral and growth opportunities did not do additionally; no important differences in the financing of listed firms across eastern, central and western regions. Loof (2004) showed that more unique a firm's asset is the thinness the market for such assets, hence, one may expect that uniqueness be negatively related to leverage. Odit and Hemant (2004) showed a significant negative relationship between leverage and investment. More interestingly, they found a negative relationship between leverage and investment for low growth firms, their econometric results reveal an insignificant relationship between the two variables stated for high growth firms.

Akhtar (2005) showed that the level of leverage did not differ significantly between multinational and domestic corporations; for both the types of corporations, *growth*,

profitability and size were significant determinants of leverage. Joshua (2005) revealed a significant positive relationship between ratio of short-term debt to total assets and *ROE*. Krish (2005) showed the effect of leverage on increased profitability of a firm in competitive market and found that low firms can substantially increase profitability by improving leverage - the practice of utilizing the lowest-cost resource to perform different functions in the business.

Huang and Song (2006) stated that leverage in Chinese firms increased with firms' size and fixed assets, and decreased with profitability, non-debt tax shield and growth opportunity; the ownership or institutional ownership had no significant impact on *CS*. Hovakimian (2006) found that firm's equity issues to periods of high market-to-book ratio but the effects were economically small and short-lived. The study also proved that the effect of timing of equity repurchases on leverage ratios was even weaker. More interestingly, the study found that debt issues had a significant long-lasting effect on *CS*, but their timing was unlikely to induce a negative relationship between market-to-book ratio and leverage and therefore debt redemptions had a significant effect on leverage ratios. Lemmon *et al.* (2008) stated that traditional leverage determinants explained a minor part of the variation in leverage (at most 30%), while 60% remain unexplained. Afza and Hussain (2011) showed that debt was considered as a way to highlight investors' trust on the firm. If a firm issues debt, it provides a signal to the market that the firm is expecting positive cash flows in the future.

Objectives of the Study

1. To study the volatility of corporate leverage based on firm size in cement industry in India.
2. To analyze the determinants of corporate leverage in cement industry in India.
3. To study the impact of firm size on the determinants of corporate leverage in cement industry in India.

Hypotheses Developed for the Study

The following hypotheses are developed to study the impact of selected financial variables on Operating Leverage.

$H_0^1 =$ There is no significant impact of Return on Capital Employed on Operating Leverage.

$H_0^2 =$ There is no significant impact of Return on Debt on Operating Leverage.

$H_0^3 =$ There is no significant impact of Return on Equity on Operating Leverage.

H₀⁴= There is no significant impact of Net Worth, Reserve Fund, Borrowings, Investment, as well as Gross Fixed Assets on Operating Leverage.

Research Methodology

The study is based on the secondary data which are collected from the Bombay Stock Exchange (www.bseindia.com), National Stock Exchange (www.nseindia.com), and Centre for Monitoring Indian Economy Private Ltd (CMIE Prowess-the online data base source) and is supplemented with other published sources in the form of journals and magazines.

Data Source

The study is of analytical nature, which makes use of secondary data. Apart from the CMIE data source the required secondary data were collected from the journals like Indian Journal of Commerce, Finance, Finance India etc.

Sampling Design

In order to test the stated hypotheses and to address the objectives of the study, the present study has chosen 29 sample firms from cement industry in India, which are listed in BSE by applying the technique of *multi-stage non-random sampling*. The reason for choosing these firms from the listing flag of BSE is due to the fact that the BSE has the largest number of quoted domestic firms on any stock exchanges in the world.

Sampling Technique

Multi-stage non-random sampling technique is used for selecting the sample firms and the different stages followed for selection of sample units are shown in *figure-B*.

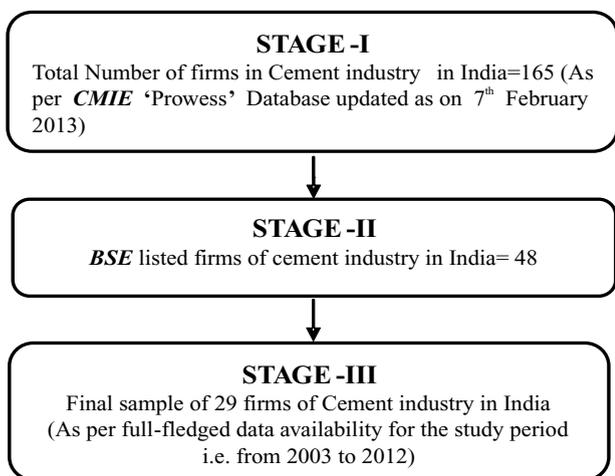


Figure-B : Multi-Stage Non-Random Sampling Technique

Source: Compiled data collected from CMIE Prowess Pvt. Ltd

Research Methods

The study used mean (\bar{X}), standard deviation (σ), co-efficient of variation (C_v), simple regression and multiple regression for analysis of data.

(a) Mean

Mean has been calculated to ascertain the central tendency of the sample using the following formula: $\bar{X} = \frac{\sum X}{n}$

(b) Standard deviation

The deviation from the mean is evaluated to find the variability in the mean. The formula used for the standard deviation is:

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}}$$

c) Regression

The linear regression uses one predictor variable to explain and / or predict the outcome of Y, while multiple regression uses two or more predictor variables to predict the outcome. The general form of each type of regression is:

Linear Regression: $Y = a + bX + u$

Multiple Regression: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_iX_i + u$

“b” is called the slope

“a” is called the intercept

“X” is the predictor variable

“Y” is the criterion variable

Y = OL (Operating Leverage);

X₁= NW (Net Worth); a = Regression Constant

X₂= RF (Reserve Fund); b1 = Regression Coefficient

X₃= B (Borrowings); u = Error Term

X₄= I (Investments)

X₅= GFA (Gross Fixed Assets)

Plan of Analysis

Categories of Size of Firms (size as the control variable)

The selected sample firms are further classified in to three categories based on size of firms viz., *small size firms*, *medium size firms* and *large size firms*. The average size (measured based on natural logarithm of total assets) over a period of 10 years is considered for deciding the size category of the firm for the study.

- ❖ *Small size firms* –the firms with natural logarithm of total assets value up to ₹ 30,000.
- ❖ *Medium size firms* – the firms with natural logarithm of total assets value in between 30,001 - 1, 50,000.
- ❖ *Large size firms* – the firms with natural logarithm of total assets value over 1,50,000.

The selected sample of 29 firms of cement industry in India is presented in **table1**.

Table 1 : List of Firms Selected for the Study

Sl. No.	Firm Name	Sl. No.	Firm Name
1	Shri Keshav Cement & Infra. Ltd.	16	Saurashtra Cement Ltd.
2	Sainik Finance & Inds. Ltd.	17	Heidelberg Cement India Ltd.
3	Shiva Cement Ltd.	18	Orient Paper & Inds. Ltd.
4	Keerthi Industries Ltd.	19	OCL India Ltd.
5	Udaipur Cement Works Ltd.	20	Chettinad Cement Corp. Ltd.
6	Panyam Cement & Mineral Indus. Ltd.	21	JK Lakshmi Cement Ltd.
7	Kakatiya Cement Sugar & Indus. Ltd.	22	Sanghi Industries Ltd.
8	Shree Digvijay Cement Co. Ltd.	23	Birla Corporation Ltd.
9	Gujarat Sidhee Cement Ltd.	24	Shree Cement Ltd.
10	Sagar Cement Ltd.	25	Madras Cement Ltd.
11	Trinetra Cement Ltd.	26	Century Textiles & Inds. Ltd.
12	Deccan Cements Ltd.	27	India Cements Ltd.
13	NCL Industries Ltd.	28	Ambuja Cement Ltd.
14	Mangalam Cement Ltd.	29	ACC Ltd.
15	KCP Ltd.		

Source: Compiled data collected from CMIE Prowess Pvt. Ltd.

Industry Analysis and Discussion

Descriptive Statistics of Operating, Financial and Combined Leverage of Small Size firms

The descriptive statistics of Operating, Financial and Combined Leverage of Small Size firms of cement industry in India is presented in table 2 followed by figure-C. It is inferred that firm Shri Keshav Ltd. records the highest minimum *OL* (1.41) and firm Gujarat Sidhee Ltd. records the highest maximum *OL* (25.77), while the highest \bar{X} (4.25) is recorded for firm Sainik Finance Ltd. The σ is highest (16.03)

for firm Gujarat Sidhee Ltd. however the C_v is highest (2.85) for firm Shree Digvijay Ltd., which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of *OL* of small size firms.

It is inferred that firm Shri Keshav Ltd. records the highest minimum *FL* (1.15), highest maximum *FL* (2.51), and the highest \bar{X} (1.65). However, the σ is highest (59.38) for firm India Shree Digvijay Ltd. however the C_v (2.09) is the highest for firm India Keerthi Industry Ltd. which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of *FL* of small size firms.

Table 2 : Descriptive Statistics of Operating, Financial and Combined Leverage of Small Size Firms for the period from 2003 to 2012

Sl. No.	Name of the Firm	OL			FL			CL		
		Mean (\bar{X})	Std. Deviation (σ)	CV (C _v)	Mean (\bar{X})	Std. Deviation (σ)	CV (C _v)	Mean (\bar{X})	Std. Deviation (σ)	CV (C _v)
1	Shri Keshav Ltd.	2.69	1.06	0.39	1.65	0.49	0.29	4.25	1.35	0.318
2	Sainik Finance Ltd.	4.53	9.74	2.14	-0.72	2.25	-3.12	-20.87	40.97	-1.96
3	Shiva Cement Ltd.	1.88	4.47	2.38	0.96	0.88	0.91	1.91	5.80	3.03
4	Keerthi Industry Ltd.	3.55	4.75	1.33	0.77	1.61	2.09	2.31	18.86	-8.16
5	Udaipur Ltd.	0.05	0.10	1.87	0.99	0.03	0.03	0.05	0.10	1.88
6	Panyam Ltd.	1.55	3.90	2.51	0.73	1.24	1.69	-1.06	9.26	-8.67
7	Kakatiya Ltd.	2.51	0.74	0.29	1.32	0.37	0.27	3.32	1.30	0.39
8	Shree Digvijay Ltd.	2.07	5.91	2.85	-8.23	59.38	-7.20	-65.11	209.81	-3.22
9	Gujarat Sidhee Ltd.	-0.16	16.03	-98.35	0.74	0.59	0.79	-1.63	8.58	-5.26

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

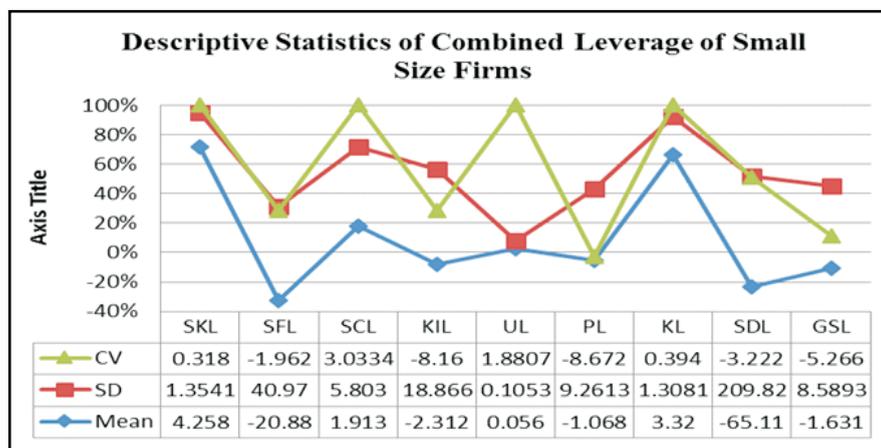


Figure – C : Descriptive Statistics of Combined Leverage of Small Size Firms for the period from 2003 to 2012

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

It is found that firm Shri Keshav Ltd. records the highest minimum (1.97) *CL* and firm Shiva Cement Ltd. records the highest maximum (9.45) *CL*, while the highest \bar{X} (4.258) is recorded for firm Shri Keshav Ltd. The σ is highest (209.82)

for firm India Shree Digvijay Ltd. with, however the C_v is the highest (3.03) for firm Shiva Cement Ltd with, which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of *CL* of small size firms.

Table 3 : Descriptive Statistics of Operating, Financial and Combined Leverage of Medium Size Firms for the period from 2003 to 2012

Sl. No.	Name of the Firm	OL			FL			CL		
		Mean (\bar{X})	Std. Deviation (σ)	CV (C.)	Mean (\bar{X})	Std. Deviation (σ)	CV (C.)	Mean (\bar{X})	Std. Deviation (σ)	CV (C.)
1	Sagar Ltd.	-6.58	270.37	-41.07	1.10	0.85	0.77	2.88	11.56	4.01
2	Trinetra Ltd.	-2.07	187.51	-90.58	0.55	1.05	1.88	-4.51	6.30	-1.39
3	Deccan Ltd.	3.30	1.14	0.34	1.39	0.44	0.31	4.59	1.87	0.40
4	NCL Industry Ltd.	2.52	0.71	0.28	1.53	0.26	0.17	3.95	1.66	0.41
5	Mangalam Ltd.	1.10	4.48	4.05	1.02	0.37	0.36	2.48	1.82	0.73
6	KCP Ltd.	4.05	3.67	0.90	0.98	0.92	0.93	1.44	8.57	5.94
7	Saurashtra Ltd.	4.63	3.12	0.67	14.65	43.60	2.97	-67.17	187.31	-2.78
8	Heidelberg Ltd.	6.28	3.94	0.62	-0.23	2.38	-9.96	-3.40	12.19	-3.58
9	Orient Paper Ltd.	3.30	1.36	0.41	-0.40	4.68	-11.63	-4.36	22.76	-5.21
10	OCL India Ltd.	-0.43	10.62	-24.31	1.26	0.10	0.08	-0.65	13.96	-21.25
11	Chettinad Ltd.	2.17	0.57	0.26	2.35	3.68	1.56	6.49	12.65	1.94

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

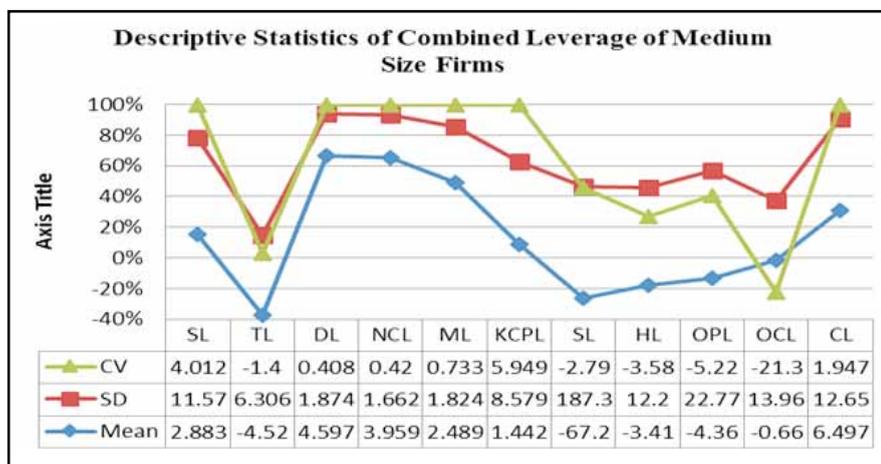


Figure – D : Descriptive Statistics of Combined Leverage of Medium Size Firms for the period from 2003 to 2012

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

Descriptive Statistics of Operating, Financial and Combined Leverage of Medium Size Firms

The descriptive statistics of Operating, Financial and Combined Leverage of Medium Size firms of cement industry in India is presented in table 3 followed by figure-D. It is inferred that firm Heidelberg Ltd records the highest minimum (2.80) OL and firm Sagar Ltd. records the highest maximum (39.76) OL, while the highest \bar{X} (6.28) of OL is recorded for firm Heidelberg Ltd. The σ is highest (270.37) for firm Gujarat Sagar Ltd. however the C_v is highest (4.05) for firm Mangalam Ltd., which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of OL of medium size firms.

The firm NCL Industry Ltd. records the highest minimum (1.25) FL and firm Chettinad Ltd. records the highest maximum (12.85) FL while the highest \bar{X} (14.65) is recorded for firm Saurashtra Ltd. The σ and C_v are highest (43.601, and 2.97 respectively) for firm India Saurashtra Ltd., which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of FL of medium size firms.

The firm Deccan Ltd. records the highest minimum (2.08) CL and firm Chettinad Ltd. records the highest maximum (42.43) CL, while the highest \bar{X} (6.497) is recorded for firm Chettinad Ltd. The σ is highest (187.316) for firm Saurashtra Ltd. however the C_v is highest (5.949) for firm KCP Ltd., which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of CL of medium size firms.

Table 4 : Descriptive Statistics of Operating, Financial and Combined Leverage of Large Size Firms for the period from 2003 to 2012

Sl. No.	Name of the Firm	OL			FL			CL		
		Mean (\bar{X})	Std. Deviation (σ)	CV (C.)	Mean (\bar{X})	Std. Deviation (σ)	CV (C.)	Mean (\bar{X})	Std. Deviation (σ)	CV (C.)
1	JK Lakshmi Ltd.	3.28	1.70	0.51	3.27	4.33	1.32	17.07	29.32	1.72
2	Sanghi Ltd.	2.07	0.83	0.40	2.56	1.48	0.57	6.34	6.84	1.07
3	Birla Ltd.	3.61	2.26	0.62	1.28	0.54	0.41	5.65	6.70	1.18
4	Shree Cement Ltd.	1.87	0.35	0.19	1.15	0.14	0.12	2.21	0.71	0.32
5	Madras Ltd.	2.17	0.42	0.19	1.25	0.20	0.16	2.78	0.93	0.33
6	Century Ltd.	3.82	1.95	0.51	1.25	0.13	0.11	4.84	2.41	0.49
7	India Cements Ltd.	3.94	2.94	0.74	1.67	3.78	2.25	5.32	16.75	3.14
8	Ambuja Ltd.	2.14	0.66	0.30	1.09	0.10	0.09	2.37	0.82	0.34
9	ACC Ltd.	3.11	1.09	0.35	1.16	0.21	0.18	3.84	2.19	0.56

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

Descriptive Statistics of Operating, Financial and Combined Leverage of Large Size firms

The descriptive statistics of Operating, Financial and Combined Leverage of Large Size firms of cement industry in India is presented in table 4 followed by figure-E. It is inferred that firm Century Ltd. records the highest minimum

(2.23) *OL* and firm Century Ltd. records the highest maximum (8.96) *OL* while the highest \bar{X} (3.94) is recorded for firm India Cements Ltd. The σ is highest (2.94) for firm India Cements Ltd., and the C_v is highest (0.746) for firm India Cements Ltd., which fact reveals that there is a volatility in the \bar{X} , σ , and C_v of *OL* of large size firms.

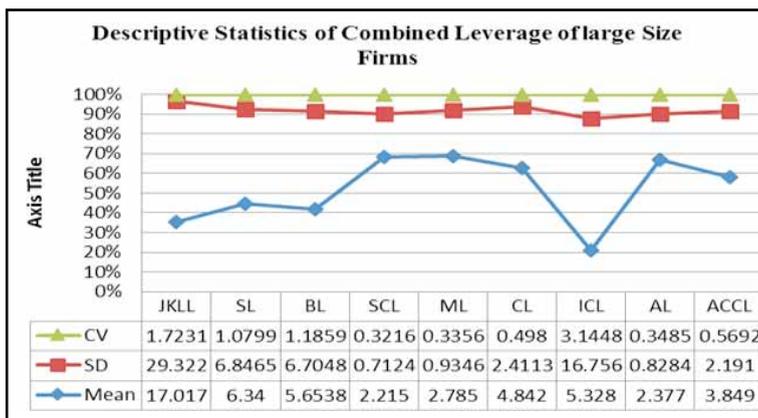


Figure -E : Descriptive Statistics of Combined Leverage of Large Size Firms for the period from 2003 to 2012

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

The firm Sanghi Ltd. records the highest minimum (1.28) *FL* and firm JK Lakshmi Ltd. records the highest maximum (11.51) *FL* and the highest \bar{X} (3.278) is recorded for firm JK Lakshmi Ltd. The σ is highest (4.34) for firm India JK Lakshmi Ltd., and the C_v is highest (2.25) for firm India Cements Ltd., which fact reveals that there is a volatility in the \bar{X} , σ , and C_v of *FL* of large size firms.

It is inferred that firm Century Ltd. records the highest minimum (2.65) *CL* and firm JK Lakshmi Ltd. records the highest maximum (72.63) *CL* and the highest \bar{X} (17.017) is recorded for firm JK Lakshmi Ltd. The σ is highest (29.33) for firm JK Lakshmi Ltd., however the C_v is highest (3.144)

for firm India Cements Ltd., which fact reveals that there is a high volatility in the \bar{X} , σ , and C_v of *CL* of large size firms.

Simple Regression Analysis of ROCE, ROD and ROE on OL

The results of simple regression analysis of *ROCE*, *ROD* and *ROE* on *OL* of cement industry in India are presented in table 5. The table shows that *ROCE* has significant negative co-efficient (-3.236) on *OL* in Cement industry in India. Hence, H_0^1 : "there is no significant impact of *ROCE* on *OL*" is rejected at 5% level (adjusted R^2 0.54). The overall regression model represented by R^2 is at 59% of the changes in *OL*. F statistics (10.475) is significant at 5% level, showing that the variance in the response variable is significantly explained by the variance in the predictor variable.

Table 5 : Simple Regression Results of ROCE, ROD and ROE on OL of Cement Industry in India from 2003 to 2012

Ratio of selected variables	ROCE			ROD			ROE		
	Simple Regression Co-efficient	t-value	p-value	Simple Regression Co-efficient	t-value	p-value	Simple Regression Co-efficient	t-value	p-value
Constant		6.396	.000		6.117	.000		5.824	.001
	-0.774	-3.236	.014	-.772	-3.216	0.015	-0.706	-2.636	.034
R^2	0.599			0.596			.498		
Adjusted R^2	.542			.539			.426		
F-Static	10.475*			10.344*			6.948*		
Durbin-Watson	2.729			3.005			2.285		

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd

ROD has significant negative co-efficient (-3.216) on *OL* in Cement industry in India. Hence, H_0^2 : “there is no significant impact of *ROD* on *OL*” is rejected at 5% level (adjusted R^2 0.54). The overall regression model represented by R^2 is at 59% of the changes in *OL*. The *F* statistics (10.344) is significant at 5% level, showing that the variance in the response variable is significantly explained by the variance in the predictor variable.

ROE has significant negative co-efficient (-2.636) on *OL* in Cement industry in India. Hence, H_0^3 : “there is no significant impact of *ROE* on *OL*” is rejected at 5% level (adjusted R^2 0.42). The overall regression model represented by R^2 is at 49% of the changes in *OL*. *F* statistics (6.948) is significant at 5% level, indicating that the variance in the response variable is explained by the variance in the predictor variable.

Multiple Regression Analysis of Selected Financial Variables on *OL*

The results of multiple regression analysis of the selected financial variables on *OL* of cement industry in India are presented in table 6. The table shows that *Net worth*, *Borrowings* and *Investments* have significant negative co-efficient (-81.54; -65.38; -57.32 respectively) on *OL Reserve fund* and *Gross fixed assets* have significant positive co-efficient (81.676; 0.289 respectively) on *OL*. Hence, H_0^4 : “there is no significant impact of *Net Worth*, *Reserve Fund*, *Borrowings*, *Investments* as well as *Gross Fixed Assets* on *OL* is rejected at 5% level. Hence, it is concluded that the selected financial variables have influenced the degree of *OL* of Cement Industry in India.

The overall regression model represented by R^2 is at 75% of the changes in *OL*. *F* statistics (1273.537) is significant at 5% level, showing that the variance in the response variable is significantly explained by the variance in the predictor variable.

Table 6
Multiple Regression Results of selected Financial Variables on *OL* of Cement Industry in India from 2003 to 2012

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
<i>OL</i>	-23.138	1.516		-15.259	
Net worth	-.001	.000	-14.989	-81.504*	0.04
Reserve Fund	.001	.000	13.388	81.676*	0.00
Borrowings	-.001	.000	-3.445	-65.381*	0.08
Investments	.000	.000	-1.914	-57.329*	0.00
Gross Fixed Assets	1.549	.000	.032	0.289*	0.01
R^2					0.75
Adjusted R^2					0.71
F-Static					1273.537*

Source: Computed results based on collected data from CMIE Prowess Pvt. Ltd.

Findings of the Study Corporate Leverage of Small Size Firms

The summary of descriptive statistics of *OL*, *FL* and *CL* of Small, Medium and Large size firms of cement industry in India are presented in table 7.

Table 7 : Descriptive Statistics of OL, FL and CL of Small Size, Medium Size and Large Size firms of Cement Industry in India

Small Size	Highest Minimum	Highest Maximum	Highest Mean
OL	Shri Keshav Ltd. (1.41)	Gujarat Sidhee Ltd. (25.77)	Sainik Finance Ltd. (4.53)
FL	Shri Keshav Ltd. (1.15)	Shri Keshav Ltd. (2.51)	Shri Keshav Ltd. (1.65)
CL	Shri Keshav Ltd.(1.97)	Shiva Cement Ltd. (9.45)	Shri Keshav Ltd.(4.25)
Medium Size	Highest Minimum	Highest Maximum	Highest Mean
OL	Heidelberg Ltd. (2.80)	Sagar Ltd. (39.76)	Heidelberg Ltd. (6.28)
FL	NCL Industries Ltd. (1.25)	Chettinad Ltd. (12.85)	Saurashtra Ltd. (14.65)
CL	Deccan Ltd. (2.08)	Chettinad Ltd. (42.43)	Chettinad Ltd. (6.49)
Large Size	Highest Minimum	Highest Maximum	Highest Mean
OL	Century Ltd. (2.23)	Century Ltd. (8.96)	Cements Ltd. (3.94)
FL	Sanghi Ltd. (1.28)	JK Lakshmi Ltd. (11.51)	JK Lakshmi Ltd. (3.27)
CL	Century Ltd. (2.68)	JK Lakshmi Ltd. (72.63)	JK Lakshmi Ltd. (17.01)

Source: Computed results based on collected data from CMIE prowess Pvt. Ltd

Operating Leverage

Firm, Shri Keshav Ltd. records the highest minimum (1.41) OL and firm Gujarat Sidhee Ltd. records the highest maximum (25.77) OL however, the highest \bar{X} (4.536) is recorded for firm Sainik Finance Ltd. The σ of OL is highest (16.03) for firm Gujarat Sidhee Ltd. however C_v is highest (2.85) for firm Shree Digvijay Ltd., which fact shows that there is a high volatility in the OL of small size firms of Cement industry in India.

Financial Leverage

Firm, Shri Keshav Ltd. records the highest minimum (1.15) FL, highest maximum (2.51) FL and the highest (1.65) \bar{X} . However, σ is highest (59.38) for firm India Shree Digvijay Ltd. with the C_v is highest (2.09) for firm India Keerthi Industry Ltd., which fact shows that there is a high volatility in the FL of small size firms of Cement industry in India.

Combined Leverage

Firm, Shri Keshav Ltd. records the highest minimum (1.97) CL and firm Shiva Cement Ltd. records the highest maximum (9.45) CL however, the highest \bar{X} of CL (4.258) is recorded for firm Shri Keshav Ltd. The σ is highest (209.82) for firm India Shree Digvijay Ltd., however the C_v is highest (3.033) for firm Shiva Cement Ltd., which fact shows that there is a high volatility in the CL of small size firms of Cement Industry in India.

Corporate Leverage of Medium Size Firms

Operating Leverage

Firm, Heidelberg Ltd. records the highest minimum (2.80) OL and firm Sagar Ltd. records the highest maximum (39.76)

OL however, the highest \bar{X} of OL (6.28) is recorded for firm Heidelberg Ltd. The σ of OL is highest (270.37) for firm Gujarat Sagar Ltd., however the C_v is highest (4.05) for firm Mangalam Ltd. which fact shows that there is a high volatility in the OL of medium size firms of Cement Industry in India.

Financial Leverage

Firm, NCL Industry Ltd. records the highest minimum (1.25) FL and firm Chettinad Ltd. records the highest maximum (12.85) FL however, the highest \bar{X} of FL is (14.65) recorded for firm Saurashtra Ltd. The σ and C_v of FL is highest (43.601; 2.97) for firm India Saurashtra Ltd., which fact shows that there is a high volatility in the FL of medium size firms of Cement Industry in India.

Combined Leverage

Firm, Deccan Ltd. records the highest minimum (2.08) CL and firm Chettinad Ltd. records the highest maximum (42.43) CL however, the highest \bar{X} of CL (6.497) is recorded for firm Chettinad Ltd. The σ of CL is highest (187.316) for firm Saurashtra Ltd., however the C_v is highest (5.949) for firm KCP Ltd., which fact shows that there is a high volatility in the CL of medium size firms of Cement Industry in India.

Corporate Leverage of Large Size Firms

Operating Leverage

Firm, Century Ltd. records the highest minimum (2.23) OL and firm Century Ltd. records the highest maximum (8.96) OL however, the highest \bar{X} of OL (3.94) is recorded for firm India Cements Ltd. The σ of OL (2.94) is highest for firm India Cements Ltd. however C_v is highest (0.746) for firm India Cements Ltd., which fact shows that there is a volatility in the OL of large size firms of Cement Industry in India.

Financial Leverage

Firm, Sanghi Ltd. records the highest minimum (1.28) *FL* and firm JK Lakshmi Ltd. records the highest maximum (11.51) *FL* however, the highest \bar{X} of *FL* (3.278) is recorded for firm JK Lakshmi Ltd. The σ of *FL* (4.339) is highest for firm JK Lakshmi Ltd., however C_v is highest (2.25) for firm India Cements Ltd., which fact shows that there is a volatility in the *FL* of large size firms of Cement Industry in India.

Combined Leverage

Firm, Century Ltd. records the highest minimum (2.65) *CL* and firm JK Lakshmi Ltd. records the highest maximum (72.63) *CL* however, the highest \bar{X} of *CL* (17.017) is recorded for firm JK Lakshmi Ltd. The σ of *CL* is highest (29.322) for firm JK Lakshmi Ltd., however the C_v is highest (3.144) for firm India Cements Ltd., which fact shows that there is a high volatility in the *CL* of large size firms of Cement Industry in India.

Concluding Remarks and Policy Prescriptions

From the study, it is concluded that there is a high volatility in the *FL* of all the firms which reflects a volatility in the \bar{X} , σ and C_v of *FL*. The overall results predict the mean value of *OL* as 63.033. *OL* increases as the ratio of fixed costs to variable costs increases. With a high ratio of fixed costs to variable costs, a small percentage change in sales will lead to a large percentage change in operating profit. The analysis of *FL* shows that the \bar{X} (37.22) indicates that Cement Industry has adopted a very good approach towards the debt capital. Simple regression applied proves that *ROCE* (-3.236), *ROD* (-3.216), and *ROE* (-2.636) have significant negative impact on *OL* of Cement Industry in India. Multiple regression applied proves that *NW*, *B* and *I* have significant negative co-efficient (-81.54; -65.38; -57.32) on *OL*. However, *RF* has significant positive co-efficient (81.676) on *OL*.

As far as the corporate leverage (*OL*, *FL* and *CL*) is concerned, the study concludes that there is a high volatility in the corporate leverage for all the three size categories of firms (small, medium and large) of Cement Industry in India. i.e., volatility in *OL*, *FL* and *CL* prevails in the whole cement industry irrespective of size of firms classified based on total assets as control variable. However, there is a significant impact of *ROCE*, *ROD*, *ROE*, *NW*, *RF*, *B*, *I* and *GFA* on *OL*. Hence, based on the results, the study rejects $H_0^1 - H_0^4$, revealing that the *ROCE*, *ROD*, *ROE*, *NW*, *RF*, *B*, *I* as well as *GFA* have impact on *OL* of Cement Industry as a whole in India irrespective of size of firms.

Suggestions

The *operating risk (OL)* of all the three size categories of firms is comparatively higher, which fact reveals that the *operating risk* is higher in all the three size categories of firms, hence it is suggested that the level of *OL* is to be reduced.

The *financial risk (FL)* of all the three size categories of firms is comparatively lesser when compared with the operating risk, which results in a balanced *combined risk or total risk (composite leverage)*, hence it is suggested that the firms of Cement Industry should try to minimize the total risk by reducing the *OL*.

Limitations and Scope for Further Studies

- ▶ In the present study, a sample of 29 firms of Cement Industry has been considered for analysis. In future, researchers can consider inclusion of more number of firms by referring to the other data sources like *capital plus* etc to take up a study with large sample units to explore further results.
- ▶ In the present study, *descriptive statistics*, *simple regression*, and *multiple regressions* are only used for analysis; therefore analysis by use of appropriate advanced models like *Chow Test* etc., if applied may bring a differing inference.
- ▶ Similar attempts could also be made by categorizing the corporate firms into *small*, *medium* and *large* based on other bases like *total sales*, *EBIT* etc. which may categorize the selected firms in to various size classes and may give a differing inference if analyzed based on such classification.

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Demographic Factors: Organizational Culture in the Academic Institutions

Namita Rajput and Ritu Kochhar

Abstract

Workplaces today are highly diversified. Employees belong to different countries, races, age groups, religions and genders. This results into workforce diversity. Presently, the acute labour shortage results in increase in retirement rate and decline in birth rate. It compels organizations to be lucrative. They attract young generation to workforce and sustain the existing experienced workforce. Private organizations have already their initiative introducing flexi time and work from home options. But in academic realm these practices are not noted.

The paper attempts to identify factors which influence faculty member's intention to join motivators, follow values and acquire expected leadership qualities using Factor Analysis, T Test, and Anova on sample of 690. Significant differences are observed among faculty across demographics on the studied variables. The academic institutions are required to keep these preferences in mind while designing HR policies.

Key Words : Work Motivators, Values, Leadership, Workforce Diversity, Generational Differences



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Organizations today are experiencing mass exodus of their experienced employees by their retirement. By globalization too, organizations are experiencing growing need for workplace competencies and skills. The decline in growth rate of labour supply makes organizations find it difficult to maintain the balance between the inflow and outflow of talented and skilled workforce. The problem will worsen in the years to come. In 2003, Canadian Federation of Independent Business in their study reported that 50% of their organizations have ranked labour shortage as their major problem. Global trends in the year 2010 also highlighted that the labour market is experiencing an unmatched crisis. Both the public and the private sectors experience staffing shortfalls.

The HR Departments need to attract fresh talent. At once they require skilled manpower. Therefore congenial environment is essential. It shall make the person - organization fit: everything from infrastructure to value

system, or performance evaluation to career growth system, or it shall have leadership pattern with accent on the needs of the employees.

Private sector has already started focusing on understanding the needs and aspirations of upcoming workforce. A webcast poll conducted in US found that 21 percent of respondents already had implemented strategies to recruit and retain younger workforce, 25 percent were considering doing so, and 36 percent currently were researching options to do so. However, such efforts on the part of Universities or Colleges failed to attract new talents and retain their staff.

This study is an effort to identify the needs and expectations of faculty members at work as they are the building blocks of any nation and help in developing good and responsible citizens. Unsatisfied or unhappy teachers can badly affect the quality of students produced by them.

Review of Literature

The employees join a particular organisation or get attracted to a particular organisation for number of reasons (Rose and Waterhouse, 2005). Eddy and Burke (2006) have listed that while for women, recruitment attractors include people, reputation and benefits, in general, most desirable job attributes include opportunities for advancement, training opportunities and skill development, good people to work with and report to, and salary. According to Amundson (2007), best attractors which give company a competitive edge include security, location, relationships, recognition, contribution, flexibility, learning and innovation.

Motivation is something that moves the person into action, and continues him in the course of action already initiated (Aswathappa, 2010). Satisfied and motivated employees outperform those who are not satisfied by 25% (Cialdini, Petrova, and Goldstein, 2004). Also, emphasis should be given on pulling the people towards performance rather than pushing them so that they achieve organizational goals voluntarily (Locke and Latham, 2004; Michaelson, 2005).

Values guide as to what is right or wrong (Rokeach, 1973). It is also proved that with more compatibility between organization's core values and employees work values, organization's chances to succeed increase (Karl K. A., 1998; Van, Van Riel and Wierenga, 2006). Preference of individual employees for organizational values can be identified to develop a culture which ensures job satisfaction, organizational commitment and person - organization fit. (Brick, 2011; Chatman, 1989; O'Reilly, Chatman, and Caldwell, 1991; Vandenberghe and Peiro, 1999).

A leader is one who guides and directs other people. It is evident from the previous researches that difference in the attitudes, values, and beliefs influences the expectations for leadership. Successful leaders are the ones who adapt themselves according to the changing needs of their employees (Tulgan, 1996).

Work Motivators and Company Values are important ingredients related to job satisfaction. Similarly differences in the attitudes, values, and beliefs of each employee affect how they view leadership. It is therefore justified to conduct a study to investigate the preferences of faculty members for their work place attractors, motivators, values and leadership expectations, and to compare the preferences across demographics.

Research Objectives

1. To determine the factors influencing intentions to join, work motivation, company values, and leadership expectations among faculty members, and
2. To study the impact of demographics on identified factors influencing intentions to join, motivation, company values, and leadership expectations.
 - a. $H_0(1)$: Gender of respondents has no significant impact on the importance given to factors influencing intentions to join, work motivation, company values, and leadership expectations.
 - b. $H_0(2)$: Generation (birth year) of respondents has no significant impact on the importance given to factors influencing intentions to join, work motivation, company values, and leadership expectations.
 - c. $H_0(3)$: Marital Status of respondents has no significant impact on the importance given to factors influencing intentions to join, work motivation, company values, and leadership expectations.
 - d. $H_0(4)$: Occupation of respondents has no significant impact on the importance given to factors influencing intentions to join, work motivation, company values, and leadership expectations.
 - e. $H_0(5)$: Organization of respondents has no significant impact on the importance given to factors influencing intentions to join, work motivation, company values, and leadership expectations.

Research Instrument and Sample

The items included in the survey for work motivators and company values are same as the items used in the research study of Brick (2011), Michael and Leschinsky (2004), and Montana and Lenaghan (1999). For finding the leadership

expectations, work of Pierce and Newstorm (2000) was taken for reference. For identifying intentions to join, literature consisting of Rose and Gordon (2010), Gaylard, Sutherland, and Viedge (2005), and Kaye and Jordan - Evans (2000) was referred.

Faculty members working in Universities / Colleges in Delhi and NCR form part of the study. 690 usable questionnaires were received out of 1100 resulting into 62.7% return rate. The response population was 38% female and 62% male, with 46% participants identifying themselves as Assistant Professors, 25% as Associate Professors and 29% as

Professors. Percentage of married and unmarried faculty members included 79% and 21% and that of Government and Non – government employees 36% and 64% respectively. Percentage response from all generations i.e. Baby Boomers, Generation X and Generation Y was kept as equal i.e. 230 each.

Empirical Findings:

A. Factor analysis is a set of techniques, which, by analyzing correlations between variables, reduces their number into fewer factors, which explain much of the original data, more economically (Nargundkar, 2005).

Table 1 showing loadings of factors for various variables:

Variable	Name of Dimension	Item No.	Statements	KMO	Variance Explained	Factor Loading	Reliability
Intentions to Join 1	Career Growth Opportunities	12	My job offers me steady growth opportunities.	0.874	22.465	0.792	<u>0.817</u>
		11	It offers me the opportunity to update my skills on continuous basis.			0.756	
		10	Career Development and future growth prospects are high.			0.753	
		14	.My job offers me the opportunity to share my knowledge with others.			0.659	
		9	I found the salary lucrative.			0.537	
		15	My job helps me to maintain work - life balance.			0.507	
Intentions to Join 2	Quality of Work	1	The work allocated to me is comparable to my qualifications.		15.812	0.711	<u>0.761</u>
		4	My organization enjoys very good reputation.			0.706	
		2	The work allotted to me is interesting.			0.613	
		3	The location of my job is convenient to me.			0.504	
		5	My job is secured.			0.494	
		16	The organization I work for is recognized and appreciated by the society.			0.44	
Intentions to Join 3	Needs	7	I received the job offer through an employee referral.		14.889	0.786	<u>0.656</u>
		6	I just wanted the job at that time.			0.767	
		13	My job fits well with the constraints set by my family.			0.523	
Motivation 1	Employee Security	25	I have been clearly communicated about my pension and other security benefits in my job.	0.867	14.539	0.763	<u>0.777</u>
		33	My job offers me enough opportunities of working with my colleagues as a team.			0.651	

		34	My job offers me adequate opportunities to enjoy and spend time with young generation.			0.614	
		32	My job profile and responsibilities do not disturb my work and family balance.			0.593	
		24	I find my job very interesting.			0.534	
Motivation 2	Feeling Appreciated / Recognition	21	I get an opportunity to produce quality work.		14.145	0.673	<u>0.677</u>
		26	My seniors appreciate me for job well done.			0.666	
		22	I share good inter - personal relationships with colleagues at workplace.			0.657	
		27	I feel that my job profile is very important in the organization.			0.531	
Motivation 3	Skill Updation and Evaluation	31	My job offers me the opportunity to update my skills on a continuous basis.		12.127	0.694	<u>0.666</u>
		29	I am recognized by my bosses when I complete my assignments on time.			0.561	
		30	I am evaluated on the basis of my performance.			0.528	
Motivation 4	Status of Job	19	I am getting a handsome salary.		9.752	0.733	<u>0.645</u>
		17	My immediate superior respects me a lot.			0.607	
		35	My job profile is respected and appreciated by people around me.			0.533	
Motivation 5	Work Conditions	18	I get adequate rest periods and breaks during my working hours.		8.508	0.78	<u>0.496</u>
		20	Infrastructural facilities are very good in my organization.			0.576	
		28	My job offers me the opportunity to do variety of jobs at one time.			0.485	
Values 1	Performance and Evaluation	46	My organization expects me to follow the conduct rules seriously while working on my assignments.	0.887	21.099	0.793	<u>0.843</u>
		44	My organization expects me to be careful in my job.			0.69	
		50	My organization expects us to be tolerant while on job.			0.68	
		43	My organization expects me to give my best performance.			0.649	
		48	My organization evaluates employees on the basis of their achievements on the job.			0.58	
		49	My organization encourages employees to foresee future opportunities and encashing them before others.			0.539	
		42	My organization evaluates employees on the basis of objective criteria.			0.475	

Values 2	Freedom to grow and experiment	37	My organization ensures respect for individual rights.		17.279	0.826	<u>0.764</u>
		45	My organization is fair in treatment to all its employees.			0.623	
		39	My organization offers me opportunities for growth.			0.584	
		47	My organization offers me the opportunity to experiment.			0.51	
		36	My organization encourages innovativeness and creativity on the job.			0.494	
Values 3	Flexible Teams and Approach to Risk	40	My organization provides opportunities for working in cross - departmental teams		13.472	0.825	0.750
		41	My organization encourages its employees to take risks while handling assignments.			0.789	
		38	My job offers predictable job assignments.			0.55	
Values 4	Security	52	My organization offers secured employment.		10.339	0.918	<u>0.794</u>
		51	My organization offers stability in job.			0.823	
Leader 1	Fairness and Competency	54	A leader must be caring towards his subordinates.	0.834	21.738	0.837	<u>0.715</u>
		53	A leader must be very ambitious.			0.738	
		55	A leader should be competent enough in his job to lead others.			0.643	
		58	A leader should be very honest to his job and organization.			0.453	
Leader 2	Team Orientation	61	A leader should be able to motivate his team members to give their best.		20.237	0.785	<u>0.662</u>
		62	A leader must be self - confident.			0.744	
		60	A leader should encourage team performance rather than individual performance.			0.646	
Leader 3	Creativity and Foresightedness	57	A leader should always be forward looking.		18.962	0.805	<u>0.718</u>
		58	A leader should have the strong determination to complete all the assignments very successfully.			0.759	
		59	A leader should have good imagination and creative skills.			0.64	

B. Study of impact of demographics on identified factors influencing intentions to join, work motivation, company values, and leadership expectations

For achieving this objective, Null Hypothesis that 'there is no significant relationship between the demographic variables and the factors' was taken. T Test and one way Anova were used based on the number of groups available in independent variable for finding out the differences.

Mean scores were calculated for factors where significant relationship between independent and dependent variables (factors) was observed.

Decision Rule: When the significance value of F-test/Welch test is less than 0.05, Null hypothesis is rejected. When the Null Hypothesis is rejected, Post Hoc analysis in case of one way Anova is used for further ascertaining which groups differ among their mean score.

1. Effect of Gender on factors

Table II showing influence of Gender on Variables
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
ITJ 1 - Career Growth Opportunities	Equal variances assumed	3.357	.067	3.928	688	.000
	Mean Score (Male)					.1150865
	Mean Score (Female)					-.1903353
WM2 - Feeling Appreciated / Recognition	Equal variances assumed	11.188	.001	2.925	688	.004
	Equal variances not assumed			3.058	621.829	.002
	Mean Score (Male)					.0861111
	Mean Score (Female)					-.1424145
WM 3 - Skill Updation and Evaluation	Equal variances assumed	.242	.623	3.830	688	.000
	Mean Score (Male)					.1122579
	Mean Score (Female)					-.1856573
CV 2 - Freedom to grow and experiment	Equal variances assumed	6.507	.011	3.497	688	.001
	Equal variances not assumed			3.682	632.743	.000
	Mean Score (Male)					.1026851
	Mean Score (Female)					-.1698253

Null Hypothesis $H_0(1)$ is partially rejected as it was found that there were significant differences among genders for factors influencing their intentions to join, work motivation, and company values. Career growth opportunities available in teaching industry was found to be more attractive to female staff members as compared to male faculty. Feeling appreciated / recognition and skill updation and evaluation also were observed to be more important and motivating for female faculty. Organizations emphasizing value of freedom to grow and experiment was also preferred more in female fraternity.

The reasons for the same can be attributed to the fact that teaching as a career is mostly joined by the female members because it helps them to maintain their work life balance as

they have equal responsibility for maintaining their homes and taking care of children and other family members. They always look for occupations where they get good growth opportunities without compromising on their priorities for families. Males however have no such limitation. Hence while recognition and appreciation works well with female faculty, monetary incentives are more important for their male counterparts.

It is also observed that glass ceiling effects and concepts like old boys club always resist women to take on risky decisions or experiment more in the corporate world as they are male dominated societies, however, teaching industry is more female dominated hence they have freedom to experiment and be creative.

2. Effect of Generations on factors

Table III: Influence of Generations (Year of Birth) on Variables
Test of Homogeneity of Variances and Anova

Factors	Levene Statistic	Sig.	F	Sig.	Welch Statistics	Sig.
ITJ 3 - Needs	1.198	0.302	8.797	0	8.776	.000
Mean Score	Baby Boomers (1945 – 1964)					0.17493
	Generation X(1965 – 1980)					-0.20767
	Generation Y (1981 – 2000)					0.032744
WM 2 - Feeling Appreciated / Recognition	3.273	0.038	3.546	0.029	3.304	0.038
Mean Score	Baby Boomers (1945 – 1964)					-0.00239
	Generation X(1965 – 1980)					-0.1225
	Generation Y (1981 – 2000)					0.124885
WM 3 - Skill Updation and Evaluation	4.496	0.011	13.13	0	15.016	0
Mean Score	Baby Boomers (1945 – 1964)					0.259002
	Generation X(1965 – 1980)					-0.05997
	Generation Y (1981 – 2000)					-0.19903
WM 4 - Status of Job	3.861	0.022	7.365	0.001	6.174	0.002
Mean Score	Baby Boomers (1945 – 1964)					0.190406
	Generation X(1965 – 1980)					-0.1604
	Generation Y (1981 – 2000)					-0.03001
CV 1 - Performance and Evaluation	17.534	0	18.324	0	15.674	0
Mean Score	Baby Boomers (1945 – 1964)					0.317142
	Generation X(1965 – 1980)					-0.1381
	Generation Y (1981 – 2000)					-0.17904
CV 3 - Flexible Teams and Approach to Risk	7.033	0.001	10.973	0	10.788	0
Mean Score	Baby Boomers (1945 – 1964)					-0.1944
	Generation X(1965 – 1980)					-0.03705
	Generation Y (1981 – 2000)					0.231453
LD 2 - Team Orientation	5.994	0.003	3.327	0.036	3.395	0.034
Mean Score	Baby Boomers (1945 – 1964)					-0.1384
	Generation X(1965 – 1980)					0.068011
	Generation Y (1981 – 2000)					0.07039
LD 3 - Creativity and Foresightedness	0.592	0.554	5.193	0.006	5.205	0.006
Mean Score	Baby Boomers (1945 – 1964)					-0.16506
	Generation X(1965 – 1980)					0.039254
	Generation Y (1981 – 2000)					0.125802

Null Hypothesis $H_0(2)$ was partially rejected and it was observed that significant differences exist among generations for their intentions to join, work motivation, company values and leadership expectations.

For the variable intentions to join, differences were found to exist in one of the factors i.e. need for the job. Through Post hoc analysis, it was observed that Generation X employees has rated this factor significantly important as compared to other Generations i.e. Baby Boomers and Generation Y. Generation X employees have high pressures on them because of their family needs i.e. education of children, looking after parents etc, need for the job therefore is the most important factor which influences their decision to join a particular organization.

For the variable work motivation, significant differences were found to exist among three out of five factors (1) Feeling Appreciated / Recognition, (2) Skill Updation and Evaluation and (3) Status of Job. Through Post hoc analysis, it was found that Feeling Appreciated / Recognition was not that important to Generation Y as it was to other two generations i.e. Baby Boomers and Generation X. Generation Y being the youngest in the workplace were multitasking. They preferred handsome salary and work life balance more as compared to recognition and appreciation. Similarly, factors skill updation and evaluation and status of job were significantly more important to Generation X and Generation Y as compared to Baby Boomers.

For the variable preferred company values also, significant differences exist among generations for the factors, Performance and Evaluation and Flexible and Risk Taking Approach. Through post hoc analysis, it was found that Performance and Evaluation carried more importance to Generation X and Y as compared to Baby Boomer Generation. For factor flexible and risk taking approach, it was observed that generation Y given less preference to this factor as they are new in the profession and still have long way to go to prove themselves, they don't want risky assignments at the initial stages. Further, because they have got a much escorted parenting, they want their mentors also to be always around to be looked upon to. Hence, flexible teams are not interesting to them.

For variable leadership expectations, significant differences were observed in factors, Team Orientation and Creativity, and Foresightedness. Through post hoc analysis, it was found that Team Orientation was very important for Baby Boomer Generation (1945 – 1964) as compared to other two generations i.e. Generation X and Generation Y. The reason can be attributed to the fact that since this generation is the senior generation, rather than doing the whole task themselves they want a team wherein they can just give their ideas and suggestions and rest of the members can follow them. Similarly factors Creativity and Foresightedness were also rated more important by Baby Boomer Generation as compared to other two generations.

3. Effect of Marital Status on factors

Table IV showing Influence of Marital Status on Factors

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
ITJ 2 - Quality of Work	Equal variances assumed	1.276	.259	-2.063	688	.039
	Mean Score (Married)					-.0393577
	Mean Score (Unmarried)					.1560149
CV 3 - Flexible Teams and Approach to Risk	Equal variances assumed	3.302	.070	-2.728	688	.007
	Mean Score (Married)					-.0519259
	Mean Score (Unmarried)					.2058358

Null Hypothesis $H_0(3)$ was partially rejected and it was observed that significant differences exist based on marital status among faculty members for their intentions to join

and company values. The factor ITJ 2 – Quality of work includes statements like my job is secured, location of job is convenient to me and work is comparable to my

qualifications. Married employees having their family responsibilities always look for jobs which are conveniently located and are secured as they help them meet their responsibilities satisfactorily. Further, if the job is secured, they will always be stress free.

Further, married people are in the mid of their career age where they have got experience and expertise. As they want

quick promotions, they don't mind taking risky decisions based on their knowledge and experience in the concerned field. Further, since they have enough knowledge in their specialized area, they always look for opportunities wherein they can work in other functional areas, grab the knowledge and improve their worth for the future growth opportunities.

4. Effect of Occupation on factors

Table V showing influence of Occupations on factors - Test of Homogeneity of Variances and Anova

Factors	Levene Statistic	Sig.	F	Sig.	Welch Statistics	Sig.
WM 3 - Skill Updation and Evaluation	3.729	.025	10.530	.000	12.119	.000
Mean Score	Professor					.2674002
	Associate Professor					-.0941983
	Assistant Professor					-.1195004
CV 1 - Performance and Evaluation	16.209	.000	13.531	.000	11.026	.000
Mean Score	Professor					.3022851
	Associate Professor					-.1323002
	Assistant Professor					-.1212910
CV 3 - Flexible Teams and Approach to Risk	11.032	.000	12.943	.000	15.893	.000
Mean Score	Professor					-.2951412
	Associate Professor					.0990437
	Assistant Professor					.1345318
LD 2 - Team Orientation	4.847	.008	3.987	.019	4.633	.010
Mean Score	Professor					-.1625481
	Associate Professor					.0301951
	Assistant Professor					.0871118
LD 3 - Creativity and Foresightedness	4.746	.009	6.978	.001	7.301	.001
Mean Score	Professor					-.1001407
	Associate Professor					-.1625117
	Assistant Professor					.1504887

Null Hypothesis $H_0(4)$ was partially rejected and it was observed that significant differences exist across occupations (Professor, Associate Professor and Asst. Professor) among faculty for their intentions to join, work motivation, company values, and leadership expectations.

Work Motivator factor Skill Updation and Evaluation were found to be more important for Associate Professors and Asst. Professors as compared to Professors. Similarly, Preferred Company Value factor on Performance and Evaluation was also found less important for Professor as compared to Associate and Assistant Professors. The reason can be attributed to the fact that majority of professors are on verge of their retirement. Hence their zeal for skill enhancement is not that great as is there in their juniors fellows. Further, they always want their experience to be given more weightage.

Through post hoc analysis, it was observed that Company Value factors - Flexible teams and risk taking approach are more important for Professors as compared to Associate and Asst. Professors. Professors because of their expertise are always inclined to take more risks to show their worth and also they are not afraid of failures.

On the leadership expectations factor – Team Orientation, it was found that Professors give more importance to leaders who create teams and give group goals. Professors want to be associated more with the teams wherein they get the opportunity to give their suggestions and get the work out of their juniors. On the other hand, Asst. Professors are always keen on doing individual assignments since they still have to prove themselves in the organization.

On the leadership expectation factor – Creativity and foresightedness, post hoc analysis showed that this factor is very important for Professors as compared to Asst. Professors. The reason can be attributed to the fact that since Asst. Professors are new in the profession, preparing

lectures or their PhD assignments occupy most of their time. Professors on the other hand are relaxed as they have developed expertise in subject over years, they get more time to devote in research projects or collaborating more with industry people.

5. Effect of Organization on factors

Table VI showing impact of organization on factors - Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
ITJ 3 - Needs	Equal variances assumed	14.639	.000	2.712	688	.007
	Equal variances not assumed			2.633	461.089	.009
Mean Scores	Govt. University					.1385083
	Non - Govt. University					-.0762574
WM 3 - Skill Updation and Evaluation	Equal variances assumed	6.359	.012	3.568	688	.000
	Equal variances not assumed			3.721	566.773	.000
Mean Scores	Govt. University					.1815320
	Non - Govt. University					-.0999446
WM 4 - Status of Job	Equal variances assumed	11.240	.001	3.379	688	.001
	Equal variances not assumed			2.983	354.143	.003
Mean Scores	Govt. University					.1720787
	Non - Govt. University					-.0947399
WM 5 - Work Conditions	Equal variances assumed	2.134	.144	2.259	688	.024
	Equal variances not assumed			2.327	548.156	.020
Mean Scores	Govt. University					.1155365
	Non - Govt. University					-.0636100
CV 1 - Performance and Evaluation	Equal variances assumed	17.686	.000	3.683	688	.000
	Equal variances not assumed			3.472	423.199	.001
Mean Scores	Govt. University					.1872867
	Non - Govt. University					-.1031129
Ld 1 - Fairness and Competency	Equal variances assumed	52.324	.000	3.646	688	.000
	Equal variances not assumed			3.295	376.619	.001
Mean Scores	Govt. University					.1854194
	Non - Govt. University					-.1020848
Ld 2 - Team Orientation	Equal variances assumed	2.087	.149	-2.619	688	.009
	Equal variances not assumed			-2.725	563.087	.007
Mean Scores	Govt. University					-.1338085
	Non - Govt. University					.0736699

On the Intention to Join Factor – Need, significant differences were found among government and non – government university employees. The reason can be given that everyone wants to join a government university, but the family pressures actual push people to join non – government colleges even when they get less pay scales or other facilities.

On the work motivator factors, skill updation and evaluation, status of job and work conditions, preferences of government employees were found to be different from non government employees. These factors were considered as very important factors by non – government employees. The reason can be once you join a government university, work conditions, status or skill updation and evaluations are not that important because the other facilities are much more and further there is job security. However, in non-government organizations, enhancing skills on regular basis, status of job and its importance for the organization and working conditions like infrastructure, timings, work pressures are some factors which really motivate employees at work.

Further, for company value – performance and evaluation also, differences were found. This may be because in most of the government organization, number of years of service and experience were seen for promotions while in non – government organizations, rather than experience or number of years of service, employees skills and capabilities and his performance on job was taken into consideration while deciding incentives.

Fair and competent leader was rated more important by non – government faculty members rather than government teachers. This may be because performance evaluations are in the hands of immediate seniors. If they are fair, there are more chances that promotions and incentives will be distributed on merit basis.

Further non – government employees because of their job demands always like to work as individual rather than in teams so that they get full credit for the task completed. On the other hand, government employees prefer to work in teams since they don't mind sharing their resources and there is no such tug of war between them to show their worth.

Implications for Management: -

To remain competent in the market and to make sure that good and skilled employees are choosing teaching as their career, it is very important for the universities to come out with innovative human resource strategies to become attractive and lucrative for the younger generations. It is evident from the findings that younger employees are keen to join organizations which offer facilities like flexi timings, convenient location and opportunities for maintaining work – life balance. If we consider the choice of female employees also, they have preference for organizations which are located conveniently and which have steady growth opportunities. Further, they also want opportunities for updating their skills on regular basis and having autonomy to experiment in their work assignments. Married employees give more preference to factors like secured job, fixed timings and work - life balance. They don't want to be involved in target oriented jobs since they have their family pressures as well. Occupation-wise also, Asst. Professors and Associate Professors would like to be associated with organizations which have sound and unfair policies for performance evaluations and inventive and promotions are decided accordingly. Professors on the other hand want to be associated more with job assignments where they can mentor their juniors and give them advice based on their expertise and experience. Their expertise and talent can be therefore used for collaborating with foreign universities and industry people. Similarly, non – government employees always would like to work with colleges which have fair and unbiased rules and regulations. Further, good working conditions - infrastructure, pay scales, timings, incentives and superior subordinate relationships -are other factors which attract employees towards the particular colleges or universities.

Recommendations:

1. Presence of opportunities for attending properly designed training and development modules within the organization or outside which can help employees to update their skills on continuous basis will go a long way in attracting young and talented workforce to join the organization.
2. Performance Appraisal Methods emphasizing on merit, quality of performance, and targets achieved rather than seniority should be introduced and given more weightage. This will help in both attracting young and

fresh blood from the market and also sharpening the skill set of employees already available in organization.

3. Flexi – timings, shift working, work from home options is another area in which organizations and human resource managers need to work.
4. Sponsoring employees for higher education, reduced work timings during education period, paid leaves and availability of overall infrastructure suitable for such activities should be strategically planned, designed and implemented. This will surely help any organization to join the best employer club for the job seekers.
5. Opportunities for sending faculty abroad on foreign exchange programmes can also be an option available to attract young and talented workforce available outside.
6. Since Baby Boomer generation prefers challenging and interesting tasks, their expertise and knowledge can be used in jobs like designing syllabus for the new programmes, conducting executive or management development programmes keeping in mind the needs and demands of industry.
7. Another area where universities and colleges can work is research and consultancy. Making consultancy work essential by sending faculty on training on paid basis to corporate world, will help them not only to experience the real difficulties faced by corporate people but it will also help them in relating their experiences in companies in the classrooms with theoretical concepts to make their classes more alive.
8. The organization should appoint leaders based on their knowledge, skills and merit rather than their qualification or seniority. Because only talented leaders who are experienced and are experts in their field can lead a team with confidence. This will also develop respect among team members for their leader.

Future Research:

The scope of the study was very limited as it was confined to faculty members working in Universities, Colleges and Institutes approved by AICTE in Delhi and NCR. Similar research work can be conducted on all India basis to have a wider view of work force diversities. Similar studies can also be conducted in sectors other than education or population of other countries and culture where such work has not been done so far in much detail for broadening the understanding of diversity among demographics.

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Skills for Employability : Employers' Perspective

Nitin Kulkarni and A.H. Chachadi

Abstract

Considerable studies have come out attempting to highlight the issue of non-employability of fresh engineering graduates in India. A few have tried to measure the employers' perspective in a manner that can be objectively utilised. This pilot study intends to measure the perspective of employers on four major skills sets - Human Skills, Professional skills, Communication skills, and Technical Skills. Using Analytic Hierarchy Process, effort has been made to quantify these preferences of skill-sets in three industry sectors. Analysis of the primary data showed that employers, across three industry sectors preferred Human skills to any other skills measured.

Key Words : Employability; Human Skills; Technical Skills; Professional Skills; Communication skills; Analytic Hierarchy Process (AHP).



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Education is regarded as a key enabler of empowerment in any nation. Education helps to develop a person individually, socially and economically. This transformation of the individual drives the social growth engine. One such critical aspect of education is generating employable human power. India, since its independence, has grown its education sector significantly. Among the various objectives of education, which include, development of personality, creating self awareness, technical knowledge - making one employable is also an equally prominent objective. Employability is a domain of employer where work dimensions define employability. In today's global economy, employability of engineering graduates plays an important role in nation's wealth building.

India produces over 500,000 engineering graduates every year. Majority of these engineering graduates are in the Indian market for gainful employment. According to the widely quoted report by the National Association of Software and Services Companies (NASSCOM) and

McKinsey in 2005, only 25% of the engineering education graduates are employable by multinational companies. A 2012 study conducted by Aspiring Minds (a placement assessment company), published a report quoting mere 17% of the engineering graduates out of 55,000 it tested, to be fit for IT jobs. The quantitative expansion in engineering education capacity has generally perceived to have led to an average decline in the quality of the students entering the teaching profession and, consequently, the decline in the quality of the graduating engineers.

According to Andreas Blom, Hiroshi Saeki (2011) of World Bank, who, in their study 'Employability and Skill Set of Newly Graduated Engineers in India' suggest that the skill gaps are largest within higher-order thinking skills (problem solving, logic, numerical ability) and smallest among the lower-order thinking skills (communication skills, soft skills). This finding they arrived at by mapping the Professional (cognitive) Skills onto the Bloom's revised taxonomy of cognitive skills. Bloom's taxonomy divides educational objectives into three "domains": Cognitive, Affective and Psychomotor (sometimes loosely described as *knowing / head, feeling /heart and doing/hands* respectively) Within the domains, learning at the higher levels is dependent on having attained prerequisite knowledge and skills at lower levels (Orlich, et al. 2004).

Employability:

In India, there is a strong perceived co-relation between engineering education and a stream of employment opportunities one gets after graduation. Philosophically, it is only but rational to think that a person who has acquired practical, value added, solution driven knowledge, seeks a fitting position in an organization. But, the question goes unanswered as to, how fair is to expect that degrees lead to jobs. Importantly, if this notion were to be true, why Indian engineering graduates are considered 'unemployable' by the industry?

It is imperative to look into the differences between employment and employability. Employment is an outcome / reward for a worthy candidate. This cluster of knowledge, skills and abilities can be collectively referred to as tenets of employability. This employability is a measure of individual's potential and is dependent on various factors as given in Fig. 1.

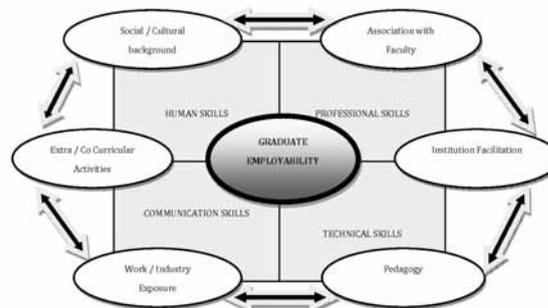


Fig. 1. Factors contributing to employability

Many studies suggest that developing employability skills in graduates is an issue for the higher education sector, not only in relation to the first job students may gain after their studies, but also important for graduate prospects at future points of career development or change. And for those who are already working, developing employability through higher education study is part of a lifelong learning process both to improve employment prospects and to achieve personal learning goals (Pegg, 2011).

According to Harvey L. (2003) employability is not just about getting a job. Conversely, just because a student is on a vocational course does not mean that somehow employability is automatic. Employability is more than, developing attributes, techniques or experiences just to enable a student to get a job, or to progress within a current career. It is about learning, and, the emphasis is less on 'employ' and more on 'ability.' In essence, the emphasis is on developing critical, reflective abilities, with a view to empowering and enhancing the learner.

Employability is a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy (Yorke, M. 2006).

India, in the last few decades, has built a large capacity in technical and other professional education. It is technology education that boosted the Information Technology (IT) growth, which is unprecedented. Along with IT, other emerging sectors seek consistent supply of quality manpower. The pressure to identify and access quality manpower at the campus level has reached its frenzy in the last few years.

One dimension of education - “delivering on promise” is the success of graduates in securing decent employment after the completion of the programme. The preference for technical education to general education emanates from this very expectation. This promise is broken if, after graduation many students fail to find employment or are forced to accept low paying jobs not commensurate with their qualification. High incidence of unemployment, underemployment or low income becomes a matter of serious concern to central and state governments (I. Padmini, 2012).

Many studies on employability have been published in India. This study on employability in contrast, considers employability as a multi criteria outcome, i.e. many factors contribute to employability of a fresh engineer but to a varying degree. To appreciate the multi criteria aspect of employability, Analytic Hierarchy Process (AHP) is used. AHP helps to delineate these factors to arrive at a better understanding of employers’ perception about skills needed in a fresh graduate engineer.

Employability of fresh graduates is being studied to a great deal in many countries like Australia, Malaysia and the UK. In fact, the studies undertaken in Malaysia are majorly focused on engineering graduates. There is substantial literature available on general university graduates and non-graduates in the universities in Australia and the UK.

The job market in general is so competitive that we need to do more than just focus on our background and qualifications. The ‘one size fits all’ approach is long gone. Labour market conditions for engineering graduates today are particularly tough due to globalization and competition, as the numbers of graduates are continuously increasing. Competition among the graduates has become more aggressive. Engineering graduates worldwide should acquire certain employability skills to be aggressive and competent. They need to embrace themselves with suitable soft skills to stay competitive (Azami Zaharim, et al. 2009).

Students today live in a global society—a society where they cannot ignore global interdependence and global inequalities. Awareness of the world has heightened the curiosity of the students about their role in a global society. They travel across the world, absorb news, and communicate with people from across the world. Unless students find roles to play for themselves, there is a risk of disenfranchisement or disillusionment, that they are aware of global issues but do nothing about them (Lamb, 2007).

‘Employability’ is defined by the ‘Enhancing Student Employability Co-ordination Team’ (ESECT) as ‘A set of achievements, skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy’ (Leggott, 2007).

India’s substantial growth in recent years has resulted in a significant increase in demand for engineers. Information technology companies, now a major part of the Indian private sector, have been prominent in such recruitment, but the competences they seek in engineering students appear to be different, compared to the priorities sought by other engineering firms. Against this background, along with the Indian employers’ general dissatisfaction with graduates’ skills, a study needs to be made to understand the preferences of various skills which they seek in a fresh engineering graduate. Employability is determined according to students’ success in campus recruitment drives by Information Technology companies, that is, whether they receive an offer of employment (Gokuladas, 2010).

This study analyses the primary data received from employers / hiring managers. The survey questionnaire sought employers’ perception on the relative importance of four skill sets – Human skills, Professional skills, Communication skills, and Technical skills.

National Board of Accreditation has proposed a set of 12 Graduate Attributes (GA’s) as a measure of effectiveness of undergraduate program outcomes. These 12 attributes are grouped into four broad based, mutually exclusive skill groups to help facilitate the pilot study. These four groups are- Human skills, Professional skills, Communication skills and Technical skills. For example, Environment and Sustainability, Ethics and Individual/Team work are grouped to form Human skills. Similarly attributes like, the Engineer and Society, Project management and Finance, and Life-long learning have been grouped into Professional skills. These skills differentiate one individual from the other on their professional capabilities. Attributes like, Engineering knowledge, Problem analysis, Design/Development of solutions, Conduction of investigation of complex problems and Modern tool usage, fall under Technical skills group. Lastly the written and verbal communication skills are classified into – Communication skills (NBA Accreditation manual for UG engineering program, 2013).

A survey questionnaire was developed for collecting the 'pair-wise' comparison with the Employers' perception of employability of fresh engineering Graduates. Four criteria were considered while designing the questionnaire, they being, 'Human Skills,' Professional Skills,' 'Communication skills,' and 'Technical skills.' Employers from the following industries were contacted. The breakup of these companies is given below.

IT/ITeS – 50%

Engineering Services – 20%

Manufacturing – 30%

AHP is a mathematical technique used for multi-criteria decision-making. In a way it is better than other multi-criteria techniques, as it is designed to incorporate tangible as well as non-tangible factors, especially where the subjective judgments of different individuals constitute an important part of decision making (Saaty, 2008). AHP is a procedure oriented tool which seeks to develop weight to the criteria used and in turn prioritize them.

AHP uses the following steps to solve decision problems. They are,

- Define the objective of the study.
- Structure the decision making elements that contribute to the objective of the study.
- Collect input by a pair-wise comparison of decision elements.
- Test of consistency for the input data.
- Calculate the relative weight of the decision elements.
- Aggregate the relative weight to obtain scores and hence rankings for the decision alternatives.

In this pilot study, AHP has been used as a tool for systematically analyzing the perceptions of employers / hiring managers, from three industry sectors – IT/ITeS, Manufacturing and Engineering Services.

Following definitions are considered to be within the purview of the study undertaken. (NBA Accreditation manual for UG engineering program, 2013).

Human Skills:

Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics, responsibilities and norms of the engineering practice.

Individual and team work: Function effectively as an individual, as a member or leader in diverse teams, and in multidisciplinary settings.

Professional Skills:

The engineer and the society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and as a leader in a team, to manage projects in multidisciplinary environments.

Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Communication Skills:

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions (Written and Verbal Communication).

Technical Skills:

Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

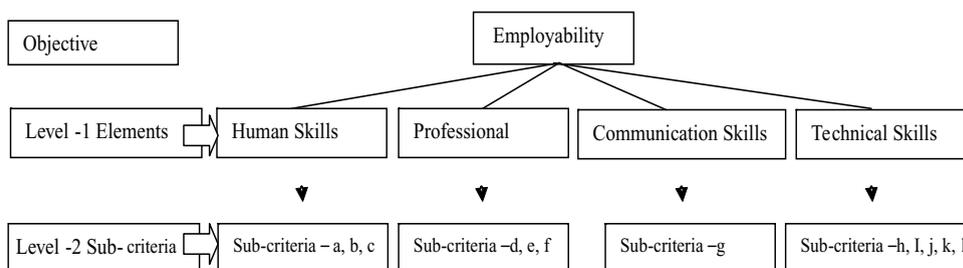
Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The nominal – ratio scale of 1-9 is adopted for the pair-wise comparison of chosen elements (Saaty, 1994).



Results and analysis

The computation of the resultant matrix could not be drawn directly from the input data as it was leading to inconsistent results. The consistency Index- CI and consistency ratio - CR values are not in the admissible range as prescribed by Saaty. The probable reason for this is that the input was taken from heterogeneous group of industries who have their own preferences of one parameter over the other. These out of range variations of CR and CI prompted normalizing the input data.

As one means of normalizing the data, we bound the results by using standard deviation and focussed on the data that

is at the lower bound of standard deviation. With this we could normalize and comply with the minimum expectations of all inputs irrespective of their industry specific preferences. We could thus ensure the CI and CR values to be well within the accepted range as prescribed by Saaty.

Consistency Index, $CI = \lambda_{max} - n / n - 1$
 $CI = (4.09717 - 4) / 3 = 0.03239$.

Consistency Ratio = $CI / \text{Random Index} = 0.03239 / 0.90 = 0.03598$.

This value of CR is well below 0.10, a limit prescribed by Saaty, indicates that the input data used for computation is consistent.

Table 1 - Random Consistency Index table

N	1	2	3	4	5	6	7	8	9	10
Random Index	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.4

Table 2 – Resultant Matrix and Computed Principal Eigen values / Priority Vector

	Human Skills	Communication Skills	Professional Skills	Technical skills	prod i	GM	Priority vector	Matrix Multiplier
Human Skills	1.0000	2.3776	1.9093	2.5514	11.5817	1.8448	0.42	1.6961
Communication Skills	0.3358	1.0000	0.9957	1.1824	0.3953	0.7929	0.18	0.7417
Professional Skills	0.7823	1.4371	1.0000	1.3743	1.5451	1.1149	0.26	1.0383
Technical skills	0.1250	1.0466	0.9379	1.0000	0.1227	0.5918	0.14	0.6210
Sum Row	2.2431	5.8613	4.8428	6.1081		4.3445	1.0000	
Priority row	0.9525	1.0698	1.2428	0.8321	4.0972			

In this study, a progressive scale was chosen for measurement with an objective distance between any two points being 2. It was observed that the least and the maximum standard deviation values of input data were 1.52 and 3.46. As the difference in these two numbers is less than 2, it indicates that, the normalizing of input data helped in keeping the conservative values of the perceived preference of one skill over the other.

'Saaty's scale' is used to measure the qualitative data on a nominal scale. However, to achieve better relative preference, we need to convert the nominal scale to ratio scale. This is done by dividing matrix multiplier values by principal eigen values. This ratio is called, λ_{\max} , and ideally $\lambda_{\max} \Rightarrow n$, where, n represents the number of criteria under consideration. In this case, n being 4, λ_{\max} is expected to be approaching 4. The computed λ_{\max} value is 4.0972. Thus, the values of principal eigen vector represent closely the probability of preference of one criterion over the other.

Significance of Eigen Value:

The priority vector shows relative weights among the criteria that are under consideration. In this study, Human skills, Professional Skills, Communication Skills and Technical skills are compared as shown in table 2. It is significant to know that, Human skills at 42% (0.42), is the most preferred skill set over others, which are Professional skills 26% (0.26), Communication skills 18% (0.18), Technical skills 14% (0.14).

Based on the computations above, it is observed that technical institutions are seemingly contributing, primarily to address the technical skills which however, are preferred only at 14%. It can also be observed that the other three sets of skills that contribute significantly (remainder 86%) towards employability, are to be strengthened using renewed curriculum and other effective teaching-learning processes.

Human skills at 42% constitute sub-criteria like, Environment and Sustainability, Ethics, Individual and Team work. Many of these may be inculcated in graduating engineers using Project based learning, field visits, rural immersions and projects focussed on Social entrepreneurship.

Professional skills at 25% constitute sub criteria like, Societal focus, Project management and finance, Life-long learning. These skills can be improvised through Capstone projects, Product building competitions, Market research and Social entrepreneurship. Self study modules can be infused appropriately to encourage love for continuous learning.

Communication skills at 16% constitute written and verbal skills. These skills can be accentuated by creative teaching-learning

process. Activities like, Seminars, Project presentations, Business plan presentations, Pitch contests, Assignments - can certainly help in improvising the quality of communication.

Technical skills, though are of utmost importance to an engineer, seem to have been preferred at 14%. In fact, the technical institutions spend 4 years to develop technical skills in an undergraduate engineer. It is perhaps imperative that by judiciously choosing technology education with other interventions mentioned above, can help improve the quality of the fresh graduate engineer.

Conclusions and Future Work:

This article is based on the pilot study conducted using a small sample. This study focuses only on level one elements like Human Skills, Professional skills, Communication skills and Technical skills - as a means to measure employer's preference. It is assumed that the above mentioned skill sets are considered to be mutually exclusive in their definition. And it is also known that the respondents are aware of this exclusivity. Further, these broad categories can be broken down into sub-criteria as defined by the Graduate Attributes (GA's) by the National Board of Accreditation (NBA) for undergraduate study.

The authors feel that, this being a pilot study, accurate mapping of employers' preference is possible after conducting a two tier multi criteria modelling with larger sample size. The outcome of such kind of study can help throw light on the specific skill gaps existing at the student / institution level. Further, recommendations can be made to bridge such gaps through - enhanced teaching learning process, curriculum design, project / practice based learning- that help in enhancing the employability of our engineering graduates.

Though this pilot study focuses on three major business sectors-IT/ITeS, Engineering Services, Manufacturing, a clear picture of employers' skills preference specific to diverse industry sectors can be evident, perhaps after studying a larger sample. With such an industry specific knowledge, students can prepare to get a job in the industry of their choice.

To summarize, it can be concluded that, across three industry sectors chosen for this study, Human skills are significantly preferred in making hiring decisions across various types of businesses to the extent of 42%.

Communication skills with 26% weightage, stood out as the second most preferred attribute for engineering graduates to be employable. Professional skills at 18% ranked third. Lastly Technical skills stood fourth in importance at 14% approval.

The relative importance among the attributes compared, showed Human skills are preferred to Professional skills 1.6 times, about 2.33 times over communication skills and almost 3 times over the technical skills.

Staffan Nilsson (2010) in his study on employability of engineering graduates observed that, hard formal and technical vocational skills are considered to be of declining importance. Generally, these skills are considered less important in relation to one's individual employability compared to different forms of soft skills and personal attributes.

In this study, it is indeed intriguing to know that employers from across three industry sectors preferred technical skills the least in comparison with the other three skill sets while choosing a fresh engineering graduate.

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Cause Related Marketing: Antecedents of Corporate Motive

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A b s t r a c t

This paper relates the factors influencing the attribution of corporate motive, when a firm is associated to a cause or charity programme. Public's attribution of corporate motive is key to the success of cause related marketing. Attribution of corporate motive can be categorized as altruistic and corporate centric motives. The public assuming cause related marketing campaign initiated by the company as corporate centric motive becomes negative to the company image rather than perceiving altruistic motive. In this regard the study explores the factors influencing the attribution of corporate motive. The paper brings to light the relationship between the factors like longevity, congruence and threshold quantity of purchase influencing corporate motive.

Key Words: *Cause related marketing, Corporate philanthropy, Corporate motive, Altruistic motive.*



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The Public Affairs Council's 2012 consumer pulse survey showed that a strong majority of Americans not only desired, but expected companies to be involved in improving communities (Public Affairs Pulse Survey 2012). That is why increasingly global corporations are reconsidering their approach to corporate responsibility, evolving a model in which traditional donations are supplemented by innovative programs and initiatives that tap into the core strengths of the business. Marketing communication and promotion with a social dimension is a response to the consumer expectation of corporate philanthropy. Cause Related Marketing (CRM) is an integration of philanthropy in marketing strategy. CRM is defined as a strategy developed by the organization in supporting a cause with creation of a fund when a customer participates in revenue generating activities of the firm. CRM is a partnership between a commercial enterprise and a not-for-profit organization in which the business entity uses the name and logo of the not-for-profit agency in advertising and selling its products, and pays the not-for-profit for the

right to do that. This type of marketing has the potential to raise significant funds for not-for-profit work, and to increase bottom-line profits for businesses. CRM is becoming popular in response to its success in enhancing the brand image in the public and customers.

However, the success of cause related marketing is critical to the organization. The company should ensure that association with a not-for-profit organization will have a positive impact on the company's desired customer demographics and it should bolster or at least not alienate the company's customer base. Although one may expect that consumers would respond favorably when a brand engages in an alliance to raise money and awareness for a social cause, it is often difficult to predict consumers' reactions to such marketing campaigns. In this regard, attribution of *corporate motive* is a factor influencing the success of CRM campaign (Michal Strahilevitz, 2003). It is understood from the literature that there are two possible ways in which a CRM association between the corporate and the not-for-profit may be looked at by the customers/publics – corporate-centric motive (profit motive) or altruistic motive (out of interest). CRM campaigns attributed as corporate-centric may hinder the success as skepticism creeps in, whereas, attribution of altruism enhances the long term image of the organization.

Literature Review

Research on CRM in the past has identified that it does not automatically guarantee a favourable evaluation by customers in all the cases. The benefits of CRM differ depending on the nature of the product or service being promoted (Strahilevitz and Myers 1998), the fit between the specific cause and charity chosen (Lafferty 1996), the perceived quality of the product being promoted (Folkes and Kamins 1999), as well as the size of the donation (Holmes and Kilbane 1993). Bloom et al. (2006) have observed that companies have been able to use cause-related marketing to help distinguish their brands from competitors in consumers' minds and get desirable effects including greater efficiency for other marketing efforts, an ability to charge higher prices, increased market share, greater brand loyalty and better manage its stakeholders. Sometimes this may also result in negative way as the consumer has become extra smart to understand the logic behind. The success of CRM is found to be an outcome of consumers' perception of the corporate motive (cause-oriented vs profit-oriented) behind the campaign (Baron et al., 2007). Sheikh and Zee (2011)

have revealed in their study that, concepts like CSR and CRM do have an effect on customers' attitudes. They have also mentioned that CRM might be more cost-efficient, its positive effect is limited to customers with high cause affinity. In contrast, CRM has a negative effect on customers with low cause affinity, or who oppose the cause. According to Endacott (2004), consumers from different countries have different perceptions of CRM. Many Spanish consumers regard CRM as egoistic, and clearly demonstrate that they will not tolerate the mercantilist abuse of the CRM strategy.

Attribution theory addresses the processes by which individuals evaluate the motives of others and explains how these perceived motives influence subsequent attitudes and behavior. When consumers attribute marketing actions to firm-serving motivations, negative reactions to the sponsoring firms often ensue (Andreasen, 1996; Drumwright, 1996; Ellen, Gurin, 1987; Webb and Mohr, 1998). Although this effect is well documented, the process that produces these negative reactions is not completely clear. One explanation of this finding is that consumers use the existence of firm serving motives as a cue to their attitude toward the firm. Ellen et al. (2000) use attribution theory to explain how consumers evaluate companies' CRM campaigns. They state that consumers evaluate and respond to CRM campaigns by making inferences about company's underlying motives of engaging in such a campaign and argue that consumers respond more positively to CRM programs that are altruistically motivated.

The review of literature shows that consumer perception of the corporate motive is a crucial factor that determines the success of CRM campaign. But no research studies were found, that tried to understand the antecedents which shape / affect the consumer perception of corporate motive. In this backdrop, the present research study has been taken up to identify the factors that influence the customer's perception of corporate motive in a CRM campaign.

Factors affecting corporate motive

This study has considered the three most important characteristics of the CRM campaign viz. longevity, congruence and threshold purchase quantity requirement as the variables which give a signal to the customers in perceiving the corporate motive as altruistic or corporate centric. Earlier studies have evaluated the influence of each of these variables separately on the success of CRM campaigns, the present research proposes them to be antecedents of consumers' perception of corporate motive as shown in figure 1.

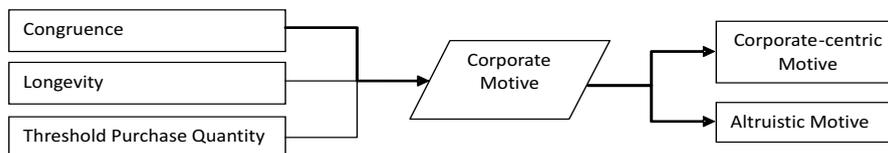


Fig 1: Antecedents of Corporate Motive

The following section deals with the importance of each variable and its possible influence on the consumers' perception of the corporate motive along with the research hypotheses.

(a) Congruence

A company / brand may join with a non-profit outfit based on its product offerings, market positioning, corporate / brand image, and target market. Congruence is in terms of the brand's product and the issue that the cause supports, or the brand and the cause targeting similar markets, or brand image associations.

Congruence is a perceived link between the cause and brand, this influences the attribution of corporate motive. If there is congruence between the brand and the cause it is associated with, consumer may perceive the company's participation in specific cause as volunteer. Similarly, the incongruent are arbitrary association of brand and cause may influence the consumers to attribute corporate centric motive to the CRM campaign.

However, support for congruency in cause brand alliance has not been explicit, so it is not enough to say consumers respond positively to congruent alliances because in some cases it has resulted in negative reactions leading to the failure of CRM campaigns (Ellen, Mohr and Webb 2000, Mizerski and Sandler 2001). Menon and Kahn (2003) examined the importance of congruity in CRM compared to advocacy advertising and found it to be an important attribute in consumers' evaluation of corporate social responsibility. Thus, **congruence** is an important variable that may influence consumers' perception of corporate motive. It is hypothesized that **perceived congruence between the cause and the brand has positive influence on attribution of corporate motive as altruistic**(H_{1a}).

Longevity

The antecedent, longevity, has also been frequently mentioned in the CRM literature as a means to more

successful CRM relationships. Drumwright (1996) found that the longer a CRM campaign ran, the higher the perceived commitment of the firm, and the more successful the campaign. Associative learning theory provides theoretical support for the prediction that greater time commitment will lead to a positive consumer opinion. CRM partnerships that are consistently managed over the long-term should be more effective than one-time or short-term relationships. The length of time that a brand is involved with a charity, is a measure of commitment by the brand to the charity. Therefore, it can be imagined that companies with strategic CRM campaigns are regarded as altruistically motivated than companies with tactical CRM program.

Till and Nowak (2000) suggest that the effectiveness of CRM program increases with its duration. Companies that consistently support a specific cause can benefit significantly in the long run (Welsh, 1999). Varadarajan and Menon (1988) state that CRM campaign with a medium term to long term focus have a higher potential of increasing consumers' perceptions of company image. Moreover, advertising campaigns with social connotations are more likely to be successful with a longer time commitment (Drumwright, 1996). Based on these observations, it is hypothesized that **"longevity of the relationship between the corporate outfit and the non-profit organization will positively influence attribution of corporate motive**(H_{2a}).

Threshold Purchase Quantity

Threshold purchase quantity is the minimum quantity to be bought by the customer so that the company will donate to the non-profit organization. Generally to encourage consumers to buy more of their products, companies / retailers often reward customers for purchasing more (e.g., sales promotions) and more often (e.g., loyalty programs), and it represents a feasible structural element for CRM. Some firms have structured CRM campaigns with minimum purchase quantity requirements. Varadarajan and Menon (1988) note that this phenomenon is consistent with the goals of CRM. But, there is risk that Consumers may infer

that objective of CRM campaign is to motivate consumers to purchase more products to make more profit and such heightened requirements may elicit inferences of corporate-centric motives and may damage participation intentions.

Further, and consistent with persuasion theories (Campbell and Kirmani 2008; Friedstad and Wright 1994), higher quantities appear to be viewed as tactics that activate consumers' persuasion knowledge and prompt them to question the firm's true motives for the sponsorship of the nonprofit (J.A.G. Folse et al. 2010). Hence, the study intends to test the hypothesis: *absence of threshold purchase quantity in a CRM campaign will positively influence the consumers' perception of corporate motive*(H_{3a}).

Experimental design of "after only without control group" is adopted with five experimental groups. The experimental groups were named as "V-ray Corp," "Indian Electronics," "db drive," "Bread India," and "Horse Breweries." These names are given after the names of the hypothetical CRM campaigns involving these companies and some hypothetical non-profit organizations. Advertisements were designed for each CRM campaign. These advertisements give enough details of the corporate as well as the non-profit organization associated. The experimental groups were presented with the brief outline of company profile, performance in the industry and the cause attributes supported by the company along with the advertisement depicting the CRM campaign.



Fig 2: An advertisement of V-ray Corp shown to a group of respondents

A structured questionnaire is designed to elicit the responses from the 846 sample respondents belonging to different parts of India. The respondents were reached through research enumerators (research scholars, faculty members, students) in different parts of India. Questionnaires were sent to these members and after collecting the opinions of the respondents, the questionnaires were sent back to the researcher for further analysis.

The questionnaire was designed to capture the perceptions of the respondents towards the variables – congruence,

longevity, threshold purchase quantity and corporate motive. The fit between company/ product and cause selected (congruence) for campaign is measured with items as "The idea that V-ray Corp donates books to children education," "I think that donation for primary education is relevant for V-ray Corp," "I think that supporting primary education is appropriate for V-ray Corp," "I think that V-ray Corp donating to education is a good match between the product and the cause" etc. Response was sought on 7-point Likert scale from "strongly agree" to "strongly disagree."

Longevity is measured using the following four semantic differential seven point scale items, “is not committed to/ is committed to charity,” “has little invested in the charity/ has a lot invested in Charity,” “is not interested in the charity / is interested in the Charity,” “is giving a little to the charity / is giving a lot to the charity.”

Threshold purchase quantity here pertains to the requirement of certain minimum quantity to be purchased by the customer to participate in the cause campaign conducted by the company. This variable is measured using the items “I would be willing to purchase the quantity required to participate in the campaign,” “It doesn’t matter to me about the quantity to be purchased for participating in the campaign,” “It is important to me regarding the quantity of purchase even though the product makes me to involve in CRM campaign.” Response is recorded on 7-point Likert scale from “strongly agree” to “strongly disagree.”

Corporate motive in supporting a charity or cause is categorized as either corporate centric motive or altruistic motive. This variable is measured with items adopted from Szykman, Bloom and Blazing (2004). Semantic differential scale with the following items “impure / pure,” “unselfish / selfish,” “caring / uncaring,” “self-servicing / society-serving,” “uninvolved/ involved,” and “reactive / proactive” is presented to the respondents with seven points.

Data Analysis

846 respondents participated in the study from different regions of India, among the respondents 294(34.8%) are between 20-30 years, 368(43.5%) are between 31-40 years, 109(13.0%) are between 51-60 years, and 36(4.3%) are between 61 and above. 476 respondents are male and 370 respondents are female. The data is qualified and internal consistency among the items of different variables is found to be good (Cronbach’s alpha above 0.8).

H_{1a} stated that when the alliance is perceived as congruent, corporate motive will be attributed as altruistic. To test this hypothesis, the individual means for corporate motive were grouped according to Congruent (N=631, Mean = 6.176) and incongruent respondents (N=215, Mean = 2.5) subjects. Independent sample test is run, considering corporate motive as dependent variable and Perception of congruence as grouping variable.

As indicated in Table 1, the effect of perception of congruence on corporate motive is found significant (F = 11.031; p- value = 0.001) thus supporting H_{1a}. Since, the group with higher mean represents altruistic motive and lower mean represents corporate centric motive, it indicates that congruence has positive influence on corporate motive (Mean =4.388) whereas incongruence makes customer to attribute corporate centric motive (Mean = 3.0884) to the CRM campaign.

Table-1: Results of Independent Samples t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Longevity	Equal variances assumed	11.031	.001	14.88	844	.020	1.29990	.08732
	Equal variances not assumed			13.47	316.34	.031	1.29990	.09647
Perception of congruence	Equal variances assumed	6.637	.425	7.964	844	.000	.66342	.08330
	Equal variances not assumed			7.991	787.30	.011	.66342	.08302

Source: SPSS output

To test the second hypothesis (H_{2a}), the individual means of corporate motive have been grouped based on individual means of perception of longevity. Longevity is classified as high(N=484, Mean= 5.35) / low (N=362, Mean =3.23). Independent sample test has been run, considering

corporate motive as a dependent variable and longevity as grouping variable. Results (Table -1) indicate that effect of longevity on corporate motive is significant (F = 6.637; p-value = .425) thus supporting H_{2a}.

H_{3a} stated as, absence of threshold purchase quantity in a CRM campaign will positively influence the consumers' perception of corporate motive (H_{3a}). To test the hypothesis correlation and regression are performed, taking corporate motive as dependent variable and quantity of purchase as independent variable. Table: 2 indicates strong, significant

negative relationship between corporate motive and threshold quantity of purchase (r = -.713, p-value =0.041) supporting H_{3a}, which means absences of purchase restriction will have positive perception on Corporate Motive, since there is negative relationship between Purchase quantity and Corporate motive.

Table –2: Correlation between Threshold Purchase Quantity and Corporate Motive

		Threshold Purchase Quantity	Corporate Motive
Threshold Purchase Quantity	Pearson Correlation	1	-.713**
	Sig. (2-tailed)		.041
	N	846	846

** . Correlation is significant at the 0.01 (1-tailed).

Source: SPSS output

Table: 3 indicates threshold quantity of purchase is able to explain 50.8% (R²= 0.508, p-value = .021) variance in the dependent variable Corporate motive.

Table -3: Regression Analysis of Threshold Purchase Quantity on Corporate Motive

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.713 ^a	.508	.508	.87135	.508	872.329	1	844	.021

a. Predictors: (Constant), Quantity of Purchase

Source: SPSS output

The previous section has analyzed the results of the antecedents of corporate motive in isolation. In this section hierarchal regression is performed to understand the effect of antecedent variables in group on corporate motive. Corporate motive is taken as dependent variable whereas longevity, congruence and threshold

purchase quantity are considered as independent variables. In the first model longevity is tested on corporate motive followed by longevity and congruence (Model 2) and longevity, congruence, threshold purchase quantity (Model 3). The results of the hierarchal regression are detailed in Table 4.

Table: 4 Hierarchal Multiple Regression of Corporate Motive

Predictor Variable	B			R ²	ΔR ²
	Model 1	Model 2	Model 3		
Model 1 L	.501**	.361**	.157**	.255	.255
Model 2 CI		.257**	.180**	.387	.132
Model 3 TPQ			.416 [†]	.610	.223

L = longevity, CI = Congruence Importance and TPQ = Threshold purchase quantity.

Source: SPSS output

Longevity alone accounts for 25.5% of variance in corporate motive (R²=0.501, F=290.755, p=0.00). Congruence and longevity both together are able to explain 38.7% of variance in corporate motive (R²=0.387, F=182.4, p=0.00). Longevity,

congruence and threshold purchase quantity together are able to explain 61% of variance in corporate motive (R²=0.61, F=483.11, p=0.00).

Discussion

It has been identified that good fit between the cause and the brand / corporate leads to attribution of altruistic motive for the CRM campaign and there by helps it to be successful. On the other hand a misfit can prompt the customers to view the CRM campaign as a mere marketing tool designed to achieve corporate-centric motive. This can be dangerous as the negative perceptions damage the brand / corporate image. In such a case a CRM campaign can prove to be disastrous for the firm. This research has once again highlighted the importance of choosing congruent partners, something that is not always discussed in the market place. This research emphasizes on congruency between the partners. The marketer has to form partnership with the cause agents who are not only credible, but also increase the company image. The partner should be compatible with the company image. The partner should not pose any risks and threats to the company image in the future.

Moreover, a long-term CRM campaign positively influences the customer perception than a short-term one. The corporate should have strategic view in designing CRM campaign rather than short term or tactical view. Corporate should design the CRM campaign with some levels of commitment towards supporting the society even though the ultimate objective could be a profit motive. The campaign can fail if the approach is for the short duration. CRM campaign should not be viewed as an instant sales maker like sales promotion.

Further, it is better to design a CRM programme that doesn't necessitate the customer to buy more than what he/she usually buy in one instance as the stipulation of minimum purchase quantity affects the customer's perception of Company's motive behind the CRM campaign. It is evident that there is negative effect of quantity of purchase on the success of CRM campaign. The marketer should design the CRM campaign on simple terms without any tactics. Otherwise, this can increase the skepticism in the consumer about the campaign.

Conclusion

The present study has identified that three important characteristics - congruence, longevity and threshold purchase requirement of CRM campaign can reasonably explain the consumer perception of corporate motive behind the CRM campaign. Hence, it is imperative for the corporate

to pay attention while designing a CRM campaign. To create a positive opinion about the CRM campaign a corporate should exhibit reasonably long term commitments to a cause that better connects to its core business / markets / customers. Furthermore, the firms should refrain from keeping restriction on quantity of purchase to participate in CRM campaign.

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Effectiveness and Relevance: Infosys 3.0 Strategy

Kingsuk Sengupta

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Infosys announced their intention to adopt what it called Infosys 3.0 during the later period of 2010. The concept of Infosys 3.0 revolved around the philosophy that business responsibility is nothing but earning the admiration of the stakeholders. The Infosys 3.0 strategy was conceptualised to move Infosys higher up in the value chain of IT – into areas of innovation, consulting and greater value addition in business management. In the global downturn these Infosys' clients were focussing on cost cutting rather than on developing fresh and new business strategies. As of today, Infosys have articulated their strategies to construct Infosys 3.0 in a manner that it would facilitate their clients to build their "enterprise of tomorrow." The evaluation process needed analysis of some secondary financial data to put focus on Infosys' present operating efficiency which was likely to be leveraged by stakeholder and client focussed Infosys 3.0 strategy. Also peer strategy analysis is a part of this study.

Key Words : Application Development and Maintenance; Global Delivery Model; Cloud Computing; Enterprise Mobility; Big Data.



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Infosys Limited, formerly known as Infosys Technologies Limited, was co founded in 1981 by N. R. N. Murthy, Nandan Nilekani, S. D. Sibulal, S. Gopalakrishnan, N. S. Raghavan, K. Dinesh and Ashok Arora with a meagre capital of \$ 250 in Pune. It signed up its first client, Data Basics Corporation in New York. The company was incorporated as 'Infosys Consultants Pvt. Ltd.' In 1983, Infosys' Corporate office was relocated to Bangalore. Infosys provides business consulting, engineering, technology and outsourcing services.

What lies within the shimmering glass buildings at the Infosys campus located in the sprawling Electronic city near Bangalore holds the key to the future of the three decade old IT Company. Within the Infosys Experience Centre there are a series of novel products that its engineers developed in the last few years, some of them a straight upshot of what they refer to as - Infosys 3.0 Strategy.

What is Infosys 3.0?

The Infosys 3.0 Philosophy:

Infosys as a company has strong faith in the philosophy that building and nurturing the larger ecosystem around it

ensures the success of a corporation itself. Infosys is also a strong believer in the concept that sustainability practice is an opportunity to apply its core strengths for social good, and innovate to create winning solutions. This holistic view of functioning helps Infosys to work consistently in meeting the expectation of their stakeholders. Infosys is of the view that business responsibility is nothing but earning admiration of the stakeholders in each and every action they perform.

In *Infosys 1.0*, Infosys initiated the Global Delivery Model (GDM). It also further advanced the Application Development and Maintenance (ADM).

Under *Infosys 2.0*, Infosys incorporated Global Delivery Model with consulting services. It also brought in vertical focus and extended beyond Application Development and Maintenance to provide end to end services.

As of today, Infosys has articulated their strategies to formulate *Infosys 3.0* which in turn is expected to facilitate their clients to build their future enterprise.

Strategies adopted by Infosys and other major players in the IT Sector:

For the last few quarters, while Tata Consultancy Services (TCS), Cognizant Technologies and HCL Technologies have been marching ahead despite the global slowdown, Infosys was not able to meet its quarterly guidance and was lagging behind. All major players in this sector like TCS, Cognizant Technologies, HCL Technologies etc. embarked on new strategies almost five years back. TCS’s outlook was more of global in nature. Its CEO, R. Chandrasekharan reorganised TCS by dividing the company in to smaller units of \$250 million each. In all these cases, the main aim of restructuring was to make the individual units grow faster. There was no huge modification in the direction. When there was any directional change, it fell separately on an individual business unit or a set of business units. HCL Technologies, under its CEO, Vineet Nayar, decided to put all its labours behind rebids and infrastructure management. Cognizant Technologies, led by its CEO, Fransisco D’souza, put all its efforts to add several more verticals and new foreign markets like infrastructure management and consulting services in Europe.

Sr.	Major IT Players	CEO	Strategies adopted
1	TCS	R. Chandrasekaran	Reorganised the company into smaller business units comprising of \$250 million each.
2	Cognizant	Fransisco D’souza	New verticals and foreign markets like consulting and infrastructure management in Europe were added.
3	HCL Technologies	Vineet Nayar	Infrastructure management and rebids were what HCL embarked upon.

Exhibit 1.0: Strategies adopted by major IT players
Source: Respective Company Annual Reports

Effectiveness of Infosys 3.0:

N. R. N. Murthy the patriarch of the Infosys announced that he would be retiring in August 2011. And it was K. V. Kamath, the ex-ICICI boss who was the most probable candidate for the coveted job after N. R. N. Murthy’s retirement. No one at that point of time was sure what Kamath would deliver when he would venture into Infosys as its Chairman. There were indications that Infosys was moving down from its pedestal as the bellwether stock. From outside everything was picture perfect and there were no signs of any quandary. Infosys was growing and still was considered to be the most lucrative company in its sector. But inside there were some serious questions that needed immediate response. The first and foremost question that was going around was that – for how long will Infosys as a company kowtow to the Narayan Murthy dogma? And the other question was for how long will the founding members cuddle functional jobs?

Finally, K. V. Kamath was appointed as the Chairman, S. D. Sibulal was appointed as the next CEO and Managing Director, Narayan Murthy remained as the Chairman Emeritus and Mohandas Pai left Infosys.

According to N. R. N. Murthy, the departing Chairman, the newly appointed team under the Chairmanship of K. V. Kamath was indeed a dream team and he was quite sure that he was leaving Infosys into very safe and secure hands. But everything did not turn out the way Murthy had expected them to. Infosys in 2011 initiated a major transformation in the form of Infosys 3.0 Strategy. The strategy was aimed to take Infosys higher up the value chain of IT.

Following are some imperative financial and operational analyses of Infosys aimed at throwing some light on the effectiveness of Infosys 3.0 as a transformational strategy.

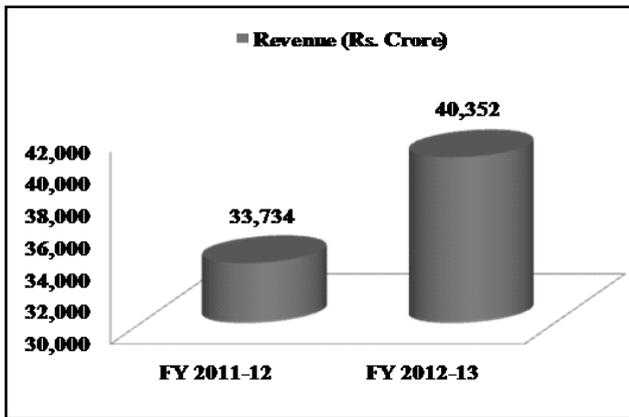


Fig. A: Revenues (in Rs. Crore)

Source: Audited consolidated financial results of Infosys limited for year ended March 31, 2013

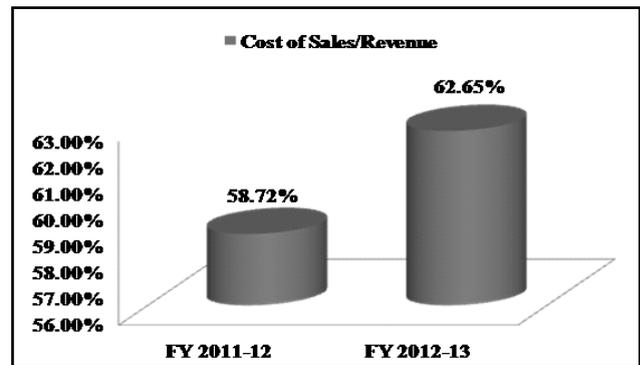


Fig. D: Cost of Sales/Revenue

Source: Audited consolidated financial results of Infosys Limited for the year ended March 31, 2013

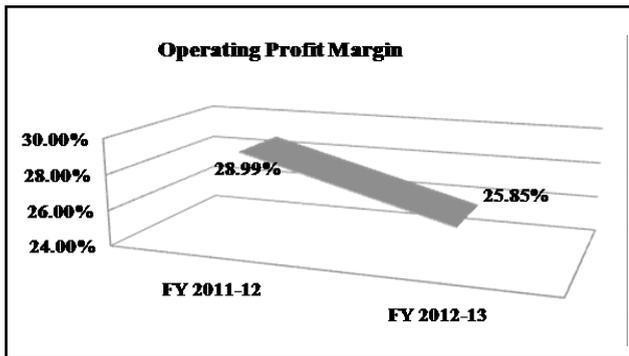


Fig. B: Operating Profit Margins (Operating Profit/Gross Revenue)

Source: Audited consolidated financial results of Infosys limited for the year ended March 31, 2013

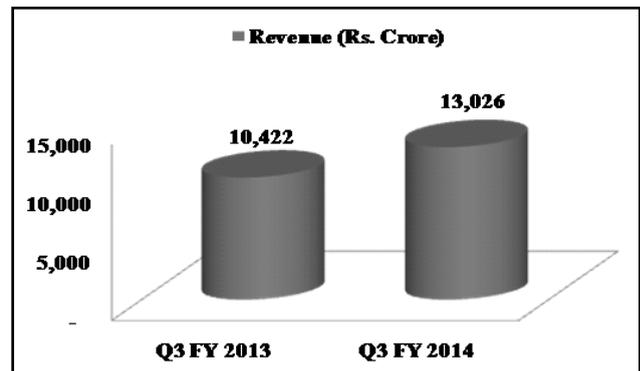


Fig. E: Revenue (In Rs. Crores)

Source: Audited consolidated financial results of Infosys Limited for the quarter ended December 31, 2013

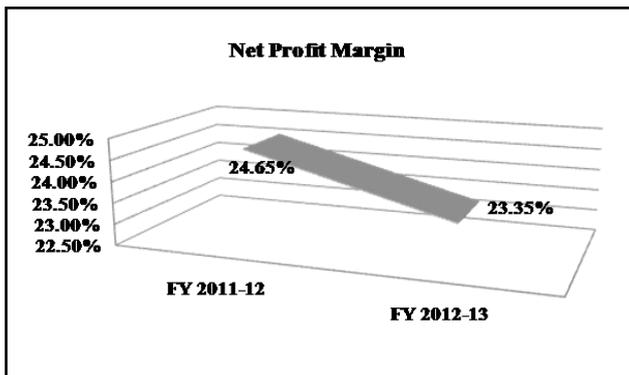


Fig. C: Net Profit Margins (Net Profit/Gross Revenue)

Source: Audited consolidated financial results of Infosys Limited for the year ended March 31, 2013

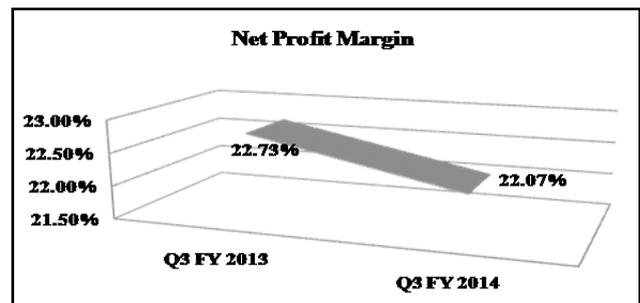


Fig. F: Net Profit Margins (Net Profit/Gross Revenue)

Source: Audited consolidated financial results of Infosys Limited for the Quarter ended December 31, 2013

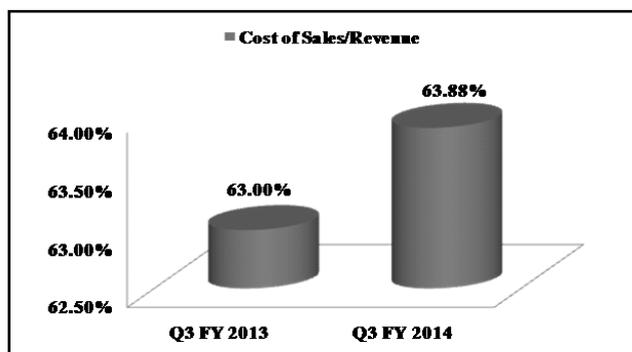


Fig. G: Cost of Sales/Revenue

Source: Audited consolidated financial results of Infosys Limited for the Quarter ended December 31, 2013

Although Q3 FY 2013-14 is showing a jump in its topline by almost 20% but Net profit margin has moved southwards and also there is an upward move in its cost of sales to revenue by almost 1%. Hence, this leads to the search for effectiveness of Infosys 3.0 in the current situation where in all other IT companies were also operating with their respective strategies.

Evaluation of Infosys 3.0 as against various strategies formulated by other major players in Indian IT Sector viz. Cognizant Technology Solutions (CTS), Hindustan Computers Ltd. (HCL), and Tata Consultancy Services (TCS):

Infosys 3.0 in totality was a different and extensive exercise. It basically came into existence from the fact that there was a significant change happening in the world of business. This was analogous to the Cognizant Technology’s Horizon 3 Strategy, which looks at budding technologies such as social, big data, mobile and other products.

Comparison of Infosys 3.0 as regards Cognizant’s Horizon Strategies (H1, H2 and H3): Cognizant restructured itself to line up itself with upcoming technologies. In doing so, Cognizant clearly defined the outline for each set of business units. Horizon 1, was concerned with Cognizant’s core business – such as Application Development and Maintenance (ADM). ADM was the largest contributor in Cognizant’s topline. Horizon 2, put its force behind the

various emerging businesses they had ventured in last 3 – 4 years. And Horizon 3 took into account various emerging technologies that were capable enough to force Cognizant’s future growth. Francisco D’Souza was given the charge of implementing Horizon 3.

However, Infosys 1.0 was directed towards establishing Global Delivery Model (GDM); Infosys 2.0 was concerned with spreading the global delivery model in different verticals; Infosys 3.0 was concerned with facilitating the clients in building their tomorrow’s enterprise. Infosys 3.0 was a philosophy that was spread through the whole organisation.

- Infosys’ sales team were encouraged to follow Infosys 3.0 philosophy i.e., building enterprise of tomorrow as well as carry on sales in existing businesses. But the numbers were showing that the sales team were virtually carried away by the Infosys 3.0 philosophy. This in turn resulted in Infosys losing edge on its core markets. The North American market which is considered to be the largest IT market as far as all Indian IT services companies are concerned, Infosys was left behind by Cognizant in the fourth quarter of FY 2010-11. A quarter later, i.e., in the first quarter of FY 2011-12, Cognizant overtook it in its largest vertical - banking and finance. And finally just after a year, Cognizant surpassed Infosys’ overall revenues too.
- As far as the sales team in other companies were concerned, they were selling more of the same where as the Infosys sales team were also selling a vision of the future along with the core product. Infosys conducted several (almost over hundred) workshops with senior leaders of client organisations, laying down facts regarding how the upcoming technology trends will change their business and why they should associate with Infosys to get ready and meet those challenges. Infosys even changed its tagline to “building

Horizon 1: it was regarding Cognizant’s core businesses.	Infosys1.0: it was about establishing global delivery capability.
Horizon 2: it was about the new businesses Cognizant had entered in last 3-4 years.	Infosys 2.0: it was about scaling GDM in different verticals.
Horizon 3: it was about new technologies that would enhance Cognizant’s future growth.	Infosys 3.0: it was concerned with facilitating clients to build the enterprise of tomorrow.

Exhibit 2.0: Comparison with Cognizant’s Horizon strategies

tomorrow's enterprise," which was in line with the Infosys 3.0 strategy.

- The timing of Infosys 3.0 was quite critical as the clients were worried about saving their today's business and obviously were not concerned with building tomorrow's enterprise. The economic crisis compelled the companies to reduce their IT budgets and the IT companies were searching for different ways to keep the lights on at lower costs. The companies who were supple on pricing were able to get hold of these contracts when they came up for renewal, as HCL Technologies did.
- Infosys was also losing on another front which was their traditional strength i.e. dealing with larger clients. The number of \$100 million clients was up by a meagre 15% (i.e. from 13 to 15 clients) where as for TCS during the same time period it went up from 8 to 16 (clearly a jump of 100%). Even the underperforming Wipro added 7 clients (from 3 to 10) for the same period.
- Compared to other strategies, Infosys 3.0 is much broader in scope. It also takes into consideration other parts of the company including the core business (application development and maintenance, infrastructure management and BPO) and the transformational business (system integration and consulting).

Conclusion and Recommendations:

Infosys Management is of the view that Infosys 3.0 came at a time when customers were looking at cost cutting rather than being too much positive with the concept of building enterprise of tomorrow there by showing reluctance to any extra investment. At the initiation of the strategy, the Infosys management did not anticipated that the markets would remain docile for such a long time and the customers would run away from any kind of premium expenditures. The indications are like that the company could not again suddenly go back for Infosys 3.0 and the company has to anyways wait for the correct time to return. Here are some enumeration of comprehensive and focussed strategies that are being articulated by the company and also few recommendations as regards Infosys 3.0.

- Infosys is concentrating on lot many new solutions like enterprise mobility, cloud computing and sustainability which are based on current market requirements.

- Infosys is committed to provide not only software services and solutions but also it would engage itself in lot of transformational projects. Along with these IT services it will also put its effort in developing the business side of clients.
- Infosys will have several groups that will provide learning solutions and business platform solutions. Along with this it will also have country focussed teams. All of these are the main drivers for the future augmentation of Infosys.
- Another very significant move that has been initiated by it is the consolidation of its verticals into – Manufacturing; Financial services and Insurance; Energy, Utility, Communications and Services; Retail, Logistics and Life Sciences.
- There is also another vertical called Infosys Public Service subsidiary, which explores various public service work under US Government.
- The company has also assembled its offerings in three different heads. This will be Infosys' focus areas.
 - Business Transformation (system integration, enterprise solutions, consulting work etc.),
 - Business Operations (application development, infrastructure management, maintenance etc.), and
 - Business Innovation.
- Going by the Infosys 3.0 blueprint, the new matrix structure was developed to ensure that the team should not only hunt for tomorrow's opportunities but also pay full attention to today's business. But, in reality this never happened rather company started losing its traditional and core businesses.
- A major issue within Infosys that further complicated the situation was its dedication towards profitability. But as the demand conditions will start getting better, it will certainly get its growth back, without compromising on its bottomline. This is what in reality Infosys 3.0 promises to deliver. With the new strategy, it is possible to be both – a growth as well as a margin leader.
- It is the brutal combination of lack of empowerment and apprehensions in taking risks over the years that might lead to the failure of Infosys 3.0. If Infosys 3.0 fails, it will not fail due to its wrong strategy. But it will fail due to Infosys' three years delay in recognising empowerment and risk taking at the middle level of

management that was very crucial in carrying out its Infosys 3.0 strategy right.

- The formal approach of the middle level management in strategy execution that has started in certain areas of Infosys in recent months will ultimately bring about the necessary changes needed to get the Infosys 3.0 right. It has to be followed up by breeding an entrepreneurial culture of risk taking through empowerment of middle level managers.

So, in the end it can be summed up by saying that it's the Management that needs a bit bucking up and as far as Infosys 3.0 is concerned it is relevant and well articulated of course with some polishing of rough edges here and there. Infosys 3.0 was never meant to be a repair formula rather it was a transformation strategy. Evaluating its performance through yardsticks of a repair formula would not solve our problem and also would not lead us anywhere. It is now high time when Infosys should make the elephant dance. Now at this point Infosys is at a strategic crossroad where it has to make a decision whether to tweak Infosys 3.0 to make it work better and faster. Infosys 3.0 is the right strategy and is heralded in the right direction in which Infosys has to move. N. R. N. Murthy in his second stint with Infosys will certainly add value to Infosys 3.0. Infosys has many problems, some are easier to solve than others, which are quite complicated in themselves. Infosys is suffering from lack of morale and a cohesive direction. Mr. Murthy is quite capable of addressing both the issues. He is like a father figure for each and all at Infosys and is a great visionary. Murthy's return to Infosys will certainly boost the company's Infosys 3.0 strategy.

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- Infosys Sustainability Report 2011-12
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- Audited consolidated financial report of Infosys Limited for the quarter and year ended March31, 2013, submitted on April 12, 2013.
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Loans availed by SMEs : Public vs Private Banks

Anup Suchak, Krunal Parekh, and Akash Agrawal

Abstract

Indian Banks have recorded a phenomenal growth in the past decade with the initiation of Economic Reforms. The banks, both Public and Private, have transformed themselves into profit oriented business organizations besides playing a developmental role in the economy. In an attempt to be more profitable, the banks have become competitive and more customer – oriented. This new orientation has compelled them to take a more pragmatic approach for conducting the business. The Customer Relationship Management (CRM) is one such tool which helps in meeting the customers' expectations according to their changing needs and challenging competition. This indicates that the banks are in a dire need to make proper strategies to improve their working and strengthen their customer relationship.

The study relates to a comparison and analysis of loans availed by SMEs from different banks, both Public Sector and Private Sector, in Nagpur city.

Key Words : Economic Reforms, Customer – Oriented, Challenging Competition, Strengthen Customer Relationship, Entrepreneurship.



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The importance of SME sector is well-re cognized world over owing to its significant contribution in achieving various socio-economic objectives, such as employment generation, contribution to GDP, fostering new entrepreneurship and to provide depth to the industrial base of the economy. Small and medium-sized enterprises (SMEs) are the backbone of all economies and are a key source of economic growth, dynamism and flexibility in advanced industrialized countries, as well as in emerging and developing economies. They are responsible for more than 60% net job creations in Developing countries. Small businesses are particularly important for bringing innovative products or techniques to the market. SMEs are vital for economic growth and development in both industrialized and developing countries, by playing a key role in creating new jobs. Financing is necessary to help them set up and expand their operations, develop new products, and invest in new staff or production facilities. Many small businesses start out as an idea from one or two people, who invest their own money and probably turn to family and friends for

financial help in return for a share in the business. But if they are successful, there comes a time for all developing SMEs when they need new investment to expand or innovate further. That is where they often run into problems, because they find it much harder than larger businesses to obtain financing from banks, capital markets or other suppliers of credit.

Need of Customer Relationship Management (CRM) in the Banking Industry

A Relationship-based Marketing approach has the following benefits

- Over time, retail bank customers tend to increase their holding of the other products from across the range of financial products / services available.
- The longer a relationship continues, the better a bank can understand the customer and his/her needs and preferences, and so greater the opportunity to tailor products and services and cross-sell the product / service range.
- In the intensely competitive banking industry, retention of existing customers is vital, which can be achieved through the process of CRM.
- With increased number of banks, products and services and practically nil switching costs, customers are easily switching banks whenever they find better services and products. Banks are finding it tough to get new customers, and more importantly, retain existing customers.

A successful CRM strategy aims at understanding the needs of the customer and integrating them with the organization’s strategy, people, technology and business process. Therefore, one of the best ways of launching a CRM initiative is to start with what the organization is doing now and working out what should be done to improve its interface with its customers. While this may sound quite

straightforward, for large organizations it can be a mammoth task unless a gradual step-by-step process is adopted.

Objectives of this study comprise:

- To compare the bank loans availed by SMEs on different parameters,
- To know the effectiveness of various SME’s financing schemes and problems faced by SMEs in getting credit from public and private sector banks,
- To understand the level of support given by banks to its SME customer during their period of difficulty, and
- To measure the overall satisfaction of SME customers, and in meeting their requirements.

Hypothesis of the study:

- H1- Interest rates are lower in Private Banks as compared to Public Banks in SME’s Funding.
- H2- Private Banks do not provide easy access of loan to SME’s as compared to Public Banks.
- H3- Private Banks do not help in economic growth and development than Public Banks.
- H4- In Private Banks, there is no possibility of tampering with the conditions of the contract when compared to Public Banks.

Methodology of the study:

SME units taking loan from public and private banks in Nagpur City were selected for study. As sample 200 SME loan borrowers were selected for administering the questionnaire. Primary data is collected through questionnaire and personnel interview method.

Analysis and Interpretation

The Small and Medium sector which plays an important role in the Indian economy in terms of employment and growth has recorded a high rate of growth after independence. It is now one of the fastest growing sectors in the country. It has made steady progress during recent years. The good performance of the small scale units is evident from their number, production, employment and foreign exchange earnings. The root cause for unemployment in India is the over growing population which has outpaced the development of industry and agriculture. For a country like ours, with limited financial resources and huge reservoir of human resources, Small and Medium industry is the only means for solving the unemployment problem.

The amount granted by the institution relative to the amount requested

	Frequency	Percent	Valid Percent	Cumulative Percent
Highly Satisfied	9	4.5	4.5	4.5
Satisfied	37	18.5	18.5	23.0
Neither Satisfied nor	74	37.0	37.0	60.0
Valid Dissatisfied	58	29.0	29.0	89.0
Dissatisfied	22	11.0	11.0	100.0
Highly Dissatisfied				
Total	200	100.0	100.0	

4.5% of the respondents are highly satisfied with the amount of loan granted by the institutions relative to the amount

requested by the respondents, 18.5% are satisfied with that, 37% are neither satisfied nor dissatisfied, 29% are dissatisfied and 11% are highly dissatisfied.

Time to process the loan

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Highly Satisfied	6	3.0	3.0	3.0
Satisfied	56	28.0	28.0	31.0
Neither Satisfied nor Dissatisfied	80	40.0	40.0	71.0
Dissatisfied	58	29.0	29.0	100.0
Total	200	100.0	100.0	

Only 3% respondents are highly satisfied with the time taken by bank to process the loan, 28% are satisfied, 40% are

neither satisfied nor dissatisfied and 29% are dissatisfied. However no respondent is highly dissatisfied.

Interest Rate

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Highly Satisfied	40	20.0	20.0	20.0
Satisfied	40	20.0	20.0	40.0
Neither Satisfied nor Dissatisfied	98	49.0	49.0	89.0
Dissatisfied	22	11.0	11.0	100.0
Total	200	100.0	100.0	

20% of the respondents are highly satisfied with the interest rates charged by bank, 20% are satisfied, 49% are neither

satisfied nor dissatisfied and 11% are dissatisfied.

Guarantees required by the institution (personal and corporate)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Highly Satisfied	22	11.0	11.0	11.0
Satisfied	80	40.0	40.0	51.0
Neither Satisfied nor Dissatisfied	36	18.0	18.0	69.0
Dissatisfied	40	20.0	20.0	89.0
Highly Dissatisfied	22	11.0	11.0	100.0
Total	200	100.0	100.0	

11% of the respondents are highly satisfied with the guarantees required by the institutions, 40% are satisfied, 18%

are neither satisfied nor dissatisfied, 20% are dissatisfied and 11% are highly dissatisfied

The institution’s support to your enterprise when business is good as well as when times are harder

	Frequency	Percent	Valid Percent	Cumulative Percent
Highly Satisfied	18	9.0	9.0	9.0
Satisfied	44	22.0	22.0	31.0
Valid Neither Satisfied nor Dissatisfied	80	40.0	40.0	71.0
Dissatisfied	58	29.0	29.0	100.0
Total	200	100.0	100.0	

9% of the respondents are highly satisfied with the support given by financial institutions to the enterprise when business is in good time as well as business is in harder

times, 22% are satisfied, 40% are neither satisfied nor dissatisfied and 29% are dissatisfied.

The possibility of negotiating the terms of the contracts (reimbursement conditions, service fees, etc.)

	Frequency	Percent	Valid Percent	Cumulative Percent
Highly Satisfied	22	11.0	11.0	11.0
Satisfied	40	20.0	20.0	31.0
Valid Neither Satisfied nor Dissatisfied	98	49.0	49.0	80.0
Dissatisfied	22	11.0	11.0	91.0
Highly Dissatisfied	18	9.0	9.0	100.0
Total	200	100.0	100.0	

11% of the respondents are highly satisfied with the possibility of negotiating the terms of the contracts, 20%

are satisfied, 49% are neither satisfied nor dissatisfied, 11% are dissatisfied and 9% are highly dissatisfied.

Overall Satisfaction

	Frequency	Percent	Valid Percent	Cumulative Percent
Satisfied	120	60.0	60.0	60.0
Valid Neither Satisfied nor Dissatisfied	80	40.0	40.0	100.0
Total	200	100.0	100.0	

60% of the respondents have shown overall satisfaction whereas 40% are neither satisfied nor dissatisfied.

Type of Sector

	Frequency	Percent	Valid Percent	Cumulative Percent
Medical	50	25.0	25.0	25.0
Education	50	25.0	25.0	50.0
Valid Transport	50	25.0	25.0	75.0
Apparel	50	25.0	25.0	100.0
Total	200	100.0	100.0	

The responses were equally distributed among different sectors viz., Medical, Education, Transport and Apparel, which are 25% each.

Loan borrowed from bank

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	132	66.0	66.0	66.0
Valid no	68	34.0	34.0	100.0
Total	200	100.0	100.0	

About 66% of the respondents have borrowed loan from banks and remaining 34% are planning to borrow.

Bank preferred for loan

	Frequency	Percent	Valid Percent	Cumulative Percent
Bank of Baroda	20	10.0	10.0	10.0
Bank of India	28	14.0	14.0	24.0
PNB	36	18.0	18.0	42.0
Union Bank	30	15.0	15.0	57.0
Canara Bank	24	12.0	12.0	69.0
Valid ICICI Bank	18	9.0	9.0	78.0
HDFC Bank	16	8.0	8.0	86.0
Yes Bank	12	6.0	6.0	92.0
Axis Bank	10	5.0	5.0	97.0
Kotak Mahindra Bank	6	3.0	3.0	100.0
Total	200	100.0	100.0	

18% of the respondents have shown Punjab National Bank as preference for borrowing loan, 15% have shown interest in Union Bank, 14% in Bank of India, 12% in Canara Bank, 10% in Bank of

Baroda, 9% in I.C.I.C.I. Bank, 8% in H.D.F.C. Bank, 6% in Yes Bank, 5% in Axis Bank and 3% in Kotak Mahindra Bank.

Problem faced with Loan

	Frequency	Percent	Valid Percent	Cumulative Percent
Interest Rate	37	18.5	18.5	18.5
Paper work required	49	24.5	24.5	43.0
Valid Time taken to extend the loan	62	31.0	31.0	74.0
Payment conditions	52	26.0	26.0	100.0
Total	200	100.0	100.0	

31% of the respondents face the problem of time taken by bank to extend the loan, 26% of the respondents are not happy with the payment conditions of the bank, 24.5% of the respondents think

that more paper work is required by bank while processing the loan and remaining 18.5% are not happy with the interest rates charged by the banks.

Obstacles faced while applying for loan

	Frequency	Percent	Valid Percent	Cumulative Percent
Collaterals	56	28.0	28.0	28.0
Financial Positions	44	22.0	22.0	50.0
Inconsistent Cash flows	46	23.0	23.0	73.0
Valid Presenting the proposal	26	13.0	13.0	86.0
Lack of standardised accounting system	28	14.0	14.0	100.0
Total	200	100.0	100.0	

The respondents faced following obstacles while applying for loan: 28% of the respondents faced the problem of collaterals, while 23% of the respondents faced the problem of inconsistent cash flows, 22% of the respondents faced

financial problem, 14% of the respondents were not having standardised accounting system and remaining 13% were not able to properly present their proposal.

Overall Satisfaction * The amount granted by the institution relative to the amount requested Crosstab

		The amount granted by the institution relative to the amount requested					Total
		Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Highly Dissatisfied	
Overall Satisfaction	Satisfied	6	18	56	40	0	120
	Neither Satisfied nor Dissatisfied	3	19	18	18	22	80
	Total	9	37	74	58	22	200
Chi-Square Tests							
		Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square		44.672 ^a	4	.000			
Likelihood Ratio		52.525	4	.000			
Linear-by-Linear Association		6.604	1	.010			
N of Valid Cases		200					
a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 3.60.							

In comparison of overall satisfaction with the amount granted by the institution relative to the amount requested it was found that 120 respondents are satisfied with the amount granted by the institutes and rest are neither satis-

fied nor dissatisfied. The Significant 2-sided Pearson Chi-Square value is 0.00 which states that null hypotheses is rejected and alternate hypothesis i.e. “the respondents are satisfied with the loan granted by the institutes” is accepted

Overall Satisfaction * Time to process the loan

Crosstab						
		Time to process the loan				Total
		Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	
Overall Satisfaction	Satisfied	6	56	18	40	120
	Neither Satisfied nor Dissatisfied	0	0	62	18	80
Total		6	56	80	58	200
Chi-Square Tests						
		Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square		90.151 ^a	3	.000		
Likelihood Ratio		112.051	3	.000		
Linear-by-Linear Association		14.593	1	.000		
N of Valid Cases		200				
a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.40.						

In comparison of overall satisfaction with time to process the loan, it was found that 120 respondents are satisfied and rest are neither satisfied nor dissatisfied. The Significant 2-sided Pearson

Chi-Square value is 0.00 which states that null hypotheses is rejected and alternate hypothesis i.e. “the respondents are satisfied with time taken by banks to process the loan” is accepted.

Overall Satisfaction * Interest Rate

Crosstab						
		Interest Rate				Total
		Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	
Overall Satisfaction	Satisfied	40	0	80	0	120
	Neither Satisfied nor Dissatisfied	0	40	18	22	80
Total		40	40	98	22	200
Chi-Square Tests						
		Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square		138.776 ^a	3	.000		
Likelihood Ratio		175.729	3	.000		
Linear-by-Linear Association		10.710	1	.001		
N of Valid Cases		200				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.80.						

In comparison of overall satisfaction with the interest rates charged by banks on loan, it was found that 120 respondents are satisfied and rest are neither satisfied nor dissatisfied. The Significant 2-sided Pearson Chi-Square value is 0.00 which states that null

hypotheses is rejected and alternate hypothesis i.e. “the respondents are satisfied with the interest rates charged by banks” is accepted.

Overall Satisfaction * Guarantees required by the institution (personal and corporate)

Crosstab							
		Guarantees required by the institution (personal and corporate)					Total
		Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Highly Dissatisfied	
Overall Satisfaction	Satisfied	22	40	18	40	0	120
	Neither Satisfied nor Dissatisfied	0	40	18	0	22	80
Total		22	80	36	40	22	200
Chi-Square Tests							
		Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square		79.167 ^a	4	.000			
Likelihood Ratio		108.395	4	.000			
Linear-by-Linear Association		5.758	1	.016			
N of Valid Cases		200					
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.80.							

In comparison of overall satisfaction with the guarantee required by the banks, it was found that 120 respondents are satisfied and rest are neither satisfied nor dissatisfied. The Significant 2-sided Pearson Chi-Square value is 0.00

which states that null hypotheses is rejected and alternate hypothesis i.e. “the respondents are satisfied with the guarantee required by the banks” is accepted.

Overall Satisfaction * The institution’s support to enterprises when business is good as well as when times are harder

Crosstab						
		The institution’s support to enterprise when business is good as well as when times are harder				Total
		Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	
Overall Satisfaction	Satisfied	18	22	40	40	120
	Neither Satisfied nor Dissatisfied	0	22	40	18	80
Total		18	44	80	58	200
Chi-Square Tests						
		Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square		19.109 ^a	3	.000		
Likelihood Ratio		25.457	3	.000		
Linear-by-Linear Association		.557	1	.456		
N of Valid Cases		200				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.20.						

In comparison of overall satisfaction with the institution’s support to the enterprise when business is good as well as when times are harder, it was found that 120 respondents are satisfied and rest are neither satisfied nor dissatisfied.

The Significant 2-sided Pearson Chi-Square value is 0.00 which states that null hypotheses is rejected and alternate hypothesis i.e. “the respondents are satisfied with the institutions support to the enterprise” is accepted.

Overall Satisfaction * The possibility of negotiating the terms of the contracts (reimbursement conditions, service fees, etc.)							
Crosstab							
		The possibility of negotiating the terms of the contracts (reimbursement conditions, service fees, etc.)					Total
		Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Highly Dissatisfied	
Overall Satisfaction	Satisfied	22	18	58	22	0	120
	Neither Satisfied nor Dissatisfied	0	22	40	0	18	80
Total		22	40	98	22	18	200

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	60.111 ^a	4	.000
Likelihood Ratio	81.622	4	.000
Linear-by-Linear Association	11.290	1	.001
N of Valid Cases	200		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.20.

In comparison of overall satisfaction with the possibility of negotiating the terms of contract, it was found that 120 respondents are satisfied and rest are neither satisfied nor dissatisfied. The Significant 2-sided Pearson Chi-Square

value is 0.00 which states that null hypotheses is rejected and alternate hypothesis i.e. “the respondents are satisfied with the possibility of negotiating the terms of contract” is accepted.

Independent Sample-T Test

Group Statistics					
Type of Bank		N	Mean	Std. Deviation	Std. Error Mean
Interest Rate	Public	138	2.5072	.90615	.07714
	Private	62	2.5161	1.00396	.12750
The amount granted by the institution relative to the amount requested	Public	138	3.1957	1.01707	.08658
	Private	62	3.3226	1.03661	.13165
Time to process the loan	Public	138	2.9928	.81497	.06938
	Private	62	2.8548	.86549	.10992
The possibility of negotiating the terms of the contracts (reimbursement conditions, service fees, etc.)	Public	138	2.9275	1.05081	.08945
	Private	62	2.7419	1.03916	.13197

The above table shows that mean satisfaction of interest rate of Public bank is 2.5 whereas the mean satisfaction of private bank is 2.52, which shows that the respondents are more satisfied with the interest rates charged by public banks than private banks.

The mean satisfaction of amount granted by the institution relative to the amount requested by public banks is 3.2 whereas the satisfaction of private bank is 3.32, which shows that the respondents are more satisfied with public banks than private banks.

The mean satisfaction of time taken to process the loan by public banks is less than private banks which shows that the respondents are more satisfied with public banks than private banks.

The mean satisfaction of the possibility of negotiating the terms of the contracts by public banks is less than private banks which shows that the respondents are more satisfied with public banks than private banks.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Interest Rate	Equal variances assumed	1.434	.233	-.062	198	.951	-.00888	.14332	-.29150	.27374
	Equal variances not assumed			-.060	107.417	.953	-.00888	.14902	-.30429	.28652
The amount granted by the institution relative to the amount requested	Equal variances assumed	.091	.763	-.811	198	.418	-.12693	.15643	-.43540	.18155
	Equal variances not assumed			-.806	115.551	.422	-.12693	.15757	-.43902	.18517
Time to process the loan	Equal variances assumed	2.341	.128	1.086	198	.279	.13791	.12703	-.11259	.38842
	Equal variances not assumed			1.061	111.408	.291	.13791	.12998	-.11964	.39547
The possibility of negotiating the terms of the contracts (reimbursement conditions, service fees, etc.)	Equal variances assumed	.677	.412	1.159	198	.248	.18560	.16011	-.13014	.50134
	Equal variances not assumed			1.164	118.761	.247	.18560	.15943	-.13010	.50130

An independent sample t-test is performed to test the effect of different variable on private and public banks, the result is as follows:

1. The significant (2-tailed) value of interest rate is 0.951 which is greater than the alpha value of 0.05, which states that the Null Hypothesis i.e. "Interest rates are lower in Private Banks as compared to Public Bank in SME Funding" is accepted and alternate hypothesis is rejected.
2. The significant (2-tailed) value of interest rate is 0.418 which is greater than the alpha value of 0.05, which states that the Null Hypothesis i.e. "Private Banks do not provide easy access of loan to SME as compare to Public Banks" is accepted and alternate hypothesis is rejected.

3. The significant (2-tailed) value of interest rate is 0.279 which is greater than the alpha value of 0.05, which states that the Null Hypothesis i.e. "Private Banks don't help in economic growth and development" is accepted and alternate hypothesis is rejected.
4. The significant (2-tailed) value of interest rate is 0.248 which is greater than the alpha value of 0.05, which states that the Null Hypothesis i.e. "In Private Banks there is no possibility of negotiating the contract" is accepted and alternate hypothesis is rejected.

Findings, Conclusion and Suggestions:

- The growth of small scale industries in Nagpur city in the recent past has been significant. The available literature on the industrial front of Nagpur city denotes that the city has sound infra-structural facilities.
- There is a good number of industry promoting agencies functioning in the State. In the absence of these agencies the city would have remained industrially undeveloped.
- The important problems experienced by SMEs at different stages are related to production, labour, marketing and finance.
- It is found that many units have been suffering production problems due to the shortages of inputs like credit. In the case of Nagpur city, a footwear manufacturing unit at Nagpur city could not produce quality footwares because they don't have adequate funds to purchase latest machinery to get quality out-put.
- Timely finance should be made available to the small units keeping in view their needs.
- The borrowings should be made cheaper by lowering the rate of interest on loans.
- The re-orientation program, workshops and seminars should be organized at district level to provide latest information to the small entrepreneurs.
- Banks should also provide consultancy services and professional guidance at the time of setting up for considering the long-term and short-term financial requirements of a small unit for lending purposes.

In line with the RBI directives, Commercial Banks, especially private sector banks have relaxed the lending norms to accelerate the credit flow. Besides the Central and State Governments, the financial institutions also have launched Entrepreneurial Development Schemes, ongoing trainings and redressal mechanisms, so that entrepreneurial skills are fully exploited for the growth of the economy. Hence financial opportunities are a plenty to entrepreneurs with zeal and enthusiasm.

After analysis of data certain strategies are suggested which will help in better implementation of CRM in banks. Banks need to understand its customers better. It has to set up its customer information centrally. In the end, we can achieve higher customer value through servicing the targeted customers better. This will make banks more efficient in serving the customers and in maintaining the long term relations with them. The analysis of the results received suggests that banks (whether Public or Private) are equally benefitted by the kind of CRM initiatives they undertake. The key drivers to customer loyalty are:

- (a) Positive Staff Attitude
- (b) Honesty, Integrity and Reliability
- (c) Productive advice and delivery of the promised service,
- (d) Consistent delivery of superior quality service, and
- (e) A fair and efficient complaints resolution mechanism.

Customer Relationship Management, as referred to in some literature, is 10% strategy and 90% action. It is a business strategy that adds value to the customer service in Banks and brings the customers near and dear to the business.

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Indian Accounting Standards vs International Financial Reporting Standards

Raghunatha T. and H. Rajashekar

Abstract

The paper is an attempt to analyze the perception of accounts preparers, chartered accountants and academicians in Mysore city-Karnataka, to find if the convergence of Indian accounting standards with IFRS is beneficial or not? Another major goal of this study is to justify that well and good accounting standards are not responsible for accounting scandals. Finally, the study comes to a conclusion that convergence of Indian Standards with IFRS is beneficial for investors, government and corporate sector respectively. Majority of the respondents agree with the significance of convergence of Indian accounting standards with IFRS and they say that, using IFRS as a reporting language brings uniformity and fairness in financial statements. However, the study states that, avoiding of accounting scandals is possible through an ethical practice among entities and auditors.

Key Words : International Financial Reporting Standards (IFRS), Convergence, INDAS, Accounting Scandals, Accounting Ethics.



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When financial source of industries crosses the national border, it has to focus on both domestic and foreign investors at the time of preparation and presentation of financial statements. Basically, the financial statements should be understood by all kind of investors. Different types of accounting practices across the globe are not able to fulfil the desire of both domestic as well as overseas investors. To avoid this, it is necessary to bring single set of highly qualitative accounting standards.

The International Accounting Standards Board (IASB) is the major professional accounting body in pronouncing a single set of accounting standards across the world. The IASB elaborates its functions through establishment of International Financial Reporting Standards (IFRS). The standards are investor friendly and principle based. The main reason behind the establishment of IFRS foundation is to bring uniformity and fairness in financial statements and minimize the several alternatives of single transaction. Presently, some countries have voluntarily adopted the IFRS,

but still many countries are not ready to complete adoption and they are trying to converge their national accounting standards with IFRS. India is one among them. However, this present study conducts a survey on 'how convergence of Indian accounting standards with IFRS is beneficial to India?' To justify the research question, the study collected the primary data from structured questionnaire. The collected information was analysed by employing descriptive and one-way ANOVAs statistical tools. Finally, the study came to conclusions that convergence of Indian standards with IFRS has both positive and negative benefits, but the positive benefits are greater than its drawbacks.

Vineet, (2013) predicts that one of the questions of concern is that the companies included (BSE-30 & NSE Nifty-50) in the first phase, are not ready to converge itself with these standards and in that case, use of converged standards is questionable. Aabida (2013) opines that majority of the respondents are not aware about the convergence of IFRS and the Indian accounting standards. Further, all of the respondents are not clear about the contents of IFRS.

Partap (2013) reveals that there is a clear difference in awareness level for different category of academicians. A very small percentage of academicians make efforts to contribute in research in IFRS area. Shibu (2013) states that convergence of INDAS with IFRS has changes in accounting transition as well as reporting system. India has already announced the convergence of INDAS with IFRS in a phased manner viz., Phase I on 1 April 2011; Phase II on 1 April 2013; Phase III on 1 April 2014. No doubt, transition from IND GAAP to IFRS will face many problems, but it has also some advantages.

RAM (2012) suggests that if IFRS has to be uniformly understood and consistently applied by all stakeholders such as, employees, auditors, regulators and tax authorities, it has to be achieved through training. David (2012) proposes that empowerment is necessary in national accounting standard setting bodies to integrate the values of professionalism, flexibility, optimism and transparency into their professional activities and set realistic timeframes and deadlines for the transition to IFRS to allow the local accounting culture to catch up with new IFRS reforms. Karthik (2012) asks, "Should the IASB put more emphasis on convergence over full adoption in promoting IFRS use? Should the IASB make accommodations to its organizational structure to facilitate U.S. adoption? Should the IASB make

further adjustments to its governance to accommodate its growing membership and stakeholder base?" Sarbapriya (2012) in her study concludes that there are not much deviations and fluctuations in the net income position as disclosed by financial statement of Wipro Ltd in IFRS reporting and Indian GAAP. But deviation is rather prominent observing the total liability and equity position which is mainly because of reclassification between equity and total liability. Bhuvn (2012) states that the adoption of IFRS will reflect more appropriately the revenues of Indian Real Estate developers and their ability to deliver projects and IFRS deals with market risks that are related to real estate projects more effectively than the Percentage Completion Method. Lucian (2011) opines that adoption of IFRS is beneficial to firm, because convergence or adoption of IFRS brings benefit to companies to reduce their cost of capital through expanding their sources of fund. Shinya (2011) suggests that, there may be a conflict between firms and domestic investors, in countries in which the ratio of net is high and secondly the adoption of IFRS is beneficial to firms or investors depends not only on the quality of the accounting standards, but also the fraction of foreign investors. Patrick (2009) says that convergence of IFRS and US GAAP provides greater comparability, yields equal or high quality standards and attracts investment from a wide population of investors. Hans (2006) predicts that the counterfactual proxy for U.K. firms adoption of IFRS is needed, because the implied cost of equity is negatively related to their proxy.

Summary

Convergence of Indian Accounting Standards with IFRS has both positive and negative benefits. Prior theories say that adoption or convergence of IFRS with national GAAP brings uniformity and fairness in accounting information. Whereas others say that, convergence is not much important because convergence or adoption needs certain changes in particular rules and regulations in the particular jurisdiction. It may affect the tax regulations. So, the reviews of empirical studies identify the research gap: still many professionals including industrialists, auditors are not agreeing with convergence of India accounting Standards with IFRS. However, this study has made an attempt to explore the opinion of professionals in Mysore city regarding how convergence is beneficial or not to India.

Problem background

US-GAAP and IFRS are the leading Accounting Standards in the world, but IFRS are investors' friendly standards and it bringing fairness in financial statements, because each country has accounting standards of its own, but some national accounting standards are not covering the Basic Accounting Principles. Speaking in the wake of the WorldCom scandal in August 2002, Robert Howell, programme director of International Institute for Management Development, said: "the object of business is to create real shareholder value which means increasing the net present value of the future stream of cash flows," (Ken, 2004). It is possible only when a company's adopted fair value approach to their valuation to preparation of financial statements. For this reason, the IASB put an effort to bring investors to full transparent financial information through new standards in the name of IFRS to standardize the accounting information.

India is a developing nation. The development of any nation depends on industrial growth. Some Indian firms are raising capital from various overseas investors. In this situation, there is a question "Are domestic standards enough to communicate firm's economic information to overseas investors?" This is one of the main reasons to adopt or converge of IFRS, because these standards are understood by across the world. To get an appropriate answer to this question, the researcher conducts a study on perception of Chartered Accountants, Academicians, and Account Preparers of Companies in Mysore City- Karnataka on Convergence of Indian Accounting standards with IFRS.

Research Objectives

The research objectives comprise:

- To examine the significance of Convergence to Investors and Companies in India,

- To examine the impact of convergence of Indian accounting standards with IFRS, and
- To analyse the fundamental reasons for accounting scandals that have broken the accounting system.

Hypotheses

Still there is a question: how significant is convergence of Indian Accounting Standards with IFRS? Various empirical studies have identified that, voluntary adoption of IFRS decreases the cost of capital, increases transparency, and brings fairness in financial information. Considering this, the following hypotheses were developed.

H₁: There is a significant impact of convergence of India Accounting Standards with IFRS on Overseas investors, providing valuable accounting information.

H₂: Convergence of Indian Accounting Standards with IFRS impacts on audit practices.

H₃: There is no significant relationship between accounting standards and accounting scandals.

This study was conducted on the basis of exploratory approach because this is the preliminary study that attempts to clarify the significance of convergence of Indian accounting standards with IFRS. Primary data were collected through structured questionnaire which are in the form of five point likert scales. Secondary data includes prior empirical studies that covered problem statements of research. Convenient sampling technique was used for selecting the respondent.

Empirical Findings

H₁: There is a significant impact of convergence of Indian Accounting Standards with IFRS on Overseas investors, provide valuable accounting information to face competitive situation and lower cost of capital.

Table 1: Descriptive Statistics of variable: Mean, Standard Deviation

SL No	Variables	Mean	Variance
1	To have good relationship with developed countries	4.507	0.312
2	To face competitive situation in global scenario	4.565	0.249
3	To enhance the company reputation	4.551	0.251
4	Procure more capital	4.710	0.385
5	Provide reliable information	4.536	0.369
6	Lower cost of capital	4.522	0.253
7	To reduce investors tendencies	4.594	0.245
8	To minimize the future uncertainties	4.449	0.251
9	To minimize the comparability risk	4.522	0.253
10	To develop the economic condition	4.362	0.234

(Source: Survey data)

Table 1.1 Anova's

Statistical Test	Result
ANOVA	P-Value(0.0358)
Observation	35
Significance level	0.05

(Source: survey data)

Table1 shows that convergence of Indian accounting standards with IFRS is important, because it helps to face global level competitive across globe, enhance the company's image, procure more capital, provide sound financial information to stake holders, lower cost of capital, comparability and transparency, reduce investor tendency, minimize the future uncertainties and development of economy because the mean value of all variables are greater than the mid value of five point likert scale that is 2.5. Hence

the research hypothesis is accepted because the P-value is <0.05. However the importance of convergence of Indian Accounting Standards with International Financial Reporting Standards is more than its drawbacks. So the analysis predicts that convergence is necessary.

H₂: Convergence of Indian Accounting Standards with IFRS has impact on audit practices.

Table2: Descriptive Statistics of variable: Mean, Standard Deviation

SL No	variables	Mean	Variance
1	Convergence is associated with rigorous audit (N)*	2.420	0.541
2	Indian GAAP provides equivalent financial information compare to IFRSs(P)*	4.537	0.370
3	Convergence increases the reliability in financial statement(P)	4.899	0.092
4	Convergence is essential to attract the overseas investors(P)	3.652	0.583
5	Convergence is disruptive for preparers and users(N)	2.565	1.661
6	Convergence brings volatility in Tier -one capital(N)	4.667	.0225
7	IFRS are suitable for Indian Market(P)	4.420	0.247
8	IFRS are qualitative standards(P)	3.725	1.114
9	Convergence minimizes the information asymmetries(P)	4.536	0.252

(Source: survey data) (Note: P*= Positive Impact, N*= Negative Impact)

Table-2 shows that majority of the respondents do not agree with convergence as it is associated with rigorous audit (2.420), it is not disruptive for preparers and users (2.565) and Indian accounting standards are near to the IFRS (4.537). Remaining mean value of variables in the form of positive impact is greater than the mid value of 2.5. It shows that respondents have the positive opinion towards the benefits of convergence of Indian accounting standards with IFRS. Regarding negative impact the respondents agree with the negative impact of convergence because the mean value is greater than mid value 2.5. But the respondents have opined that, IFRS has both positive and negative benefits, but we have to consider only the positive benefits rather than negative, because nothing is free from negative thoughts.

H₃: There is no significant relationship between accounting standards and accounting scandals.

Deductive approach was used to analyse the above research hypothesis because data are in the theoretical form and based on this information the study analyzes the above hypothesis. Theoretical information shows: various accounting fraud that misleads the Investors, Auditors, as well as Government. Though there are several rules and regulations to avoid corporate scandals, it is not possible to avoid complete abolition of scandals. In this analysis the study tries to find out some measures that can avoid the corporate scandal through analyzing the various accounting scandals.

Table 3: Number of accounting scandals and its reasons

SL. No	Name of the companies	Some important reasons for Accounting Fraud
1	MCKEESON & ROBBINS(1938)	Forged invoices, fabricated shipping notices, contracts, debit memos misstatement, and overstatement of its inventory.
2	ALLIED CRUDE VEGETABLE OIL REFINING(1955)	Cheating the Government while carrying out Government contract, inflated financial statements, double counted, inventory boosting the auditor 's records, and fuelling the company 's accounting record.
3	CRAZY EDDIE(1986)	Fraudulent financial reporting and misappropriation of assets, skimmed cash, overstated inventory, used a number of memorandum entries to appear more financial lucrative prior to the IPO(Initial Public Offering) , sharing inventory from one store to another to boost each store 's inventory.
4	ZZZZ BEST(1987)	Recorded several fraudulent schemes to raise the needed funds to grow his business such as: credit card forgeries, insurance fraud, check kiting, reporting countless fictitious revenues from insurance restoration contract to coerce banks in to approving his loan, financial report are inflated and phony accounts, management generate fake receivable.
5	BARING BANK (1995)	Created fake account which he used to hide his loss and reported earnings, improper internal auditing, and risk management practices.
6	ENRON (2001)	Boasted annual report, stock was undervalued and encouraged further investment, receive borrowed funds and recorded them as revenues while ignoring the associated liability, violated the SPE (special purpose entities), limited disclosure of the SPE pronounced by SEC and FASB, creating huge gains that carried over to the income statement, unrealistic forecasts, underestimating expenses, overestimating profit, lack of internal control, and deteriorating financial condition.
7	PHAR-MOR(2002)	Inventory overstatements, fraudulent financial reporting(not announcing and reporting the loss), misappropriation of assets, issuing fake invoice for merchandise purchases, making Phony journal entries to increase inventory, over-counting merchandise, poor internal control, lack of management information system, absence of audit committee.
8	PARMALAT(2003)	Creative accounting, forgery in bank document debts amount which shown in balance sheet was almost eight times of the sum originally stated.

(Source: Justin Matthew Mock (2004), "Classic Case Studies in Accounting Fraud")

The principles of accounting are applied to business entities in three divisions of practical art: Accounting, Book-keeping, and Auditing. These principles clearly specify that how a transaction should be entered in book-keeping and what are the responsibilities of auditing firm while carrying auditing work. Johan L. Carey, describing ethics in accounting, "When people need a doctor, or a lawyer, or a certified public accountant, they seek someone whom they can trust to do a good job-not for him, but for them. They have to trust him, since they cannot appraise quality of his products, to trust him they must believe that he is competent, and that his primary motive is to help them."

But if we analyze reasons for several accounting scandals it shows auditors' irresponsibility and unethical involvements with corporate, are some of the important reasons.

Luca Pacioli was the first person who introduced the concept ethics in accounting and says "Do not omit any items in the Book-keeping" because the final aim of preparation of accounting is to communicate sound economic information to various stakeholders. But now accounting practices are reverse to his thought.

Table-3: shows that starting from 1938 several scandals took place because of lack of internal control, illegal

cooperation of auditor towards company, misappropriation of assets, issuing fake invoice for merchandise purchases, making phony journal entries to increase inventory, overcounting merchandise, poor internal control, lack of management information system, absence of audit committee. And the investors opine that both corporate sectors and auditors are responsible to these scandals. Some time business entity may not provide fair information to auditor where as some time internal auditors try to hide information that affects the reputation of organizations. However the number of accounting fraud is explained in this study, because of lack of auditor's responsibility (examples shown in the above table). Due to this, investors, brokers, and banks suffer losses worth billions.

Now various professional accounting bodies are pronouncing new audit standards, creating more audit procedures, tests of control, and interpretation of accounting standards, but it is not sure that it really avoids the accounting fraud. Because standards do not change the mindset of business entities and auditors and they know how to fake their annual report with sound accounting and auditing standards. However, it is possible only when they try to follow accounting and corporate ethics. Then it automatically reduces fraudulent activities in accounting. Hence, the research hypothesis is accepted, because the above scandals show that though there are sound accounting standards, it is not possible to avoid accounting fraud.

Suggestions

1. Government should mandate that all higher education institutions should include IFRS and ethics in accounting and auditing in their syllabus especially for commerce and managements, CA, CS and other relevant areas.
2. Arranging workshop to all industries and corporate entities (small and large) with regard to implication of IFRS, and its benefits.
3. Accounting firms and Auditors should try to practise ethics in their accounting profession that helps to give fair information to investors which help them to take accurate investment decisions.
4. Every organization should have one separate department like, Forensic Accounting which may minimize unethical accounting practices.

Conclusion

Today the entire world is considered as a single village, but still there is a lack of difference in accounting practices that are disruptive to investors and others and it fails to bring fairness and uniformity in accounting information. So, to bring uniformity in accounting system it is necessary to adopt or converge with IFRS. This study examines the various professionals' opinion on convergence of Indian Accounting Standards with International Financial Reporting Standards using ANOVAs. The study finds out that convergence of Indian Standards with IFRS is beneficial to bring fairness in financial statements especially for companies having global relationship. It is easy to compare the financial performance of one company with that of another and convergence is significant to attract overseas investors, and reduce the cost of capital.

Accounting scandals have taken place because of fraudulent financial reporting and misappropriation of assets; skimmed cash; overstated inventory; forged invoices; fabricated shipping notices; contracts, and debit memos misstatement; this study justifies that accounting standards do not avoid accounting fraudulent activities in an organization though pronouncing a 'well and good' accounting standards, because the entities and auditors know how to fake the financial statements to attract investors. So at the end the study clearly states that avoiding of accounting scandals is possible through an ethical practice in both entities and auditors.

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Questionnaire

Dear respondent,

This is the research questionnaire for a study on the topic entitled “**Convergence of Indian Accounting Standards with International Financial Reporting Standards-A study of perception of Chartered Accountants, Academicians, and Account Prepares of Companies in Mysore City- Karnataka**”

To carry out my research work with effectively, I need your valuable opinion through this questionnaire.

SECTION-1: PROFILE

- 1) Name of the company/industry/institutions: _____
- 2) Name of the C.A/ professor/ company account preparer: _____
- 3) Age: _____
- 4) Qualification: CA or professor, Associate professor, and Accounting professors.

SECTION -2: AGREE OR DISAGREE STATEMENTS

The following questions are in the form of agree or disagree statement. Respondents are requested to give their opinion to analyze the impact of convergence of Indian accounting Standards with International Accounting Standards.

5= strongly agree, 4=agree, 3=neutral, 2=disagree and 1=strongly disagree

SL. No	variables	5	4	3	2	1
1	Convergence is associated with rigorous audit.					
2	Indian GAAP provide equivalent financial information compare to IFRS					
3	Convergence increase the reliability in financial statement					
4	Convergence is essential attract overseas investors					
5	Convergence is disruptive for prepares and users					
6	Convergence bring volatility in Tier-one capital					
7	IFRS is suitable for Indian Market					
8	IFRS are qualitative standards					
9	Convergence minimize the information asymmetries(P)					

SECTION-2: IMPORTANT AND NOT IMPORTANT STATEMENTS

The following questions are in the form of important and not important statements, respondents are request to give your opinion to analyze the significance of convergence of Indian accounting Standards with International Accounting Standards.

5= very important, 4= important, 3= of no influence, 4= not so important, and 1= totally unimportant.

SL. No	variables	5	4	3	2	1
1	To have good relationship with developed countries					
2	To face competitive situation in global scenario					
3	To enhance the company reputation					
4	Procure more capital					
5	Provide reliable information					
6	Lower cost of capital					
7	To reduce investors tendencies					
8	To minimize the future uncertainties					
9	To minimize the comparability risk					
10	To develop the economic condition					

Signature: _____

Date : _____

Place : _____

Thanking you

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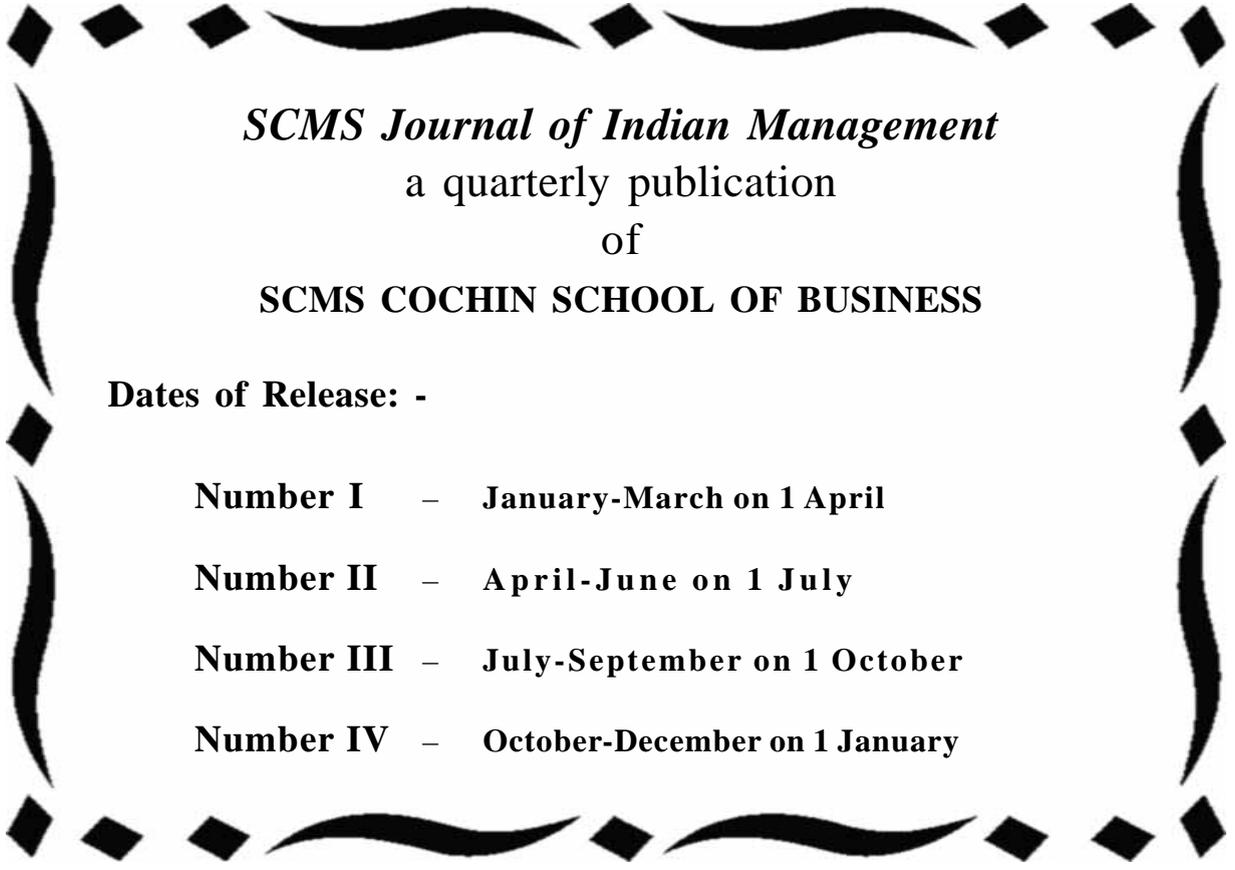
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