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VIDWAT (विद्वत) in Sanskrit means: know, understand, find out, learn, ascertain, discover, and expound.

"Vidwat – The Indian Journal of Management", published by Dhruva College of Management, Hyderabad, reflects this array of meanings. It is a vehicle for a wide range of researchers from across the globe to bring their insights to B-Schools as well as practising managers.

"Vidwat - The Indian Journal of Management" is a biannual publication. Its objective is to encourage and publish applied research in all the functional areas of Management. It lays emphasis on management issues that are relevant to academicians and practicing managers.

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Editorial

In keeping with the vision of enabling the process of capturing and sharing the management community's collective expertise, this issue of Vidwat provides an eclectic mix of advanced management thought both from India and abroad. This twice-in-a-year opportunity, reflecting the frontiers of research and conceptual thinking in management acts something like a repository of contemporary knowledge.

In the opening research paper 'Organizational Role Stress of Employees: Public vs. Private Banks', Prof Shilpa Sankpal, Dr Pushpa Negi and Mr Jeetendra Vashishtha examined the impact of organizational role stress on employees of public and private banks. This exploratory study revealed that the private bank employees experienced higher organizational role stress than their public sector counterparts.

Dr R Kasilingam and Dr S Sudha in their paper 'Influence of Locus of Control on Investment Behaviour of Individual Investor' made an attempt to appreciate the impact of the locus of control on the investment behavior of individual investor.

In their research paper 'Performance Evaluation of the Mutual Fund Industry in India", Prof KP Sivakumar, Dr S RajaMohan, Prof DM Sezhiyan and Prof S Narsimhulu undertook a quantitative research to examine the performance of mutual funds players in India based on their resource mobilization during the past decade.

In the case study 'Amara Raja Group: Transforming Lives by Filling Technology Gaps', the Dhruva Consulting Group and Dr Vipin Gupta tried to appreciate the Group's diversification strategy with special reference to its decision to enter the automotive battery segment.

In 'The Difficulty of Being Good: On the Subtle Art of Dharma', Gurcharan Das seeks to apply the lessons from the epic Mahabharata to everyday contemporary life. I've made an attempt to draw parallels with the business world bringing out the essence of the author's search for ethics.

In the closing section of the journal, Prof Baseema Banoo cites the literature in the area of 'Sustainable Entrepreneurship'. This bibliography is intended to help scholars to understand the concept, relevance and impact of Sustainable Entrepreneurship on the overall growth and development of the global economy.

The year 2010 provides yet another opportunity for thinking through themes and issues which are critical to the development of management thought. The response to the call of papers has once again been heartwarming and did pose a challenge to the editors who had the daunting task of separating the grain from the chaff. The present volume is the result of painstaking work by members of editorial team, carefully chiseled and polished, wherever required, for finalizing the contributions for publication. This focus has rewarded DHRUVA by Vidwat being licenced to EBSCO. It is our pleasure to present this mixed 'platter' for you to savor.

"The New Year is at the door. I wish for the stupid a little understanding and for the understanding a little poetry. I wish a heart for the rich and a little bread for the poor. But above all I wish that we may blackguard each other as little as possible during the New Year"... Heinrich Helene

With best wishes for a happy new year,

Dr S Pratap Reddy
Editor-in-Chief, Vidwat
January 01, 2010

Organizational Role Stress of Employees: Public Vs Private Banks

Prof Shilpa Sankpal

Dr Pushpa Negi

Mr Jeetendra Vashishtha

Role Stress is a frequently studied phenomenon. One of the facets of the umbrella term is the specific study of organizational role stress. Studies on organizational role stress of employees have been conducted in context of various occupational environments. Though several studies have been reported in context of medical and health services, not too many studies are done on the banking sector especially in the Indian context. This study examines organizational role stress of employees of public and private banks.

The study was conducted in Gwalior city and a sample of 100 bank employees is used for data collection – 50 each from public and sector. The instrument for data collection was the standardized questionnaire developed by Pareek. The data was collected using Likert scale. The data collected was subjected to analysis through z-test for comparing between the employees of public and private sector banks. Overall 11 hypotheses were tested. Not only was the data compared in the entirety, it was also compared on the basis of inter role distance, role stagnation, role expectation conflict, role erosion, role overload, role isolation, personal inadequacy, self role distance, role ambiguity and resource inadequacy.

Key Words: **Role Stress, Public Vs Private Sector Banks, Stress Management**

Introduction

Stress is a normal phenomenon in the contemporary life. Not that stress is a recent concept, but still the consequences and antecedents are vastly different in the modern world vis-à-vis what they were for our ancestors.As the study of this phenomenon advanced, researchers investigated the various facets of stress to have clarity on differences and components of this stress. Stress is the "wear and tear" our bodies experience as we adjust to our dynamic environment; it has physical, psychological and emotional effects on us and can create positive or negative emotions. As a positive influence, stress can drive a person towards action; it can result in a new awareness and an exciting new perspective and such stress is called eustress.As a negative influence,it can result in feelings of distrust, rejection, anger, and depression, which in turn can lead to health problems such as headaches, upset stomach, rashes, insomnia, ulcers, high blood pressure, heart disease, and stroke and such stress is called distress. And role is the position one occupies in a social system, and is defined by the functions one performs in response to the expectations of the significant members of a social system, and one's own expectation from that position of office (Pareek, 2002). Often employees play a multitude of roles and it is obvious that clarity of tasks leads to greater job satisfaction (Ting, 1997).

Optimum stress is essential for performing well in one's job. But once stress exceeds a certain limit it can cause burnout and detrimentally affect work performance. People can feel "crushed" by the need to make a life changing decision. They can feel "smashed" by a disaster, or "stretched" to the brink of "splitting" (Steber, 1998). As organizations become more complex, the potential for stress increases. Urbanization, industrialization and increase in scale of operations are some of the reasons for rising stress. Stress is an inevitable consequence of socio-economic complexity and, to some extent its stimulant as well. Simon (1997, p.276) has pointed out that the basic challenge for all organizations is inducing the employees to contribute towards the organizational goals. Pfeffer (1998) has also emphasized that the key to the long-term success has been and shall remain how organizations manage and keep their employees happy because in the long term, it will be the main pillar behind organizational effectiveness. Cooper (1983) has listed several sources of work stress including job conditions, role stress, interpersonal factors, career development, organizational structure and home-work interface. Essentially, this paper has looked at stressors from the perspective of the situations proposed by Pareek (2002).

These situations subsume:

- Inter-Role Distance: It signifies the conflict that exists between organizational roles and others.
- Self-Role Distance: This represents the conflict of one's values and self concept with the role requirements within the organization.
- Role Isolation: Role Isolation is an indicator of the extent of alienation of one's role from the other organizational roles.
- Role Ambiguity: It represents the paucity of clarity of what others expect from a role, for the lack of sufficient feedback on performance.
- Role Expectation Conflict: It signifies the conflicting demands on role-incumbent by others.
- Personal Inadequacy: It represents the feeling of being ill-equipped for the demands of a particular role.
- Resource Inadequacy: It represents the stress emanating from not having enough resources (available knowledge, financial and personnel resources etc). to effectively perform in a role.
- Role Stagnation: This indicates the lack of opportunities for growth or progress.
- Role Erosion: It constitutes the feeling that the job is no longer challenging or that parts that should have remained within a particular role have been given to others.
- Role Overload: It represents being 'heaped-up' with more than what one can actually accomplish.

Review of Literature

Studies conducted on bank employees by Parkington and Schneider (1979) revealed that bank branch employees and customers of a large commercial bank responded to employee perceptions of management's orientation to service and employees' own orientation to service. In the study, a causal relationship was evidenced between service orientation discrepancy, role stress, and employee outcomes. Also, positive employee outcomes were found to be significantly related to customers' perception of service quality. Quick (1979) conducted a field study over a 14 month period to examine goal setting as a dyadic, role making process between 46 managerial and staff employees (subordinates) and 15 officers and directors (supervisors) in an insurance company. Significant improvements in the goal behaviors and significant declines in stress were found following training. Fernandes et al (2008) studied the impact of social support on role stress experienced by the executives of public and private sector banks in Goa. Ten types of role stress were measured using the ORS scale and their study found that enhancing social support lowered the role stress.

Some studies related to role stress have been conducted on hospital nurses. Gupta et al (2008) measured ten types of role stresses on civil hospital nurses in West Bengal, using a modified version of ORS scale translated in Bengali. Nurses are the backbone of efficient running of hospitals and clinics and this study identified prominent role stressors and their consequences and made recommendations for functionally coping therewith. Baba and Fang (1993) constructed a three-stage linear model of turnover with role ambiguity, role conflict, and role overload as antecedents and stress as an intervening variable. In addition, the moderator effects of external and internal opportunities, social support, and personal experience on the stress-turnover linkage were examined. Two samples of data were collected from nurses working in both general hospitals and specialized hospitals in the Greater Montreal area. While the stressors failed to predict turnover intention consistently across samples, stress in all samples yielded significant predictions of turnover intention. However, none of the proposed moderating variables showed significant effects on turnover. Another study was done by Chang et al (2007) and their results suggested that mental health benefits for nurses who use problem-solving to cope with stress by addressing the external source of the stress, rather than emotion-focused coping in which nurses try to control or manage their internal response to stress.

Studies conducted on service sectors concluded that service-oriented jobs, which involve a direct interaction with customers, are prone to create relatively greater stress levels for employees. Modekurti and Chattopadhyay(2008) found, stress levels was more overwhelming in the case of women employees due to the greater need among them to strike a balance between their personal and professional lives. Recent years have seen that in addition to the traditional family and societal expectations, women are also required to meet their more demanding professional tasks. Hence, caught in the midst of such an array of expectations, they experience severe stress, which takes a toll on their life styles.

Bhattacharya and Basu (2007) studied Distress, Wellness and Organizational role stress of professionals in the area of Information Technology. The effect of sex and age on the above variables as well as the predictability of the variables from stressful life events and coping resources taken together were also examined. Results of the study revealed that women experienced greater wellness and older personnel experienced more distress. Distress could not be predicted from the life events and coping resources taken together. Wellness and Organizational role stress could be predicted from these two variables. Pestonjee and Azeem (2001) investigated the relationships between organizational role stress and job burnout among university teachers. The results of the study indicated that organizational role stress is highly correlated with job burnout among all the three groups of teachers (Lecturers, Readers and Professors). Lecturers have higher level of role stress as compared to other two counterparts and are found to be significantly different from Readers and Professors on demographic variables and their level of role stress and emotional exhaustion. Readers are found to be significantly different on Role Erosion, Role Overload, Self-Role Distance, Resource Inadequacy and Total ORS from the Professors.

To survive and excel in the new economy, working environment including the HRD climate is a matter of serious concern in Indian public sector organizations (Pattanayak, 2003). Study conducted by Mohan and Chauhan (1999), revealed that, the managers of Public Sector experienced the maximum Role Erosion and Self Role Conflict, followed by Government and the private sector. The private sector seems to have a better work climate, which is giving forward orientation in one's job role and also fewer amounts of intra-personal confliction situations. This can have implications for improvement of work climate in Government and Public Sector.

Boshoff and Mels (1995) concluded that, the organizational commitment of insurance salespeople exerts a strong, positive influence on their internal service quality, and establishes that organizational commitment is positively influenced by participation in decision-making and negatively influenced by role conflict. They also suggested that the management of an insurance sales force could enhance internal service quality by creating a working environment where employees identify with the goals, objectives and values of their organization. Miller and Ellis (1990), found that, a work environment associated with unpleasant organizational climate, lack of privacy, a lot of hassle in conducting work, and distractions can result in higher stress.

A study conducted by Levi (1984), suggested that, work situations are experienced as stressful when they are perceived as involving important work demands which are not well matched to the knowledge and skills (competencies) of workers or their needs, especially when those workers have little control over work and receive little support at work. Cooper (1978) suggested that the fear of obsolescence and failure resulting in demotion is likely to be strongest in those who believe they have reached their career ceiling, and that most will experience some erosion of status before they retire. He believes that these fears may give rise to stress if workers are unable to adapt their expectations to the reality of their situation.

Tidd and Friedman (2002) investigated the impact of conflict style as a coping strategy in response to role conflict and also examined workplace uncertainty as a mediator in the role stress process. Results supported the mediating role of uncertainty in the role stress process. Additionally, the results showed exhibiting a more active approach to conflict management decreased the negative impact of role conflict an uncertainty. These findings suggest that individuals may be able to reduce the negative individual impact of role conflict in their environment by adopting positive behavioral styles while avoiding negative ones.

Kanungo (1981) revealed that, when workers believe there is a separation between their own job and other work related contexts; a sense of frustration that finally manifested in a behavioral state of apathy is likely to occur. This is particularly intense for employees with high social needs.Oi-ling (2002) examined occupational stressors and well being for blue- and white-collar occupations with Chinese and Hong Kong samples.The study demonstrated that occupational stressors play a significant role in determining job satisfaction, mental and physical well being.

Stress among expatriates has been studied from various perspectives. Deosthalee (2002) in a study attempted to assess the occupational stress experienced by Indian expatriates working in Sultanate of Oman, and stress experienced by Indians working in India. The results show that Indian females working in Sultanate of Oman experience more stress than their counterparts working in India. Personnel having post-graduate qualifications working in Sultanate of Oman experience more stress than their counterparts working in India,and Indian expatriates over the age of 45 who are working in Sultanate of Oman experience more stress than their counterparts working in India. Vakola and Nikolaou (2005) explored the linkage between employees' attitudes towards organizational change and occupational stress and organizational commitment.

The results showed negative correlations between occupational stressors and attitudes to change indicating that highly stressed individuals demonstrate decreased commitment and increased reluctance to accept organizational change interventions. The most significant impact on attitudes to change was emerging from bad work relationships emphasizing the importance of that occupational stressor on employees' attitudes towards change. Srivastav (2007) explained the types and measurement of role stress. The study brings out that each role stressor is the result of specific problems faced by the role occupant and the identification of prominent role stressor(s) has important implications for the individuals and the organization.

Westman and Dalia (2001) found that vacation alleviated perceived job stress and burnout as predicted, reinforcing the notion that a respite from work diminishes levels of strain to lower than chronic, on-the-job levels. Authors found decline in burnout immediately after the vacation and a return to provocation levels four weeks later, and a similar pattern with regard to absenteeism.Lobban et al (1998) found that supervisory styles (in terms of providing direction and communicating with employees) may play a more dominant role in the stress process than is extant appreciated.They also suggest that supervisory relationships, either directly or mediated by other job characteristics, have significant additional influence on occupational stress that cannot be explained by the role or demand/latitude variables. Thoits (1995) found that, alienation has a positive effect on job stress. Feelings of alienation are likely to result when employees are required to work alone.

Van der Hek and Plomp (1997) concluded that there was some evidence that organization-wide approaches show the best results on individual, individual-organizational interface and organizational parameters outcome measures and that these comprehensive programmes have a strong impact on the entire organization, and require the full support of management. Maslach and Leiter (1997), found that, a goal oriented organizational approach was necessary to minimize stress-induced burnout.

Rather than focus upon the individual as having responsibility for the management of stress, an organizational approach gives stress a workplace focus. They analyzed organizational life and found that six areas held the key to identifying sources of stress related burnout in employees.

These six areas are workload,reward,control,community, fairness and Values. Selye (1976), distinguished between two different types of stress: eustress and distress. Eustress is pleasant and provides a sense of satisfaction and a sense of achievement. Distress is the one which is unpleasant and can involve such things as losing a job, death of a Partner, loss of a friend. Distress is responsible for the negative effects on the individual.If it persists,it ultimately affects their ability to function properly.

Srivastav (2006) posited that Individuals at different management (hierarchical) levels have different perspectives, focus and thrust. They have different learning experiences and their perceptions differ. Coping with stress depends on cognitive appraisal which is influenced by perception and learning. It is, therefore, hypothesized that there are significant differences in the coping strategies adopted across all management levels. Brahma and Srivastava (2007) were involved in a study conducted in five Indian acquisitions to understand the role of communication, executive retention and employee stress on acquisition performance.

The results confirmed that both communication and executive retention have a positive impact, whereas employee stress has a negative impact on acquisition performance. It was also found that the relationship between employee stress and performance was not moderated by the degree of integration.

Objectives of the Study

- To compare organizational role stress of managers in public and private banks.
- To open new vistas for further research

Research Methodology

The study was exploratory in nature. Survey method was used to complete the study. Total population was composed of employees of private and public banks of Gwalior. The Sample size was 100 respondents and it was divided into 50-50 employees each from public and private sector banks in India. An individual bank employee was the sample element from whom the data was collected.

A Standardized Questionnaire on Organizational Role Stress (Pareek, 2002, see A-1) was administered on the employees. The scale was Likert-type and the data was collected between February and May 2008. The primary data was collected through quota (non-probability) sampling method. To compare the difference between the employees of different sector banks, z-test was applied on the collected data. Not only were the differences checked on the overall data, but differences were also measured for the different factors (as those listed by Pareek).

Results and Discussions

z-Test Result and Hypotheses Testing

To test the difference in organizational role stress between private and public banks employees z-test was used and the result obtained are indicated below in Table 1.

Table 1: Results of z-test

No.	H_0: Null Hypothesis	Z-Test value at 5% level of Significance (1.96)	Significant/ Insignificant	Accepted/ Not Accepted
1.	Overall difference between public and private sector bank employees	4.486	Significant	Not Accepted
2.	Inter role distance (public bank and private bank employees)	4.591	Significant	Not Accepted
3.	Role stagnation (public bank and private bank employees)	3.30856	Significant	Not Accepted
4.	Role expectation conflict (public bank and private bank employees)	1.80767	Insignificant	Accepted
5.	Role erosion (public bank and private bank employees)	4.0827	Significant	Not Accepted
6.	Role overload (public bank and private bank employees)	3.24266	Significant	Not Accepted
7.	Role isolation (public bank and private bank employees)	1.308	Insignificant	Accepted
8.	Personal inadequacy (public bank and private bank employees)	1.452177	Insignificant	Accepted
9.	Self role distance (public bank and private bank employees)	3.28677	Significant	Not Accepted
10.	Role ambiguity (public bank and private bank employees)	0.481551	Insignificant	Accepted
11.	Resource inadequacy (public bank and private bank employees)	2.723590	Significant	Not Accepted

z-Test: Overall

H01: There is no significance difference in the overall organizational role stress between private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 155.68, 16.1718324

Meanprivate, Standard Deviationprivate – 168.22, 11.37181

Calculated value of z – 4.486

Ha1: There is a significant difference between the organizational role stress experienced by employees of public and private banks.

The null hypothesis is not accepted because z-test value (4.486) is higher than the tabulated value. The result of the z-test indicates that there exists significant difference between the private and public bank employees in their role stress. The results indicates that the private bank employees have high mean score (168.22) in relation to organizational role stress compared to public bank employees (155.68) in this research. This shows private banks employees' high-level stress compared to public bank employees.

z-Test : Inter-Role Distance

H02: There is no significant difference in inter role distance experienced by private bank and public bank employees.Z

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 15.38, 3.231793588

Meanprivate, Standard Deviationprivate – 18.02, 2.478396453

Calculated value of z – 4.591

Ha2: There is significant difference between the experienced inter-role distance between the employees of public and private banks.

The null hypothesis is not accepted because z-test value (4.591) is significant. The study indicates that there is significant difference in inter role distance between private banks and Public banks employees. The results of the study indicates that the private bank employees have high mean score (18.02) in relation to Inter-Role Distance compared to public bank employees (15.38). This shows private banks employees' high-level Inter-Role Distance compared to public bank employees. There are several dimensions of organizational role stressors such as inter-role distance which covers work-home conflict, e.g. work in the bank interfering with the demands at home (Penson et al, 2000).

z-Test : Role Stagnation

H03: There is no significant difference in role stagnation experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 15.5, 2.674520747

Meanprivate, Standard Deviationprivate – 16.64, 1.945796096

Calculated value of z – 3.30856

Ha3: There is significant difference in experienced role stagnation between employees of public and private banks.

The null hypothesis is not accepted because z-test value (3.30856) is significant. The study indicates that there is significant difference in role stagnation between private banks and Public bank's employees. The results of the study indicates that the private bank employees have high mean score (16.64) in relation to role stagnation compared to public bank employees (15.5). This shows private banks employees' high-level role stagnation compared to public bank employees Role stagnation refers to lack of career development, or lack of non-monetary incentives (Mor Barak, et. al, 2001).

z-Test : Role Expectation Conflict

H04: There is no significant difference in role expectation conflict experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – _14.42, 2.792774935

Meanprivate, Standard Deviationprivate – 15.48, 3.065542533

Calculated value of z – 1.80767

The hypothesis is accepted because z-test value (1.80767) is insignificant therefore the study indicates that a set of expectations applied to the incumbent by the organization and the role they perform within the organization is not in congruence with each other. Lower the levels of role clarity members feel at work higher the level of stress. Though at 5 % significance level there is the z-value indicates that there is no significant difference between the role stress experienced by employees in public and private banks, but still the mean scores reflect that role stress is higher for private bank employees with regards to role expectation conflict.

Cooper and Marshall (1978) rightly indicate in this context that indicated that "role conflict exists when an individual in a particular work role is torn by conflicting demands or doing things he or she really does not want to-do or does not think our part of job satisfaction". Role expectation conflict refers to disparity in actual job performance and expectations of superiors and colleagues (Maunz & Steyrer, 2001). Combined with the inherent stressors of the social work profession, role stressors such as role conflict and role ambiguity in social work settings appear to have much greater impact on job strain than do role stressors in any other occupation. Hence, among many important antecedents of burnout, role stressors (role conflict or role ambiguity) have been selected as the major predictive variable of burnout (Um & Harrison, 1998).

z-Test: Role Erosion

H05: There is no significant difference in role erosion experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 16.44, 2.619861345

Meanprivate, Standard Deviationprivate – 17.36, 2.097228492

Calculated value of z – 4.0827

The hypothesis is accepted because z-test value (4.0827) is significant.The study indicates that there is significant difference in role erosion between private and public bank's employees. The private bank employees have high mean score (17.36) in relation to role erosion compared to public bank employees (16.44). This shows private banks employees' slightly high-level role erosion compared to public bank employees

z-Test : Role Overload

H06: There is no significant difference in role overload experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – _16.86, 3.16878912

Meanprivate, Standard Deviationprivate – _18.72, 2.531757476

Calculated value of z – 3.24266

The hypothesis is accepted because z-test value (3.24266) is significant. The study indicates that private employees have high workload compared to public bank employees. The private bank employees have high mean score (18.72) in relation to role overload compared to public bank employees (16.86). This shows private banks employees' high-level role overload compared to public bank employees

The members feel that the work allotted is taxing to the employees and it is beyond their expertise and limit. Cobb (1975) has the rightly pointed out in the context that "The responsibility load creates severe stress among workers and managers." Member's confidence on his or her own performance expectations and contributions at work are affected because of hurry nature of work. A feeling of incongruity between the skills they have the workload given to them is the factor behind high stress among members in non-nationalized bank. Role overload is performing several functions at the same time, or having to deal with many patients at one time (Maslach and Jackson, 1986).

z-Test : Role Isolation

H07: There is no significant difference in role isolation experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – _15.8, 2.806697529

Meanprivate, Standard Deviationprivate – 16.6, 2.258769757

Calculated value of z – 1.308

The null hypothesis is accepted because z-test value (1.308) is insignificant. This study indicates that greater support from supervisors and co-workers in the workplace is strongly associated with greater feeling of well-being and any undermining from their part put the employee under irritability, anxiety, depression, and somatic disorders. Inadequate support given by the superiors and their subordinates contribute considerable stress for employees in both banks. Role isolation can result from role overload since an employee who has much work may not be able to interact significantly with colleagues and significant others (Bakker 2005).

z-Test : Personal Inadequacy

H08: There is no significant difference in personal inadequacy experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 15.12, 3.074848594

Meanprivate, Standard Deviationprivate – 15.88, 2.056746

Calculated value of z – 1.452177

The null hypothesis is accepted because z-test value (1.452177) is insignificant. The study indicates that there is no significant difference in role Inadequacy between private and public bank's employees. Personal inadequacy may emanate from lack of training to cope with job, or a subjective feeling about one's self doubt and insecurities (Lopez, 2005).

z-Test : Self-Role Distance

H09: There is no significant difference in self role distance experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 15.56, 2.865416592

Meanprivate, Standard Deviationprivate – 17.3, 2.51728717

Calculated value of z – 3.28677

Ha9: There is significant difference in the experienced self role distance between the employees of private and public banks.

The null hypothesis is not accepted because z-test value (3.28677) is significant. The results of the study indicates that private bank employees have high mean score (17.3) in relation to self role distance compared to public bank employees (15.56). This shows private banks employees' high-level self role distance compared to public bank employees Self-role distance refers to the demands of the job that may conflict with one's personal beliefs, e.g. blood transfusion is not permitted by certain religious beliefs (Begat et al, 2005).

z-Test : Role Ambiguity

H010: There is no significant difference in role ambiguity experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – _15.08, 2.701775682

Meanprivate, Standard Deviationprivate – 15.32, 2.2627417

Calculated value of z – 0.481551

The null hypothesis is accepted because z-test value (0.481551) is insignificant. The study indicates that the private bank employees have high ambiguity compared to public bank employees. Higher the ambiguity related to the work and work schedule higher the occupational stress. The role ambiguity results when there low congruity between the expectations of the work behavior and the scheduled task. There is lack of clarity about what to do, when to do, where to do and how to do. Role ambiguity may ensue from lack of orientation on one's scope of responsibilities (Edwards et al, 2000).

z-Test: Resource Inadequacy

H011: There is no significant difference in resource inadequacy experienced by private bank and public bank employees.

Tabulated value of z at 5% level of significance – 1.96

Meanpublic, Standard Deviationpublic – 15.52, 2.815699427

Meanprivate, Standard Deviationprivate – 16.9, 2.215437488

Calculated value of z – 2.723590

Ha11: There is significant difference in experienced resource inadequacy between the private banks and public bank employees.

The null hypothesis is accepted because z-test value (2.723590) is Significant. The private bank employees have high mean score (16.9) in relation to resource inadequacy compared to public bank employees (15.52). This shows private banks employees' high-level resource inadequacy compared to public bank employees. Resource inadequacy pertains to unavailability of monetary and non monetary incentives at work (Piko, 2005).

Avenues for Further Research

This study can be extended beyond the limits of banking industry. Service Industries such as Hospitality and Healthcare are potent areas for research. Even within the banking industry every component of the organizational role stress can be studied individually.

A longitudinal study of the employees in banks can also reveal crucial information that may be used to improve the working climate in the banks.

Conclusion

The study focuses on the role stress experienced in the banking sector today. The study has highlighted that there is a significant difference between the role stress of public and private sector bank employees.

It was found that the private bank employees experienced higher organizational role stress than their public bank counterparts.Looking at the various aspects of components of organizational role stress, it was found that there was no difference between the Public and Private Sector bank employees in certain aspects like role expectation conflict, role isolation, personal inadequacy and role ambiguity.

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Annexure

Questionnaire

Please indicate your response on the scale of 1 to 5, where 1 indicates strongly disagree and 5 indicates strongly agree.

My role tends to interfere with my family life.

1 2 3 4 5

I am afraid I am not learning enough in my present role for taking up higher responsibility.

1 2 3 4 5

I am not able to satisfy the conflicting demands of various people above me.

1 2 3 4 5

My role has recently been reduced in importance.

1 2 3 4 5

My workload is too heavy.

1 2 3 4 5

Other role occupants do not give enough attention and time to my role.

1 2 3 4 5

I do not have adequate knowledge to handle the responsibilities in my role.

1 2 3 4 5

I have to do things, in my role, that are against my better judgment.

1 2 3 4 5

I am not clear on the scope and responsibilities of my role (job).

1 2 3 4 5

I do not get the information needed to carry out responsibilities assigned to me.

1 2 3 4 5

I have various other interests (social, religious, etc.), which remain neglected because I do not get time to attend to these.

1 2 3 4 5

I am too preoccupied with my present role responsibility to be able to prepare of taking up higher responsibilities.

1 2 3 4 5

I am not able to satisfy the conflicting demands of my peers and juniors.

1 2 3 4 5

Many functions that should be a part of my role have been assigned to some other role.

1 2 3 4 5

The amount of work I have to do interferes with the quality I want to maintain.

1 2 3 4 5

There is not enough interaction between my role and other roles.

1 2 3 4 5

I wish I had more skills to handle the responsibilities of my role.

1 2 3 4 5

I am not able to use my training and expertise in my role.

1 2 3 4 5

I do not know what the people I work with expect of me.

1 2 3 4 5

I do not get enough resource to be effective in my role.

1 2 3 4 5

My role does not allow me enough time for my family.

1 2 3 4 5

I do not have time and opportunities to prepare myself for the future challenges of my role.

1 2 3 4 5

I am not able to satisfy the demands of clients and others,since these are conflicting with one another.

1 2 3 4 5

I would like to take on more responsibility than I am handling at present.

1 2 3 4 5

I have been given too much responsibility.

1 2 3 4 5

I wish there was more consultation between my role and others' roles.

1 2 3 4 5

I have not had right training for my role.

1 2 3 4 5

The work I do in the organization is not related to my interests.

1 2 3 4 5

Several aspects of my role are vague and unclear.

1 2 3 4 5

I do not have enough people to work with me in my role.

1 2 3 4 5

My organizational responsibilities interfere with my extra organizational roles.

1 2 3 4 5

There is very little scope for personal growth in my role.

1 2 3 4 5

The expectations of my seniors conflict with those of my juniors.

1 2 3 4 5

I can do much more than what I have been assigned.

1 2 3 4 5

There is a need to reduce some parts of my role.

1 2 3 4 5

There is no evidence of several role (including mine) being involved in joint problem solving or collaboration for planning action.

1 2 3 4 5

I wish I had prepared myself well for my role.

1 2 3 4 5

If I had full freedom to define my role,I would be doing some things differently from the way I do them now.

1 2 3 4 5

My role has not been defined clearly and in detail.

1 2 3 4 5

I am rather worried that I lack the necessary facilities needed in my role.

1 2 3 4 5

My family and friends complain that I do not spend time with them due to the heavy demands of my work role.

1 2 3 4 5

I feel stagnant in my life.

1 2 3 4 5

I am bothered with the contradictory expectations different people have from my role.

1 2 3 4 5

I wish I had been given more challenging tasks to do.

1 2 3 4 5

I feel overburdened in my role.

1 2 3 4 5

Even when I take the initiative for discussions or help, there is not much response from the other roles.

1 2 3 4 5

I need more training and preparation to be effective in my work role.

1 2 3 4 5

I experience a conflict between my values and what I have to do in my role.

1 2 3 4 5

I am not clear what the priorities are in my role.

1 2 3 4 5

I wish I had more financial resources for the work assigned to me.

1 2 3 4 5

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> “The only thing which makes it possible to regard this world we live in without disgust is BEAUTY, which now and then men create out of chaos: the picture they paint, the music they compose, the books they write, and the lives they lead. Of all these, the richest beauty is a life well lived. That is the perfect art.”
>
> - **Somerset Maugham**

Influence of Locus of Control on Investment Behaviour of Individual Investor

Dr R Kasilingam

Dr S Sudha

Locus of Control is a term in psychology which refers to person's belief about what causes the good or bad results in his or her life (Julian. B. Rotter). Locus of control, according to Rotter's approach, can be divided into two separate sources of control: Internal and External. People with Internal Locus of Control believe that they control their own destiny. They also believe that their own experiences are controlled by their own skills or efforts. On the other hand, people who tend to have External Locus of Control tend to attribute their experiences to fate, chance or luck. For conducting this study, 20 statements are used from Rotter's Locus of Control Scale with five point Likert Scale. This study is done to know how the investors approach the investment management which is a part of their life on the basis of personality characteristics, sources of information, period of investment and their savings level. Personality characteristics are taken as the main factors in finding out the investment behavior of the respondents.

Key Words: **Locus of control, Saving Behaviour, Relationship between internal and external Locus of control, Impact of locus of control on investment behaviour, Measurement of locus of control**

Introduction

Investors have different mindset when they decide about investing in a particular avenue. Every individual wants his saving to be invested in most secure and liquid avenue. However, the decision varies for every individual and his risk taking ability. Investment behaviour is related to activities of individual investors regarding searching, evaluating, acquiring, reviewing the investment products and if necessary, disposing such investment products. Investment behaviour reveals how the individual investor allocates the surplus financial resources to various instruments available. The investment behaviour consists of why they invest, where and how they get information, what factors they use to evaluate, who influences them on choice of investment and how they act after investment (R Kasilingam & G Jayabal, 2008). The study was conducted mainly to know about the investor's perception with regard to their profile, income, savings pattern, investment patterns and their personality traits.

Methodology

The study was conducted in Chennai city during January to March 2009 by using well structured questionnaire. As the population size is not determined the sample size of 285 was arrived by using formula n= Z2 *p * q / e2.(Kothari.C.R,2004). The sample respondents were selected by using systematic random sampling. To start with, 30 branches of different banks located at different areas of Chennai were selected on the basis of convenience. One day was dedicated for each branch. On a selected day 10 questionnaires were distributed to customers of a particular branch chosen by using systematic random sampling. The scrutiny of questionnaires has revealed that 25 questionnaires were not usable as they were not filled completely and hence rejected for further analysis. Finally 260 questionnaires were taken for analysis. The non-response rate and rejection rate totally amounts to less than 10 percent. Hence, the rejection rate and non-response rate can be treated as quite insignificant. The content validity of the questionnaire was verified by panel of experts and criterion validity and construct validity have been tested using correlation analysis. The reliability of the survey instrument was tested using Cronbach Alpha method. The alpha value is 0.700, Cronbach's alpha value based on standardized items is 0.696, Hotilins T Squared value is 284.181, F value is 13.917 and the significant value is 0.0000. This means that the statements used in the questionnaire and the sample size are reliable and adequate at more than 99 percentage level of confidence.

Review of Literature

Locus of control is a concept describing whether people feel that control of their lives rests in their own hands (internal locus of control) or in the hands of others (external locus of control) (Rotter, 1966).

Locus of control is a term in psychology which refers to a person's belief about what causes the good or bad results in his or her life, either in general or in a specific area such as health or academics. Understanding of the concept was developed by Julian B. Rotter in 1954, and has since become an important aspect of personality studies.

Locus of Control refers to the extent to which individuals believe that they can control events that affect them. Individuals with a high internal locus of control believe that events result primarily from their own behavior and actions. Those with a high external locus of control believe that fate, or chance primarily determines events. Those with a high internal locus of control have better control of their behaviour and tend to exhibit more political behaviors than externals and are more likely to attempt to influence other people; they are more likely to assume that their efforts will be successful. They are more active in seeking information and knowledge concerning their situation than those with external locus of control. The propensity to engage in political behavior is also stronger for individuals who have a high internal locus of control.

Locus of control, according to Rotter's approach, can be divided into two separate sources of control: internal and external. People with an internal locus of control believe that they control their own destiny. They also believe that their own experiences are controlled by their own skill or efforts. An example would be "The more I study, the better grades I get" (Gershaw, 1989). On the other hand, people who tend to have an external locus of control tend to attribute their experiences to fate, chance, or luck. Examples: External locus of control: If a student attributes either their successes or failures to having a bad day, unfair grading procedures on their teacher's part, or even God's will, they can be said to have a more external locus of control. These students might say, "It doesn't matter how hard I study. The teacher just doesn't like me, so I know I won't get a good grade." These students generally don't learn from previous experience. Since they attribute both their successes and failures to luck or chance, they tend to lack persistence and not have very high levels of expectation.

Generally, the development of locus of control stems from family, culture, and past experiences leading to rewards. Most internals have been shown to come from families that focused on effort, education, and responsibility. On the other hand, most externals come from families of a low socioeconomic status where there is a lack of life control. Non-cognitive skills are multifaceted and economic research that focuses on personality measures, skills, preferences and attitudes is necessarily intertwined with the psychological literature. Hence, locus of control as a measure of non-cognitive skills that is well-established in the psychological literature and has frequently been used in previous economic studies on the role of non-cognitive skills for labor market outcomes (Heckman et al., 2006; Judge and Bono, 2001; Andrisani, 1977, 1981; Osborne, 2000).

Locus of control is a psychological concept, frequently attributed to Rotter (1966), that measures an individual's attitude regarding the nature of the causal relationship between one's own behavior and its consequences. In this concept, which is related to self-efficacy, people who believe that they can control reinforcements in their lives are called internalizers. People, who believe that fate, luck, or other people control reinforcements are termed externalizers. Generally, externalizers (with low non-cognitive skills) do not have much confidence in their ability to influence their environment, and do not see themselves as responsible for their lives. Therefore, these individuals generally are less likely to trust their own abilities or to push themselves through difficult situations. Conversely, internalizers (the high-skilled) are likely to have more self-esteem and to trust their capability of changing their circumstances for the better. These individuals perceive themselves more capable of altering their (economic) situation.

In fact, locus of control is one of the most prominent concepts of non-cognitive skills, previously analyzed in the economic literature. Most studies agree that it affects a variety of economic choices individuals make. This is particularly true for education decisions which most researchers find to be highly affected by locus of control. Coleman and DeLeire (2003) present a model of locus of control and education decisions, where locus of control is not directly viewed as a skill, but rather as a character trait that influences education decisions via an individual's believes about the effect of education on expected earnings. Cebi (2007) on the other hand concludes using the NLSY that labor market outcomes but not education choices are affected by locus of control. Evidence of effect of locus of control on labor market returns is mixed, but mostly positive. For example, Andrisani (1977), using the National Longitudinal Study (NLS), finds a positive effect of locus of control on several measures of earnings and occupational attainment of young and middle-aged men. Yet, Duncan and Morgan (1981) find mostly non-significant effects of locus of control on the change in hourly earnings of individual.

Individuals with a high internal locus of control believe that events result primarily from their own behavior and actions. Those with a high external locus of control believe that powerful others, fate, or chance primarily determine events. Those with a high internal locus of control have better control of their behaviour and tend to exhibit more political behaviors than externals and are more likely to attempt to influence other people; they are more likely to assume that their efforts will be successful. They are more active in seeking information and knowledge concerning their situation than do externals. The propensity to engage in political behavior is stronger for individuals who have a high internal locus of control than for those who have a high external locus of control.

Internal Locus of Control

For conducting this study, 20 statements were used from Rotter's Locus of Control Scale and responses from the people are collected in five points Likert Scale. Out of 20 statements, 14 statements were related to internal locus of control. The mean level of existence of internal locus of control is given in the table.

Table 1: Internal Locus of Control

Statements	Mean
People's misfortunes result from the mistakes they make.	3.16
In the long run people get the respect they deserve in this world.	3.60
It's one's experiences in life which determine what they are in life.	3.34
I have often found out what is going to happen will happen.	3.17
Trusting fate has never turned out as well for me as making a decision to take a definite course of action.	3.11
Becoming a success is a matter of hard work; luck has little or nothing to do with it.	3.69
Getting a good job depends mainly on being in the right place at the right time.	3.75
When I make plans, I am almost certain that I can make them work.	3.65
It is impossible for me to believe that chance or luck plays an important role in my life.	3.50
Usually, when I plan to do something, I can carry it out.	3.51
In general I think about a decision before taking action.	3.61
It is better to save up for something and buy it only when you have the money to pay.	3.50
Being in debt shows that you cannot manage yours finances properly.	3.12

From the above table it is inferred that all these statements have mean value more than 3 which means that respondents have high level of locus of control. They feel that getting job mainly depend upon their talent to search and identifying right job. Most of people agree with the statement that becoming a successful person is a matter of hard work, luck has little or no role to play. The impact of locus of control on debt management is only moderate.

Table 2: Internal Locus of Control

Loc	Frequency	Percentage
Low	15	5.8
Medium	138	53.1
High	107	41.2
Total	260	100.0

Table 2 indicates that only around 6 per cent of people have low level of self belief and 41 percent of people strongly believe that their success mainly depends on their hard work and they have high level of self belief. Around 53% of people are not very strong in their self belief and they are also not against working hard to get success in life. These should be rightly motivated to take logical and information based decision.

Table 3: External Locus of Control

Statements	Mean
Many of the unhappy things in people's life are partly due to bad luck	2.82
To improve standard of living unfortunately, an individual's worth passes unrecognized no matter how hard he tries	3.07
It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow	3.33
Many times I feel that I have little influence over the things that happen to me.	3.23
The best laid plans often go astray	2.90
Being in debt shows that you cannot manage your finances properly	3.12
Heredity plays a major role in determining one's personality.t	3.37

Out of seven statements related to external locus of control two statements have mean value less than 3 and mean values of other statements are not very high. This indicates that Indian citizens do not believe too much on luck and fate. People have favourable opinion on statement "Heredity plays a major role in determining one's personality". They also believe that long term planning will not be successful always.

Table 4: External Locus of Control

Loc	Frequency	Percent
Low	65	25.0
Medium	121	46.5
High	74	28.5
Total	260	100.0

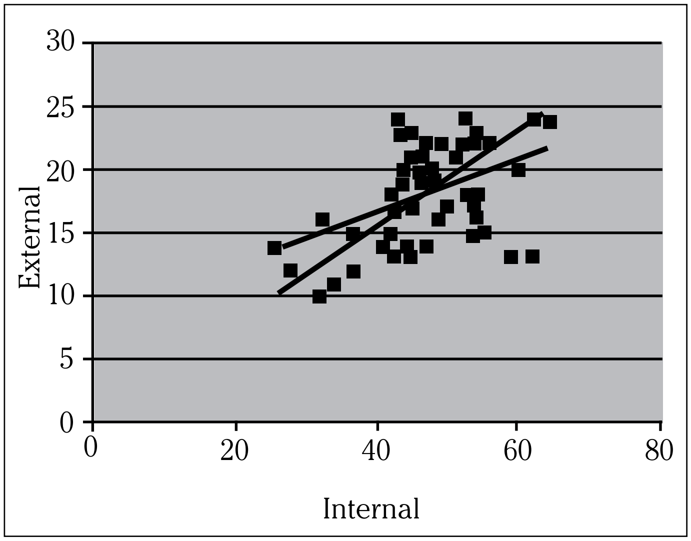
Around 28% of people believe that the environment, some high power and other people have control on their decisions and action success in their life. Majority of the people neither agreed nor disagreed with impact of external impact on their personal actions. The chi-square test reveals that all the categories of people with respect to external locus of control are not equal (Chi-square value 20.869, Significant value 0.000) and it can be concluded that majority number of people are in "neither agree nor disagree" category.

Table 5: Locus of Control

	Internal Average	External Average
Mean	3.4338	3.0769
Standard Deviation	0.52	0.62
Co-efficient of Variation	15%	20%
Skew ness	-.229	-.351
Kurtosis	524	-.904
Std. Error of Kurtosis	.301	.301

It is inferred that average level external locus of control is 3.07 and internal locus of control is 3.4. This means that respondents have more of their own destiny (internal) than they depend on others (external). The standard deviation is very less for internal locus of control which means that variance among the people is very less about their self belief. The standard deviation is comparatively high for external locus of control than internal control and the variance is within the range of 20%.

Figure 1: Relationship between Internal and External Locus of Control



The correlation between external and internal locus of control is significant. This indicates that external and internal locus control characteristics of people are not independent to each other. The people have both internal and external locus of control traits together. Figure 5 is scatter diagram which illustrates the relation between both loci of control traits with linear trend line. The first trend line takes intercept as zero and another trend with actual intercept value.

Investor Segmentation

Investor's segmentation refers that people are segmented into different group based on their personality traits. As studied earlier, people might have different level of internal and external locus of control. Investor segmentation is done based on their locus of control by using cluster analysis. Before segmentation into different categories, two stage cluster analysis was performed to identify how many cluster can be derived based upon their level of locus of control. Two stage cluster analysis indicated that it is better to categorize investors into three categories.

Table 6: Investor Segmentation

	Cluster 1 (No belief)	Cluster 2 (Perceived control)	Cluster 3 (Self belief)
External LOC	2.27	3.56	2.65
Internal LOC	2.73	3.57	3.63

By using K means cluster technique investors are segmented into three categories. The mean values of external locus of control and internal locus of control for three categories are displayed in the table 6. Cluster 2 people have high external and internal locus of control. This shows that they have high confidence in themselves as well as they believe in external factors. Thus that cluster can be named as Perceived control. Cluster 1 people do not have any self belief and they don't have any external control. Thus it is named as No belief Cluster. Cluster 3 people have high internal locus of control which means they have belief in their own skills and efforts.

Suitability of Segmentation

To test the suitability of segmentation based on locus of control discriminant analysis is performed. When there are three clusters two discriminant function can be formed. Function 1 is the function of external control and the second function is explains internal control.

Figure 2: Discriminant Analysis

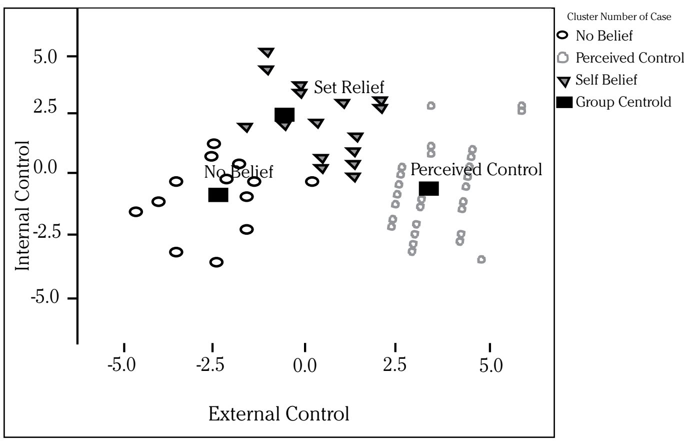


Figure 1 clearly indicates that the three clusters namely no belief, perceived control and self belief segments are correctly classified.

The three clusters differ significantly on external locus of control and their difference in internal locus of control is also significant but less than external locus of control. The people differ mainly on their external locus of control.

Relationship Between Locus of Control and Demographic Variables

The influence of demographic variables on locus of control is analyzed using chi-square test.

Table 7: Relationship Between Locus of Control and Demographic Variables

Variables	Values	df	Significance
Gender	1.857	2	0.394
Marital Status	20.629	2	0.000
Education	31.560	8	0.000
Occupation	53.401	8	0.000
Employment Status	27.879	6	0.000
Family Income	33.344	4	0.000
No. of Members	56.701	14	0.000
No. of Dependents	8.844	4	0.065
Primary Earner	33.607	8	0.000

The Chi-square analysis gives low significance value (below 0.05) for the association between demographic variables and locus of control.

This means that null hypothesis is rejected and it can be further stated that demographic variables such as marital status, education, occupation, employment status, family income, no. of members and primary earner have an association with locus of control and gender and number of dependents have no association with locus of control.

Table 8: Locus of Control and Demographic Variables

S. No	Variables	Internal		External		Overall	
		Value	Sig.	Value	Sig.	Value	Sig.
1	Marital Status	1.944	0.378	21.416	0.000	20.629	0.000
2	Education	37.609	0.000	35.605	0.000	31.560	0.000
3	Occupation	35.201	0.000	65.999	0.000	53.401	0.000
4	Employment Status	7.658	0.264	33.310	0.000	27.878	0.000
5	Family Income	13.071	0.011	16.675	0.002	33.344	0.000
6	No of Members	10.580	0.032	48.426	0.000	24.128	0.000

Chi-square analysis further reveals that marital status is having influence on external locus of control but not on internal locus of control. When the people are unmarried they do not give much importance to external factors and once they have family then they start to believe on external factors. Education, occupation, family income and number of members in the family have impact on both locus of control whereas employment status has influence only external locus of control

Relationship between LOC and Education

To find out which education category people have association which category of locus of control correspondence analysis is used.

FIG. 3: LOC and Education

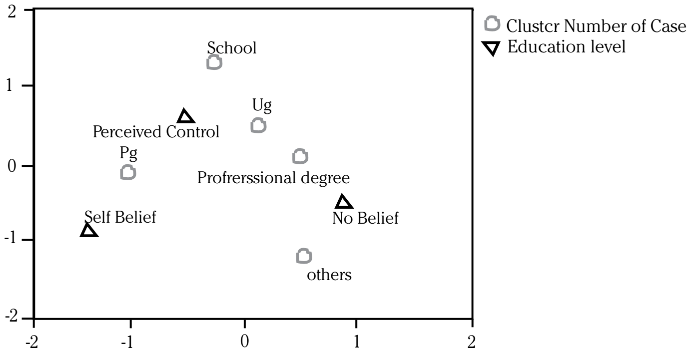


Figure 2 clearly indicates that respondents having PG degree have higher level of self belief .which means they believe in their own skills and efforts.Respondents who have only U.G degree are having perceived control which means they believe in both internal and external locus of control.People who have only school education do not have any belief in internal or external loc. Therefore it can be concluded that education improves their level of self belief and confidence level depends on their level of education.

Saving Behaviour

People might exhibit different type of saving habit namely saving some portion of monthly income regularly and some may save only when they get extra income.Table 8 displays different types of saving habit of people.

Table 9: Saving Behaviour

Saving Habit	Percentage
Save regularly, put money aside every month.	70.8
Spend regularly earned income and save other income.	12.7
Spend income of one family member and save the income of others	35.4
Do not save.	7.3

From the above table it can be inferred that around 70 per cent of the respondents says that they save regularly and they put money aside every month and 35 percent of people have the habit of spending income of one family member and save the income of others.Only 7 per cent says they do not save.Hence it is clear that majority people save some portion of their income.To analyse the impact of locus of control on saving behaviour discriminant analysis is used by taking the saving behaviour as a dependent variable and both internal and external locus of control as the independent variable.

Table 10: Structure Matrix

	Function	
	1	2
External	0.999*	-0.052
Internal	0.434	0.901*

The structure matrix table indicates that two discriminant functions can be formed viz.

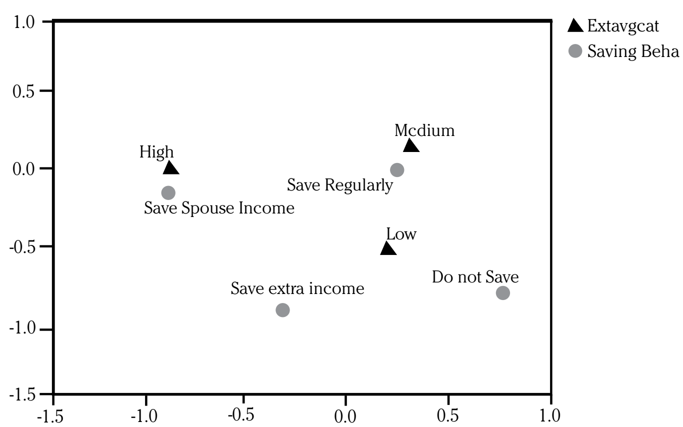
Z1=0.999* External Locus of control and Z2=0.091 * Internal Locus of Control.

Table 11: Characteristics of Discriminant Function

Test of Function(s)	Wilks' Lambda	Eigen Value	Chi-square	df	Sig.
1 through 2	0.889	0.123	30.094	6	0.000
2	0.999	0.001	.305	2	0.858

Though there are two discriminant functions only function 1 is important function which distinguishes saving behaviour of people. The Eigen value for function two is very less and Wilks lambda is very high and significant value is not significant to describe the characteristics of investors.From this it is clear that the saving behaviour is determined by their level of external locus of control.

Figure 4: External LOC and Saving Behaviour



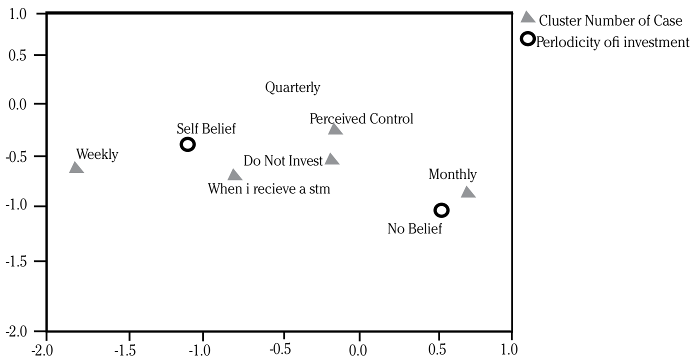
To analyse the relationship between savings behaviour and external locus of control chi-square analysis is used. The chi-square analysis indicates that there is significant relationship between saving behaviour and external locus of control traits of investors (Chi-Square value is 44.830. The correspondence diagram illustrates that the people who have less level of external locus of control do not save and if at all they save, they save only when they get extra income.

The people who have high level of locus of control save their entire income of one person of the family. The people with medium level save regularly some portion of their income. Hence it can be concluded that the saving behaviour of people mainly depend upon their external locus of control and the people and the size of saving is directly correlated to level of external locus of control.

Relationship Between Periodicity of Investment and Locus Of Control

The investor has to review the investment by him frequently so as to avoid loss in value.The investor may review weekly or monthly which may depend upon type of investment and nature of people and time available to him. The chi-square analysis reveals that there is a significant relationship between periodicity of review and locus of control (Chi-square value 49.170, Degrees of freedom 8).

Figure 5: LOC and periodicity of Investment



The correspondence diagram illustrates that people who have higher level of self belief review their investment very frequently. The people who do not believe in external as well as internal factors review the investment on monthly basis.

Impact of Sources of Investment on LOC

The investors collect information from various sources before they could take any decision. The investors were asked to rank the different sources of information according their preference.

Table 12: Sources of Information

Information Sources	Mean	Rank
Electronic media	3.87	1
Relatives, Family Members	3.39	2
Print Media	3.47	3
Friends , Co-workers	3.31	4
Experts Opinion, Consultants	3.05	5
Financial Professionals, Brokers	2.92	6

From the above table it can be inferred that the electronic media is the most preferred source for investment information and it occupies the first position in the order of priority. Indian investors do not give much preference to financial advisors.

Table 13: LOC and Sources of Information

Sources of Investment	F	Sig.
Electronic Media	2.191	0.114
Print Media	0.624	0.537
Relatives, Family Members	6.731	0.001
Friends , Co-workers	3.636	0.028
Experts Opinion, Consultants	11.414	0.000
Financial Professionals, Brokers	6.158	0.002

To find out the impact of locus of control on sources of investment information analysis of variance is used.

All the category people give equal importance to print and electronic media and the order of preference of these two media for information do not vary according to their level of locus of control. People differ mainly on their preference for expert information from finance professionals brokers and consultants.

Table 14: Usage of Expert Opinion

Category of Investors	N	Subset for alpha = 0.05	
		1	2
Perceived Control	142	2.65	
No Belief	48		3.42
Self Belief	70		3.60
Sig.		1.000	.460

The investors who give importance to internal locus of control give more preference to expert source of information whereas people who give much importance both locus of control do not prefer expert source.

Impact of Factors of Investment on LOC

To find out the impact of factors of investment on locus of control analysis of variance is used.

Table 15: LOC and Factors of Investment

Factors of Investment	F	Sig.
Risk	1.235	0.293
Capital Appreciation	1.871	0.156
Regular Return	0.043	0.958
Convenience	10.001	0.000
Terms of Investment	1.138	0.322
Liquidity	0.730	0.483

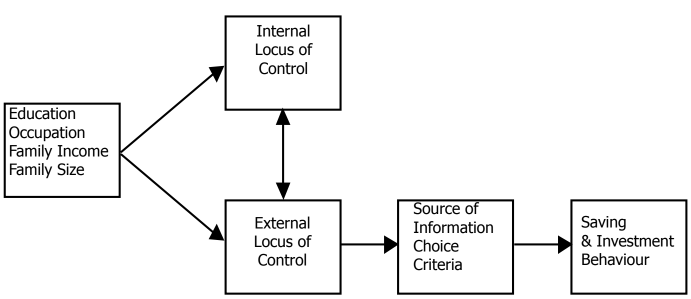
From the above table it is inferred that the three categories of people based on their level of locus of control do not differ on their expectation on risk, capital appreciation, regular return, terms of investment and liquidity. But there is a significant difference among the people on their expectation of convenience while choosing the investment alternative.

Table 16: Convenience

Category of Investors	N	1	2
Perceived Control	142	1.91	
Self Belief	70	2.23	
No Belief	48		2.71
Sig.		.080	1.000

From the post hoc test it is found that no belief category people want higher level of convenience. This refers that people who do not have both external and internal locus of control give more importance to convenience and they take investment decision based on their convenience rather than risk or liquidity factor. People with perceived control and self belief feel that all the other factors are more important for investment decision making.

Figure 6: Locus of Control Model



The locus of control model describes the factors which are having impact on the locus of control traits of people and also how the locus of control traits is having influence on investment behaviour of people.

Conclusion

A majority of the Indian investors have a belief that the success in their investment activities mainly depend upon their effort and their skill decision making. They have not only internal locus of control but also external locus of control because there is significant correlation between internal and external locus of control. There is a significant level of variance among the investors with respect to their external locus of control. The saving behaviour of investors is mainly determined by their level of external locus of control. The people who have high level of education have less level of external locus of control. The external locus of control has impact on information source used for decision making and choice criteria considered choose an investment avenue. Thus locus of control is an important psychological attribute which has significance in investment behaviour of individual investor

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Performance Evaluation of Mutual Fund Industry in India

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This article evaluates the performance of mutual funds players in India based on their resource mobilization during the past decade. The players are broadly classified into private and public participants. The study revealed that there is significant contribution by all the participants for the growth of the mutual fund industry in India. At the same time, this study also found that the private participants play a greater role in resource mobilization compared to those of public sector.

Key Words: **Indian Mutual Fund Industry, UTI, Performance Evaluation**

Introduction

With the emergence of the capital market at the center stage of the Indian financial system, the financial services industry nationally and internationally is growing leaps and bounds contributing significantly to the health of global economy as well as that of individual investors. However most of the investors do not like risk; they have to assess risk and develop solutions to problems caused by risk. A significant institutional development in the form of a diversified structure of mutual funds and different investment avenues are available to investors. Mutual funds offer good investment opportunities to the investors. The investors should compare the risk and expected yields of various instruments while taking investment decision. The investors may seek advice from experts and consultants including agents.

Concept of Mutual Fund

Mutual fund is a special type of financial instrument that pools the funds of investors who seek to maximize ROI. These pooled funds provide thousands of investors with proportional ownership of diversified portfolios managed by professional investment managers. The profits or losses are shared by the investors in proportion to their investments. A mutual fund is required to be registered with Securities and Exchange Board of India (SEBI), which regulates securities market.

A Snapshot of Mutual Funds Growth in India

The Association of Mutual Funds in India (AMFI) has officially classified the four decades of mutual funds growth in India into six phases. First phases 1964-87 saw UTI consolidating its position by offering a variety of products and extending its reach throughout the country. The second phase (1987-93) marked the arrival of mutual funds sponsored by public sector banks and financial institutions. The third phase (1993-96) with the arrival of private sector players, both Indian and Foreign. The fourth phase (1996-99) started with SEBI regulations of 1996. The fifth phase (1999-2004) saw a significant growth in amounts mobilized and the emergence of uniformity in industry. In the sixth phase (2004- till date) the mutual fund industry is consolidating its growth. Today, there are 36 asset management companies covering Indian public sector, private sector and joint ventures with foreign players. 36 mutual fund houses put together mobilized about Rs 6,70,937 Crs worth assets. UTI Rs.67,978 Cr, other public sector mutual fund houses worth Rs.77,823 Cr, Private sector Mutual fund houses Rs. 2,18,198 Cr. Foreign institutional MF AUM Rs.44,662 Cr and joint ventures predominantly Indian mutual fund houses AUM Rs.2,35,362 Crs Joint ventures predominantly foreign players AUM Rs.26,914 Cr.

Literature Review and Research Intent

When we look at history of the performance measurement of mutual funds that has been carried out in the rest of world it makes some interesting facts and led to the present study.

Malkiel,Burton G.(1995) has highlighted several studies suggest that the equity mutual fund managers achieve superior returns and that considerable persistence in performance exists and his study utilizes a unique data set including returns from all equity mutual funds existing each year. These data (from 1971 to 1991) enable a more precise examination of performance and the extent of survivorship bias. Taken together, funds have underperformed benchmark portfolios both after management expenses and after even gross of expenses.

Brown, Stephen J, Goetzmann, William N, (1995) explores the performance persistence in mutual funds using absolute and relative benchmarks. A probit analysis indicates that poor performance increases the probability of disappearance. A year-by-year decomposition of the persistence effect demonstrates that the relative performance pattern depends upon the time period observed, and it is correlated across managers. Consequently, it is due to a common strategy that is not captured by standard stylistic categories or risk adjustment procedures.

Mark M Carhart., (1997) demonstrated that common factors in stock returns and investment expenses almost completely explain persistence in equity mutual funds' mean and risk adjusted-returns. The individual funds do not mean higher returns from following the momentum strategy in stocks. The only significant persistence not explained is concentrated in strong underperformance by the worst-return mutual funds.

Michael S Rozef (1998) has found that the Mutual fund splits occur in high-priced funds after unusually high returns. Split factors are related to the deviation of a fund's price from the mean of all fund prices. Post-split prices are below the mean of other funds' prices. Post-split numbers of shareholders and assets do not increase compared with funds having similar rates of asset growth. However, another study finds evidence that mutual fund splits bring per account shareholders back up to normal levels. It is argued that signaling, liquidity and tick size theories do not apply to mutual fund splits.

Lu Zheng,(1999) compares with a previous study and finds the evidence to support selection ability among active fund investors for equity funds listed in 1982. By using a large sample of equity funds, he found that funds that receive more money subsequently perform significantly better than those that lose money and this effect is short-lived and is largely but not completely explained by a strategy of betting on winners. In the aggregate, there is no significant evidence that funds that receive more money subsequently beat the market. However, it is possible to earn positive abnormal returns by using the cash flow information for small funds.

Russ Wermers, (1999) found the relationship that exists between Mutual fund herding and its impact on stock prices. The trading activity of the mutual fund industry from 1975 through 1994 was analyzed to determine whether funds "herd" when they trade stocks and to investigate the impact of herding on stock prices. Although little herding was found by mutual funds in the average stock, much higher levels were found in the trades of small stocks and in trading by growth-oriented funds. Stocks that herd buy outperform stocks that they sell by 4% during the following 6 months; this return difference is much more pronounced among small stocks.

SP Kothari, Jerold B Warner (2001) study on Standard mutual fund performance measures uses the simulated funds whose characteristics mimic actual funds. It was found that performance measures used in previous mutual fund research have little ability to detect economically large magnitudes of abnormal fund performance, particularly if a fund's style characteristics differ from those of the value-weighted market portfolio. Power can be substantially improved, however, using event-study procedures that analyze a fund's stock trades. These procedures are feasible using time-series data on mutual fund portfolio holdings.

Nicolas P B Bollen, Jeffrey A Busse, (2001) argues that the Existing studies of mutual fund market timing analyze monthly returns and find little evidence of timing ability. It is shown that daily tests are more powerful and that mutual funds exhibit significant timing ability more often in daily tests than in monthly tests. A set of synthetic fund returns is constructed in order to control for poor results. The daily timing coefficients of the majority of funds are significantly different from their synthetic counterparts.These results suggest that mutual funds may possess more timing ability than previously documented.

Narayanan Jayaraman, Ajay Khorana, Edward Nelling (2002) examined the determinants of mutual fund mergers and their subsequent wealth impact on shareholders of target and acquiring funds. Results indicate significant improvements in post-merger performance and a reduction in expense ratios for target fund shareholders. In contrast, acquiring fund shareholders experience a significant deterioration in post-merger performance.The net asset flows continue to remain negative for the combined fund in the year following the merger. The likelihood of a fund merger is inversely related to fund size for both within- and across-family mutual fund mergers. However, poor past performance is a significant determinant for only within-family mergers.

The studies by Stephanos Papadamou, Costas Siriopoulos,(2004) empirically prove that the American no-load equity mutual funds that invest in European stocks and keep their managers for more than three years, in order to investigate the persistence of the short-term performance, and the related investment style. The results showed an underperformance compared to the Eurostoxx index and a hot hands phenomenon does not persist, with some exceptions. Mutual funds that performed well in a five-month evaluation period continued to generate superior performance in the next four months. According to style analysis a portfolio constructed by growth-large, growth-medium and value-large capitalization stocks outperformed any other investment style. However, well-diversified funds were the most mean-variance efficient, style-consistent funds.

Michael J Cooper, Huseyin Gulen, P Raghavendra Rau (2005) has examined whether mutual funds change their names to take advantage of current hot investment styles, and what effects these name changes have on inflows to the funds, and to the funds' subsequent returns. They further find that the year after a fund changes its name to reflect a current hot style, the fund experiences an average cumulative abnormal flow of 28%, with no improvement in performance.The increase in flows is similar across funds whose holdings match the style implied by their new name and those whose holdings do not, suggesting that investors are irrationally influenced by cosmetic effects.

Steven N Kaplan, Antoinette Schoar, (2005), investigated the performance and capital inflows of private equity partnerships. Average fund returns (net of fees) approximately equal the S&P 500 although substantial heterogeneity across funds exists. Returns persist strongly across subsequent funds of a partnership. Better performing partnerships are more likely to raise follow-on funds and larger funds. This relationship is concave, so top performing partnerships grow proportionally less than average performers. At the industry level, market entry and fund performance are procyclical; however, established funds are less sensitive to cycles than new entrants. Several of these results differ markedly from those for mutual funds.

The other stream of study by Jennifer Huang, Kelsey D Wei, Hong Yan.(2007) portrays that mutual funds with lower participation costs have a higher flow sensitivity to medium performance and a lower flow sensitivity to high performance than their higher-cost peers. Using various fund characteristics as proxies for the reduction in participation costs, they provide empirical evidence supporting the model's implications for the asymmetric flow-performance relationship.

Joshua M Pollet, Mungo Wilson, (2008) interesting study addresses the issues related to size of fund that affects the mutual fund behavior. They found that if actively managed mutual funds suffer from diminishing returns to scale, funds should alter investment behavior as assets under management increase. Although asset growth has little effect on the behavior of the typical fund, they find that large funds and small-cap funds diversify their portfolios in response to growth. Greater diversification, especially for small-cap funds, is associated with better performance. Moreover, Fund family growth is related to the introduction of new funds that hold different stocks from their existing siblings. Funds with many siblings diversify less rapidly as they grow, suggesting that the fund family may influence a fund's portfolio strategy.

Paulo Armada Leite, Maria Ceu Cortez, (2009) estimated and compared the performance of Portuguese-based mutual funds that invest in the domestic market and in the European market using unconditional and conditional models of performance evaluation. The results suggest that mutual fund managers are not able to outperform the market, presenting negative or neutral performance.

The studies of Aymen Karoui, Iwan Meier,(2009) on the performance and portfolio characteristics of 828 newly launched US equity mutual funds over the period 1991-2005. These funds initially earn, on average, higher excess returns and higher abnormal returns. Their risk-adjusted performance is also superior to existing funds. Furthermore, they provide evidence for short-term persistence among top-performing fund starts, however, a substantial fraction of funds drop from the top to the bottom decile over two subsequent periods. Analyzing portfolio characteristics, further they found that returns of funds starts exhibit higher ratios of unsystematic to total risk. Portfolios of new funds are typically also less diversified in terms of number of stocks and industry concentration and are invested in smaller and less liquid stocks.

An investigation on the conditional performance of a sample of German equity mutual funds over the period from 1994 to 2003 conducted by Wolfgang Bessler, Wolfgang Drobetz, Heinz Zimmermann, (2009) found that the conditional performance evaluation raises the benchmark for active fund managers because it gives them no credit for exploiting readily available information. Moreover, underperformance is more pronounced in the SDF framework than in beta-pricing models. The fund performance measures derived from alternative model specifications differ depending on the number of primitive assets taken to calibrate the SDF as well as the number of instrument variables used to scale assets and/or factors.

Richard T Bliss, Mark E Potter, Christopher Schwarz. (2008) provide an empirical examination of whether funds managed by individuals perform differently from funds managed by teams. Using a sample of about 3,000 equity mutual funds over a 12-year horizon, the authors find that although the number of funds managed by teams has grown at seven times the rate of funds managed by individuals, no significant difference in risk adjusted performance is observed between team-managed and individually- managed funds. Funds managed by teams, however, are significantly less risky and exhibit lower turnover. In addition, the total cost of owning a team-managed mutual fund is, on average, nearly 50 bps lower per year than the cost of owning an individually managed mutual fund. Finally, team-managed funds attract significantly greater investor flows than individually managed funds.

At this backdrop the prime objective of this research is to address and probe the overall performance of mutual fund industry in India.

Sources of Data and Research Process

The information related to the resources mobilized for mutual funds by various participants has been collected from the various releases by SEBI, AMFI India, The Economic Times, Business Line and CMIE Database. Mostly these are second hand information used for data analysis purposes. Initially relevant secondary data was gathered for the period of 1998-99 to 2008-09 and it was tabulated. The relevant statistical tools were used (i) to describe the data patterns like mean, standard deviation, (ii) to prove the hypothesis with the help of t test, f ratios' Anova.

Analysis and Interpretations

Table 1: Performance Evaluation of Mutual Funds Related to Public and Private Sectors

(Net Inflow in Rs Crores)

Years	Private	Public	UTI
1998-99	14527	335	-2737
1999-00	15166	-745	4546
2000-01	9850	-1045	323
2001-02	13050	1409	-7284
2002-03	12069	1561	-9434
2003-04	42545	2597	1667
2004-05	7600	-2677	-2722
2005-06	42977	6379	3424
2006-07	79038	7621	7326
2007-08	133304	9820	10677
2008-09	34018	9380	-3659
Total	404144	37652	2127
Mean	36740.36364	3422.909091	193.3636364
Standard Deviation	38593.62028	4307.25438	6106.358789

Source: Primary data: SEBI Bulletin and Secondary data analysis

The total resources mobilized by the private sector are 91.04%, Public sectors other than UTI are 8.49% and the resource contribution of UTI alone accounted for 0.48%. The Variation occurred in mobilization of funds during various period is very high with Private sector participations followed by the public sector excluding UTI, and by UTI. Based on the trends related to performance of mobilization of mutual funds it can be averged that there is much divergence in the performance among different players as shown in fig-1. The same is further corroborated statistically in

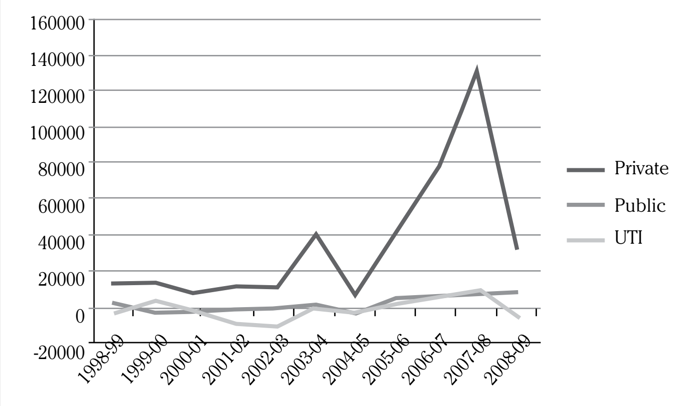
Table 2 below. Hence it may be concluded that there is a significant variation in the performance of different groups of mutual funds.

Table 2: One-Way ANOVA

Mutual Funds Resources Mobilization (Net Inflow) Rs in Crs					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	9.01E+09	2	4.50E+09	8.742	0.001
Within Groups	1.55E+10	30	5.15E+08		
Total	2.45E+10	32			

Source: Secondary data analysis

Figure 1: Performance Evaluation of Mutual Funds Related to Public, Private Sectors and UTI

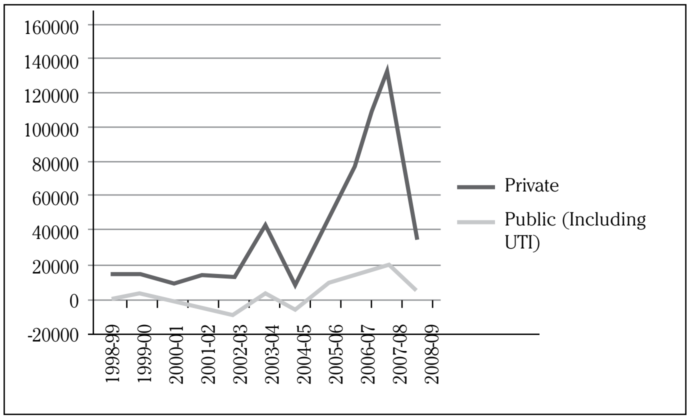


Source: Primary data: SEBI Bulletin and Secondary Data analysis.

It is evident that the participation by UTI has a greater impact on the performance of public sector mutual funds.

The performance of mutual funds in mobilization of funds by whole of public sector, including UTI and Private sector participation, is exhibited in the Table 3 and the respective trend is also depicted in Figure 2. To substantiate further and to statistically scrutinize, t-test for equality of means and Levene's test for equality of variances are performed (Table 3)

Figure 2: Performance Evaluation of Mutual Funds Related to Public and Private Sectors



Source: Primary data: SEBI Bulletin and Secondary Data analysis.

Taking into account the performance related to mobilization of funds by public sector, the contribution of UTI raises lot of questions to be investigated.

The mobilization of funds by the public sector mutual funds with and without UTI is examined. There is greater volatility in the differences of mobilization of funds, which is portrayed in Figure 3.

Table 3: Evaluation of Performance of Mutual Funds by Private and Public Sectors

	Levene's Test for Equality of Variances					t-test for Equality of Means			
								95% CI	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	6.802	0.017	2.774	20	0.012	33124.09091	11940.14	8217.39	58030.79
Equal variances not assumed			2.774	11.055	0.018	33124.09091	11940.14	6859.88	59388.3

Source: Secondary Data Analysis

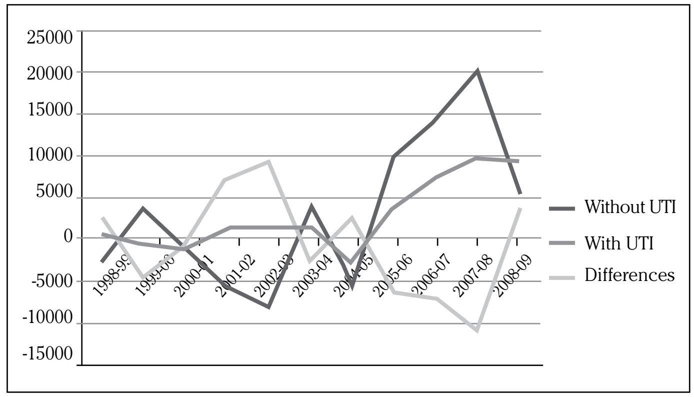
The test statistics t equals 2.774, the 2 tailed P value is (sig) of 0.012, which is less than 0.05 (value at 95% confidence interval) highlights the differences in performance of mobilization of funds by both categories of the players.

Table 4: Funds Mobilized by Public Sector MFs With and Without UTI

Public Sector MF Resource Mobilization (Net Inflow) In Rs Crs			
Year	**Without UTI**	**With UTI**	**Differences**
1998-99	335	-2402	2737
1999-00	-745	3803	-4548
2000-01	-1045	-722	-323
2001-02	1409	-5875	7284
2002-03	1561	-7873	9434
2003-04	1667	4264	-2597
2004-05	-2722	-5399	2677
2005-06	3424	9803	-6379
2006-07	7621	14647	-7026
2007-08	9820	20498	-10678
2008-09	9380	5721	3659
Total	30705	36465	

Source: Primary data: SEBI Bulletin and Secondary Data analysis.

Figure 3: Funds Mobilized by Public Sector MFs With and Without UTI



Source: Primary data: SEBI Bulletin and Secondary Data analysis.

Table 5: Independent Sample Test for With and Without UTI Performance

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% CI	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Equal variances assumed	4.568268	0.045106	-0.17436	20	0.863335979	-523.636	3003.2028	-6788.21	5740.9
Equal variances not assumed			-0.174	14.352301	0.864018714	-523.636	3003.2028	-6950.06	5902.8

Source: Secondary Data analysis.

Table 5 portrays the results of Levene's test for equality of variances and test statistic t-test. This clearly indicates that there is a significant difference between the quantum funds mobilized by public sector with and without UTI. Hence, it proves that the UTI has a greater role in performance of mobilization of funds.

Findings and Conclusions

It is established that the private sector players hold the greater strength in resources mobilization. On the other hand, in the public sector, UTI holds a favorable position. But in terms of performance UTI contributes in a big way. The other public sector players like SBI, Can Bank, LIC also hold good position in the industry. The intensity of the competition is growing day by day. Future survival is based on the performance of the players and the consolidation process.

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Amara Raja Group: Transforming Lives by Filling Technology Gaps

Dr Vipin Gupta

Dhruva Consulting Group

In 2009, Jayadev (Jay) Galla, CEO of Amara Raja Batteries, contemplated the future of his family business group in India and the best way to fulfill its corporate social responsibility. Jay's father and group founder - Ramachandra (Ram) Naidu Galla, had the vision to fill the technology gap in India, by bringing state-of-the-art technology from overseas and innovating that. Ram belonged to a rural farming family, and had established Amara Raja in 1985. He set up his factories in the most backward regions, and secured 100% commitment and performance from the local workforce. Ram later conceded, "This was challenging to execute with the inward-oriented human resources and work culture we had in India at that time, but I found a very simple solution!" "Rather than asking employees to do something, I believe in setting an example by doing it myself, so that people would follow me on their own." Jay's mother, Aruna Kumari, had followed the footsteps of her father, Rajagopala Naidu - a prominent parliamentarian, to run for office, and was presently a Health minister in the Andhra Pradesh State government, devoted to rural development.

Jay succeeded as the CEO in 2003, and since 2005, the sales and post-tax profits of Amara Raja batteries had grown at a compounded rate of 60 percent annually. The sales had surpassed Rs. 15 billion, making it the second largest battery business in India. The group had also diversified through five start-up sister companies, with combined revenues of Rs. 6 billion. The flagship and the new businesses were projected to reach Rs. 50 billion each in another five years. Jay had declared his intention to bring all these together under a single holding company, overseen by a corporate board. The holding company will have clear codes enabling involvement of the next generation of family members, and allowing equity participation from strategic international partners. Jay's vision for 2030 was to be counted in Fortune 500.

As Jay contemplated the future of Amara Raja group, he saw three strategic opportunities:

- Growth of Amara Raja's flagship battery business, in industrial as well as automotive segments, into untapped markets – especially amongst youth and women, and in rural areas.
- Further expansion of new revenue streams, in related sectors such as small electronics and power systems, and unrelated sectors such as food processing and infrastructure, that had originally been set up as small internally funded corporate social responsibility ventures.
- Pursuit of international markets.

How should the group plan in the present to realize the future Vision 2030? This is what Jay planned to discuss with his father.

Seeds of Entrepreneurship

Ram was the second of five children. His father was a farmer, and his family hadn't been educated. Ram recalled, "When I came to fifth grade my parents said, 'Now you are educated.'" Young Ram, eager to learn, completed his electrical engineering from the Anantapur Engineering College, and started working as a lecturer in the College of Engineering, Kakinada, Andhra Pradesh. His eyes were on a PhD from the Indian Institute of Technology – Madras. Unable to get in, he joined a MS program in control systems in the US in 1969. While in the program, his interests changed from academics to industry. He joined the Power consultants Sargent &

Lundy as a senior engineer, designing electrical systems for nuclear power plants.

Guided by his entrepreneurial ambitions, Ram delivered religious and social seminars to the immigrant Andhra community, promoting its Telugu language cultural and literary traditions. To better organize these efforts, he founded Telugu Association of North America (TANA) in 1977 as a founding President. TANA was a forum for literary, cultural, educational, social, and charitable interactions among the American Andhra community. He organized the first national conference of TANA in 1977 in Chicago, focused on three subjects.

First, cultural: understanding how the children of the Andhra medical doctor parents, born and raised in the US, are facing the challenge of assimilating two cultures – Indian and the American.

Second, emigration: if some people from Andhra wish to go back because of cultural or other reasons, what investment opportunities are opening up in Andhra?

Third, immigration: what could other professionals learn from the experiences of the medical doctors who had moved in big numbers to the US?

In the 1980s, a public outcry against nuclear energy in the US led Ram to shift gears. Ram thought of starting a new business in an emerging area in the US. However, he could not find partners, because all his friends had children and not ready to take the risk of a startup. He then began thinking about the several new incentives by the Government of India for the overseas Indians to return and invest in India. Ram observed, "Until that time, I didn't have any idea of coming back to India, because the US has lot more opportunities than India." But now the time was opportune from a family front also. Jay had just finished his schooling, and joined a college in the US. In 1984, Ram in his late 40s made an emotional decision to quit his $50,000 job, sell his suburban house, and return to India after a gap of 17 years, to start his own venture.

Taking the Industrial Battery Market by Storm

Ram's foremost goal was to participate in and to contribute to the economic development of the State and the nation. Instead of looking at a wide range of opportunities, he believed in selecting an area where he could achieve excellence and success. He observed, "There is no point in taking too many things at a time, you cannot succeed that way. Therefore I selected limited products and concentrated only on them." He wanted to create a center of excellence with some new, unique approach – instead of developing a me-too product. He wanted to take part in the technology progress, as opposed to just making money. He felt if money alone had been his motive, he could have remained in the US and made money there also.

In the mid-1980s, a lot of excitement existed around the electronics and instrumentation, and the newly emerging computer field both in India as well as in the US. For investing in the state-of-art technology in these fields, the market in India was very limited, so the economies of scale were insufficient. Ram wanted to focus on something for which there was a need – where the customers were already using some solution and where it would be possible for him to deliver a better alternative. That way he could be assured of success. His first thought of being a consultant for power plants to help increase their efficiency. A family friend was chairman of Andhra Pradesh Electricity Board at that time. He visited state power plants for doing checks. He found them using four generations old batteries, compared to the US. He decided to fill this gap.

On February 13, 1985, Ram founded Amara Raja (lit. everlasting king) Batteries as a privately held enterprise. Know-how was secured under a technical collaboration with GNB Industrial Battery Co. – the third largest industrial battery manufacturer in the US. Ram felt that creating a green-field factory would be better than correcting the problems in existing factories and existing industrial estates. He purchased a 3 hectares barren land and built a factory, with an initial production capacity of 100,000 batteries annually, and the infrastructure, from scratch. The factory was in Tirupati – a religious center point of South India. With the growth in transport and communication technologies, Ram saw more future for the smaller towns. Ram was attracted by the concept of universal good at the religious center of Tirupati. The concept upheld the principle that the work being done should be beneficial to the society and to the people, and should not be harmful to anybody.

The next challenge was finance. Ram noted, "When I approached the government for orders and financial institutions for money, they said the competitors are going to kill you… "There's nothing you can do to survive." Ram understood he would need to take company public for securing funds to support successful commercialization. In 1990, Ram converted into a public company, and went with the initial public offering in 1991. In the interim, finishing his college degree in 1989, Jay joined the international marketing department for GNB Industrial Battery Co. in the US to gain experience. Coinciding with the IPO, Jay returned home and joined the business, and was entrusted the task of setting up the sales and service network, based on his experiences of markets and consumer expectations in the US.

Because of the bureaucracy in India, Ram had to go through considerable hardship in creating everything new. Despite the government connections of his parliamentarian father-in-law, "it took more than a year just to get the paperwork for getting the factory license completed." But once it started going, it was easy to sustain – for Ram had a new unique creative environment, where he hired fresh minds not exposed to established ways of the industry. He felt that these two factors "have made a lot of difference and helped to strengthen the organization. By starting from scratch, we had a new concept, environment, and people to work." Ram was committed to offering opportunities for exploiting something, delivering something, and learning something, and to grow those opportunities. His goal was to exploit all the talent in the best possible way. He established an environment of creativity, emphasizing the positive nature of the product as beneficial to the society. Ram focused on creating an organization that could withstand any type of challenge, and an environment where he alone was not running it. He noted, "I cannot expect myself to be permanent, though at the same time I do not want to leave as of now. I want to establish a system that can guide the whole operation. The system would then guide the things to move and that will become the guideline."

After the IPO, Amara Raja became the first company in India to launch Value Regulated (VLRA) lead acid batteries for the government-run telecom sector. Ram recalled, "But we had to convince them to pay three times the price they were paying for conventional batteries. It was a huge challenge for us. We proved to them that we are technically and economically superior to conventional batteries. Within six months the entire Department of Telecommunications (DoT) moved over to VRLA batteries. At that time we were the only manufacturers of VRLA batteries."

Amara Raja also entered the Uninterrupted Power Supply (UPS) systems segment of VLRA, with sealed maintenance free (SMF) lead acid batteries. The public sector enterprises found these batteries very valuable for their new infrastructure projects. Railways, in particular, found these assured uninterrupted power supply for expanding the fleet of air-conditioned coaches. Additional markets were opened in the government run power, oil and gas sector.

Over the following years, Ram grew Amara Raja through vertical and horizontal integration, developing a niche market position, centering on these same two products. He noted, "I have not deviated far away from my products, and have tried to build capacity for making them the best that could compete anywhere in the world, and be better than what anybody else is making in the world…. But one segment and one technology wasn't enough." By 1999, Amara Raja commanded a share of 60% in the VLRA segment, and a 40% share in the overall Rs. 4 billion industrial batteries market.

Auto Battery Diversification

In the late 1990s, Exide announced plans to enter the industrial battery segment, by acquiring GNB Technologies. Fortunately, Amara Raja by now had capabilities to innovate in the industrial battery segment on its own, and was not hurt on breaking of the ties with its technology partner. However, Exide was a leader in the automotive battery segment in India, and so a larger threat loomed on the horizon. Jay convinced Ram to consider diversification into the auto battery market. Jay was entrusted responsibility to find a global technology and strategic partner. In 1997, Jay concluded the partnership with Johnson Controls Inc. – the largest auto batteries maker in the US, who agreed to take a 23% stake in Amara Raja through private placement of shares at Rs. 89 per share. The existing industrial battery plant was adapted to allow manufacturing of auto batteries, giving a potential capacity of 500,000 annually. The commercial production of auto batteries started in 1999.

Unlike the valve-regulated lead acid (VRLA) battery segment where Amara Raja enjoyed the first mover advantage, entry into the auto sector was a rather late one. And in comparison to the industrial batteries segment, auto batteries segment offered a larger scale but lower margins. The competition was more sophisticated. The name of Exide was synonymous with auto batteries, and most consumers referred to any auto battery as Exide. A number of car manufacturers had invested in India over the 1990s, forging deep relationships with the existing battery manufacturers, and creating barriers to entry for the new entrants.

Yet, the decision to diversify into the auto batteries was very strategic and prophetic. By the late 1990s, low price competition from China brought the volumes and margins in the SMF segment under pressure. And, in 1998, after entering the industrial battery segment, Exide appeared to make significant inroads. Consequently, in 1999, the industrial battery prices were about 30% lower than in 1998. Amara Raja's revenues dropped by 30% - though volumes remain stagnant, and profits before depreciation fell by 50%. The net operating margins fell from the historical 20% plus to less than 15%, though they were still higher than the average 6% for the most top players that had a wider portfolio of products (Exhibits 1 to 5).

Even as a late entrant, Jay saw immense opportunities in the ongoing boom of the auto sector: "We are not late. We are there at the right time…. The boom is yet to come. And, in any case we are not slow." He added, "Exide may be a strong player but nothing prevents us in the world from being the second largest player." Exide had led the auto batteries segment for fifty years with a 90 percent market share in the original equipment manufacturer (OEM) market and a 75 percent share in the organized aftermarket, and an overall 40 percent share of the market. Still there was scope for new entrants, as the auto battery market was growing by 10-12 percent annually, and some foreign players were also looking at entering. The auto battery segment was worth Rs. 10.5 billion, and was the dominant part of the Rs. 22 billion storage battery industry. The industrial batteries market was only Rs. 6 billion.

Ram added, "We realized that there was a huge technology gap between what was available to consumers here and those in the international markets, very similar to the situation when we entered the market for industrial batteries. Our strategy has always been to bring the latest technology that exists anywhere in the world and adapt it to the local environment here and offer it to the customer at rates at which they find great value. Our assessment at that time was that the competition was not doing this. There was a clear gap to be filled."

It still remained to be seen if Amara Raja could replicate its industrial batteries success in the auto segment. The industrial battery market required a few large customers to be served. The auto market was very different. Prices were constantly under pressure, because the auto assemblers were facing increasing cost pressure. Exide, by virtue of its size, had an obvious scale advantage. In the after-market, distribution and customer service were extremely important. Both institutional and retail customers didn't easily switched brands in case of need-based purchases like batteries, and so securing volumes required creativity.

Jay conceded, "We knew that we couldn't play Exide's game and win…We had to play a different game." In January 2000, Amara Raja launched hi-life "Amaron" brand auto batteries targeted at the owners of the new-generation vehicles, and distributed them through Amaron pit stop franchisees in major cities. Amaron was a zero maintenance product incorporating the latest technological advances in the field, on par with batteries manufactured and marketed in developed countries. Amaron were at the premium segment with a

36-month prorated warranty.All the products were shrink-wrapped and with a chrome finish. Ram explained,"We had to be seen and believed as a credible alternative to the market leader Exide."

In addition to offering access to best technology, the alliance with Johnson Controls also provided a foot in the door through its Original Equipment Manufacturers (OEM) network. Through that, Jay secured exclusive contracts from Ford India for Ikon cars, General Motors India for Opel Diesel cars, Diamler Chrysler, and Mercedes Benz India for 'E' class vehicles. But his eyes were on the retail replacement market, which was much larger size and growing at 12% annually. One million new cars were sold each year and the 8.5 million were on the roads.

Penetration of the replacement market was critical to gain economies of scale, and build market share in the auto battery segment. 60% of the replacement market was, however, dominated by the unorganized sector, and lacked product differentiation despite an active advertising by Exide. Still a new opportunity was emerging. The unorganized sector was focused on supplying hard rubber batteries. Since the late 1990s, there had been a shift in demand towards plastic batteries, where the unorganized sector was slow to enter because of high initial investments. The unorganized sector was also facing increasing government pressures around environmental and tax evasion issues.

Jay researched the evolution of distribution in the US and Europe, and its adaptation, use and distribution in emerging markets such as China, Brazil and Mexico where the market structure was similar to that in India. He identified how the companies in those nations managed the unorganized sector and dealt with credit and money collection from the small dealers. Internationally, batteries were marketed based on distribution, not brands, and the emphasis was on R&D. The batteries were a low interest product; and customers selected batteries based on where they were distributed (e.g. Wal Mart), and their price, features, warranty and shelf space.

Jay saw significant opportunities for restructuring the industry, away from the domestic as well as international trends. He knew to succeed, consumer attitudes would need to be changed. Few people thought of car battery till it failed some day. He observed,"Batteries generally had long life of three years, so it was a slow moving consumer good. The product itself was hidden under the hood of the car, and people were not able to show that off. Our first challenge was not selling our brand, but getting people to start thinking about automotive batteries. If they start thinking, they will automatically start comparing and realize that our product is superior." He added, "The Amaron brand was launched only in January 2000. We looked at advertising as a route to increasing consumer interest and thus play the role of a catalyst to get other players to start advertising.The more the advertising - whether it is our brand or somebody else's - the better it is for us as more people will be forced to take cognizance of our existence and draw comparisons." "At least people have my brand tucked away in their sub-conscious mind and will voice it at the time of purchase. My company will have a sound image and represent a certain value to the customers. In that sense, treating my product like an FMCG (fast moving consumer goods) has its rewards."

To promote a knowledgeable use of the battery, Jay introduced programs like online battery monitoring to check the health of an installed battery, organizing symposiums teaching the selection of right battery and increase its life. Keeping in mind consumer convenience, each Amaron battery had a unique barcode. The barcode contained entire history of the product - the date, time, the assembly line it was put together on, which truck loaded it, which warehouse it was stored in, when it went to which retailer, when did it exactly go to the consumer and in what condition. It had a distinctive look and feel, in an attempt to establish a standard like 'Intel Inside'. To create an initial buzz, in 2001, Amara Raja gave away 350,000 mineral water bottles at major traffic junctions with the message, "In this heat you need water, not the Amaron battery under your hood". The brand launch was highly successful. In 2001, two thirds of Amara Raja's auto battery sales came from the replacement market, and the rest from the OEMs, giving it a 14% market share in the passenger car market.

Inspired by the success, an aggressive plan was designed to create capacity to drive demand, and to reach new international markets. In September 2001, Amara Raja commissioned a new auto battery plant at Karakambadi Village, near Tirupati, with a capacity of 1 million, investing Rs. 450 million – all through internal accruals. This high-tech plant, with in-house advanced battery excellence center for R&D and integrated manufacturing facility to produce all critical components, set global standards for the auto batteries. Own R&D-based auto batteries allowed a major foray into the exports of SLI (start light ignition) auto batteries in Europe and Southeast Asia. To mark the occasion, a new corporate identity was adopted – with the new logo being a yin and yang symbol in green and black.

Jay also decided to expand from the passenger car market into the commercial vehicle and tractor segments. The unorganized sector had a 90% share in these segments. In 2002, a focused marketing campaign was launched to switch the customers. The 'Chicken Leg' ad campaign adapted an innovative approach from the successful FMCG sector, to make an otherwise dull category look attractive. Backed by cumulative communication spending of just Rs. 80 million, the campaign won nomination for 2002 Creative Advertiser of the Year award. After the campaign, top-of-mind recall in major markets for the Amaron brand surged from 2% to 6%, and then to 20% by end-2002. By 2002, Amaron had become the second largest selling brand in India. It was being sold to all light vehicle and truck manufacturers in India, excluding Hyundai and Toyota, on either exclusive or preferential basis.

Amara Raja also started designing a battery for the two-wheeler market, with technology from Johnson Controls. It invested Rs. 350 million to start creating a two-wheeler assembly line with a capacity of 1 million units. Ram was excited and saw additional opportunity in manufacturing private label auto batteries for other brands, such as Bosch, Lucas and AC Delco, to help utilize capacity and accelerate learning curve. The auto battery production capacity was planned to double within a year from 1 million to 2 million units.

Leadership Succession

The automotive segment helped Amara Raja reverse the decline in revenues. However, its profitability situation remained under stress. The cost of entry was high, both in terms of capital expenditures as well as gaining market presence. Therefore, while the sales volumes and revenues grew significantly during 2001 and 2002, the net profit margins came down from about 15% in 2000, to 11% in 2001, and to 4% in 2002. By 2003, auto batteries accounted for 55% of the company's revenues, up from 30% in 2002. However, the overall revenues of the company were stagnating, because of the high cost of marketing of auto batteries, along with escalating prices of raw materials. The net profit margins dropped sharply to only 0.40%, a far cry from 20% plus achieved during the 1990s. The plan to double the auto battery production capacity had to be revised, because of a significant under utilization of capacity, and a decision to use internal accruals for investments. Under the revised plan, the next capacity increase would be to only 1.5 million, and that would occur only in 2004.

By 2003, Ram recognized that Amara Raja had a strong potential, but needed a fresh leader to tap and move that potential. On August 1, 2003, he resigned as the Managing Director position, while retaining the Chairman of the Board position, and passed the reins to Jay. A close working relationship was developed with the engineers of Johnson controls to improve the technology possibilities and efficiencies. Based on its R&D, Amara Raja was able to introduce batteries across different price segments. Jay observed, "Our research and development department is our pride, with annual R&D expenditure accounting for 1.5 to 2% of turnover." With this, relationships with the existing OEM manufacturers were deepened, such as with Ford India for Fusion, General Motors for Chevrolet-Tavera, Mahindra & Mahindra for Force Motors. Ford India rated Amara Raja as a top tier supplier of batteries, paving way for it to supply to Ford worldwide. Amara Raja also secured an exclusive contract to supply batteries for Swift – the latest offering of the largest car firm Maruti in India.

A unique four-year warranty product – Amaron Pro – was introduced for the replacement market. Amara Raja's warranty costs were only 2%, compared to 10-12% usual in the market. Other products launched in this newly created super-premium category included Amaron Hi-life for passenger cars, Amaron Hi-way for trucks, and Amaron Harvest for tractors. The category, with high margins, accounted for a sixth of the aftermarket revenues. Amaron Quanta was introduced for the UPS systems. An authorized collection center for the used batteries was also established. The distribution strategy helped expand retail outlets across the nation – through a network of 60+ pitstops, 100 franchisees, and 9,000 dealers.

Amara Raja worked with a recognized Non-Government Organization (NGO) to set up forty information kiosks in remote villages, to acquaint farmers and local businessmen with technology, internet, and information on farming and other topics. Thus, Amaron gained mindspace in even these difficult to penetrate pockets. In another similar confidence-building initiative, Amara Raja worked with the trucking companies to help fleet owners understand better maintenance of the electricals of their vehicles. Moreover, factory charged battery brands Go and Fresh were launched for the three-wheeler and taxi segments.

With these creative programs, a significant share was captured from the unorganized sector, whose share in the auto battery segment was now down to 50%. The auto battery market in the nation was growing at 8 percent. Amara Raja had gained a 12% share in the organized sector. The industrial battery segment performance also substantially improved, and Amara Raja's domestic volumes surged 48% in fiscal 2004. After years of price decline, battery prices in the telecom sector stabilized, and new capacity was coming up from both private and public sector telecom players.

Thus, in fiscal 2004, the sales grew by 34% to more than Rs. 2 billion. Exports grew proportionately, accounting for 7% of sales, with major demand in Japan, China, Taiwan, Singapore, Australia, Philippines, UAE, Kuwait, and Greece. In some markets, Amara Raja became a leader – in Singapore it gained a 25% market share. Exports contributed 20% of sales in fiscal 2005, with new markets in Africa, Middle East, Southeast Asia, and Europe, including through supply of private label batteries as the partner Johnson Controls replaced the reputed European names like Bosch and Waltair batteries. In fiscal 2004, both auto batteries and industrial batteries accounted roughly 50% to company revenues.

Inspired Jay decided to expand the auto battery capacity from 1.5 million units to 2.4 million units by December 2005, with internally generated funding of Rs. 388 million. He planned to raise the capacity of industrial batteries also to 150 million ampere hours. By 2005, Amara Raja was back on a robust footing, with growing sales and profitability. The troubles of the late 1990s and early 2000s appeared to be behind. In fiscal 2005, the company revenues actually grew by more than 70%, and net profit margin doubled. Backed by better than expected market performance, the capacity was actually increased to 3 million units of auto batteries and 240 million ampere hours of industrial batteries by December 2005.

In 2005, Amara Raja became the first battery company to win the 5S Excellence Award from the Confederation of Indian Industry (CII). The 5S award recognized the use of Japanese principles of 'seiri' (sort), 'seiton' (systematic arrangement), 'seiso' (shine), 'seiketsu' (standardize) and 'shitsuke' (sustain), which translated into higher standards of efficiency and productivity. Amara Raja now had entered a rapid growth phase, securing a compounded annual growth of over 60% in sales, and in profit after tax, over the next five year period. By 2009, Amara Raja had a 26% market share in the industrial batteries, with growth in both the telecom as well as UPS divisions. Telecom service providers embarked on network expansions and infrastructure sharing, generating rising demand for batteries. And, growth in the Services industry and household affluence drove UPS battery sales, for back-up power from both households and offices due to the continued power shortage.

The auto battery division also grew through new product lines in new segments, with an eye for the high growth niches of youth and women in urban and sub-urban areas, and of general population in small towns and villages. Jay took the Amaron brand to the youth by investing in brand building initiatives through motor sport sponsorships. In 2006, he started a racing academy in collaboration with Narain Karthikeyan, Formula 1 racer. An exciting growth area was the rising popularity of premium two-wheelers including electric motor vehicles among Generation Y and of ungeared scooters among urban and sub-urban women. These were based on a self-start mechanism, compared to the self-start mechanism used in the traditional two wheelers. Amaron battery technology offered a 30 percent higher cranking power than the traditional ones, and so was better for the self-start mechanism. Jay observed, "Two-wheeler riders traditionally were not required to pay much attention to the battery in the kick-start models. However, with increasing shift to self-start, the battery technology and choice is becoming critical."

In 2007, Amara Raja decided to further scale the VLRA manufacturing capacity of 2-wheeler batteries and UPS batteries to 3.2 million units by 2010. The two-wheeler battery was introduced to the market in 2008, under 'Amaron Pro Bike Rider' brand, with a first in India 60-month warranty. 25% of the overall communications budget was allocated for brand building and marketing promotions, with a goal to acquire a 20 percent share of the two wheeler battery market. India's two-wheeler battery market was valued at Rs. 5 billion, growing @ 8% annually.

Jay considered involvement with the motorsports as an example of a 720-degree approach for brand promotion. It allowed building brand not only through expenditures, but also through activities in which the firm was involved as a self-financing business venture. He also set up Amaron Roadtrips to help `groups' interested in long road trips in logistics, safety and maintenance issues. The goal was to encourage more and more people to get out on the road for vacation. Most competitors offered dry charged products for which dealers needed space, infrastructure and equipment for recharging. Like plug and play monitors, Amara Raja batteries were however factory charged, thus ready to install. Jay recognized that this allowed Amara Raja batteries a potentially unlimited retail channel opportunity, including in shopping malls and general stores. For rapid and smooth nation-wide ramping of the distribution network, Jay decided on the franchisee approach, as opposed to the set up of individual dealers. In 2007, 130 franchisees around the nation offered access to 15,000 retailers. Of these more than half were new to the battery trade. Amara Raja team worked with and nurtured the franchisees, and pitched sales calls jointly with the franchisee team in order to expand retailer base.

In 2008, Jay launched a new retail store format – Powerzone – to cater to the growing need in rural markets for superior technology of automotive and power-related products. Powerzone offered a one-stop shop for the household and business needs, assuring quality service and affordable prices. Jay planned to have one Powerzone in each of the district sub-divisions of India by 2010. As Amara Raja evolved, Jay continued to put a strong emphasis on its employees and values. Amara Raja was committed to transparency, accountability and efficiency in its activities within the organization, and with its partners and customers. Amara Raja offered primary schooling facilities for the children of its employees, and offered an on-site library for employees. It took responsibility for providing complete social infrastructure for its employees, including a bank, a post office, medical facilities, recreational clubs, and residential complexes. It invested substantially in the development of villages, including through support for roads, street lighting, rainwater storage, and check dams. One of its core values was sustainability, and environment friendliness, including through energy conservation and water harvesting.

In 2008, Jay set up a new battery plant in the north, in the spiritual town of Haridwar, to better and more cost-effectively access the region's retail market. In 2009, Employer Branding Institute of India recognized Amara Raja for the "Best HR Strategy in line with Business" and "Continuous innovation in HR Strategy at work" in South India. The marketing initiatives of Amara Raja were also recognized by Amity Business School, who gave it the 'Corporate Excellence Award in Marketing' in 2009.

Diversified Family Business Group

In 2004, Ram and Jay jointly laid a vision for leveraging Amara Raja's learning in the battery business into other sectors, in order to create a diversified Galla family business group. They noted, "A company is known by the society it keeps… Our vision is to create communities that are economically and socially vibrant enough to stimulate growth and self-reliance; within and without the company." They also laid the mission statement: "To transform our spheres of influence and to improve the quality of life by building institutions that provide better access to better opportunities, goods and services to more people…all the time." The group was committed to introducing latest generation technologies, adapting these technologies to the operating environment, developing and manufacturing globally competitive customer focused quality products, responsibly introducing these products, and providing world-class customer support.

In 2004-05, Mangal Precision Products was set up with an investment of Rs. 150 million to fabricate advanced sheet metal products and fasteners, plastic component and compounds for both the export and the domestic market. Amara Raja Electronics was established to manufacture battery chargers, digital inverters, and trickle chargers for Amara Raja Batteries and for outside clients. Amara Raja Power Systems was set up to design and develop power electronic products. And, a fourth new company, Galla Foods was set up with an initial investment of Rs. 200 million, as a 100% export oriented food processing facility. Jay observed, "None of these four companies were built in a grand scale. They were started in a small scale… Rural job development is an underlying theme for all the businesses."

While the first three businesses had some links with the core business, Galla Foods was an unrelated diversification, as part of the Corporate Social Responsibility of the group. This operation was based in Chittoor, Andhra Pradesh – an economically backward region of India, which had rich varieties of mango. The initial focus was on the European market, and on the pulp extract and puree of mangoes. A research facility was added to help brand and to assure international level of quality. Collaborations were established with the local farming community. Ram noted, "We have brought in the world's latest technology to the battery market….Our goal now is to do the same in the fruit processing. We are confident enough that, this will bring the revolutionary changes in present Industry practices and translates the benefits to farmers, industry and country." Ram's rural focus was key to securing committed workforce, and underpinned his vision of revitalizing the places that he came from.

As the mango pulp and puree business stabilized and the world-class capabilities were built, a decision was made to expand Galla Foods into the domestic market. An additional investment of Rs. 370 million created state-of-the-art infrastructure facilities to widen the fruit-processing capability to include more fruits, and supported expansion into the fruit beverage market with a mango nectar product Galla Thick Mango. Ram noted, ''We source the fruits from our own and other select farms and produce the pulp with minimal human intervention. The choicest grade pulp is then used for the production of Galla Thick Mango Nectar," he said. The entire process right from formulation to bottling was automated and totally hands-free. This ensured high consistency in taste across batches and longer shelf life.

Galla Thick Mango was launched in the domestic market in May 2008. Ram planned to establish the retail distribution first in South India by 2009, and then expand to the rest of India by 2010, to capture a market share of 14% in the packaged natural fruit beverages market. This market was estimated at Rs. 15 billion, and growing @ 15% annually. All major retail chains in South India signed up on the launch, giving a starting network of 400 modern retail outlets and 4,000 traditional shops. The goal was to increase Galla Foods revenues from Rs. 400 million in 2007 to Rs. 7 billion by 2012.

In 2007-08, a need was being felt to have greater transparency in the family business codes for inducting GenNext. The five wholly-owned group companies now included a newly formed Amara Raja Infra to focus on the infrastructure projects for group companies such as civil works. Jay decided to set up a holding company to bring the six companies under a single umbrella. He wondered if some overseas investors will be interested in taking strategic equity stake in the five new ventures, and help Galla Group realize a future of being a Fortune 500 corporation by 2030.

Exhibit 1: Balance Sheet for Amara Raja Batteries Ltd. (Rs. Million)

Liabilities	Ended Mar-98	Ended Mar-99	Ended Mar-00	Ended Mar-01	Ended Mar-02	Ended Mar-03	Ended Mar-04	Ended Mar-05	Ended Mar-06	Ended Mar-07	Ended Mar-08
Share Capital	102.7	102.7	102.7	113.9	113.88	113.88	113.88	113.88	113.9	113.9	113.9
Reserves & Surplus	758.40	1,129.60	1,290.70	1,555.60	1,582.68	1,637.41	1,632.04	1,692.97	1,899.00	2,322.80	3,217.10
» Net Worth (1)	861.20	1,232.30	1,393.50	1,669.40	1,696.55	1,751.29	1,745.92	1,806.85	2,012.90	2,436.70	3,331.00
» Secured Loans (2)	53.3	47.7	58.2	115.5	56.2	10.7	44.95	73.67	162.3	1074.9	2266.5
» Unsecured Loans (3)	0	56.9	69.6	83.7	77.48	86.67	103.85	159.39	216.4	332.2	896.1
Total Liabilities (1+2+3) »	914.50	1,336.90	1,521.30	1,868.70	1,830.23	1,848.66	1,894.72	2,039.91	2,391.60	3,843.80	6,493.60
Assets	**Ended Mar-98**	**Ended Mar-99**	**Ended Mar-00**	**Ended Mar-01**	**Ended Mar-02**	**Ended Mar-03**	**Ended Mar-04**	**Ended Mar-05**	**Ended Mar-06**	**Ended Mar-07**	**Ended Mar-08**
Fixed Assets											
Gross Block	460.50	633.70	783.50	977.10	1,410.59	1,513.71	1,583.51	1,672.30	1,907.10	2,577.80	3,105.80
(-) Acc. Depreciation	108.6	155.4	206.5	274.8	358.7	468.94	591.62	723.67	863.6	1009.5	1,217.30
Net Block (A)	351.90	478.30	577.00	702.30	1,051.90	1,044.78	991.89	948.63	1,043.50	1,568.30	1,888.50
Capital Work in Prgs. (B)	10.7	13.7	39.8	31.5	42.82	42.34	9.51	12.89	48.2	61.7	657.4
Investments (C)	1	53.6	130	130	130.34	131.57	208.78	235.63	320.1	161.9	162
Current Assets, Loans & Advs.											
Inventories	98.9	137.1	148.8	176.1	302.16	294.21	307.25	440.96	572	921.7	1943.3
Sundry Debtors	253.2	368.1	243.8	362	453.48	455.72	471.67	649.71	856.5	1459.5	2264.7
Cash And Bank	298.5	398.5	316	310.2	98.58	153.03	152.29	169.12	205.2	49.9	289.6
Loans And Advances	256.4	417.4	402.5	534.5	346.79	328.18	267.27	352.86	672.1	1069	1478.3
(i)	907	1321.1	1111.1	1382.8	1,201.01	1,231.15	1,198.48	1,612.64	2,305.80	3500.1	5975.9
Current Liab. & Provs.											
Current Liabilities	167.8	176.9	143.4	172.8	408.87	401.53	315.52	475.97	845.8	871.4	1196.9
Provisions	188.3	352.9	203.7	271.5	295.98	301.84	198.42	293.92	480.2	577	993.4
(ii)	356.1	529.8	347.1	444.3	704.85	703.37	513.94	769.89	1,326.00	1448.4	2190.3
Net Curr. Assets (i - ii (D)	550.9	791.3	764.1	938.5	496.15	527.78	684.54	842.76	979.8	2051.7	3785.6
» Misc. Expenses (E)	0	0	10.4	66.4	109.02	102.19	0	0	0	0	0
Total Assets (A+B+C+D+E) »	914.50	1,336.90	1,521.30	1,868.70	1,830.23	1,848.66	1,894.72	2,039.91	2,391.60	3,843.80	6,493.60

Exhibit 2: Amara Raja Income Statement, Fiscal Year Ending (Rs. Million)

	Mar-98	Mar-99	Mar-00	Mar-01	Mar-02	Mar-03	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Net Sales	1443.8	1865.5	1314.9	1550.1	1646.73	1736.11	1775.99	2377.91	3916.9	6024.9	11006.8
Other Income	15	42.4	65.9	60.9	47.33	10.55	18.63	16.3	73.5	-2.4	38.4
Total Income	1458.8	1907.9	1380.8	1611	1694.05	1746.67	1794.61	2394.21	3990.4	6022.5	11045.2
Raw Material Cost	447.8	589	483.4	582.6	753.96	810.35	835.51	1332.21	2194.9	3829.8	7310.6
Operating Profit	443.4	622.4	320.1	308.9	387.96	334.57	236.66	256.69	533.6	934.5	1816.8
Interest Name	14	2.6	3.6	5.5	6.67	3.78	1.75	1.45	13.4	47.3	147.1
Gross Profit	429.4	619.8	316.5	303.4	381.29	330.8	234.91	255.24	520.2	884.8	1708.1
Depreciation	24.3	46.8	52.7	68.3	137.76	219.19	225.24	136.31	147	170	244.5
Profit Bef. Tax	405.2	573	263.8	235.1	243.53	111.61	9.67	118.93	373.2	714.8	1463.6
Tax	92	134.1	61.1	27.6	65.48	43.33	2.58	45.47	134.8	237.1	519.5
Net Profit	313.2	438.9	202.7	207.5	178.04	68.28	7.09	73.46	238.4	477.7	944.1
Other Non-Recurring Income			-7.4	-2.3	4.18	5.73	6.81	13.44	0	-7.3	-0.5
Reported Profit	313.2	438.9	195.2	205.3	182.23	74.01	13.9	86.9	238.4	470.4	943.6
Equity Dividend	40.2	67.8	34.2	40.8	39.86	17.08	17.08	22.78	28.5	39.9	39.9

Exhibit 3: Balance Sheet for the Competitors (Rs. Million)

	Amara Raja	Bosch	Exide Industries	Motherson	Amtek Auto
	Mar '08	Dec '08	Mar '08	Mar '08	Jun '08
Sources Of Funds					
Equity Share Capital	113.9	320.2	800.0	355.6	972.0
Reserves	3217.1	30634.3	9463.5	3668.9	23016.4
Networth	3331.0	30954.5	10263.5	4024.5	23988.4
Secured Loans	2266.5	99.2	2724.0	1584.6	832.3
Unsecured Loans	896.1	2544.4	774.1	3026.0	22422.4
Total Debt	3162.6	2643.6	3498.1	4610.6	23254.7
Total Liabilities	6493.6	33598.1	13761.6	8635.1	47243.1
Application Of Funds					
Gross Block	3105.8	27285.6	10974.7	6790.5	21139.3
Less: Accum. Depreciation	1217.3	21199.4	5423.6	2667.3	2971.3
Net Block	1888.5	6086.2	5551.1	4123.2	18168.0
Capital Work in Progress	657.4	1671.1	466.7	196.5	8080.6
Investments	162.0	8665.3	5182.8	1775.3	4183.8
Inventories	1943.3	5480.7	5707.4	1484.9	2502.3
Sundry Debtors	2264.7	6995.1	2592.1	2046.2	2634.4
Cash and Bank Balance	289.6	410.4	16.8	242.6	433.9
Total Current Assets	4497.6	12886.2	8316.3	3773.7	5570.6
Loans and Advances	1256.5	5550.5	571.6	1925.6	5453.5
Fixed Deposits	221.8	10297.8	0.0	84.0	8804.5
Total CA, Loans & Advances	5975.9	28734.5	8887.9	5783.3	19828.6
Current Liabilities	1196.9	7206.6	5272.9	2152.3	2557.3
Provisions	993.4	4352.2	1053.9	1510.8	481.9
Total CL & Provisions	2190.3	11558.8	6326.8	3663.1	3039.2
Net Current Assets	3785.6	17175.7	2561.1	2120.2	16789.4
Miscellaneous Expenses	0.0	0.0	0.0	419.8	21.3
Total Assets	6493.5	33598.3	13761.7	8635.0	47243.1
Net Profit	943.6	6338.6	2503.3	1281.9	2612.5

Exhibit 4 - Market Value of Competing Firms: 2008 (Rs. Billion)

	Share Price	Market Capitalizsation.
Bosch	3,374.55	106.84
Exide Industries	71.00	56.80
Motherson	68.20	24.25
Amtek Auto	146.65	20.68
Amara Raja Batt	90.15	7.70

Exhibit 5: Profit & Loss Account for the Competitors (Rs. Million)

	Amara Raja	Bosch	Exide Industries	Motherson	Amtek Auto
	Mar '08	Dec '08	Mar '08	Mar '08	Jun '08
Income					
Sales Turnover	13703.8	51313.3	36036.6	15257.7	13079.7
Excise Duty	2697	4911.2	4491	2124.8	0
Net Sales	11006.8	46402.1	31545.T6	13132.9	13079.7
Other Income	38.4	3305.1	93.6	298.1	1166.8
Stock Adjustments	582.1	334.6	835.1	111.9	511.3
Total Income	11627.3	50041.8	32474.3	13542.9	14757.8
Expenditure					
Raw Materials	7892.7	26424.1	19884.9	8010.8	8686.8
Power & Fuel Cost	225.7	538.3	1006.9	235	261.7
Employee Cost	534.8	5304	1510.3	1193.8	600.7
Other Manufacturing Expenses	82.5	1039.2	229.1	350.7	88.1
Selling and Admin Expenses	944.2	4978.5	4999.1	1058.3	267.8
Miscellaneous Expenses	92.2	1226.4	50	299.2	52.6
Preoperative Exp Capitalised	0	-291	0	0	0
Total Expenses	9772.1	39219.5	27680.3	11147.8	9957.7
Operating Profit	1816.8	7517.2	4700.4	2097	3633.3
PBDIT	1855.2	10822.3	4794	2395.1	4800.1
Interest	147.1	87.3	408.2	266.9	313.9
PBDT	1708.1	10735	4385.8	2128.2	4486.2
Depreciation	244.5	3024.6	642.4	500.6	967
Profit Before Tax	1463.6	7710.4	3743.4	1627.6	3519.2
Extra-ordinary items	4.7	947.9	0	14.7	-9.4
PBT (Post Extra-ord Items)	1468.3	8658.3	3743.4	1642.3	3509.8
Tax	519.5	2319.4	1240	360.3	906.9
Net Profit	943.6	6338.6	2503.3	1281.9	2612.5

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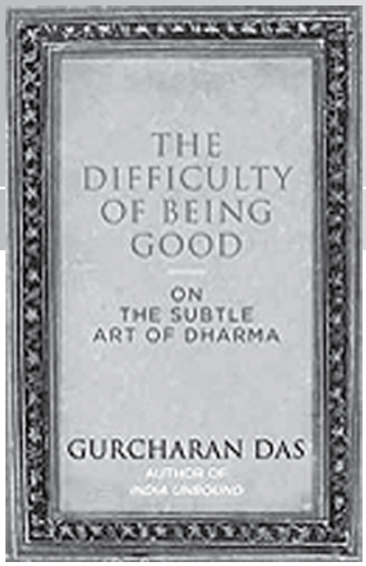
Dhruva Consulting Group (DCG) is an eclectic mix of Industry and Academia which undertakes consulting projects far and wide. Global Leadership and Organizational Behavior Effectiveness (GLOBE) is a multi-phase, multi-method research project in which investigators spanning over 72 countries in the world are examining the inter-relationship between societal culture, organizational culture and organizational leadership. This project is envisaged by Robert J House of Wharton School along with Dr Vipin Gupta. DCG has been retained as the sole Principal co-investigator for the state of Andhra Pradesh, India. DCG has managed the daunting task of profiling the case studies of about top 50 CEOs of Andhra Pradesh. DHRUVA retains the right over these case studies including that of Amara Raja. DHRUVA eventually will publish these GLOBE case studies under the title - "Models Of Organizational Excellence in AP".

Book Review

The Difficulty of Being Good:
On the Subtle Art of Dharma

Gurcharan Das

Reviewer: Dr S Pratap Reddy



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The recent global economic crisis has revealed a lack of moral insight at the highest echelons of the corporate world showing proof that it is 'difficult to be good'. Gurcharan Das turns to the Sanskrit epic Mahabharata, in order to answer the question 'Why be good?' Mahabharata's characters, in essence, are also obsessed with the elusive notion of dharma – which in essence "is being good".

"Books are the tools of the mind, they hasten man's intellectual steps, they widen the intellectual horizon, they increase the range of his vision, they sow intellectual harvests otherwise impossible and reap treasures quite beyond the reach of the unaided person."

– Newell D. Hills

Gurucharan Das being an epic poet, an erudite scholar, an incisive critique, a philosopher writer and above all a corporate manager, brings out lucidly the 'difficulty of being good' in his treatise on Mahabharata. He believes in Socrates' dictum – "You learn to question and never to just depend on what the printed words tell you".

The *Mahabharata* winds its way leisurely, with a steady objective, through elaborate discussions on law, philosophy, religion, custom, even geography and cosmography, together with a formidable array of episodes and legends, piled up at various distances along its course. It's a revelation for an ordinary person like me with profound faith in Diligence, Dignity, Dhyana and Dharma to learn that Mahabharata is made up of almost 100,000 couplets – its length seven times that of the Iliad and the Odyssey combined. No wonder it is said that - *thinte garelu tinale, vinte bharatam vinale!* (An approximate English rendering- If one has to eat, eat "Garelu" a south Indian delicacy. If one has to listen, one must listen to Mahabharata).

It's the hypocrisy and waste, the sheer emptiness of a false ideal of secularism that tacitly disallows the teaching of Mahabharata because it is a (Hindu) religious book. To classify it that way is illiteracy because the Mahabharata is more than a religious epic. More than that, Hinduism is not a religion in the strictest sense - but a mosaic of varied philosophical schools. It is verily the Indian way of life.

Das further states, "I find that as I view the world through the lens of the Mahabharata, my moral reasoning is sharper. If you are a Christian or a Muslim, you go to the Bible or Koran to find out what God said is right or wrong. The Mahabharata doesn't appeal to God at all – it leaves everything up to you. What gives me a tremendous sense of esteem for the Indian classical tradition is that it incorporates texts like the Mahabharata that do not spoon-feed you, do not prescribe, but force you to think for yourself."

The author tries to be reader-friendly in rendering Sanskrit words in Mahabharata into English and also prefers neither to translate 'dharma' nor to stick to the spelling of Krsna. Long names are inevitably abbreviated. The full name of the city we know as Los Angeles is El Pueblo de Nuestra Senora la Reina de Los Angeles de Porciuncula and is frequently shortened even further to merely LA. Das is absolutely right . There is a beauty in simplicity and brevity.

Swadharma Vs Sadharana Dharma

Dharma yuddha or just war or *jus in bello* lays down elaborate rules of fighting. It reminds warriors that fighting should be called off at sunset; one does not strike the enemy from behind; one does not engage in ambush or surprise attacks. The epic Mahabharata creates limits on the intensity and duration of the combat or the suffering of soldiers.

Krishna's role in the epic forces one to confront a moral dilemma. How does one explain that 'good' persons, who had strong and persuasive reasons to make the war, could win only by unfair means? How can one think of them as 'good' if they can succeed only by fighting in unfair ways? How, then, does one distinguish between the 'wicked Kauravas' and the 'good Pandavas', and indeed, between good and evil? The Pandavas, along with Krishna, were supposed to be 'the good guys'; yet they managed to kill every Kaurava commander – Bhishma, Drona, Karna and Duryodhana – by foul means.

The impersonal viewpoint (Sadharana Dharma) within us produces a desire for goodness, fairness and equality, while the personal one (Swadharma) wishes the opposite, seeking only one's own gain, often at the expense of others. This conflict between our divided selves underlies the dilemmas that are faced both by the epic's heroes and by us. Hence, it leaves us with an 'awareness of the possibilities of life'. Who has in his heart always the well-being of others, and is wholly given, in acts, thoughts, and in speech, to the good of others, he alone knows what Sadharana dharma is.

Anrishamsya as 'Business Ethics'

'Business Ethics', a poor synonym of Anrishamsya has become such a hot topic that it is currently taught at hundreds of B-Schools now all over the world. It is a flowery concept encompassing subtleties such as being moral, selfless, kind and compassionate, charitable, honest, virtuous, fair, courageous etc. But can they be taught in a classroom? Teaching and learning business ethics is an art and, therefore, not a matter of technique. By diligent practice alone the seeker (student) begins to see its hidden and deeper meaning. Wisdom is an existential experience. It is not something known from others. It is something that grows in one's heart. It is an experience, not information.

How does one learn Anrishamsya? Listening to or reading the Mahabharata's moral tale is a good place to start. Like all good literature, it is a conduit for expanding the mind and cultivating a moral sensibility. Yudhishthira teaches by example and not by 'ethical prophecy'. It is not easy to become virtuous; it requires a leap from thought to action, and it takes painstaking effort to learn to identify with people whom one dislikes or to whom one is indifferent. It is best to begin by trying to empathize with others.

Das beautifully expounds the concept of Anrishamsya further by taking certain episodes in the story - In the Dvaita forest when his brothers had died from thirst, given a chance of reviving only one of them Yudhishthira abandoned Bhima and Arjuna, his own brothers, and chose to save the life of his step brother Nakula, because he wanted to deal equally with their two mothers leaving each with a surviving son. Yudhishthira explains that his father had two wives, whom he regards as equal. He believes that each mother deserves to be left with a surviving son. In making this choice, Yudhishthira demonstrates through his actions the significance of 'the highest truth of dharma- anrishamsya".

On the point of sadharana dharma (impersonal) vs. swadharma (personal) one can draw a parallel to Machiavelli's "end justifies the means:" Here the end is personal aggrandizement at the expense others is similar to the concept of swadharma. The moot point is which is noble and has shades of divinity- is it sadharana dharma or swadharma? The answer would lie in one's belief.

If one stoutly believes in "sarve jana sukhino bhavantu" one should strive for sadharana dharma which of course is asadharana (unusual) for many mortals like us. It is too ambitious for humans to acquire shades of divinity. But as per our dharma we should strive to achieve sadharana dharma and if that happens *atma* is subsumed with *paramatma*.

Mahabharata is a moral tale. Like all good literature, it is a conduit for expanding the mind and cultivating a moral sensibility. Law is essentially a handiwork of humans to sub serve the cause morality and ethics. Law cannot occupy the pedestal of morality and ethics which are the quintessence of human virtues. Often, we talk about following "in letter and spirit" in law. In swadharma we follow the "letter" while in sadharana dharma the essence is "spirit". However, it is not every thing. "kevala shashtra maashrithya na karthavyohi nirnaya, yukthi heene vicharethu dharma haani prajayathe." Meaning, just by following the text of the law one can't decide the things and one has to use common sense .Otherwise dharma is jeopardized. Hence one has to see the tenets of law through the lens of common sense. The moment one speaks of swadharma (personal, selfish, greedy) one ceases have a moral right to talk of dharma.

Ethics Vs Law

Das brings out the dilemma of Ethics Vs Law through a couple of case studies in the corporate world in comparison to certain episodes in Mahabharatha. As a student of management I'm fascinated to understand the nuances of ethics in comparison with law thru these readings.

Ramalinga Raju as Dhritarashtra

His customers speak glowingly about Satyam's dedication to quality, reliability and integrity. There is no tribute greater than a satisfied, passionate customer. Das avers that because of CEOs like Raju, India had become the world's second fastest growing economy. A person of such creditable achievement, who lacked nothing in life, turns to crime? Greed is too easy an answer. There must be more to it.

Was one-time satyam Chief Ramalinga Raju like Dhritarashtra in the Mahabharata, impelled by the desire to leave an empire behind for his sons? Or is he a shrewd entrepreneur who tried to make a quick buck thru Maytas. Had real estate bubble not burst, may be he would've come out unscathed. His admirers consider Raju as God. They are performing *havans* for his well being and praying for his acquittal.

Anil Ambani as Duryodhana

Is Anil Ambani, engaged in a bitter struggle with elder brother Mukesh, a contemporary Duryodhana inspired by envy?

Ambani's defenders argue that since his enterprises brought so much good to society, what is the harm if he manipulated an evil system and bribed politicians and bureaucrats? The government itself realized it and has been dismantling the system of 'licence raj' since 1991. But Ambani's opponents counter, saying that it is never justified to break a law. Ends cannot justify the means. Other defenders believe that the uncertain business world is full of danger and surprise, and a certain amount of deception is necessary for business success.

It is hoped that management education will undergo a metamorphosis through readings of the likes of Mahabharata.

Author's Profile

Gurcharan Das graduated from Harvard University where he studied philosophy with John Rawls and Sanskrit under Daniel Ingalls. He was CEO of Procter & Gamble India before he took early retirement to become a full-time writer. Apart from the much-acclaimed *India Unbound,* his other books include a novel - *A Fine Family,* a book of essays - *The Elephant Paradigm*, an anthology.

Reviewer's Profile

Dr S Pratap Reddy *(drspratapreddy@yahoo.co.in)* is the founder Chairman of Dhruva College of Management, Hyderabad. After a fruitful stint of 30 years at JNTU, he took voluntary retirement only to promote Dhruva College of Management in 1995. He has guided several research projects and consulted for various industries. Dr Reddy has authored innumerable number of research articles, organized /chaired several national as well as international conferences. He is on the boards of several universities and institutions. He visited UK as British Council Visiting Professor and USA at the invitation of University of Miami, ATA & Simmons School of Management. He is a life member of Association of British Scholars, AMDISA, HMA, AIMA, AIMS and NIESBUD. He is a trustee of SAFE and Manu Foundation, both NGOs. He is the recipient of several awards including 'Lions Club Best Teacher'.

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