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(Print)



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I, Chinmoy Kumar, hereby declare that the particulars given above are true to the best of my knowledge and belief.



Dated: June 5, 2018

(Chinmoy Kumar)

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Editorial

It's a great pleasure to bring out the 1st Issue of the 1st Volume of the ARISCOM Journal of Management (Print), a Biannual Journal published by the Association for Research in Social Sciences, Commerce and Management (ARISCOM), a registered Society based at Ranchi.

ARISCOM is an emerging research initiative established with the objective of promoting scientific research through various workshops, seminars, conferences, training programmes etc. vis-à-vis publishing journals, edited books, occasional papers, monographs, white papers and case studies with special focus on empowering young teachers and researchers. The Society also aims at undertaking research projects on leading socio-economic and business management issues in coordination with various government departments, public and private undertakings and other funding agencies.

The present issue (March 2019) comprises invited research articles received from teachers and professionals of various organisations, universities, and B-schools on the broader theme concerning contemporary issues in commerce and management. Altogether, ten blind-peer reviewed articles have been included in this issue. The major issues like sustainability, information system security, corporate accounting, stock market anomalies, CSR, solid waste management and business analyses have been thoroughly discussed with suitable recommendations by the contributors from all across the country.

The ARISCOM family is very much thankful to the contributors who have shown faith on the Society and cooperated through their valuable contributions in the very first issue of the ARISCOM Journal of Management (Print).



(Prof. Dr. L. N. Bhagat)

Ranchi | June 5, 2018

Paradigm Shifts in Business Strategies Towards Sustainability

Arun B K¹

Abstract

Increased competition has led to race for cost reduction and maximizing customer value. Unfortunately, while tapping the resources from nature, the larger environmental and societal demands were ignored and more focus was on making money in less time. Against this backdrop, the mortality of organizations has increased and ecological environment started getting degraded. This has led to the question of sustainability and therefore, application of green technology and consequently green marketing. In view of its increasing relevance and importance, the present study was undertaken. This study is based on both primary and secondary data covering a wide range of organizational contexts. The study critically analyzes the concept of sustainability and role of green technology and green marketing. The work identifies the time dependent trends in the business strategies aimed towards sustainability. The results were categorized into voluntary and forced strategies. Keeping the results of the study in mind, practical remedial steps are listed. Further, its impact on organizational effectiveness is also highlighted.

Keywords : Business Strategies, Green Marketing, Green Technology, Organizational Effectiveness, Sustainability.

Introduction

The world economy faces unprecedented challenges, whether from soaring population growth, resource constraints, a warming climate and myopic financial markets. The contemporary world is characterized by business organizations vying with each other to increase the consumption rate among the people so that their business is multiplied and thereby profit is ensured. It is estimated that at this rate the number of cars on the road would double and energy and water demand would go up by 45 percent in next 35 years. Further, pollution of drinking water would become a major environmental concern. Sustainability is the capacity to endure, support and maintain.

Sustainability has been related to the integration of environmental, economic, and social dimensions towards global stewardship and responsible management of resources. Ensuring sustainability would enable the earth to continue to support life on the planet and energy efficiency holds the key in this aspect. One of the principles of sustainability is to reduce the consumption rate below the replenishing rate (Desai, 1982).

There are two major ways of managing human impact on ecosystem services. One approach is environmental management; this approach is based largely on information gained from educated professionals in earth science, environmental science, and conservation biology. Another approach is management of consumption of resources, which is based largely on information gained from educated professionals in economics.

Human sustainability depends on economics through the voluntary trade consequences of economic activity. Maintaining sustainability while keeping the quality of life high is a social challenge that entails, among other factors, international and national law, urban planning and transport, local and individual lifestyles and ethical consumerism. Ways of living more sustainably can take many forms from controlling living conditions (e.g., ecovillages, eco-municipalities and sustainable cities), to reappraising work practices (e.g., using permaculture, green building, sustainable agriculture), or developing and using new technologies that reduce the consumption of resources such as renewable energy technologies. Amidst all these, what's

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missing is totality. Business innovation to scale sustainable solutions exponentially -- across entire business models, across all products and services -- is what is needed to put our global economy on a sustainable path. Scattered shoots of sustainability will not do the job. The global economy will surely grow, but so must our concern for the planet we rely on. The best performing companies of the 21st century will be those that recognize this evolving new order, and invest and act now (Binswanger et al. 1993; Jacquelyn et al. 2006).

In order to ensure sustainability, the companies first must recognize that making themselves more sustainable will make them more successful in the 21st century. Second, corporate success on sustainability will require comprehensive strategies that extend to all aspects of the business -- from the board room, to employees, to suppliers, to consumers (Hazell et al. 1995).

The key components of any successful strategy towards sustainability include elevation of sustainability in company governance, including direct board oversight and accountability over environmental and social issues, more diversity and special expertise on boards, and linking executive and other employee compensation to sustainability goals; Robust regular dialogues with key company stakeholders on sustainability challenges, including employees, investors, NGOs, suppliers and consumers; Open reporting on sustainability strategies, goals and accomplishments; Systematic performance improvements to achieve environmental neutrality and other sustainability goals across the entire value chain, including operations, supply chains and products (Srivastava and Srivastava, 2012).

Rationale of the Study

The following were the main reasons for taking up the present study.

- During the course of directed literature survey it was felt that there is a need to study the strategic response of Indian firms to the increasing need for sustainable development. In view of its relevance, the present study was taken up.

- As evidenced during the literature survey, there is dearth of studies that highlight the strategic position of Indian firms vis-à-vis the construct of sustainability. Keeping this dearth of literature in mind, the present study was taken up.
- The researcher was curious to understand the status of strategic response of Indian firms towards sustainable development. This curiosity has led to the taking up of the present study.

Objectives

The following are the objectives of the study.

- To empirically assess the current status of strategies adopted by Indian organizations towards sustainability.
- To assess the role played by competition towards sustainability in Indian context.
- To empirically assess the way ahead for Indian firms in terms of their strategies.
- Based on the study, to list suggestions and recommendations.

Sampling Design & Data

24 organizations with eight each belonging to manufacturing, service and small scale sectors and operating in and around Bangalore city were selected at random after assessing the feasibility of data collection. These organizations constituted the frame of reference for the study. Six respondents each from the frame of reference organizations were selected at random to form a total sample of 144. The condition for selection of these respondents was that they have a fair degree of familiarity with the strategies followed by their organization. Further, Bangalore, by its cosmopolitan nature obviated the possibility of cultural bias affecting the impressions of the respondents. The macro-view of the sample is summarized and presented below in Table 1.

Table 1 : Sample Details (N = 144)

| Sl. No. | Organizational Context | No. of Organs. | Ss per Organ. | Total Ss |
|---------|------------------------|----------------|---------------|----------|
| 1 | Large Manufacturing | 8 | 6 | 48 |
| 2 | Large Service | 8 | 6 | 48 |
| 3 | Small Scale | 8 | 6 | 48 |

For assessing the degree of sustainability of the strategies, a questionnaire was designed and administered to the sample respondents. The questionnaire which has a concurrent validity of 0.82 and test-retest reliability of 0.87 contained 12 statements on a five-point scale. These 12 statements pertained to the six sustainability dimensions of nature of the strategy (forced by competition or voluntary), degree of contribution to the well-being of society, degree of reduction in consumption of resources, degree of reuse of resources, degree of recycle adopted, and degree of emphasis on vulnerability of resources. In addition to these 12 statements, the respondents needed to list any three of the most prominent strategies that they have experienced.

In order to supplement to the questionnaire data, 25-percent of the sample respondents were involved in semi-structured interview schedules to get more insights into the phenomenon of possible shifts happening in terms of business strategies.

In addition to the primary data, the secondary

data was collected through a variety of literary sources such as books, e-books, journals, websites, company literature, periodicals and newspapers. These sources helped in better understanding of the research context.

Results and Discussion

The data was collected for three categories of manufacturing, service and small-scale organizations. Under each category responses with similar strategies were identified and separated. Further it was noticed that forced (or competitive) strategies pertained mainly to price, quality and service delivery, whereas, the voluntary (or pioneering) strategies pertained mainly to energy efficiency, material savings and paper-work reduction. When the data collected through the questionnaire was carefully analyzed, it was found that main trends in terms of the strategies were with respect to the contribution to the society. The results of the analyses were summarized and presented as shown below in Table 2.

Table 2 : Forced and Voluntary Strategies

| Sl. No. | Organizational Context | Forced Strategies Observed | | Voluntary Strategies Observed | |
|---------|------------------------|----------------------------|---------------------------------------|-------------------------------|---------------------------------------|
| | | No. of Strategies | Mean % Contribution to Sustainability | No. of Strategies | Mean % Contribution to Sustainability |
| 1 | Large Manufacturing | 6 | 7.80 | 3 | 4.30 |
| 2 | Large Service | 5 | 8.90 | 3 | 5.25 |
| 3 | Small Scale | 4 | 12.10 | 2 | 6.20 |

These results are further subjected to statistical analysis for each organization category and the results are presented separately for forced and voluntary strategies in terms of percentage-mean, standard deviation and co-efficient of variation as

shown in Table 3 (for forced strategies) and Table 4 (for voluntary strategies). The summary of t-test highlighting the significant differences of mean co-efficient of variation between forced and voluntary strategies is shown in Table 5.

Table 3 : Co-efficient of Variation for Forced Strategies

| Sl. No. | Organizational Context | Forced Strategies Statistics | | |
|---------|------------------------|------------------------------|--------------------|---------------------------|
| | | Mean % Contribution | Standard Deviation | Co-efficient of Variation |
| 1 | Large Manufacturing | 7.80 | 3.40 | 0.44 |
| 2 | Large Service | 8.90 | 2.92 | 0.33 |
| 3 | Small Scale | 12.10 | 3.47 | 0.29 |

Table 4 : Co-efficient of Variation for Voluntary Strategies

| Sl. No. | Organizational Context | Voluntary Strategies Statistics | | |
|---------|------------------------|---------------------------------|--------------------|---------------------------|
| | | Mean % Contribution | Standard Deviation | Co-efficient of Variation |
| 1 | Large Manufacturing | 4.30 | 2.40 | 0.56 |
| 2 | Large Service | 5.25 | 2.76 | 0.53 |
| 3 | Small Scale | 6.20 | 2.97 | 0.48 |

Table 5 : Summary of t-test

| Sl. No. | Strategy Category | Mean | Standard Deviation | df | t-value |
|---------|----------------------|-------|--------------------|----|---------|
| 1 | Forced Strategies | 0.353 | 0.078 | 4 | -3.363* |
| 2 | Voluntary Strategies | 0.523 | 0.040 | | |

*: Significant at 5% level of Significance

The hypothesis involved in t-test is that - there is no significant difference between forced and voluntary strategies in terms of the mean efforts involved. Table 5 sufficiently indicates that mean value of the two strategies are significantly different as indicated by the t - value which is statistically significant at 5% level of significance.

The results have indicated a trend of predominant emphasis on societal orientation. This may be attributed to increased customer awareness which gets positive strokes better societal orientation of an organization. Such an approach would necessitate preference for a larger and favourable image in the minds of the general public. Thus, there is a gradual shift in the strategic purpose from the one skewed towards earning profit to the one caring for public image also. It is logical therefore to conclude that the care for public image would later translate into care for the concerns of the society. In this trend, the increased inter-dealer communication and

increased emphasis on word of mouth publicity especially in case of service organizations are playing their part (Prately, 1995; Ravallion and Datt, 1995).

Efforts involved in designing and deploying voluntary business strategies were found to be significantly higher due to the problems associated in reconciling the survival imperatives and understanding the societal dynamics. The societal dynamics are in turn a function of level of difficulty faced for meeting the basic needs. The level of difficulty is increasing over a period of time due to depletion of natural resources and explosion in population. Further, in search of basic amenities, there is an increased migration of people from thickly populated states to the one that are sparsely populated. Thus, efforts involved in voluntary strategies are far more complex in comparison with the simple imitative steps needed in the case of competition forced strategies.

Conclusions

Based on the study, the following are the major conclusions in line with the objectives of the study.

- The business strategies deployed by Indian organizations exhibited low levels of emphasis on sustainability.
- Increased level of competition is no guarantee to ensure sustainability as evidenced by the higher contribution towards sustainability by the voluntary sets of strategies.
- Keeping the increased media and judicial pressure in mind, Indian organizations need to orient their strategies more towards societal purpose and later on towards sustainability.

Suggestions and Recommendations

Based on the study, the following are major suggestions and recommendations as listed below.

(i) Suggestions

- The study may be replicated for a particular type of business strategy to get better insights.
- The study may be extended to include the four metropolitan cities of India to obtain the degree of shift in the business strategies towards societal orientation.

(ii) Recommendations

- Indian organizations need to understand the basic economical dynamics operating in Indian society for increased sustainability of business operations.
- There is a need to continuously train the employees to develop strategic mindset so that organizations would face lower internal resistance while deploying their voluntary strategies.

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Emerging Issues and Challenges in Information System Security

Chandrahauns Chavan¹

Abstract

In this research paper the researcher has analyzed the current research issues and challenges about the information system security and its significant role to control the organizational activities and business operations. The researcher focused on the emerging issue and challenges in information system security, in current scenario the organizations are suffering the security threats and their possibilities to effect the organizational processes and development activities with respect to information security. The main objectives of this research paper is to analyze the procedure and control of security issues in information system which are playing a significant role to control organizational activities and their business processes towards the decision making process.

Keywords : Information System Security, Security Awareness Training, Security Controls and Security Program.

Introduction

Information security means protecting information (data) and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction. Information Security management is a process of defining the security controls in order to protect the information assets.

Security Program

Carlson (2008) described the management program to implement information security is to have a security program in place. Though some argue the first act would be to gain some real “proof of concept” and “explainable through display on the monitor screen” security knowledge. Start with maybe understanding where OS passwords are stored within the code inside a file within a directory. If you don’t understand Operating Systems at the root directory level maybe you should seek out advice from somebody who does before even beginning to implement security program management and objectives.

- Security Program Objectives
- Protect the company and its assets.
- Manage Risks by Identifying assets, discovering threats and estimating the risk

Provide direction for security activities by framing of information security policies, procedures, standards, guidelines and baselines

- Information Classification
- Security Organization and
- Security Education
- Security Management Responsibilities
- Determining objectives, scope, policies, re-expected to be accomplished from a security program
- Evaluate business objectives, security risks, user productivity, and functionality requirements.
- Define steps to ensure that all the above are accounted for and properly addressed

Approaches to Build a Security Program

Top-Down Approach

The initiation, support, and direction comes from the top management and work their way through middle management and then to staff members. Treated as the best approach but seems to base on, I get paid more therefore I must know more about everything type of mentality. Ensures that the

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senior management who are ultimately responsible for protecting the company assets is driving the program.

Bottom-Up Approach

Deming (1950) found that the lower-end team comes up with a security control or a program without proper management support and direction. It is often considered less effective and doomed to fail for the same flaw in thinking as above; I get paid more therefor I must know more about everything.

Since advancement is directly tied to how well you can convince others, who often fall outside of your job duties and department, as to your higher value to the company as stated by your own effective written communication. This leads to amazing resume writers and take no blame style of email responses that seems to definitely lead to the eventual failure of company's standards and actual knowledge. Peltier (2005) described it is often covered up by relationships which form at the power levels within any group of people and those who are considered so-called experts having no real idea what is really involved under the hood of the reports/applications they use and no proof presented in emails written when self-declared claims of their expertise is made or blame is to be put on another.

Security Controls

Security Controls can be classified into three categories

Administrative Controls which include

- Developing and publishing of policies, standards, procedures, and guidelines.
- Screening of personnel.
- Conducting security-awareness training and
- Implementing change control procedures.
- Technical or Logical Controls which include

Implementing and maintaining access control mechanisms.

- Password and resource management.
- Identification and authentication methods
- Security devices and
- Configuration of the infrastructure.

- Physical Controls which include

Controlling individual access into the facility and different departments

- Locking systems and removing unnecessary floppy or CD-ROM drives
- Protecting the perimeter of the facility
- Monitoring for intrusion and
- Environmental controls.

Objectives of the Research Paper

1. The main objective of this research paper is to analyze the procedure and control of security issues in information system which are playing a significant role to control organizational activities and their business processes towards the decision making process.
2. The secondary objectives are to focus on the emerging issue and challenges in information system security

Research Issues and Its Significant Need

Brykczynski & Small (2003) have stated that the management's directives pertaining to security are captured in the security policy, and the standards, procedures, and guidelines are developed to support these directives. However, these directives will not be effective if no one knows about them and how the company expects them to be implemented. For security to be successful and effective, senior management on down to the rest of the staff needs to be fully aware of the importance of enterprise and information security.

- All employees should understand the underlying significance of security and the specific security related requirements expected out of them.
- The controls and procedures of a security program should reflect the nature of the data being processed.
- The security program should be developed in a fashion that makes sense for the different cultures and environments.
- The security program should communicate the what, how, and why of security to its employees.

- Security-awareness training should be comprehensive, tailored for specific groups, and organization-wide with a goal that each employee understands the importance of security to the company as a whole and to each individual.
- Expected responsibilities and acceptable behaviors need to be clarified, and noncompliance repercussions, which could range from a warning to dismissal, need to be explained before being invoked.

Different Types of Security Awareness Trainings

There are usually at least three separate audiences for a security-awareness program: management, staff, and technical employees.

- Each type of awareness training needs to be geared toward the individual audience to ensure that each group understands its particular responsibilities, liabilities, and expectations.
- Members of management would benefit the most from a short, focused security awareness orientation that discusses corporate assets and financial gains and losses pertaining to security.
- Mid-management would benefit from a more detailed explanation of the policies, procedures, standards, and guidelines and how they map to the individual departments for which they are responsible.
- Middle managers should be taught why their support for their specific departments is critical and what their level of responsibility is for ensuring that employees practice safe computing activities. They should also be shown how the consequences of noncompliance by individuals who report to them can affect the company as a whole and how they, as managers, may have to answer for such indiscretions.
- The technical departments must receive a different presentation that aligns more to their daily tasks. They should receive a more in-depth training to discuss technical configurations, incident handling, and indications of different types of security compromises so they can be

properly recognized.

BSI (2009) found that the employees should not try to combat an attacker or address fraudulent activities by themselves instead they should be told to report these issues to upper management, and upper management should determine how to handle the situation.

The presentation given to staff members needs to demonstrate why security is important to the company and to them individually. The better they understand how insecure activities can negatively affect them, the more willing they will be to participate in preventing such activities.

Burgess, (2002) is of the view that the researcher usually best to have each employee sign a document indicating that they have heard and understand all the security topics discussed and understand the ramifications of noncompliance.

Security training should happen periodically and continually.

Evaluating the Program

- Security-awareness training is a type of control, and just like any other control it should be monitored and evaluated for its effectiveness.
- After the employees attend awareness training, a company may give them questionnaires and surveys to gauge their retention level and to get their feedback about the training, to evaluate the program's effectiveness.
- A good indication of the effectiveness of the program can be captured by comparing the number of reports of security incidents that were made before and after the training.
- For online training, capture individuals' names and what training modules have or have not been completed within a specific time period. This can then be integrated into their job performance documentation.
- Security-awareness training must repeat the most important messages in different formats, be kept up-to-date, be entertaining, positive, and humorous, be simple to understand, and—most important—be supported by senior management.

- Specialized Training Programs
- Train the individuals to use specialized devices and technologies.

According to Pattinson (2007) Different roles require different types of training (firewall administration, risk management, policy development, IDSs, and so on). A skilled staff is one of the most critical components to the security of a company, and not enough companies are spending the funds and energy necessary to give their staffs proper levels of security education.

Problem Statement

Information system security is one of the significant research in business organization, the researcher is focused on these research objectives:

- Analysis the security mechanism in information system.
- Analysis the procedure and control features which are significant towards this research objectives.

Classification of Procedures and Controls

The following outlines the necessary steps for a proper classification program:

- Define classification levels.
- Specify the criteria that will determine how data is classified.
- Have the data owner indicate the classification of the data she is responsible for.
- Identify the data custodian who will be responsible for maintaining data and its security level.
- Indicate the security controls, or protection mechanisms, that are required for each classification level.
- Document any exceptions to the previous classification issues.
- Indicate the methods that can be used to transfer custody of the information to a different data owner.
- Create a procedure to periodically review the classification and ownership. Communicate any changes to the data custodian.

- Indicate termination procedures for declassifying the data.
- Integrate these issues into the security-awareness program so that all employees understand how to handle data at different classification levels.

Caralli & Wilson (2004) stated the type of control implemented per classification depends upon the level of protection that management and the security team have determined is needed. Some of the controls are:

- Strict and granular access control for all levels of sensitive data and programs
- Encryption of data while stored and while in transmission
- Auditing and monitoring (determine what level of auditing is required and how long logs are to be retained)
- Separation of duties (determine whether two or more people need to be involved in accessing sensitive information to protect against fraudulent activities; if so, define and document procedures)
- Periodic reviews (review classification levels, and the data and programs that adhere to them, to ensure that they are still in alignment with business needs; data or applications may also need to be reclassified or declassified, depending upon the situation)
- Backup and recovery procedures (define and document)
- Change control procedures (define and document)
- File and file system access permissions (define and document)

Research Issues

1. Security Aspects behind the Crime: In this era of computer “viruses” and international spying by “hackers” who are thousands of miles away, it is clear that computer security is a topic of concern in the field of Computer Ethics. The problem is not so much the physical security of the hardware (protecting it from theft, fire, flood, etc.), but rather “logical security”, which

according to Spafford, Heaphy and Ferbrache are divide into five aspects:

- Privacy and confidentiality
 - Integrity—assuring that data and programs are not modified without proper authority.
 - Unimpaired service
 - Consistency—ensuring that the data and behavior we see today will be the same tomorrow.
 - Controlling access to resources.
2. Department of Trade and Industry (DTI) (2006) describe the malicious kinds of software, or “programmed threats”, provide a significant challenge to computer security. These include
- Viruses, which cannot run on their own, but rather are inserted into other computer programs.
 - Worms which can move from machine to machine across networks, and may have parts of themselves running on different machines.
 - Trojan horses which appear to be one sort of program, but actually are doing damage behind the scenes.
 - Logic bombs which check for particular conditions and then execute when those conditions arise; and
 - Bacteria or rabbits which multiply rapidly and fill up the computer’s memory.
3. Trusted Persons/Security clearance Persons vs Hackers/Whackers
- Computer crimes, such as embezzlement, financial fraud within exchanges, interest rate manipulations or planting of logic bombs, are normally committed by trusted personnel who have permission to use the computer system and/or access to classified information. Computer security, therefore, must also be concerned with the actions of trusted computer users and those with

confidential security clearances.

4. European Network and Information Security Agency (2010) stated that higher the trusted level/security clearance access or the higher level within an organization’s hierarchy the larger the risk of more extreme damage in terms of costs and security while having the opposite effect in terms of the likelihood for getting caught in the criminal act decrease exponentially. And even more concerning is the chance of actually having criminally charges brought against the once “most trusted” but now criminal falls virtually to zero at the very top levels as those criminals will settle before charges get filed for a fraction of the amount stolen with no damage coming to their reputation whatsoever thus allowing them to maintain that “most trusted” status.
5. According to Parenty (2003) Hackers/ Whackers breaks into someone’s computer system without permission by way of unknown security risks. Some intentionally steal data or commit vandalism, while others merely “explore” the system to see how it works and what files it contains. These “explorers” often claim to be benevolent defenders of freedom and fighters against rip-offs by major corporations or spying by rogue government agents. Some think of themselves as performing charity work for the more “IT-challenged” users of information systems who either through ignorance or just laziness don’t find the risks themselves. These self-appointed vigilantes/charity workers of cyberspace say they do no harm, and claim to be helpful to society by exposing security risks for the users who just don’t have the natural ability or skills to find them for their selves and for those that are willfully ignorant and just don’t put forth the effort.

Li et al. (2003) are of the opinion that every act of hacking is harmful, because any known successful penetration of a computer system requires the owner to thoroughly check for damaged or lost data and programs. They claim even if the hacker did indeed make no changes, the computer’s owner must run through a costly and time-consuming investigation of the compromised system. While

others would claim (and is actually stated in separate security section within this page above) that the data/systems/application owners should already be performing routine checks for damaged or lost data or compromised programs and applications.

Conclusion

In this research paper researchers discussed the security issues and challenges about the information system security and their controlling mechanism in the organization and enterprises to control the business processes. During the research found out the some critical issue about the information system security which are detected by unauthorized person and some software hackers. The researcher also analyzed the procedures and controlling features of the information system security which is playing significant role in business organization towards decision making process. The researcher suggested that organization should not trust to anyone with respect to information system security and provide multi-level control in this regards. For the future research work, the researcher suggested that the organization should implement the UNIX/LINUX and MAC based operating system which are providing high level security to the organization with the help of cryptography network security.

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Mergers & Value addition – Evidences from Indian Banks

Bigyan P Verma¹

Abstract

Economic Value Added (EVA) and Market Value Added (MVA) are well accepted accounting measures that tell us whether institutions are adding or destroying investor's hard earned money and their wealth. This paper examines three bank mergers in Indian history to evaluate their performance (in pre and post merger scenario) and thus finds out which Indian banks have been able to create (or destroy) shareholders wealth between 2000-2016. The overriding message of this paper is that banks must always strive to maximize shareholders value. This analysis helps us to dig below the surface numbers to tell us more about the underlying business and whether there is a prima facie case for using EVA as one of the range of performance measurement tools.

Keywords : Bank Mergers, EVA, MVA, Shareholder's wealth, Value addition

Introduction - Framework of relevance

Through the prism of growing competition and non performing assets, the study revolves around mergers and acquisitions, its effect on creating values (wealth) for its stakeholders. The scope of study is limited to Indian banking companies – Bank of Baroda, Indian Overseas Bank and IDBI Bank; period of study ranging between 2000 and 2016 – a good one and half decade. Techniques of EVA was used to evaluate the performances of those institutions in both the periods: pre-merger and post-merger. When the study pointed at the resilience of Indian economy and the maturity levels of Indian banking, it was discovered that some politically motivated mergers of weaker banks with stronger banks notwithstanding these returned positive EVA, post merger.

Objectives of the study

The purpose of this paper is to draw inter-temporal comparisons between Pre-merger period of performance and Post-merger period of performance in the case of Indian banks. The paper studies bank's profiles to demonstrate a direct correlation between the investment in stakeholder relationships and corporate performance. For the purpose of writing this paper, books of the following banks were examined: Bank of Baroda (BOB); Indian Overseas Bank (IOB) and IDBI Bank

Ltd. (IBL). The examination stretches from the year 2000-01 till 2015-16. Two temporal divisions – the periods between 2000 and 2007 were taken as 'Pre-merger' period and the period between 2007 and 2016, as 'Post-merger' period. Most of the banks in this study had merged with some entity or other during the period 2000 and 2007. Therefore, it was decided to mark this period of 2000 to 2007 'eventful-year' as the cleavage between Pre-merger and Post-merger period.

Literature Review

Shimin and Dodd (2001) examined the EVA performance of 566 U.S. companies and compares the information usefulness of EVA with accounting earnings and residual income. Three conclusion result from the study – (i) although improving EVA performance is associated with a higher stock return, the association is not as perfect as claimed by EVA advocates, (ii) EVA is more powerful than traditional measures of accounting profit in explaining stock return; however, accounting earnings are still of significant incremental information value in addition to EVA, and (iii) not only is EVA similar to residual income in concept, the two metrics are empirically comparable.

Raiyani and Joshi (2011) studied Indian bank's profile to demonstrate a direct correlation between the investment in stakeholder relationships and

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corporate performance. With the help of EVA they found out which Indian banks had been able to create (or destroy) shareholders wealth since 2005-2006 to 2007-2008.

Thampy and Baheti (2000) evaluated the performance of Indian banks, both public and private sector, using the Economic Value Added metric. The study revealed that most of the banks and financial institutions have negative EVAs. The study revealed that most Indian financial institutions have a higher cost of capital compared to the returns which means that value is not being created for their investors, but rather that value is being destroyed. In order to improve EVA, the study suggested that banks need to understand the costs and profits of different activities and services offered by them. Only then would they be able to know which lines of business to reduce and which are the ones worth expanding. It further postulated that banks would also have to focus on improving the efficiency of their basic activity offering. The banks that have better EVAs are also those that have lower proportion of their loans as NPAs. Banks need to improve and strengthen their credit assessment techniques and monitoring mechanisms to bring down the NPAs.

Girotra and Yadav (2001) emphasize on the importance of the EVA. They compare the EVA with Return on Equity (ROE), Return on Net Worth (RONW), Return on Capital Employed (ROCE) and Earnings per Share (EPS). They argue that EVA is not a tool to create value but it encourages managers to think like owners, and, in the process may impel them to strive for better performance. The study concluded that EVA has been helpful because it forces companies to pay attention to capital employed and especially to excess working capital.

Worthington and Tracey (2001) developed the relationship of EVA with MVA of MNC banks for a period of 1999-00 to 2008-09. The study showed that there was significant association between EVA and MVA.

Stewart III (1994) discussed how EVA compares with residual income, net income and operating cash flows. He examined the claim that EVA is more closely associated with stock returns and firm value than is net income. The study showed that EVA does

not dominate net income in associations with stock returns and firm values. He also found the evidence that managers do respond to residual income-based incentives.

Damodaran (1998) compared different value enhancement measures viz. discounted cash flow model, EVA and Cash Flow Return on Investment with traditional valuation models and find out where (and why) there might be differences.

Satish and Rao (2009) concluded in their paper that most of the Public and Private sector banks in India have already started looking at their portfolio of services offered and what they should do in the future for remaining competitive in the industry and generate greater Economic Value Added. As public sector banks are likely to undergo consolidation from time to time, one may argue that the banks objective is to maximize Market Value Added, since it reflects the premium or discount of the market value

Data and Methodology

A bank's management creates value when it takes decisions that provide benefits, in excess of costs. These benefits may come to banks in the near or distant future depending on the strategies involved in decision making process. The bankers of today's world therefore must be sensitive to two fundamental drivers that drive shareholders' wealth. First, there must be an unrelenting focus to ensure that funds mobilized by the banks (whether through depositors, equity or debt issues) generate returns in excess of the cost of capital (or can reasonably be expected to do so) with an eye toward returning non productive capital back to providers of the capital or shareholders. Second, bankers should constantly seek to invest in technology that increases their reach and also be open to strategic alliances, mergers & acquisitions and restructuring. In the same context it is worth considering that the capital mobilized by banks earns a satisfactory return. While it is true that substantial amount of value creation for a bank or corporate takes place from less than half of the capital employed, it proves that the entity can unlock huge amount of capital employed for adding to the value for the shareholders. The second point mentioned earlier, a necessary corollary to the first point, emphasizes on the importance of investing in value creating

projects and strategies.

To do justice in evaluation of financial performance of merging banks, data for each period (i.e. pre & post merger) were collected. Therefore, two temporal divisions were made – the periods between 1st April 2000 and 31st March 2007 were taken as ‘Pre-merger’ period and the period between 1st April 2007 and 31st March 2016, as ‘Post-merger’ period. As per the RBI report, most of the Indian banks had merged with some entity or other during the period 1st April 2004 and 31st March 2007. Therefore, it was decided to mark this period of 2004 to 2007 ‘eventful-year’ as the cleavage between Pre-merger and Post-merger period. Several commercial Indian banks had undergone M&A deal during this period but the study narrowed down to three banks only. The selected banks are Bank of Baroda (BOB); Indian Overseas Bank (IOB) and IDBI Bank Ltd. (IBL). The data required for this study was collected from various sources mainly from Annual Report of the respective banks, internet, magazines and journals.

Measurement of EVA for Select Indian Banks

The first step in calculating EVA is to make adjustments to a company's net income in order to produce its NOPAT. The most common adjustments for a bank refer to its provision for loan losses and its provision for taxes. With regard to the EVA estimation for banks, one important difference between financial institutions and other firms is the role of debt. For non banking firms debt forms the integral part of the financing activity and interest expenses are excluded from NOPAT so that returns are unlevered. A bank's debt funding is effectively the raw material and hence interest expense is equivalent to cost of goods sold. In this study RBI loans and other loans were considered as financing operations while deposits were taken as raw material for the bank. Therefore NOPAT for each year was estimated by adding interest on RBI loans and other loans to Profit Before Depreciation and Taxes (PBDT) less cash taxes. The cash taxes represented as if banks were debt free and was calculated by adding back tax shield on interest paid on RBI loans and other loans to tax provision. To maintain consistency over the years, a tax rate of 30% was adopted for this analysis. Invested capital is equal to its economic capital (i.e. reserve and

capital) plus total borrowings of the bank.

The weighted average cost of capital (WACC) which is the minimum rate of return on capital required to compensate both creditors and shareholders for bearing risk in investing their money into that specific bank, is the measure of total cost of capital. Management should evaluate business by considering investors opportunity cost. Thus estimation of cost of capital involved estimation of cost of equity (K_e) as per capital asset pricing model (CAPM), cost of debt (K_d), Risk free rate (R_f), Market Return (R_m), Betas (β) and target capital structure.

The risk free rate is the interest rate that can be obtained by investing in an investment with no risk and were assumed to be same as interest rates on central Government dated securities for respective years (Source: Reserve Bank Of India). The average daily Sensex return for the period was taken as market return for Pre merger period and the same was calculated for the Post merger period. Betas for all the years for all the banks were calculated by regressing the weekly stock returns of respective banks against weekly Sensex returns.

Cost of debt is the combination of cost of deposit and cost of borrowings. Interest paid on deposit reflected the cost of deposit and cost of borrowings was considered as the interest paid on RBI loans and other loans.

Cases of Mergers by sampled Indian Banks

Bank of Baroda' merger with Bareilly cooperative Bank: Bank of Baroda merged with three banks in the past fifteen years. They are Bareilly cooperative Bank in 1999, Banaras State Ltd Bank and on June 25, 2004 South Gujarat Local Area Bank Limited (SGLABL) was amalgamated with it following clear identification of ‘management failure’ of the Local Area bank. BOB was founded on 20th July 1908 in Baroda and was nationalized on 19th July, 1969 by the government of India. It is the highest profit-making PSU bank in India and the third largest PSU bank in terms of number of total business in India. BoB has total assets in excess of Rs. 6.78 lakh crore as on March 31, 2017, a network of 6,991 branches (out of which 3907 branches are in India) and offices, and about 3,657 ATMs. The SGLABL was incepted on 10th October, 2000 with seven

branches with an area of operation comprising three contiguous districts viz. Navsari, Surat and Bharuch with its head office at Navsari (Gujarat).

The Merger of Bharath Overseas Bank with Indian Overseas Bank: Indian Overseas Bank (IOB) is a major PSU bank based in Chennai, with more than 3650 domestic branches. IOB also has a network of about 2433 ATMs all over India. IOB was established in 1937 to encourage overseas banking and foreign exchange operations. During consolidation of Indian Banking sectors in 1960, IOB absorbed five weak private sector banks. Then in 1969 the Government of India nationalized IOB. After nationalization it emphasizes the opening of branches in rural India. In 2000, IOB engaged in an initial public offering (IPO) that brought the government's share in the bank's equity down to 75%. Bharat Overseas Bank (BhOB) was a Chennai based private bank and was established by IOB along with other six banks in 1973 in order to take over IOB's Bangkok branch. It was one of the few private banks that the RBI permitted to have a branch outside of India. BhOB's profitability since March 2004 suffered poorly and the return on assets had been significantly below 1 percent when most public sector banks managed better. As a result IOB acquired BhOB with the aim to expand abroad on 31st March, 2007 after getting Parliament's approval. Integration process completed smoothly as BhOB was smaller than IOB and both were south based bank.

The Merger of IDBI Bank Ltd with IDBI Ltd.: The Industrial Development Bank of India (IDBI) is an Indian financial service company headquartered Mumbai. RBI categorized IDBI as an "other public sector bank". It was established on 1st July 1964 by an Act of Parliament as a wholly owned subsidiary of the Reserve Bank of India. It is currently 10th largest development bank in the world in terms of reach with 1514 ATMs, 923 branches including one overseas branch at DIFC, Dubai and 621 centers including two overseas centers at Singapore & Beijing. In 16 February 1976, the ownership of IDBI was transferred to the Government of India and it was made the principal financial institution for coordinating the activities of institutions engaged in financing, promoting and developing industry in the country. Following the IDBI's public issue in 1995, government stake came down (current

shareholding: 65.14%). IDBI provides financial assistance, both in rupee and foreign currencies, for green-field projects as also for expansion, modernization and diversification purposes. One of the institution built by IDBI was the IDBI Bank, a government owned bank. IDBI Bank, a new generation bank merged with parent IDBI on 2nd April, 2005. With the acquisition of United Western Bank (UWB) in October 2006, IDBI bank further expanded its retail arm with some 230 branches of UWB. UWB was incorporated in 1936 at Satara, Maharashtra. It became a Scheduled Bank in 1951. In 1956 it merged with Union Bank of Kolhapur, and in 1961 with SataraSwadeshi Commercial Bank. On September 2, 2006 The Central Bank had put distressed United Western Bank under moratorium. As a part of the amalgamation scheme all employees of UWB will continue in service and be deemed to have been appointed in IDBI bank at their current pay and perks.

EVA Analysis of Merged Banks

In our analysis of EVA by the select Indian Banks upon which we committed this study we discovered the following:

1. In the case of Bank of Baroda, for the size of this public sector bank, it was indeed, creating positive value since the beginning of the period in our study, i.e. 2001. The EVA that it added in the year 2001 was 248.35 Cr. By the year in 2004 the value addition amounted to 896.12 Cr. – 4 times since the beginning of the period of our study 2001. While this was the value addition during the Pre-merger times in comparison to the Post-merger period the value addition performance in the Post-merger period appeared to be far better upto 2008 the value added was 1069.92 Cr. much more than 2004 and in spite of merging with a bank that had a negative net-worth Bank of Baroda seems to have taken the merger in its stride, by the end of our period of evaluation the value addition posted was a whopping 3645.12 Cr. That was 15 times more than what was in the beginning of our evaluation period – 2001. However, except for two years of dip in the performance for the next two years in 2009 & 2010, the bank has consistently added values to shareholders wealth and despite risks of

high NPA, its overall performance remained the best in the banks being studied.

2. Bharath Overseas Bank had structural problems in its balance sheet and like South Gujarat Local Area Bank its net-worth too was no better than its co-competitor. Indian Overseas Bank's value addition was a mere 135.75 Cr. in the beginning of our evaluation period: 2001. By the end of the Pre-merger period it had a value addition of 491.11 Cr. It became evident in our analysis that Bharath Overseas Bank's merger with Indian Overseas Bank has not roughened the feathers of Indian Overseas Bank. Like, BOB, IOB too appears to have taken the merger effects on its stride. One look at the post-merger performance reveals for itself: in 2008 the value addition was 970 Cr. – almost double than the period before the merger. However, IOB's value addition seems to have a hit all-time low of 388.97 Cr. in 2010 from 1013 Cr. in 2009, albeit for different reason not linked to merger per se. It appears that the bank's provisioning costs upon loans shot up to 925.47 Cr. in 2010 from 412.90 Cr. in 2009. Additionally, its operational costs too went up – probably due to re-structuring of banking branches and other operational redundancies post merger of Bharath Overseas Bank from 1941.69 Cr. in 2009 to 2466.50 Cr. in 2010. This is the particular reason that resulted in the corrosion of value addition. The bank doubled its value addition from 388 Cr. in 2010 to 791.97 Cr. by 2011 but its performance on almost all counts kept on deterioration thereafter. It did recover partially in the year 2014 but its value addition by the end of March 31, 2017 has been very close to where it began in the year 2002.
3. The case of IDBI is quite interesting in that it was IDBI Bank Ltd that was merged with IDBI Ltd and thus was formed IDBI Bank Ltd. This name was retained to make this new merged entity a huge financial conglomerate. Thus was born a new and modern public sector bank post merger. What brought this merger to a fruitful conclusion was that IDBI Bank Ltd was doing exceptionally well unlike its parent organization that was reeling in problems not alien to any PSU financial institution.

This merger was intended to enable IDBI Ltd to compete with its erstwhile PSU financial institution ICICI which became part of ICICI Bank Ltd and thus emerged as the largest private sector bank. Apparently, it was ICICI Bank Ltd that acquired ICICI Ltd – which was a reverse-merger, the case of IDBI Bank Ltd taking over IDBI Ltd, would have meant privatization of IDBI Ltd, and there was a clear political wave emerging to veto such a merger. The Pre-merger economic value addition has been clearly in the negative: from – 3408 Cr. in 2001 to -3359.43 by the year 2004. It was only in the year 2003 that briefly its EVA bettered to -2955.58 Cr. However, its post-merger economic value added is in contrast far better than during any preceding period. Sample this: by 2008 the economic value added had bettered to – 130.77 Cr in 2008; it increased to – 150.56 Cr in 2009 due to heavy provisioning of its bad loans. In 2010 this situation improved to -83.14 Cr and finally by 2011 the economic value addition – for the first time in a decade – entered into the positive category of 585 Cr! IDBI Bank's net loss nearly doubled at Rs 3,200 crore in the quarter to March 2017, mainly due to higher provisioning for bad loans. Bank's net loss was Rs 1,736 crore in the January-March quarter of 2015-16. As per the financial result posted by the bank on stock exchanges, its annual loss for 2016-17 too widened to Rs 5,158 crore as against Rs 3,665 crore in the previous fiscal. IDBI's total income during the fourth quarter of 2016-17 was Rs 8,048 crore, down from Rs 8,275 crore in the year-ago quarter leading to reduced operational income. The Gross NPAs almost doubled to 21.25 percent of the gross advances in the fourth quarter of the last fiscal compared to 10.98 percent in the corresponding period of the previous financial year. The net NPAs were 13.21 percent against 6.78 percent. The bank, however, reported increase in net interest income which went up by 14.43 percent from Rs 1,427 crore for the quarter ended March 2016 to Rs 1,633 crore for the three months ended March 2017. The bank made provisions worth Rs 4,590 crore in the fourth quarter to deal with non-performing assets (NPAs) which was Rs 3,331 crore in the period of 2015-16.

Conclusion

In our study of select three Indian banks we discovered that value addition has more to do with operational efficiency of the banking company and how effectively it emerges as a winner in merging the entities and integrating its operations with the merged company. What particularly attracted our attention in this study was that none of the mergers that the banks took part in were scrutinized for efficiency or effectiveness in its post-merger existence. All those mergers were mandated by RBI under either economic compulsion for the lack of better alternatives or were politically motivated and mediated. Those mergers were a clear case of a stronger bank acquiring a weaker counterpart which performed inefficiently and ineffectively; accumulating losses and with capital and networth completely wiped out of its balance sheet. Those inefficiencies and lack of a better alternative notwithstanding, in the test of time, the merged entities did clearly emerge as winner.

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Appendix – I

EVA Average (In crs)

| EVA Average (In crs) | Event Period | Post Event |
|----------------------|--------------|------------|
| | 2001-07 | 2007-16 |
| Bank Of Baroda | 586.38 | 978.00 |
| Indian Overseas Bank | 327.12 | 989.00 |
| IDBI Bank | -3211.11 | -145.00 |

ROIC Average

| ROIC Average | Event Period | Post Event |
|----------------------|--------------|------------|
| | 2001-07 | 2007-16 |
| Bank Of Baroda | 17.09% | 3.27% |
| Indian Overseas Bank | 24.60% | -17.32% |
| IDBI Bank | 4.01% | -18.53% |

ROCE Average

| ROCE Average | Event Period | Post Event |
|----------------------|--------------|------------|
| | 2001-07 | 2007-16 |
| Bank Of Baroda | 23.55% | 16.70% |
| Indian Overseas Bank | 27.57% | 12.10% |
| IDBI Bank | 4.84% | 0.08% |

RONW Average

| RONW Average | Event Period | Post Event |
|----------------------|--------------|------------|
| | 2001-07 | 2007-16 |
| Bank Of Baroda | 14.40% | 3.43% |
| Indian Overseas Bank | 21.48% | -29.40% |
| IDBI Bank | 6.90% | -30.08% |

Respondents' Perceptions on Protection of Stakeholders' Interest in the Context of Corporate Accounting Scandals: An Empirical Study

Siddhartha Sankar Saha¹

Abstract

Management of the business often takes some malpractices in order to induce the stakeholders. Manipulating financial reports to show a strong accounting profit and good balance sheet position is one such practice. Stakeholders who otherwise do not have any access to the day to day affair of the business have to depend upon the financial reports prepared by the company management using the loopholes of accounting regulations. Company with a long practice of financial manipulation fails to continue their operation as a going concern entity and end up being taken over by another company or being liquidated by the judiciary. Thus, a corporate accounting scam would lead to huge loss to the entire stakeholder community of the concerned business. With a view to protecting stakeholders' interest, corporate governance comes into place. A corporate governance structure includes Board of Directors and some other concerned authorities entrusted with the duty of overseeing business operation and protecting stakeholders' interest. Audit committee is an important member of a company's corporate governance structure. External auditors are the most important participant of the corporate governance structure as their job involves independent examination of company's financial books and informing stakeholders of any shortcoming in it. In this backdrop, an attempt has been made to conduct an empirical study based on perception of respondents on 'protection of stakeholders' interest in the backdrop of corporate accounting scam'. The main objective of the study is to identify underlying factors governing protection of stakeholders' interest in the backdrop of corporate accounting scam. It is observed that each factor represents different dimensions influencing 'protection of stakeholders' interest'. Corporate governance issues, regulatory and ethical reforms to improve audit and governance procedure, investigative issues and audit independence are the dimensions identified under the current study for representing the stated theme.

Keywords : Bartlett's Test, Corporate Accounting Scandals, Exploratory Factor Analysis, Kaiser Meyer Olkin, Protection of Stakeholders' Interest.

Introduction

Business enterprise develops and attains its maturity within the society with the help of stakeholders. The main motive of business operation is to earn profit and create value for the stakeholders. If the management fails to attain this end, stakeholders would terminate their financial relationship with the company leading to its demise. So, in order to induce the stakeholders, management of the business often resort to some malpractices (Reazee, 2009). Manipulating financial reports to show a strong accounting profit and good balance sheet position is one such practice. Stakeholders who otherwise do not have any access to the day to day affair of

the business have to depend upon the financial reports prepared by the company management using the loopholes of accounting regulations (Alexander & Britton, 2004). Stakeholders based on the impressive result continue to increase their financial relationship with the company until the huge deviation between actual and reported result is revealed. Company with a long practice of financial manipulation fails to continue their operation as a going concern entity and end up being taken over by another company or being liquidated by the judiciary. All the moneys or money's worth invested and expected to be received from the business gets blocked until the liquidation process is complete.

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Even after liquidation, company's wealth proved to be inadequate to pay-off all of their stakeholders. Thus, a corporate accounting scam would lead to huge loss to the entire stakeholder community of the concerned business. Numerous stakeholders of vested financial interest when loss a substantial portion of their wealth in a scam it creates problem in the overall economy (Winkler, 2004). A scam also leave a black mark over the regulatory environment of the country, which even sometimes deter new industrial project to enter the country impacting national economy (Rockness and Rockness, 2005).

In this backdrop, with a view to protecting stakeholders' interest corporate governance comes into place (Tipgos & Keefe, 2004). A corporate governance structure includes Board of Directors and some other concerned authorities entrusted with the duty of overseeing business operation and protecting stakeholders' interest. A constant oversight of internal control, financial reporting and many other issues concerning the business by corporate governance participants inside or outside of the organisation would ensure protection of stakeholders' interest (Jenkins, 2001). Audit committee is an important member of a company's corporate governance structure. It oversees financial reporting and internal control mechanism of the company and communicates the same to the external auditors. External auditors are the most important participant of the corporate governance structure as their job involves independent examination of company's financial books and informing stakeholders of any shortcoming in it. To help auditors perform their job efficiently and independently, in every country professional accountants performing the role of auditors are provided with technical standards and code of ethics by their governing authority. In spite of that statutory auditors often fail to perform their duties that sometime cause corporate accounting scam to occur undetected. For this reason professional institutes governing audit activities have offered many measures (e.g. peer review of audit work, oversight of audit operation etc.) from time to time (Thibodeau & Freier, 2004).

Literature Review

A few of eminent studies in the area of protection of stakeholders' interest in the backdrop of corporate

accounting scam are reviewed here. Carillo (2008) in his study conducts an independent judicial review of disgorgement plan proposed by recent SOX Act, 2002 and their impact on protection of stakeholders' interest. Chakraborty (2004) in his study admits the increased importance of auditors in corporate governance structure. As many stakeholders take their financial decision based on audit opinion, manifold development of auditing profession is necessary to curb fraudulent activities and increase transparency in financial reporting. Garg (2001) in his study gives a brief idea on the corporate governance. Accounting and audit procedures according to GAAP and responsibility of auditors and directors in the corporate governance structure to protect interest of the stakeholders are also discussed in his study. Gerotra & Bajjal (2002) in their study discuss the importance of peer review mechanism in protecting stakeholders' interest. Peer review is a process of reviewing compliance of technical standards in audit procedure by the peer of the auditor in the same profession. Lomax (2003) in his study compares fraudulent measures taken up by companies for falsifying financial results and deduces that lack of checks and balance is the main reason behind financial fraud. Prentice (2003) makes a relation among law, economics, business ethics and behavioural science. Enron scam and impact of SOX Act, 2002 in protecting stakeholders interest has been critically analysed from behavioural aspect. Rao (2009) in his report identifies the lacuna in financial disclosure practices and proposed amendment in Companies Act, 1956. According to the author, modification in accounting and audit procedures laid down in Companies Act, 1956 can reduce fraudulent practices that would ultimately lead to protection of stakeholders' interest. Rezaee & Riley (2002) in their book discuss several ways to detect and deter fraud with the help of so many practical examples, sample reports, best practices recommendation of SEC advisory board. They also describe responsibilities of directors, executives, auditors, managers and supervisors in corporate governance. Singh (2009) in his study points out that auditors should maintain quality of their auditing practices as per the norms laid down in Standards of Auditing and Code of Professional Conduct. Thibodeau & Freier (2008) in their book discuss change in auditing environment following implementation of SOX Act, 2002 in relation to their

understanding of clients business, audit procedures and ethical responsibility with few real life case examples. Tipgos & Keefe (2004) in their study show that traditional corporate governance process power was not uniformly distributed between management and stakeholders. Initially protection of shareholders was the main aim. But over the time focus has been shifted from shareholders to entire stakeholder community.

The above profile of literatures presents a comprehensive discussion on corporate governance mechanism of a business enterprise and its responsibility in protecting stakeholders' interest from management misdeeds. Responsibilities of directors and statutory auditors as members of corporate governance structure have received additional importance by the authors. According to them, statutory auditors with good moral character and under an ethical guideline can perform a unique role in protecting stakeholders' interest. Peer review of audit work can ensure technical compliance of audit work much to the benefit of stakeholders. But in order to ensure protection of stakeholders' interest, some changes in present regulation is also needed. Many of the authors under this present study have analysed impact of its provision on protection of stakeholders' interest.

Research Gap

In the previous section, few representative literatures on protection of stakeholders' interest in the backdrop of recent corporate accounting scams have been presented. But number of empirical studies based on perception of respondents is really small on this particular issue and even in those studies, application of advanced statistical analysis to infer scientific conclusion is really rare. With a view to covering up this gap, an empirical study based on perception of respondents on 'Protection of Stakeholders' Interest in the backdrop of corporate accounting scam' has been conducted with following objectives.

Objectives of the Study

The main objective of the study is as follows:

- (i) To identify underlying factors governing protection of stakeholders' interest in the backdrop of corporate accounting scam.

Research Methodology

The present study is exploratory in nature. The methodology, as adopted in pursuing the study, has been organized in the following paragraphs:

- (i) **Sample Design:** Primary data for the study has been collected from different categories of respondents having adequate knowledge and experience in the related field. Both male and female respondents with age ranging from 20 to 80 have contributed their opinion in the research. The geographical area where the survey is conducted is Kolkata district in the state of West Bengal and the time period for survey is October, 2011 to June, 2012. As population size is infinite, an attempt has been made to determine the sample size based on convenience sampling method (Ho, Soo Ong & Seonsu, 1997).

At the beginning, total respondents have been grouped into three categories: Academic, Professional and Other Group. (a) Academicians and (b) Students have come under the 'Academic Group'. 'Professional Group' comprises (a) Chartered Accountants (CA) and (b) Cost and Management Accountants (CMA) both in practice and in service in Kolkata. Finally, the 'Other Group' includes (a) Senior Functionaries of the institutionalized investing companies and (b) individual investors. Respondents included from different occupational categories along with reasons for their inclusion are presented as follows:

- (a) **Academicians** : Academicians from premier Undergraduate Colleges, Universities and Business Schools in Kolkata, who are specialised in the subject of accounting and auditing and have research orientation in the related field are included in this present study.
- (b) **Students** : Students especially from commerce background pursuing their post-graduation from University or Business School or students appearing for the final examination of Chartered Accountancy course are expected to bring their modern thoughts on a burning issue

like statutory auditors independence in this present study. Naturally, they are included as a respondent category. Academicians and students together form Academic Group.

- (c) **Chartered Accountants (CAs):** CAs plays the role of statutory auditors of financial statements to the Indian companies. Naturally, they have hand on work experience and knowledge in the field on statutory auditors' independence. So, CAs both in practice and service are included in our study.
- (d) **Cost and Management Accountants (CMAs) :** According to Companies Act, CMAs are also required to audit cost related information of a company according to statute. So, they also fall within the definition of statutory auditors. Naturally, CMAs both in practice and service are also included in the sample respondents. CAs and CMAs fall under Professional Group. This is the most important group of respondents as they perform the role of statutory auditors in Indian companies.
- (e) **Investors :** The last but not the least category of respondent is investors both institutional as well as individual who play important role in the capital market. For having opinions of institutional investors, Senior Functionaries of the institutionalized investing companies from Kolkata regional offices have been interviewed. Corporate executives in Kolkata having sufficient investment in securities market and experience in this field have been chosen as respondents under the category of individual investor.

The Population size under each aforesaid category is infinite and indeterminable. Thus, an initial representative sample of 150 respondents has been selected for each subcategory under 'Academic and Professional Group' and an initial sample of 100 respondents has been selected for 'Other Group' based on convenience sampling technique. Hence, total sample

size was 700 respondents initially, while we have collected questionnaire from 477 respondents finally. Based on subjective judgment, responses have been collected from those who by virtue of their profession are able to provide their thoughtful opinion in the present research (Malhotra , 2003).

- (ii) **Collection of Data:** The enquiry has been made after going through primary data from the field survey. The primary data has been collected from aforesaid respondents in a pre-tested, close-ended, structured questionnaire containing total 12 statements. The questionnaire for the aforesaid theme is designed in a 'Likert' 5 point scale (Kothari, 2010) (5 representing 'Strongly Agree' (SA), 4 representing 'Agree' (A), 3 representing 'Neutral' (N), 2 representing 'Disagree' (D), 1 representing 'Strongly Disagree' (SD)). Initially, a pilot survey was conducted with close-ended structured questionnaire in Kolkata region, while a modified version of questionnaire has been developed subsequently. After that, each of the respondents from the sample size has been contacted over phone or in person to take an appointment with them. Subsequently, they have been visited in their convenient time and place and their opinions have been incorporated in the questionnaire. If the respondents have any other suggestions in this area, they have also been taken into consideration for inclusion in the final analysis. Out of 150 initial sample set for academicians, CAs, CMAs and students, 111 valid responses are collected from academicians, 101 valid responses are collected from CAs, 94 valid responses are collected from CMAs and 118 valid responses are collected from students. An initial sample of 100 was set for investor category. Only 53 valid responses were collected from them.

- (iii) **Statistical Tools for Interpretation and Conclusion :** After collection of primary data through field survey, an attempt has been made to analyze statistically these data with the help of statistical package (SPSS 17.0). Required hypotheses have been framed in accordance with the objective of the study

and these have been statistically tested in order to draw suitable inferences. From all the questions (i.e. variables) considered under the main theme of the study, underlying factors influencing the theme of the study under consideration have been identified separately with the help of 'Exploratory Factor Analysis'(Tacq,1996). Fitness of the factor analysis model has also been tested statistically. Before conducting factor analysis, reliability analysis with the selected variables is conducted and Chronbach's alpha (Peterson, 1994) is calculated to measure the internal consistency reliability of the summated scale. The fitness of the factor model is also tested. Then reliability analysis is again conducted with variables pertaining to each identified factors to see whether the variables within each factor are internally consistent.

Analysis of Responses and Discussion

Exploring Underlying Factors influencing 'Protection of Stakeholders' Interest' [Using 'Exploratory Factor Analysis']

Factor Analysis is a multivariate technique used for data reduction and summarization (Sudalaimuthu & Jesintha,2011). In any research problem, a particular theme is affected by certain number of variables which may be correlated among each other. Factor analysis replaces this large set of internally co-related data with a smaller set of underlying factors which are uncorrelated with each other. Variables which have high correlations among themselves are grouped into individual factors (Tacq, 1996). Therefore, in social science research, importance of Factor Analysis cannot be overemphasized for simplifying and condensing a large dataset and identifying major factors based on causation relationship between variables (Acharyulu, 2012). However, Factor analysis model can be represented as follows:

$$\Rightarrow X_i = A_{i1}F_1 + A_{i2}F_2 + \dots + A_{im}F_m + V_iU_i$$

Where,

- X_i = i^{th} standardized variable
- A_{ij} = standardized multiple regression coefficient of variable i on common factor j

- F = common factor
- V_i = standardized regression coefficient of variable i on unique factor i
- U_i = the unique factor for variable i
- m = number of common factors.

In our present study, a filed survey has been conducted with the help of structured questionnaire consisting of 12 statements. Each statement represents a variable influencing the stated theme. Therefore, based on internal correlations between each pair of these 12 variables, 'Exploratory Factor Analysis' has been conducted for data reduction and summarization. As an outcome of Factor Analysis, few specific factors influencing the stated theme are identified out of selected variables and variables with high correlations among themselves are grouped under individual factor. Based on the nature of underlying variables, Factors are profiled and interpreted. However, following steps are adopted in order to conduct Factor Analysis systematically in the present study:

- (i) Formulating the problem
- (ii) Measuring reliability of scale
- (iii) Constructing correlation matrix
- (iv) Assessing appropriateness of factor analysis
- (v) Selecting method of factor analysis
- (vi) Selecting number of factors
- (vii) Selecting method of rotation of factor matrix
- (viii) Interpretation of factors
- (ix) Development of factor models
- (x) Determination of model fit.

Following steps are adopted to conduct Factor Analysis systematically in the present study:

- (i) **Formulation of the Problem :** Theme of the current study is 'Protection of Stakeholders' Interest in the Backdrop of Corporate Accounting Scam'. To represent this theme, 12 statements representing variables are included in the close ended structured questionnaire on Likert 5 point scale to obtain opinions of respondents. These 12 variables have been selected for conducting Exploratory Factor

Analysis that positively or negatively affects the current theme. The variables selected for our current study are as follows:

| No. of Variables | Statements/ Variables |
|------------------|--|
| V ₁ | Corporate Accounting Scam (CAS) has no impact on stakeholders' interest. |
| V ₂ | Statutory auditors' involvement in insider trading. |
| V ₃ | Notable accounting scam impaired protection of stakeholders' interest. |
| V ₄ | Strengthening audit committee. |
| V ₅ | Rotation of auditor. |
| V ₆ | Effectiveness of Prohibition of Fraudulent and Unfair Trade Practices Law introduced by SEBI. |
| V ₇ | Amendment in Company law in line with Sarbanes Oxley Act, 2002. |
| V ₈ | Effectiveness of peer review committee. |
| V ₉ | More lucidity in audit report. |
| V ₁₀ | Establishment of oversight authority in line with Public Company Accounting Oversight Board (PCAOB). |
| V ₁₁ | Importance of ethics and values to play ethical role by Statutory Auditors (SA). |
| V ₁₂ | Importance of forensic investigation. |

(ii) **Measuring Reliability of Scale** : In an internally consistent reliable scale, all the scale item would convey the same meaning as that of the scale. Chronbach's α is used to measure internal consistency reliability (Chronbach, 1951). If the value of this α is more than 0.6, it can be reasonably concluded that the scale is internally consistent and reliable (Nunnally,

1978). In the present study, Chronbach's α calculated for a scale containing 12 items is 0.669 more than threshold limit of 0.6. Hence, it can be concluded that the scale representing 'Protection of Stakeholders' Interest' are internally consistent and reliable.

(iii) **Constructing Correlation Matrix** : Based on scores corresponding to respondents' degree of opinion to the aforesaid variables, internal correlation between each pair of variables can be calculated and shown in a correlation matrix. Correlation matrix is the basis for factor analysis. Items with high correlations with each other are likely to be grouped under one factor. For instance, in our study, V4 has high correlations with V6 (.375) and V8 (.344) and V9 (.375) which makes V4, V6, V8 and V9 likely candidate under one factor.

(iv) **Assessing Appropriateness of Factor Analysis** : Factor analysis is appropriate for a given dataset if the number of respondents is 4 or 5 times the number of observations or variables (Basilevsky, 1994). In this current dataset, number of observations are 12 and the number of respondents are 477 exceeding required limit. Hence, we can proceed with factor analysis based on given criteria. After the correlation matrix is constructed, appropriateness of factor analysis can be assessed using following tests

- Test of significance of correlations in correlation matrix
- Bartlett's Test of Sphericity
- Kaiser Meyer Olkin (KMO) of Measure of Sample Adequacy (MSA)

(a) **Test of significance of correlations under correlation matrix** : Factor analysis can be conducted if there is correlation between any pair of variables under study. This is possible only if the correlation matrix is not identity matrix. But in our study correlation matrix drawn is certainly not an identity matrix. But question is: are the pair wise correlations statistically significant to proceed with factor analysis? To test the same, we take following hypothesis:

Hypothesis-1

- Null Hypothesis (H_0): Correlation between each pair of variables is 0 ($p = 0$)
- Against Alternate Hypothesis (H_1): Correlation between each pair of variable is not 0 ($p \neq 0$)

If H_0 is accepted, it is inferred that correlation between each pair of variable is 0. If for most of the pairs H_0 is accepted, it is evident that correlations are not statistically significant for most of the pairs and factor analysis can not be conducted. If H_1 is accepted for most of the pairs, reverse inference will follow. In our study, there are 12 variables and 66 correlations. From upper right triangle of the significance of correlation matrix, it is observed that at 5% level of significance, out of 66, H_0 is accepted for only 13 pairs of variables and H_1 is rejected. Hence, majority of correlations are statistically significant and factor analysis can be conducted.

- (b) **Bartlett's Test of Sphericity** : Another approach of assessing applicability of factor analysis is Bartlett's Test of Sphericity. This test also analyses correlations between the variables involved. Before conducting this test for our present study, following hypothesis is taken:

Hypothesis-1

- H_0 : Variables are uncorrelated [i.e. correlation matrix is an identity matrix].
- H_1 : Variables are correlated.

The test statistics is based on Chi-Square transformation of matrix determinant. At 5% level of significance, a high value of the test statistics and significance less than 0.05 rejects H_0 (Hair, Anderson & Tatham, 2006). It can be inferred H_0 is rejected and variables are correlated with each other and correlation matrix is not an identity matrix.

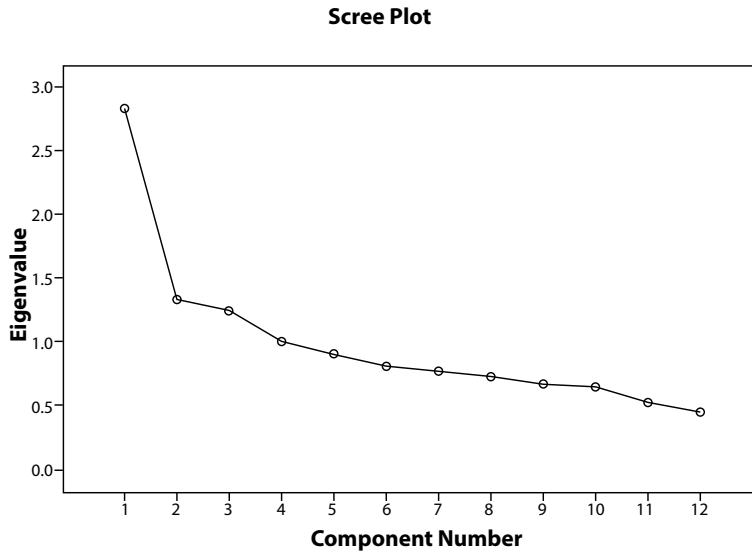
Bartlett's Test of Sphericity

| | | |
|-------------------------------|--------------------|---------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 708.265 |
| | Df | 66 |
| | Sig. | .000 |

(Source: Compilation of Field Survey Data using SPSS 17.0)

- (c) **Kaiser Meyer Olkin (KMO) Measure of Sample Adequacy (MSA)** : KMO is an index comparing magnitude of observed correlations with potential correlations and decides whether one pair of correlation can be explained by other variables (Hair, Anderson, Tatham & Black, 2006). In case of factor analysis, KMO index should be more than 0.5 in a particular situation. In our study, KMO is calculated at 0.751. Hence, KMO for this given dataset is excellent and factor analysis can be easily conducted.
- (v) **Selecting Method of Factor Analysis** : With a view to explaining maximum variance of the variables contained under study with minimum factor, Principle Component Analysis (PCA) is selected as a method of Exploratory Factor Analysis (EFA) (Hotelling, 1933).
- (vi) **Selecting the Number of Factors** : Using PCA of EFA, all the variables should be represented by as minimum factors as possible keeping in mind Eigen value method for deciding on the number of factors. Number of factors with Eigen value more than 1 should be retained (Kaiser, Rice & Jiffy, 1974). In the present study, based on Eigen value cut off at 1, 4 factors are identified. Eigen values for each component obtained from Table 'Total Variance Explained' are plotted on a graph paper to obtain 'Scree Plot'. A Scree Plot is a plot of Eigen values against the number of factors in the order of extraction. Scree plot is another method of selecting number of factors. The break between steep fall and gradual trailing appears at component number 4. So, as per Scree plot, 4 factors should be selected, which is uniform with the result obtained using Eigen value cut-off for selecting number of factors.

Figure-1: Scree Plot



(Source: Compilation of Field Survey Data using SPSS 17.0)

(vii) Selecting Method of Rotation of Factor Matrix : After the number of factors is decided, factor loading for each variable against each of these factors are calculated and shown under factor matrix. Factor loading is simple correlation between factor and underlying variables. Based on factor loadings, variables are grouped under one factor. But under factor matrix there is a possibility that non-zero, significant loading grouped under more than one factor. It hampers interpretability of factors. Thus, assuming extracted factors are uncorrelated, orthogonal rotational technique

with varimax procedure is selected for rotating factor matrix (Kaiser, 1958).

(viii) Interpretation of Factors : Reducing and summarising 12 variables representing 'Protection of Stakeholders' Interest', Principle Component Analysis as a method of Exploratory Factor Analysis is used with Eigen value cut off at 1. Four factors are extracted. Based on varimax rotation method with Kaiser Normalisation converged at 7 iterations, factors are rotated and 12 variables are grouped under extracted factors (Table -1).

Table -1: Important Information on Factor Analysis results

| Factor Name | Eigen Value | Extraction sum of squared loadings (Percentage of variance explained) | Reliability coefficient (α) | Variables grouped | Rotated factor loadings | Extracted Communality |
|--|-------------|---|--------------------------------------|--|-------------------------|-----------------------|
| (Factor-1) Effectiveness of Corporate Governance Issues (F_1) | 2.829 | 23.579 | .620 | V_4 . Strengthening audit committee (F_{1v4}) | .722 | .605 |
| | | | | V_6 . Effectiveness of Prohibition of Fraudulent and Unfair Trade Practices Law introduced by SEBI (F_{1v6}) | .627 | .520 |

| | | | | | | |
|--|-------|--------|-------|--|-------|------|
| | | | | V8. Effectiveness of peer review committee (F _{1v8}) | .639 | .420 |
| | | | | V9. More lucidity in audit report (F _{1v9}) | .522 | .449 |
| (Factor–2) Regulatory and Ethical Issues to Improve Audit Independence (F2) | 1.339 | 11.155 | .550 | V ₇ . Amendment in Company law in line with Sarbanes Oxley Act, 2002 (F _{2v7}) | .829 | .705 |
| | | | | V ₁₀ . Establishment of oversight authority in line with Public Company Accounting Oversight Board (PCAOB) (F _{2v10}) | .761 | .602 |
| | | | | V ₁₁ . Importance of ethics and values to play ethical role by Statutory Auditors (SA) (F _{2v11}) | .426 | .444 |
| (Factor–3) Investigation Issues (F ₃) | 1.251 | 10.421 | .447 | V ₂ . Statutory auditors’ involvement in insider trading (F _{3v2}) | .703 | .522 |
| | | | | V ₃ . Notable accounting scam impaired protection of stakeholders’ interest (F _{3v3}) | .482 | .413 |
| | | | | V ₁₂ . Importance of forensic investigation (F _{3v12}) | .654 | .565 |
| (Factor–4) Audit Independence in CAS (F ₄) | 1.016 | 8.463 | –.270 | V ₁ . Corporate Accounting Scam (CAS) has no impact on stakeholders’ interest (F4v1) | –.833 | .709 |
| | | | | V ₅ . Rotation of auditor (F4v5) | .462 | .478 |
| Total Variance Explained | | 53.617 | | | | |

(Source: Compilation of Field Survey Data using SPSS 17.0)

Findings

- (a) **F₁ : Effectiveness of Corporate Governance Issues** : It is observed that F1 having Eigen value 2.829 explains 23.579% of the total variance along with reliability coefficient 0.620 (more than the threshold 0.6). Hence, variables grouped under this factor are reliable and internally consistent. 'Strengthening audit committee (V4)', 'Effectiveness of Prohibition of Fraudulent and Unfair Trade Practices Law introduced by SEBI (V6)', 'Effectiveness of peer review committee (V8)' and 'More lucidity in audit report (V9)' are grouped into

this factor with rotated factor loading .722, .627, .639 and .522 respectively. F1 is named as 'Effectiveness of Corporate Governance Issues'. From the extracted communality column under Table 7.2, it is observed that percentage of variance explained by extracted factors for V4, V6, V8 and V9 are 60.5%, 52%, 42% and 44.9% respectively. This result shows both in terms of rotated factor loading and extracted communality 'Strengthening audit committee' is the most important variable under F1. Naturally, it should be treated as surrogate variable for further statistical analysis.

- (b) **F₂ : Regulatory and Ethical Issues to Improve Audit Independence** : This factor comprising Eigen value 1.339 explains 11.155% of the total variance along with reliability coefficient 0.550 which is slightly less than the threshold 0.6. Hence, this factor is not completely reliable and internally consistent. 'Amendment in Company law in line with Sarbanes Oxley Act, 2002 (V7)', 'Establishment of oversight authority in line with Public Company Accounting Oversight Board (PCAOB) (V10)', and 'Importance of ethics and values to play ethical role by Statutory Auditors (SAs) (V11)' are grouped into F2 with rotated factor loading .829, .761, and .426 respectively. This factor can be justifiably named as 'Regulatory and Ethical Issues to Improve Audit Independence'. From the extracted communality column, it is observed that percentage of variance explained by extracted factors for V7, V10 and V11 are 70.5%, 60.2%, and 44.4% respectively. This result shows both in terms of rotated factor loading and extracted communality 'Amendment in Company law in line with Sarbanes Oxley Act, 2002' is the most important variable under F2. Naturally, it should be treated as surrogate variable for further statistical analysis.
- (c) **F₃ : Investigative Issues** : The Eigen value of F3 is 1.251 and it explains 10.421% of the total variance with reliability coefficient 0.447 which is less than the threshold 0.6. F3 is not completely reliable and internally consistent. 'Statutory auditors' involvement in insider trading (V2)', 'Notable accounting scam impaired protection of stakeholders' interest (V3)', and 'Importance of forensic investigation (V12)' are grouped into this factor with rotated factor loading .703, .482 and .654 respectively and 'Investigation Issues' is an appropriate name for this factor. It is observed that percentage of variance explained by extracted factors for V2, V3 and V12 are 52.2%, 41.3%, and 56.5% respectively. Among the variables grouped under this factor

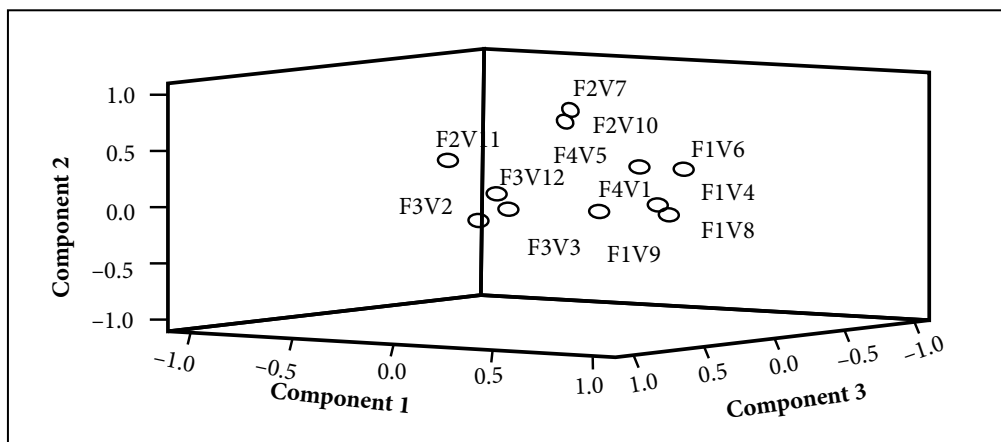
V2 has highest loading while V12 has highest extracted communality. Keeping in mind the nature of variable grouped under the factor, V12 i.e. 'Importance of forensic investigation' is considered to be a surrogate variable for further statistical analysis.

- (d) **F₄ : Audit Independence in CAS** : This factor comprising Eigen value equal to 1.016 explains 8.463% of the total variance. F4 having reliability coefficient -0.270. Variables included in F4 are negatively correlated with each other. 'Corporate Accounting Scam (CAS) has no impact on stakeholders' interest (V1)', and Rotation of auditor (V5)', are grouped into this factor with rotated factor loading -.833 and .462 respectively. Thus, 'Audit Independence in CAS' is a justified name for this factor. It is evident that percentage of variance explained by extracted factors for V1 and V5 are 70.9% and 47.8% respectively. This result shows both in terms of rotated factor loading and extracted communality, 'Corporate Accounting Scam (CAS) has no impact on stakeholders' interest' is the most important variable under F4. Hence, it should be treated as surrogate variable for further statistical analysis.

From the percentage of variance explained, it can be stated that 'Effectiveness of Corporate Governance Issues' (F1) is the most important factor governing protection of stakeholders' interest. All the extracted factors together explain 53.617% of the total variance of variables included under this theme which less than 60% threshold required for social science research.

Now, with a view to understanding inclination of variables to their attributed factor, data plotted under Table 5.2 are represented through Component Plot in rotated space where each axis represents a factor. Variables close to any of the axis is said to have more allegiance to the governing factor, but variables belonging between 2 or more axes are bound to have correlation with more than one factor. Following observations are made (Figure-2):

Figure- 2: Component Plot in Rotated Space or Factor Loading Plot



(Source: Based on Table 1 using SPSS 17.0)

| Factors Name | Interpretations |
|---|---|
| (Factor-1) Effectiveness of Corporate Governance Issues (F_1) | F_{1v4} , F_{1v6} , F_{1v8} and F_{1v9} are variables grouped under F_1 . F_{1v4} and F_{1v8} are closely associated with the factor, while remaining two variables have some distance. F_{1v9} is not very close to the axis representing F_1 . F_{1v9} has loading with more than one factor. |
| (Factor-2) Regulatory and Ethical Issues to Improve Audit Independence(F_2) | F_{2v7} , F_{2v10} and F_{2v11} are variables grouped under F_2 . F_{2v7} and F_{2v10} are closely associated and they have strong correlation with their governing factor F_2 while F_{2v11} is plotted at a distance from them and its correlation lies with more than 1 factor. |
| (Factor-3) Investigation Issues (F_3) | F_{3v2} , F_{3v3} and F_{3v12} are variables grouped under F_3 . All the variables are closely associated with each other and they also have strong association with their governing factor. |
| (Factor-4) Audit Independence in CAS (F_4) | F_{4v1} and F_{4v5} are variables grouped under F_4 . F_{4v1} and F_{4v5} are not strongly associated with each other. Association of F_{4v1} with F_4 is more than F_{4v5} . |

(ix) **Development of Factor Model :** Factor models are developed for calculation of factor scores of each individual factor. Unlike variable scores, factors scores are likely to be uncorrelated. Factors score for an individual factor is a function of variable scores multiplied by factor score coefficient. In our present study, factor scores for each factor are obtained from following regression equations (Table-2):

Table-2: Factor Model Interpretations

| Factor Name | Regression Equations | Interpretations |
|---|--|---|
| (Factor-1) Effectiveness of Corporate Governance Issues (F_1) | $F_1 = .074V_1 - .044V_2 - .017V_3 + .390V_4 + .204V_5 + .351V_6 - .058V_7 + .392V_8 + .247V_9 - .056V_{10} - .290V_{11} - .036V_{12}$ | <ul style="list-style-type: none"> In terms of factor score coefficient from the regression equation, it is observed that variables V_4, V_6, V_8 and V_9 are strongly positively related to F_1 (i.e. these variables have strong influence in calculating factor scores). This deduction is also supported by the inference made from Table 5.2 where these variables only grouped under F_1 for having high factor loading with the stated factor. |

| | | |
|--|--|--|
| (Factor-2) Regulatory and Ethical Issues to Improve Audit Independence (F ₂) | <ul style="list-style-type: none"> ▪ F₂ = .055V1 -.108V2 - .070V3 -.089V4 +.136V5 + .133V6 + .514V7 -.120V8 -.105V9 +.469V10 + .269V11 + .062V12 | <ul style="list-style-type: none"> ▪ Variables V₇, V₁₀ and V₁₁ are strongly positively related to F₂ (i.e. these variables have strong influence in calculating factor scores). ▪ The inference made from Table 5.2 where these variables having high factor loading with the stated factor only grouped under F₂ support this deduction. |
| (Factor-3) Investigation Issues (F ₃) | <ul style="list-style-type: none"> ▪ F₃ = .037V1 +.486V2 + .278V3 + .043V4 -.224V5 -.187V6 -.068V7 -.054V8 +.169V9 -.026V10 + .297V11 + .460V12 | <ul style="list-style-type: none"> ▪ Variables V₂, V₃ and V₁₂ have strong influence in calculating factor scores and are strongly positively related to F₃. ▪ This is also sustained by the inference made from Table 5.2 where these variables having high factor loading with the stated factor only grouped under F₃. |
| (Factor-4) Audit Independence in CAS (F ₄) | <ul style="list-style-type: none"> ▪ F₄ = -.715V1 -.022V2 + .286V3 + .019V4 +.391V5 -.051V6 -.029V7 -.073V8 + .072V9 -.063V10 +.091V11 -.303V12 | <ul style="list-style-type: none"> ▪ V₁ has strong negative coefficient with F₄ while V₅ has strong positive coefficient with F₄. ▪ These 2 variables have strong influence in calculating factor scores. This is also ratified by the inference made from Table 5.2 where these variables only grouped under F₄. |

It is significant to note that based on variable scores and factor score, coefficient factors for individual respondents can be calculated for each common factor. These factor scores will be uncorrelated and subsequent multivariate analysis can be conducted with these scores.

(x) Determination of Model Fit

- Final step of factor analysis is determination of model fit. Estimated correlation between variables and common factors are calculated and shown under reproduced correlation matrix.
- Difference between comparable items in initial correlation matrix and reproduced correlation matrix is plotted under Residual correlation matrix.
- Conceptually, if proportion of number of large residuals (residuals more than .05) to total number of residuals is more than 50%, factor analysis model do not provide a good fit to the data and should be reconsidered.

- In our present study, there are only 46 (69%) non-redundant residuals with absolute value more than .05. hence, it can be inferred that factor analysis does not provide a good fit to the data.

Conclusions

In the beginning of our study, we have seen that there are 12 variables representing 'Protection of Stakeholders' Interest'. These variables are internally consistent to the scale. Respondents' opinions on these variables are collected. But the said theme can not be represented well with so many variables. In order to reduce and summarise the dataset and increase its interpretability, Exploratory Factor Analysis (EFA) is conducted. Under EFA, Principle Component Method with Eigen value cut off at 1 is

used and 4 factors are extracted that represent the given theme. Now, based on orthogonal technique of factor rotation with varimax procedure and Kaiser Normalisation converged at 7 iterations underlying variables are grouped under 4 extracted factors. Based on inherent nature of the variables grouped, factors are named and interpreted. It is seen that each factor represents different dimensions influencing 'Protection of Stakeholders' Interest'. Corporate governance issues, regulatory and ethical reforms to improve audit and governance procedure, investigative issues and audit independence are the dimensions identified under our current study for representing the stated theme. Variables grouped under majority of factors are not internally consistent. The model developed for conducting factor analysis is also found to provide an unsatisfactory fit to the given dataset. For subsequent multivariate analysis, factor scores can be calculated from the factor score model designed for each factor.

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Ethics and Spirituality at Workplace

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Abstract

Ethics and Spirituality at Workplace are germane in today's context more appropriate at a time than never ever before. Quite often organizations are indicted with corruption. The culture and climate in many organizations are such that these lead to high employee-turnover. Amidst this derogatory situation, the question emerges as to what is then the solution? Should ends be more important than means or rectitude should override short-cuts meshed with unfair practices? The answer lies in fostering the right work-environment where employees can work with their heads high and self-esteem coupled with mutual charm, trust and dignity prevail across all transactions. Spirituality calls for an all-embracing approach to all menace.

Keywords : Ethics, Organizational Climate, Spirituality

Introduction

There have been much discussion in various forums on how to curb attrition. Literature is replete with techniques of employee retention practices. Nevertheless, the problem remains unresolved. While on this, many organizations have started pondering, does spiritualism help improving the workplace, or lessen rate of attrition in modern management or even eradicate malpractices and restore ethics? Before we address this question, we need to place the attrition-context in perspective following a literature review of ethics and spirituality in the workplace.

Organizations of today have been witnessing a high rate of attrition. People join companies with lots of hope and high aspirations. Unfortunately, as time progresses in the wake of their on-boarding, employees get disillusioned. Their expectations are belied and their confidence in companies to provide them employee-satisfaction, let alone, employee-delight, start dwindling.

Many start looking for alternate openings elsewhere while others continue to 'get into the rut' and suffer from boredom and frustration. Health issues develop and it is not unusual to come across employees who suffer from bouts of depression and other organic ailments. Psychologists and consultants are roped in to diagnose the problem. After much of probing

and interviews with employees, such specialists infer that the organization climate does not provide an enabling or facilitating work-environment. Beset with such a finding, organizations feel intrigued and bewildered and start pondering as to what is meant by an enabling or facilitating organization climate. Initial observations reveal that employees are of the opinion that the culture prevailing in the company is not positive.

Culture, as we know, consists of a set of values and beliefs that help to bind and reinforce work groups and communities. Culture, in turn, creates climate. When this is applied to organization-settings, we find, there exists different types of organization-climate. Accordingly, there can be sales climate, innovation climate, safety climate, quality climate and a host of other climates.

The thinking revolves around the notion that inappropriate organization-climate is the root-cause of various perils at the work place and may act as the trigger for acrimony, conflict, politicking, and ineffective teamwork. So, not only employees are inconvenienced in terms of their quality of work-life in the organization, the organization also suffers because of less productivity and output. It starts losing its competitive advantage and 'bad-mouthing' of discontented employees bedevils the organization's reputation in the society in general

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and industry in particular.

Today people are finding that there's more to life-and business-than profits alone. Money as the single bottom line is increasingly a thing of the past. In a post-Enron world, values and ethics are an urgent concern. The hottest buzz today is about a "triple bottom line," a commitment to "people, planet, and profit." Employees and the environment are seen as important as economics. Some people would say it's all about bringing one's spiritual values into one's workplace. A poll by KRC Research for Spirituality published November 17, 2003 in USA Today found that 6 out of 10 people say workplaces would benefit from having a great sense of spirit in their work environment.

Literature Review

Ethics researchers have focused much attention on ethics in organizations, including the investigation of ethical culture, the incorporation of ethical codes, and the development of ethical climates. But, it is the individual employee's personal ethical framework that influences individual ethical behavior, so a more proper unit of analysis when investigating ethics might be the individual (Al-Khatib et al., 2004).

Researchers have been interested in the effects of situational or contextual variables on ethical behavior (e.g., Ford and Richardson, 1994; Jones and Kavanagh, 1996; Mesmer-Magnus and Viswesvaran, 2005; Robertson and Ross, 1995; Trevino, 1986), but have also developed theoretical models that attempt to explain the behavior of individuals when faced with ethical choices, including those faced by business people (Jones, 1991; Trevino, 1986).

The determination of the factors that influence individual ethics in the workplace is of primary concern to the study of ethics in the workplace, but relatively little attention has been paid to this question (Giacalone and Jurkiewicz, 2003). One of the factors that has been hypothesized to influence individual ethics is spirituality.

Spirituality

Spirituality in Management is one of the "hottest" emerging fields in management as it provides corporate reputation for competitive advantage (Zsolnai, 2004). Spirituality has an important

role to play as an aide to leadership development, as well as leadership effectiveness (Abdullah, 2009). Pfeffer (2003) points out that spirituality promotes effective leadership practices which can have a significant impact on organizational life and ultimately organizational success. Mitroff and Denton(1999)'s spiritual audit wanted to know if having a spiritually-oriented boss reduces health risk in areas that extend beyond the work setting, such as tobacco or alcohol use, proper diet, and depression or anxiety. Bennett et al(2003) examined the role of spirituality in Workplace Health through a case study approach of small business leadership wherein apart from manifold practices different workers would take turns saying a short prayer over the speaker-system just before the start of the work day. This study results point to the fact that spiritual health of the business operator may potentially be a key resource that can improve employee health. Many interviews talked about the importance of honesty, integrity, respect, and having a relationship with God or a Higher Power. Individuals and organizations who perceive themselves as more "spiritual" are more creative, productive, and adaptive since work is connected to a bigger picture (Mitroff & Denton,1999). Carroll (2004) observes, spirituality, deeply held spiritual belief, however we might define these things, are all necessary to achieve real sustainability, and also serves as teacher and guide. Spirituality means beginning to become aware of a Consciousness higher than that of the body-mind centered ego, and the ability to live more and more in it under its guidance. (Chakraborty, 2008).

Spirituality is therefore the ability of an individual to understand the innate divine nature of the human self that can realize its potential to reach the "Higher Self". This is also known as the spiritual quest (Giacolone & Jurkiewicz, 2004). Spirituality is different from Religiosity. While Religiosity is concerned with scriptures, rituals, institutionalized and patterned beliefs, Spirituality revolves around righteousness, compassion, love and individual concern for others.

Objectives

The objectives of this paper are as under:

- To understand the importance of Ethics and Spirituality in the Workplace in perspective

- To reflect how Ethics and Spirituality can impact organizational culture and climate
- To ascertain how Ethics and Spirituality can lead to employee wellness and organizational success

Spiritual Climate as yet another form of organizational climate

Fundamentally, organizational climate refers to perceptions of organizational practices and procedures that are shared among members and which provide an indication of the institutionalized normative systems that guides behavior. An organization's climate regarding spirituality forms the spiritual character of the organization, by providing the environmental cues that guides spiritual behavior. Decisions of founders and other top leaders in the early stages of the organization's lifecycle have a profound impact on the development of an organization, and lead to the creation of strategies, structures, climates, and culture.

Similarly, spirituality of employees is reflected in work climate. Research has shown that organizations with spiritual climate that provide their employees with the opportunities for spiritual development are better in performance than others. In India many a company follow the new-age principles, such as Meditation to attain inner calmness, Purshartaa for the balance between personal and professional life, yoga for healthy and disease-free life, etc., which have their roots in Indian ethos for the spiritual upliftment of an organization. At an individual level, spirituality at work provides job satisfaction and reduces employee's burnout as found in the case of health care professionals.

Spiritual Leadership

Wolf (2004) defined spiritual leadership as "building an environment of respect, ethics, values and integrity" (p. 23).

Spiritual leadership is moving leaders from managing employees to inspiring employees, a critical component of transformational leadership. It integrates transformational and servant leadership with spiritual, ethical, and values-based leadership models into a combination of core competencies, skills, and learned techniques to provide a model of behavior for the spiritual leader, and this approach

asks fundamentally different questions about what it means to be human, what we really mean by growth and what values and power distributions are needed to enhance both organizations and society as a whole. Spiritual leadership asks the leader to be the one who can show what it means to be human, and what it means to be authentic, which is an important aspect for organizations for gaining deeper insights of spiritual self and of the spiritual lives of others with whom the leaders interact and also those who are affected by the results of their leadership.

The purpose of spiritual leadership is to tap into the fundamental needs of both leader and follower for spiritual well-being through calling and membership, to create vision and value congruence across the individual, empowered team, and organization levels and, ultimately, to foster high levels of organizational commitment and productivity. Operationally, spiritual leadership comprises the values, attitudes and behaviors that are necessary to intrinsically motivate one's self and others so they have a sense of spiritual well-being through calling and membership. (Fry, 2003)

The organizational benefits of spiritual leadership include increased organizational performance, intrinsic employee job satisfaction and involvement (Fry, 2003), higher employee performance resulting in improved customer service and higher rates of return on investments (Jurkiewicz & Giacalone, 2004). The inspirational and/or transformational effect of spiritual leadership can result in positive moral behavior of the members of the organization. For the stakeholders of the organization, the impact of a spiritual organizational culture translates not only to the integrity of the organization but also to the financial returns from improved performance and customer satisfaction.

Some authors define spiritual leadership by five components which are self-awareness, self-regulation, motivation, empathy and social skills. It is a fast emerging postmodern management paradigm. Spiritual leadership has the potential to guide organizational transformation and develop positive organizations, where human well-being and organizational performance can not only coexist, but also can be maximized.

Based on the qualitative interviews conducted

with 32 managers in Turkey, a typology of spiritual anchors has been developed. Spiritual anchors are patterns of deeply held spiritual motives, values, and attitudes, which provide direction, meaning, and wholeness to a person's life or work. They are the spiritual DNA of the individual or a fractal of the individual's holistic value system. Nine spiritual anchors that characterize leaders' value compasses in organizations include: (1) perfection; (2) compassion; (3) passion; (4) inspiration; (5) investigation; (6) dedication; (7) appreciation; (8) determination; and (9) cooperation).

Foregoing therefore, are the essence of spiritual leadership.

Summary of findings of the study

Ethics and Spirituality in Workplace is therefore increasingly gaining importance as a specialized area for further research. Once it gets deeply rooted in an organization DNA, it would be useful in infusing spirituality in the workplace, identifying inhibiting factors for institutionalizing spirituality at work, for motivating and controlling the employees

The above mentioned applications would result in several benefits to employees at large in enhancing her/his job satisfaction and job involvement, organizational commitment and in turn productivity. The organization, therefore, would also derive benefits, in terms of business performance and sustainability. These would lead to employee wellness and organizational success.

This would be feasible through Spiritual Leadership which will help create Spiritual Climate, thereby improving Quality of Work Life and reducing attrition-rate in organizations. Once employees comprehend that the organization has business ethics as its DNA, it is very likely that the bonding between the employer and its employees will be cemented leading to a mutually gainful win-win situation for all concerned stakeholders.

Suggestions

Foregoing would call for implementing Ethics in the workplace so that both personal conduct and professional conduct amongst employees could be maintained. Simultaneously, it should be complemented with Spirituality in the Workplace through a display of Spiritual Leadership which will

foster Spiritual Climate in teams. The denouement would be reduced employee turnover coupled with Work-Life Integration, all leading to sustainability and happiness within the enterprise. Employee Wellness and Organizational Success will lead to improved tangible workplace outcomes.

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Stock Market Anomalies and Efficiency: Investigating the January Effect on Indian Equity Market

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Abstract

Anomalies are empirical results that seem to be inconsistent with maintained theories of asset pricing behavior. They indicate either market inefficiency (profit opportunities) or inadequacies in the underlying asset pricing mode. Commonly discussed anomalies include the calendar effects, such as the “January effect” which seems to indicate that higher turns can be earned in the first month compared to the rest of that year and the “weekend effect” or “Monday blues on wall street” which suggests that you should not buy stocks on Friday afternoon as Monday morning since they tend to be selling at slightly higher prices. This paper is an attempt to document the different types of anomalies that has been found to be present in the stock market and further it tests the presence of January effect in Indian stock market. The findings do not validate the presence of January effect, but further research could be made to explore the presence of December effect.

Keywords : Adaptive market hypothesis, Capital asset pricing model, Dow Jones Industrial Average, Efficient Market Hypothesis,

Introduction

Predicting the behavior of stock market is considered one of the most challenging tasks performed by the researchers and securities analysts the world over. Even so, for decades, investors whether individual or institutional, have always been interested in finding an answer to the question of how securities are priced. In fact, the term market efficiency is used to explain the relationship between information and share prices in the capital market literature as it is perhaps the most important concept especially in terms of understanding of the working of capital markets. This term is used to depict the ability of the stock market to process information with respect to speed and quality. As a result, it is the speed of this price adjustment process which reveals exactly how efficient a market is. By virtue of this, such efficiency would result in a price that is appropriate in terms of current knowledge. This

hypothesis has also occupied significant proportion of research since the 1970s. In fact, the share prices appear to follow a random walk and it is of much interest to either prove it or to disprove it. Despite strong evidence that the stock market is highly efficient, scores of studies have documented long-term historical anomalies in the stock market that seem to contradict the Efficient Market Hypothesis (EMH).

The present study is focused to document the different types of anomalies reported in the literature and to empirically test the presence of January effect in the Indian stock market as well as assess whether investors can exploit them to earn superior returns. Agrawal and Tandon (1994) examined five seasonal patterns in stock markets of eighteen countries: the weekend, turn-of-the-month, end-of-December, monthly and Friday-the-thirteenth effects. We find a daily seasonal in nearly all the countries, but a

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weekend effect in only nine countries. Interestingly, the daily seasonal largely disappeared in the 1980s.

The last trading day of the month has large returns and low variance in most countries. Many countries have large December pre-holiday and inter-holiday returns. The January returns are large in most countries and a significant monthly seasonal exists in ten countries. Pandey (2002), studied the seasonality in the Sensex monthly returns. The study used the monthly data of the BSE's sensitivity index for the period April 1991 to March 2002 and used autoregressive moving average model with dummy variable for the analysis. The results of the study confirm the monthly effect in stock returns in India and also supported the 'tax-loss selling' hypothesis.

Objectives of the Study

1. To document the various kinds of anomalies reported in the literature.
2. To investigate the presence of January effect in Indian stock market.

Stock Market Anomalies

In recent years, the testing for market anomalies in stock return has become an active field of research in empirical financial management and has been receiving attention globally (Al Loughani and Chappell 2001; Pandey 2002a; Rossi 2007). Over the last 25 years or so, one of the most puzzling and consequently investigated areas of financial market research is the presence and documentation of security price anomalies. Anomaly means deviation from the established principle or a situation or that, which is different from what is normally expected. They are the patterns in prices that are not in accordance with theoretical expectations and anomalies in stock returns are in various forms i.e. large firms versus small firms trading returns, long-term versus short-term trading returns, over and under reactions of the firms to information,

seasonal effects of trading returns and so on. Yet, market anomalies are frequently reported in the empirical finance and economic literature. Therefore, these potential departures from the EMH must be rigorously analyzed and tested. This understanding, in turn, provides an insight towards an explanation of the anomaly. The present research concentrates on the selected anomalies related to EMH in the Indian context. In recent years, several anomalies have been identified (Bhattacharya et al. 2003; Holden et al. 2005). Most commonly discussed Calendar anomalies are given below:

- Day-of-the-Week effect (Kato 1990; Chaudhary 1991; Chang et al. 1993; Draper and Paudyal 2002; Boynton et al. 2006);
- January effect (Rozeff and Kinney Jr 1976; Clark et al. 1992; Brooks and Persaud 2001; Marquering et al. 2006);
- Turn-of-the-Month effect (Karmakar and Chakraborty 2000);
- Holiday effect (Pardo and Vicenty 2004)

Types of Stock Market Anomalies

The existence of Calendar anomalies is a contradiction to the weak form of the EMH. The weak form of the EMH states that the market is efficient in past price and volume information and stock movements cannot be predicted using this historic information as this form infers that stock returns are time invariant, that is, there is no identifiable short-term time based pattern. The existence of seasonality in domestic and international markets suggests market inefficiency, so that investors should be able to earn abnormal rates of return incommensurate with the degree of risk. Various types of anomalies discovered and discussed in financial literature are presented below in Figure 1

Figure 1: Stock Market Anomalies

| Calendar based Anomalies | Announcement based Anomalies | Other Anomalies |
|--------------------------|------------------------------|-----------------------|
| Day-of-the-week effect | Earning-surprise effect | Book-to-market effect |
| End-of-the-day effect | Information releasing effect | Low-beta-firm effect |

Figure 1 contd...

| Calendar based Anomalies | Announcement based Anomalies | Other Anomalies |
|---------------------------------|--|-----------------------------|
| Holiday effect | Initial public offerings (IPOs), SEOs and stock buybacks | Low price stock effect |
| Intra-day effect | The pay-out effect | Momentum effect |
| January effect | Price earnings (P/E) ratio effect | Revision to the mean effect |
| Monday/weekend effect | | SEO-underperformance effect |
| Monthly/turn of the year effect | | Size effect |
| Tax-year effect | | Weather effect |
| Week of the month effect | | |

January Effect

A January effect, the subject of the study, is an external factor which explains the price abnormality. By the end of year, most investors sell stocks which show low performance. With the New Year, investors repurchase these stocks to their portfolio at a cheap price. This demand on stocks in the first month of the year increases the prices of stocks.

Causes of January Effect

January effect exists inexplicably, although the theories underlying its existence are somewhat unexplainable (Keim 1983). The most prominent hypothesis of January effect is the tax-loss selling hypothesis and the information hypothesis. Some of the common explanations for January effect are explained below:

Tax-loss Selling Hypothesis

It states that investors seek to reduce their taxes by realizing losses at year end, thereby depressing stock prices. The investors re-purchase those stocks whose prices decline at the beginning of the following year and this creates the purchasing pressure on investors in turn.

Information Hypothesis

Rozeff and Kinney (1976) believe that January is a month of uncertainty due to the impending release of important financial information such as the previous year's accounting earnings (Barry and Brown 1984; Sehyun 1988; Arsad and Coutts 1997). Such information is more likely to have a significant effect on smaller firms, as the cost of process of gathering and processing such information is very expensive.

Data Analysis of January effect

The present study considers the daily indices reported by NSE that is S&P CNX Nifty. The data comprises daily closing prices of the NSE from 1.1.2007 to 31.12.2016, covering a period of about 10 years. The required data have been downloaded from the NSE website (<http://www.nseindia.com>) and yahoo finance.

In order to examine the presence of the January effect, the following null hypothesis has been tested:

Hypothesis (Ho) : $a_1 = a_2 = a_3 = a_4 = a_5 = a_6 = a_7 = a_8 = a_9 = a_{10} = a_{11} = a_{12}$

Here a_1, a_2 represents mean returns of different months of the year. The null hypothesis implies that there is no significant difference in mean returns across the different months.

Table 2: Summary of the Descriptive statistics results

| | S&P CNX NIFTY |
|-------------------------|--------------------|
| Highest Mean Returns | November, December |
| Lowest mean returns | March, October |
| Highest volatile months | May, October |
| Least volatile months | December, February |

Table 3: Results of Wilcoxon Mann-Whitney Test

| Return Pair | S & P CNX Nifty | |
|-------------|-----------------|--------|
| Feb – Jan | Z | -1.435 |
| | P Value | .145 |
| Mar – Jan | Z | -.971 |
| | P Value | .316 |

| Return Pair | S & P CNX Nifty | |
|-------------|-----------------|--------|
| Apr – Jan | Z | -.041 |
| | P Value | .967 |
| May – Jan | Z | -.217 |
| | P Value | .825 |
| Jun – Jan | Z | -.311 |
| | P Value | .755 |
| Jul – Jan | Z | -.413 |
| | P Value | .678 |
| Aug – Jan | Z | -.837 |
| | P Value | .407 |
| Sept – Jan | Z | -.043 |
| | P Value | .946 |
| Oct – Jan | Z | -.766 |
| | P Value | .437 |
| Nov – Jan | Z | -1.283 |
| | P Value | .185 |
| Dec – Jan | Z | -1.644 |
| | P Value | .088 |

Complied using SPSS 16.0

Data Source: www.nseindia.com

The above table 3 shows that the p-values are greater than 0.05 showing that the null hypothesis is accepted. Every Z-value is way below the critical

value 1.96 at a standard significance level of 5%. Though, in our result, all the significance levels are different, but we can safely say that the Z-value will not go beyond 1.96, showing that our null hypothesis is accepted and there is no dependency among variables. From the above test, one can safely conclude that there are no fluctuations when it comes to January return.

Table 4: Friedman Rank Sum Test

| Nifty | |
|-------------|--------|
| N | 15 |
| Chi-Square | 11.321 |
| df | 14 |
| Asymp. Sig. | .417 |

Complied using SPSS 16.0

Data Source: www.nseindia.com

Analysis to Friedman Rank Sum Test

The table 4 above shows that the significant level is more than 0.05, hence, inferring that the dependent and independent variable are statistically insignificant, thus accepting the null hypothesis. In the table 5 of the results of Equality of Monthly Returns, also all the p-values of the different months, are highly insignificant supporting the null hypothesis that there is no difference in the mean returns of the months of the year.

Table 5 : Results of Equality of Monthly Returns

| Nifty | | | | | | |
|-----------------|--------|--------|-------|--------|-------|-------|
| Test Statistics | Jan | Feb | Mar | Apr | May | Jun |
| Mann-Whitney U | 7.0 | 8.0 | 10.0 | 12.0 | 13.0 | 10.0 |
| Wilcoxon W | 52.0 | 14.0 | 16.0 | 57.0 | 58.0 | 16.0 |
| Z | -1.202 | -1.017 | -.647 | -.277 | -.092 | -.647 |
| P - Value | .229 | .309 | .518 | .782 | .926 | .518 |
| Test Statistics | Jul | Aug | Sep | Oct | Nov | Dec |
| Mann-Whitney U | 7.0 | 8.0 | 11.0 | 4.0 | 10.0 | 9.0 |
| Wilcoxon W | 13.0 | 14.0 | 17.0 | 49.0 | 55.0 | 15.0 |
| Z | -1.202 | -1.017 | -.462 | -1.757 | -.647 | -.832 |
| P - Value | .229 | .309 | .644 | .079 | .518 | .405 |

Table: 6 Results of Dummy Variable Regression Analysis

| Month | Parameter | S&P CNX Nifty |
|------------------------------|---|------------------------------------|
| β_1 Jan (Intercept) | Coeff. Std. Error t-stat Prob. | 0.136 1.764 0.075 0.948 |
| β_2 Feb | Coeff. Std. Error t-stat Prob. | 1.152 3.021 0.377 0.722 |
| β_3 Mar | Coeff. Std. Error t-stat Prob. | 0.156 1.721 0.081 0.932 |
| β_4 Apr | Coeff. Std. Error t-stat Prob. | -0.643 2.464 -0.311 0.774 |
| β_5 May | Coeff. Std. Error t-stat Prob. | -1.912 1.734 -1.079 0.342 |
| β_6 Jun | Coeff. Std. Error t-stat Prob. | -1.261 1.857 -0.672 0.524 |
| β_7 Jul | Coeff. Std. Error t-stat Prob. | -0.758 2.761 -0.266 0.8 |
| β_8 Aug | Coeff. Std. Error t-stat Prob. | 0.866 2.242 0.367 0.423 |
| β_9 Sept | Coeff. Std. Error t-stat Prob. | 0.132 2.426 0.047 0.967 |
| β_{10} Oct | Coeff. Std. Error t-stat Prob. | -1.043 1.538 -0.676 0.533 |

| | | |
|------------------|-----------------------------------|----------------------------------|
| β_{11} Nov | Coef Std.Err t-stat Prob | 0.774 2.049 0.375 0.713 |
| β_{12} Dec | Coef Std.Err t-stat Prob | 2.657 2.812 0.955 0.412 |
| | R square | 0.757 |

Complied using SPSS 16.0

Data Source: www.nseindia.com

The R^2 values are 0.757 (75%) which denotes that in CNX NIFTY, 75% of the variation in the daily stock return is explained by the closest previous day's return. Since both R square is high, the previous month's stock price is a good predictor of the current month's stock price. Thus, the value of R square denotes that independent variable (months of the year) has a significant influence on the dependent variable (returns). But since, probability values are insignificant, it negates the presence of January effect.

Conclusion

The above analysis showed that some of the months really play an important role in determining the investment strategy. Literature reviews have shown that there were signals of the presence of this seasonality till 2008. The regression results confirm that seasonal effect does not exist in stock returns in India. The study reveals that January, February & March have negative returns but can be the best months to buy the scrip and November & December show significant positive high returns which can be used to sell securities. Tax-loss selling hypothesis could be the possible explanation for the above phenomenon. Although the t-coefficient of December month did not report any significance but the presence of December effect can be tested over Indian stock market. The study also provides evidence that the market was not able to price the risk appropriately as higher returns were possible by taking less risk and this indicates market inefficiency

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CSR and Health Care Services of Tata Steel with Special Reference to East and West Singhbhum Districts of Jharkhand

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Abstract

Tatas being one of the leading industries world over are known for their philanthropic and CSR activities. The present study deals with the corporate social responsibility and the health care services of Tata Steel with special reference to the East and West Singhbhum districts of Jharkhand. It is about the health seeking behaviour of the people from the health care providers - Tata Steel Rural Development Society (TSRDS) and Tata Steel Family Initiatives Foundation (TSFIF) - of the Company. It examines whether there are enough clinics for the people in need or not? and, whether the people in the industrial zone take benefit from the clinical health interventions or not? The clinics are both in the rural as well in the urban areas of Jamshedpur and the beneficiaries reside in both the areas.

The data was collected through both primary and secondary sources. The methods used for the purpose was personal interviews, focussed group discussions and direct observations. The people who visited the clinics were the ones who were interviewed. Two blocks from the East Singhbhum district and two blocks from the West Singhbhum district were selected. The coverage was of a total of seven clinics in the rural areas and six clinics in the urban areas. The study was conducted under TSRDS. The initiatives were undertaken by TSFIF. It was found out from the study that the people from the rural and the urban areas of the East and West Singhbhum districts of Jharkhand have a health seeking behaviour. The people, who are aware about the clinics, visited them as and when required. Though everything about the clinic is in good picture, there are still things that need to be done for the improvement of the services. The study concludes that though there are a lot of facilities that the company is providing to the community, but there still are people who are left unattended. They need the supporting hand of the company.

Keywords : Corporate Social Responsibility, Health Services, Intervention Gaps, Jharkhand, Tata Steel

Introduction

Corporate social responsibility is the basic responsibility of any business towards the society it works in. It is important for a company to give back to the society as it depends on it for its raw materials, labour force, land and capital. The Company's Act, 2013 has made it mandatory for any company to spend 2.5% of its net profit for CSR initiatives. It refers to business practices involving initiatives that benefit society. A business's CSR can encompass a wide variety of tactics, from giving away a portion

of a company's proceeds to charity, to implementing "greener" business operations (Caramela, 2016). It is a company's obligation to be responsible to all its stakeholders. The main motive behind CSR is to accomplish all its activities, goals and achieve sustainable development not only in economical but also in social and environmental measures. However, the concept of CSR is still quite fuzzy, with unclear boundaries and debatable legitimacy.

To clear things up, three types of CSR are observed: ethical, altruistic and strategic, only first and third

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of which are legitimate. CSR can be an ethical, capitalistic force for good if implemented with both interests of the firm and society in mind (Lantos, 2005). Ethical CSR consists of economic responsibilities (which comprise being profitable for shareholders while providing economic benefit to other corporate stakeholders, such as fair-paying jobs for employees and good quality, fairly priced products for customers), legal responsibilities (which involve conducting business legally by complying with laws and playing by the rules of the game), and ethical responsibilities (which go beyond the law by avoiding harm or social injury; respecting peoples moral rights; and doing what is right, just and fair). On the other hand, Altruistic CSR relates to Archie Carroll's (1979) fourth type of CSR, philanthropic responsibilities which entails voluntarily "giving back" time and money to good works which contribute to the well being of various societal stakeholders, even if this sacrifices part of the business' profitability. Finally, Strategic CSR consists of philanthropic activities that benefit the community or society socially, as well as the firm financially through positive publicity or goodwill, thereby accomplishing strategic business goals. Thus, corporations contribute to their constituencies not only because they believe it to be in their best financial interests to do so, thereby fulfilling their fiduciary responsibilities to the stakeholders (Friedman, 1996).

Many researchers have conducted a number of studies on corporate social responsibility. It is something that has been talked about a lot by many people- researchers or not. CSR has always been a talk of the town. With the new Companies Act, 2013, CSR has become an integral part of every business.

Even before the concept of modelling CSR initiatives according to priorities or liabilities or even responsibilities came into the picture, Ackerman proposed his model that was laid down in three phases (Ackerman & Bauer, 1976). More than a model, it was a strategy that guided the implementation of CSR activities, but not their formulation. The first phase was about the top managers recognizing a social problem, the second phase was an intensive study of the problem and finding out solutions by hiring experts and the last phase was implementation of the proposed

solutions. It is obvious that this model, rather a plan, merely provides strategies to deal with problems having social implications. Other parameters and constraints of CSR activities did not come under the purview of this model.

The stakeholder theory (Freeman, 1984) clearly underlines the fact that investing a firm's time and resources to redress issues and concerns of stakeholders is a justifiable managerial activity. This perhaps forms the very basis of the concept of corporate social responsibility (CSR).

Health Care Services in India

According to (Feinstein, 1993), Mortality rates in the developed world have fallen sharply during the twentieth century. Individuals of lower socioeconomic status, however, generally have faced higher mortality rates than individuals of higher status. The literature documenting the relationship between socioeconomic status and health is reviewed, including several recent contributions and evidence from other countries. A conceptual framework then draws two distinctions: one contrasting the relative impact of lifestyle habits with the use of health care on health outcomes; and the other seeking to quantify the importance of resources relative to behavioural factors in explaining differential outcomes.

The public health services are very inadequate. The public curative and hospital services are mostly in the cities where only 25 percent of the one billion populations reside. Rural areas have mostly preventive and promotive services like family planning and immunization. The private sector has a virtual monopoly over ambulatory curative services in both rural and urban areas and over half of hospital care. Further, a very large proportion of private providers are not qualified to provide modern healthcare because they are either trained in other systems of medicine (traditional Indian systems like ayurveda, unani, siddha and homeopathy) or worse, do not have any training. These, however, are the providers from whom the poor are most likely to seek healthcare (Gangolli, 2005).

The relationship between the extent of equitable access to healthcare and the degree of public financing of healthcare is well known. Analysis

of outcome indicators and percentage of public investment in health in a number of countries shows that indicators are poorer where public investment is low. The scenario in India reflects this observation, where declining public expenditures over the 1980's, which further accelerated in the 1990's led to a stagnation of the declining infant mortality rates and a resurgence of a number of communicable diseases (ibid).

Status of Health Care Services in Jharkhand

People's health and well being are considered as one of the major indicators of development. In Jharkhand, if this indicator is used, then its level of development leaves much to be desired. The state is confronted with many grave challenges in the health sector. The sizeable share of population remains deprived of basic health care facilities despite the national rural health mission (NRHM) and other health initiatives by the government and related agencies. The issues of availability, accessibility, acceptability, affordability and quality with regard to health care remain as concerns (Kumar, 2008).

According to the state health MIS (as of 30th April, 2008), there is a huge gap in the current availability and proposed numbers of health facilities in the state. The state has only 3958 sub-centres whereas the requirement is of 5057 health sub-centres. Interestingly, out of 3958 sub-centres, only 1736 have their own building (RHS Bulletin, 2007). For PHCs the current availability is 330 while the proposed number was 1005 (ibid).

CSR and Health Care Services of Tata Steel

Tata Steel's CSR strategy was inspired by Jamsetji Tata's conviction that, "In a free enterprise, the community is not just another stakeholder, but is, in fact, the very purpose of its existence." Tata Steel's approach to its business has evolved from this concept and the wealth it has created is continuously returned to the people through its community initiatives. (Noronha & Rodrigues, 2007; Prasad and Kumar, 2013, 2016). The company's community-centric initiatives are directed towards the spread of healthcare and education, facilitation of skill development, empowerment and sustainable livelihood opportunities and preservation of ethnicity and culture of indigenous communities, among others. In other words, the Tata Steel

CSR policy encompasses initiatives to conserve, sustain and renew the environment, to encourage sustainable socio-economic development of the community and to improve the quality of life of the people living in the areas in which it operates. In all their programmes, the organizations seek to engage the ultimate beneficiaries of an initiative right from the conceptualization and planning stage to the implementation, with the company playing the role of a catalyst eliciting positive change. The idea is to make people act by their own will and support them in their efforts to build a better future (Tata Steel, 2016).

For promoting community health, Tata Steel offers preventive, promotive and curative healthcare services through medical services and CSR division in and around the company's operational areas in the states of Jharkhand and Odisha. To cater people in the remote villages they run mobile medical vans which offer primary health care services, organize multi-specialty health camps and also offer specialized services like eye care, mother and child care, TB treatment, awareness on adolescent reproductive health issues, etc. to address issues of HIV/AIDS, they work with the general population as well as high risk groups like truckers and PLWHA'S. They also partner with government agencies including National Rural Health Mission (NRHM) in implementing public health programmes (ibid).

Objectives of the Study

The present study attempts to examine the various health related interventions provided by Tata Steel and health seeking behaviour among the beneficiaries in the East and West Singhbhum districts of Jharkhand. The study also provides some suggestions to improve the interventions provided under health services of Tata Steel CSR policy.

Hypothesis

The health services intervention of Tata Steel under Corporate Social Responsibility Policy are continuously improving keeping in line with the need of the communities living in its industrial zone.

Research Methodology

For this study, six urban areas and seven rural

areas were selected in the east and west Singhbhum districts of Jharkhand respectively. Under the supervision of the first author, field work was conducted in the sampled areas of the study by the second author. Qualitative and quantitative data were collected from both primary and secondary sources. The methods used for the primary data were personal interviews, focused group discussions and direct observations. The secondary data consisted of annual reports of TSRDS, TSFIF case studies, company journals, etc. The data was used for the second author's dissertation of which this article discusses just some of the findings.

Jharkhand: The Area of Study

Jharkhand is a state in the eastern part of India which was carved out of the southern part of Bihar on 15th of November, 2000. The state shares its borders with the states of Bihar in the north, Uttar Pradesh and Chhattisgarh in the west, Odisha in the south, and West Bengal in the east. The whole area of Jharkhand is 79,710 km² (30,778 sq mi).

The industrial city of Ranchi is its capital and Dumka its sub capital. Jamshedpur is the largest industrial city in the state, while Dhanbad and Bokaro Steel City are the second and fourth most populous cities

respectively. Jamshedpur is the headquarters of the East Singhbhum district of Jharkhand. According to the 2011 census of India, Jamshedpur (East Singhbhum & Seraikela-Kharsawan) district has current population of 1,337,131. East Singhbhum has a sex ratio of 949 females for every 1000 males, and a literacy rate of 76.13% (Government of Jharkhand).

West Singhbhum is one of the 24 districts of Jharkhand state, India. It came into being in 1990, when the old Singhbhum district was bifurcated. Chaibasa is the district headquarters. The district is situated at an average height of 244 meters above sea level and covers an area of 5351.41 km. West Singhbhum has a sex ratio of 1004 females for every 1000 males, and a literacy rate of 59.54%.

The clinics that were visited belonged to the following blocks:

In East Singhbhum the following three blocks were considered for the study: Jamshedpur, Potka, and Patamda. In West Singhbhum the two blocks considered for study were Gamharia and Saraikela. The following clinics were visited for the collection of data.

Table 1: Segregation of Names of the Clinics

| District: East Singhbhum | | | |
|--------------------------|------------|---|---|
| Sl. No. | Blocks | Name of the clinics | Rural/ urban |
| 1. | Potka | ▪ Tirildih | ▪ Rural |
| 2. | Jamshedpur | ▪ Betakocha ▪ Pipla ▪ Chotabanki ▪ Sonari ▪ Karandi Dots Centre ▪ Gudrubasa ▪ Kitadih ▪ Adityapur ▪ Kadma | ▪ Rural ▪ Rural ▪ Rural ▪ Urban ▪ Urban ▪ Urban ▪ Urban ▪ Urban ▪ Urban |

Source : TSRDS and TSFIF office records and fieldwork data.

Table 2 : Segregation of Names of the Clinics

| District: East Singhbhum | | | |
|--------------------------|-----------|---|--|
| Sl. No. | Blocks | Name of the clinics | Rural/ urban |
| 1. | Gamharia | <ul style="list-style-type: none"> Kolabera Dugni | <ul style="list-style-type: none"> Rural Rural |
| 2. | Saraikela | <ul style="list-style-type: none"> Saraikela | <ul style="list-style-type: none"> Rural |

Source: TSRDS and TSFIF office records and fieldwork data.

Findings and Analysis

The findings and analysis described in this section are a combined gist of both the social wings of the Company - TSRDS and TSFIF – as these two wings implement the various health related initiatives among the people residing in the Company's industrial zone.

Comparative Study of Rural and Urban Areas

The tables below show a comparative study of the rural and urban areas of east and west Singhbhum districts of Jharkhand. As there are no urban clinics in the West Singhbhum district so there was no comparison of such possible.

Table 3: Comparative study of the Rural areas of the East and West Singhbhum districts of Jharkhand

| Sl. No | Rural areas | FY- 2014 | FY- 2015 | FY- 2016 |
|-----------------------|-------------|----------|----------|----------|
| East Singhbhum | | | | |
| 01 | Betakocha | 668 | 707 | 988 |
| 02 | Pipla | 5080 | 5151 | 6274 |
| 03 | Chotabanki | 1934 | 1783 | 2540 |
| 04 | Tirildih | 4134 | 4429 | 4910 |
| West Singhbhum | | | | |
| 01 | Kolabera | 6739 | 6264 | 7695 |
| 02 | Rankakocha | 1026 | 1074 | 1653 |
| 03 | Dugni | (nd) | (nd) | (nd) |

Source: TSRDS and TSFIF office records and fieldwork data.

The comparative study of the rural areas of the east and west Singhbhum districts of Jharkhand show

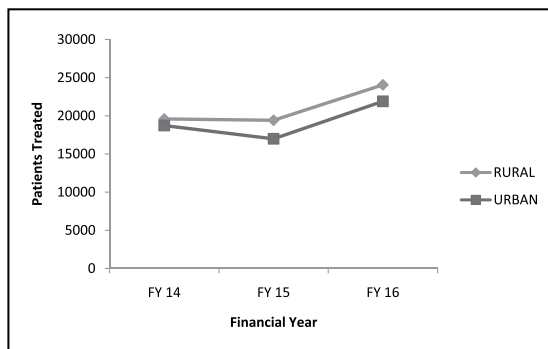
(table- 3) that the people of the east Singhbhum district have a more health seeking behaviour than the west Singhbhum district people. This also shows that the people from the west Singhbhum district have other health service providers available around their vicinity. The government health facilities in the East Singhbhum areas do not work in a proper condition. This is also one of the reasons why people from this area seek the benefits of the TSFIF (under TSRDS) organization. On the other hand there are some of the government facilities around the west Singhbhum district of Jharkhand. These government facilities work in a better way than the rest.

Table 4: Overall Trend of Patients Visiting the Clinics

| Locality, Area, Community | FY- 2014 | FY- 2015 | FY- 2016 |
|---------------------------|----------|----------|----------|
| Betakocha | 668 | 707 | 988 |
| Pipla | 5080 | 5151 | 6274 |
| Kolabera | 6739 | 6264 | 7695 |
| Rankakocha | 1026 | 1074 | 1653 |
| Chotabanki | 1934 | 1783 | 2540 |
| Dugni | – | – | – |
| Tirildih | 4134 | 4429 | 4910 |
| Sonari | 6876 | 6952 | 7463 |
| Karandi dots | 0 | 0 | 1365 |
| Gudrubasa | 3829 | 3110 | 3736 |
| Kitadih | 0 | 0 | 264 |
| Adityapur | 1467 | 1286 | 2002 |
| Kadma | 6560 | 5641 | 7073 |

Source: TSRDS and TSFIF office records and fieldwork data.

Figure 1. Comparison of Urban and Rural Clinics in the three Financial Years



The overall trend shows that there has been an increase in the no. of patients visiting most of the clinics. Though, there are still clinics where the no. of patients has decreased. The reason for the decline is that there are other clinics giving the same amount of benefits or rather an equal amount to the patients. And, the clinics are situated nearby each other.

Discussion

The status of health in the East and West Singhbhum Districts of Jharkhand, according to the research, is in a better position. People have a health seeking behaviour. But one of the major drawbacks that were found was that people living in the primitive areas are deprived of the basic medications. They are completely deserted and they are not even aware of the medical facilities, be it private or government ones. The doctors from TSRDS regularly visit some of the primitive areas situated deep inside the East and West Singhbhum districts of Jharkhand. But doing only this much will not help them. They will not become aware of the facilities that are provided outside their villages.

It was also observed that the number of village health volunteers also called contact persons was not in accordance with the population. The ones that are there are not paid enough or paid anything to be encouraged to continue doing the good work. They either procrastinate in their work or leave their job completely. So, it is being suggested to increase the payment of these contact persons and subsequently, increase their number.

There are three E-HEALTH centers in the Jamshedpur block of Jharkhand. Out of these

three, only one is in a working condition. And even the one that does work has a Skype problem. My suggestion would be to either close the E-HEALTH centers completely or set up new centers at a more feasible place.

Conclusion and Recommendations

The clinical health interventions of Tata Steel Rural Development Society are going in the right direction. There are many households that are being helped by the various initiatives of the TSRDS/TSFIF society. The eye camps, maternal and child health care facilities and many more facilities that are being provided by the society at various levels are in tandem with the government facilities. These initiatives help bring the people from the downtrodden areas to the surface. There are various primitive tribes which were not recognized earlier and are now being considered under the health service interventions.

Various clinics that are of no use could be eliminated which would further give way to other clinics that can come up. These could be in the remote and isolated areas where there are no signs of healthcare providers.

Apart from all the above findings, awareness building is an important thing that should be included in the process. People need to be made aware of the facilities that are being provided to them. Most of the people who do not visit the clinics are not aware of the facilities being given by the company. They do not know that these health care facilities are free of cost and also are of a grade above.

Not visiting the clinics, be it the government ones or the ones being provided by the company, leads the people to other sources like the quacks, midwives, etc. This is not good for their health or the health of their family members. It is important for us to bring the people out of these places if we want the mortality rates to go down to a minimum. Each year these rates vary, sometimes in a good way and at other times in a bad way. One of the reasons is that the rural masses do not reach the hospitals. If it is difficult for them to reach the clinics then we should take the clinics to them. The people from the primitive tribes in the area do not have any idea about the clinics that exists for them. This gives

way to the traditional mode of treating diseases and illness under the ethno-medical system which is very much prevalent among the rural and tribal communities of Jharkhand.

Although a lot has already been done, there is still a scope to improve the services for people living in the remote areas. For example, there is a serious need of more doctors in most of the clinics. There is also a need of more paramedics who assist these doctors. The centres that exist should be a little more updated on their infrastructure as well. The government and the budget play an important role in these sectors. The various initiatives by the government can go hand in hand with the ones that are being conducted by the Tata Steel Rural Development Society (TSRDS) and Tata Steel Family Initiatives Foundation (TSFIF) for inclusive growth and development of the people of remote areas of Jharkhand.

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Sustainable Municipal Solid Waste Management in India

Anjor Bhaskar¹

Abstract

The 20th and 21st centuries can quite literally be heralded as the “Garb-age”, in keeping with the ages that identify the evolution of humanity. The production of waste matched every other kind of production, measure for measure. Extraction of resources from the earth, manufacture and consumption of goods, and the creation of detritus are the outcomes of an unbridled growth trajectory. This is the case with India as well, which has seen the economy growing at 8-9%. Societies, particularly the urban ones, produce and consume, leaving the wastes of these processes to be taken care of by municipal governments that are often ill equipped to take on this task effectively.

There is thus a need to review waste management practices and policies in the light of the experiences gained over the previous 17 years since the original MSW Rules were framed in 2000. This is what this study intends to do, in addition to helping understand how policies and practices evolve, and more importantly, how they can be improved. It attempts to understand the political, economic and environmental sustainability of decentralised models of waste management.

Keywords : Decentralisation, Ecology, Environment, Green Jobs, Sustainable, Sustainable Livelihoods, Urbanisation, Urban Planning, Waste Management.

Introduction

1. Waste Generation in India

Indian cities generated nearly 68.8 million tonnes of ‘Municipal Solid Waste’ in 2011 (calculated from Annepu, 2012). It is estimated that this quantity rises at a compounded rate of about 1.3% annually. The waste generated by residential and commercial units as by-products of their daily activities has been lumped up into one category - MSW - without much consideration for their material properties and their environmental, social and economic value. In reality, MSW comprises several very different categories of waste, which can broadly be categorised into Organic (or biodegradable) Waste, Recyclable (or commercially marketable) Dry Waste and Non-Recyclable (or not commercially marketable) Dry Waste. The table below provides the composition and quantities of different categories of waste within MSW in India in 2011.

Table 1: Composition and Quantities of Different Categories of Waste within MSW in India in 2011

| Category | Proportion | Quantity (Million Tonnes per Annum) |
|----------------------------------|------------|---|
| MSW | 100 | 68.8 |
| Organic Waste | 51 | 74.1 |
| Recyclables | 17.5 | 25.4 |
| Non-Recyclables (inert waste) | 31.5 | 45.8 |

Source: Calculated from Annepu (2012)

2. The Conventional Model of Waste Management

In terms of knowledge and guidelines, the Municipalities are equipped with a conventional model of waste management which is essentially a combination of three stages, viz. collection, transportation and disposal:

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The collection systems in cities typically involve the placement of a container in an area where citizens can dump their mixed garbage. Where door to door collection has been initiated, it involves a worker (employed by the Municipality, contractor or private company) who collects mixed garbage from residential and commercial establishments (in return for a user fee) and dumps it at a common point. Transportation usually refers to the system of transportation of waste using large vehicles, dumpers, compactors, trucks, tractors etc. used to collect waste from the Transfer Stations and carry it to the site of final disposal. Finally, disposal conventionally consists of open dumping of waste on city outskirts or vacant lands. Recently, wherever projects have been sanctioned and plants set up, sites of 'disposal' have been 'developed' to 'dispose' of waste in less environmentally damaging ways. These 'developments' include construction of scientific landfills, waste to energy plants to incinerate waste and generate electricity.

3. Expenditure and performance of Municipalities

Expenditure on waste 'management' comprises a major share of municipalities' budgets. Nearly 50 per cent of municipal budgets and employees are dedicated to these tasks. Yet, municipalities have been able to collect only around 50 per cent, and recycle only 5 per cent of the total waste generated. (NIUA, 2005)

Only 50 per cent of collection implies that half the waste generated in urban areas is not even collected. This waste is either dumped in open spaces, drains or rivers or burnt close to the source of its generation. All these practices have adverse health and environmental consequences. Open dumps of wastes are breeding grounds of disease vectors, dumping waste in drains clogs them, throwing waste in rivers etc leads to water pollution and burning of waste releases toxic gases.

A study of human health impacts of solid waste mis-management (essentially open dumping and burning of waste) in Juba town indicated that 100% of the households investigated (50 in number) suffered from some waste or sanitation related disease. Accordingly, about 26% households suffered from diarrhoea, 24% household suffered from malaria, 18% from viral disease, 14% from eye disease, 10% from skin disease and 8% from

typhoid. Residents reported that that in the beginning of the wet season, when all the refuse and faeces are soaked with water, it becomes ideal for insect breeding and the population of flies increases tremendously and disease incidence increases correspondingly. Thus, 16% households said that these disease vectors breeding in waste dumps became a threat in dry season and 84% said it became nuisance in wet season (Celestino Ladu, Lu and Osman, 2011).

Problems with the Traditional Model of Waste 'Disposal'

1. The Creation of Landfills

Of the waste that is collected, about a fifth is retrieved by informal waste workers (Annepu, 2012). The rest of the collected non-recycled waste is largely dumped in dumpyards ('landfills') often located on the outskirts of urban limits - away from the sight of those with a political voice.

Urban Local Bodies (ULB), charged with the task of finding appropriate spaces for making landfills, acquire land on the outskirts of cities and towns, or in villages close to the urban settlements. Bangalore has been dumping its waste in the villages of Mavallipura, Mandur, Doddaballapur and Subbarayanapalya. Other dumping grounds in the villages of Kannahalli, Somasandrapalya, Anjanapura, Bagganadodd villages had to be shut down due to protests by the villagers. Pune's waste is dumped in the nearby villages of Devachi Uruli and Phursungi. The villages of Deonar, Mullund, Gorai, Kanjur village, Kolshet and Shilphata, Adharwadi and Telkoswadi, and Turbhe receive waste from Mumbai. The Deonar landfill, set up in 1927 and spread over 132 hectares already has about 9.2 million tonnes of waste and continues to add 4000 tonnes every day. Delhi's landfills are located within its city limits at Okhla, Ghazipur and Bhalswa. Three thousand tonnes of waste generated in Kolkata finds its way to the landfill in Dhapa.

2. Environmental Impact of Landfills

This dumping causes severe problems for villagers and other communities residing or working around the dumpsites. Due to seepage of leachate from the decomposing waste, massive ground water contamination takes place. Massive air pollution also occurs as the waste often catches fire due to the

heat generated during the decomposition process. Landfills are the single largest source of methane gas in the country. Nearly 20% of methane gas emissions in India are caused due to landfills. The Deonar landfill in Mumbai releases an estimated 4251 m³/hr of biogas, mostly containing methane (Clyde, 2008). The dumping of waste also provides a massive breeding ground for disease vectors and contaminates the land, making it unfit for plant life.

Clyde (2008) reports of the health impacts of the dumping of waste in Deonar in Mumbai, "In 2005, Infant Mortality Rate in Govandi was 60.8 per 1000 live births while the average for Mumbai is 35.12 per 1000. In the past year, health posts in Govandi registered 1629 TB patients, while asthma,

skin diseases and malaria is common here as well."

3. Environmental and Economic Cost of Transportation

The traditional model of waste management also involves huge costs, both economic and environmental, in terms of transportation of waste from the point of generation to the landfills. Municipalities spend nearly 416.6 crore rupees (4165.5 Million rupees) in transportation of waste alone (which is nearly 50% of the total cost of Solid Waste Management). Further, this transportation leads to nearly 125 million kgs of Co₂ emissions per year (using 2011 figures and assuming all waste that is not recycled is transported to landfills).

Table 2: Economic and Environmental Cost of Transportation of Waste to Landfill or Incinerator

| Sl. No. | Item | Calculation | Quantity | Unit |
|---------|---|--------------------------------|----------|--|
| 1 | Amount of Waste NOT recycled | (90.2% of 68.8 Million Tonnes) | 62.1 | Million Tonnes per annum |
| 2 | Cost of Transportation of One Tonne of Waste (in Rs.) | (24500/365) | 67.1 | Rupees Per Tonne |
| 3 | Total Cost of Transportation | 1 × 2 | 4165.4 | Million Rupees per annum |
| 4 | Average CO ₂ Emissions in Transporting One Tonne of Waste | Annepu (2012) | 2 | Kg |
| 5 | Total Amount of CO ₂ Emissions from Transporting Waste to Landfills in India | 4 × 1 | 124.1 | Million Kgs of CO ₂ Emissions per annum |

4. The Political Economy of Land for Landfills

The method of dumping waste in open landfills has another drawback – it requires an unending supply of land. A particular landfill has a limitation on the amount of waste it can accommodate, known as its carrying capacity. Once the landfill reaches its carrying capacity, the Municipality needs to find new land to dump the city's waste. But land for landfills is not easily acquired - no one wants a landfill in their backyard! Given the difficulties of acquiring land for landfills, Municipalities continue to dump waste, even when the landfills have long past exceeded their carrying capacity. But there is another force which exerts pressure upon

municipalities to close down landfills and look for new lands. That is urbanisation and rising land prices. As cities expand, the landfills, which were designed to be far outside the city, come within the folds of the city. City dwellers purchase land or housing near landfills and add voice to the protests to close down the landfill. Their protests and struggles receive support from civil society groups, environmental NGOs, the courts and the Pollution Control Boards. These agencies have played an important role in exposing how the ULBs have been overstepping their invitation in the villages by dumping much more than they had permission for and without the promised safety precautions (EPW, 2012).

In order to quell any angst amongst the villagers, ULBs invest in the village infrastructure, their roads, their electricity and their schools. The city of Pune dumped its waste in the Kothrud landfill till nearly a decade ago. However, as the city expanded and Kothrud became a part of the city, residents' protests gained voice. These residents took the Municipality to court which finally directed the Pune Municipal Corporation (PMC) to look for another landfill. Forced by the courts, PMC had to search for another 'site', which it found in the villages of Devachi Uruli and Fursungi - only after promising the villagers to 'compensate' for the environmental damage by investing in roads, electricity and education. A local example of the 'polluter pays principle' at work!

5. Landfills as Battlegrounds between Residents and Municipalities

Landfills have thus been a major cause of tension (often turning to violence) between residents and Municipalities. In August, 2012, crisis hit Bangalore, when all 3 of its landfills were closed down in response to protests by villagers and subsequent orders by the Karnataka Pollution Control Board as well as the High Court.

A report from Mandur village which hosts Bangalore's waste says, "We are ready to go jail to save our village from the garbage menace. We have not agreed to the dumping. We won't change our decision at any cost," said M Munegowda, a resident of Mandur. At around 11am, police warned the protesting Mandur villagers to call off their protests, failing which a lathicharge would be ordered". When waste began piling up on the city's streets, the Deputy Chief Minister, in a spectacular show of abuse of power, deployed nearly 600 police men to escort garbage trucks from the city to dump waste at the landfill. In the outrage that followed, one of the protesters named Srinivas died of cardiac arrest". (Times of India, 22nd October, 2012, 'Showdown looms as cops descend upon Mandur').

Kerala began facing a waste crisis in December, 2011 when villagers all over the state began protesting to stop dumping in their villages. Gradually, landfills all across the state began closing down causing the state to become paralysed under

the weight of thousands of tonnes of waste on the city streets.

On 14th October, 2012, The Pioneer reported about the clash regarding dumping at Vilappilsala village, "The anti-garbage crusade in Vilappilsala, a village adjacent to Kerala capital Thiruvananthapuram, has transformed into a direct confrontation of the villagers with the State Government after it secretly moved a leachate treatment plant into the dump-yard in the village under the cover of darkness early Saturday morning when the people were asleep...Determined to fight for the people's right to healthy and peaceful life, Vilappilsala Panchayat president S Sobhana Kumari has launched a fast-unto-death and the joint action council has announced that Vilappilsala and the adjoining villages will observe indefinite shutdown from Monday bringing life in the region to a total standstill." (Pioneer, 2012)

Municipalities, crushed under the burden of waste and protests, are unable to come up with any sustainable solutions. An August, 2008 report states "This month the BMC came up with a rather ridiculous situation to control the stench in Deonar by spraying it with deodorant, the perfume costs US \$114,000 for 42,000 litres, which is required to perfume the landfills for six to eight months. Currently even people who segregate their garbage are more than likely wasting their time, as it's all combined together and dumped". (Clyde, 2008).

These conflicts have clearly exposed the unsustainability of the traditional model of waste 'management' adopted by Municipalities, i.e. of collection, transportation and dumping/landfilling of MSW.

Emerging and Dominant Paradigm of Waste Management

The failure of Municipalities to provide municipal services, including waste management, efficiently, was blamed largely upon their lack of access to finance. It was believed that access to finance could allow municipalities to create the necessary infrastructure for providing municipal services. It could also allow them to attract private sector participation in municipal service provision -

thereby bringing in technical and managerial expertise which private corporations are associated with.

The availability of funds through JNNURM suddenly made urban infrastructure and service provision in the 'mission' cities, including waste management, a lucrative business opportunity. The trend continued and grew further through the Swachh Bharat Abhiyaan. Urban bodies invited private players to provide solutions to waste management. In response, private corporations jumped at the opportunity. Existing corporations, with no prior experience in waste management floated subsidiary companies or special purpose vehicles to take advantage of the opportunity.

These companies offered a techno-managerial solution to waste management that had already been adopted by many developed western countries, creation of 'scientific' landfills, producing energy from waste, capping existing landfills and capturing the gas. Several large scale W2E plants have been set up in many large cities across the country and many more are in the pipe line. On the existing dumpsites these companies are supposed to 'process' and generate energy from all the waste that was being dumped at the dump-yards- mostly by producing Reduced-Derived-Fuel (RDF) which is then combusted in place of coal to produce electricity or to provide energy for factories such as cement plants. This helps the ULBs to comply with the MSW Rules (MoEF, 2000) of processing waste and stopping open dumping.

This mode of channelization of the investments through JnNURM has created a paradigm of giant centralised structures for waste management. On the other hand, the administrative and operational reforms, which JnNURM proposed for ULBs were never given any priority. Given the inefficiencies in waste collection systems, leading to non-collection of almost half of the waste generated in cities, the funds coming in through JnNURM were used by many ULB's to revamp their collection systems. Tenders were invited and large corporations with the capacities to make initial investments came in. Different models of collection were followed and different levels of privatization were undertaken from privatization of only primary (door to door)

collection to privatization of even secondary (from Municipal Container to Transfer station) and tertiary collection (from Transfer station to Landfill) as well. In most cities, now, primary, secondary and tertiary collection has been or is being privatized. JnNURM funds have been utilized to purchase push carts, vehicles, equipments, development of disposal site, and gear for the purpose, as part of the Capital Expenditure. In addition, funds were allocated for operations and maintenance. In most places, waste collection and disposal contracts were given to corporations which were paid on the basis of a tipping fee i.e. on the basis of the quantity of waste collected and disposed per tonne - which constituted the bulk of the operations and maintenance expenditure.

It is worth noting however, that even in 2017 (12 years after the JnNURM was launched), there has not been a single comprehensive and independent assessment of the performance of the massive investments that have gone into waste management facilities. Given the enormity of investments which have already been made and which are proposed for the future, it would be worth assessing the actual energy generation that has taken place in the W2E plants as against the promises made and the level of recovery of investments made by governments.

Limitations of the Centralised 'Dominant' Model

1. Displacement of Informal Waste Workers

Given the massive allocations and investments in mechanised waste collection and disposal technologies such as W2E, such systems are proliferating across the country, promising better waste management. However, they also are ending livelihoods of millions of waste pickers and the informal recycling industry, in complete disregard of several recommendations on integration of the informal sector into the reformed systems of waste management. These recommendations include those from the Bajaj Committee Recommendations of 1995, to the Plastic Waste (Management and Handling) Rules of 2011 - all of which have recommended integration of informal workers into formal systems but apparently failed to make an impact on ULBs (for a list of such rules, see Chintan, 2011).

▪ **India's Informal Waste Workers :** There are approximately 3.26 million informal waste workers in India which helps recycle nearly 9.8 per cent of the total MSW which would otherwise end up in dump yards (calculated from Annepu, 2012).

In 2011, the informal sector saved Urban Local Bodies (ULBs), approximately Rs. 45 crores by reducing the quantity of scrap which needs to be transported to the landfill (Annepu, 2012). These workers also contribute to the economy, by recycling nearly 6.74 million tonnes of scrap every year. Finally, the reduced quantum of waste required to be transported to landfills has not only an economic benefit (in terms of saving costs), but also an environmental benefit as it brings down CO2 emissions by approximately 13.5 million kg a year. Some of the contributions of the informal waste sector towards the economy and environment are summarised below. It is worthwhile noting that the calculations for savings to ULBs and CO2 emissions reductions are based only on reduced transportation requirements – they do not include other savings incurred to the ULBs from reduced waste to be managed at landfill sites. They also do not include the environmental benefits from reduced leachate percolation, reduced emissions when waste burns at landfill sites, and reduced emissions due to lower need for resource extraction, processing and fresh production of products from virgin materials.

Yet, despite the immense economic and environmental contributions of the sector, informal waste work is rarely viewed as a productive activity and informal waste workers live at the margins of society. Many of them lack citizenship rights (such as the right to vote, the right to live with dignity) as well as the right to carry out their livelihood without fear of harassment (Chikarmane and Narayan, 2011).

Despite the hardships, difficult working conditions and apathy of both society and government, the informal waste sector is able to recycle a substantial portion of the city's waste. Their livelihoods however, are threatened by the new paradigm of privatised waste collection and disposal.

▪ **Waste Pickers vs. Energy Companies**

The W2E paradigm however has led to a large scale displacement of waste pickers. After gaining control over the land of the dump yard as well as over the waste coming in, the companies do not permit waste pickers inside the landfill. Most of the W2E technologies are based upon the production of energy using the calorific value of waste such as high density plastics, PVC, cartons, cardboard, paper. These materials however also have the highest economic value in the recycling industry and are the primary sources of income for waste pickers. The corporations therefore have an interest in disallowing waste pickers' access to scrap. In order to assure their supply of 'good quality' waste, it is often beneficial for them to take control of the collection and transportation of waste as well (Schindler, Demaria, & Pandit, 2012).

The payment of waste transportation companies on the basis of tonnage again implies their interests are conflicting with those of waste pickers. Waste pickers, retrieving recyclables from waste reduce the quantity and hence payments received by the companies. Waste pickers are therefore denied access to waste (Schindler, Demaria, & Pandit, 2012). They are rarely hired by these companies engaged in waste collection for both social and economic reasons. The displaced workers rarely find alternate employments. Several studies of landfill displaced waste pickers have found that such workers are rarely able to find alternative employment, their families suffer from sudden income shocks, their children's education suffers as they have to be taken out of school to support the family and several even enter destitution.

2. Waste-to-Energy or Waste-of-Energy

W2E is hailed as it not only rids us of waste, but also produces, 'clean', 'renewable' energy which can then be used to produce electricity. However, a recent study by the Mayor of Maryland City Council, Ellis Burruss, finds that W2E incinerators actually waste more energy than they produce. He shows this by calculating the energy that goes into manufacturing materials like Plastic, Paper, Aluminium and Food, the energy that goes into recycling the products and the energy that is obtained from its incineration. A table with the relevant figures has been given below.

Table 3 : Energy Balance during Recycling and Incineration of Waste

| Waste Material | Energy Required for Manufacturing (Kwh/Ton) | Energy Obtained from Incineration (Kwh/ton) | Loss of Energy from W2E (Kwh/ton) (1-2) | Additional Energy Required for Recycling (Kwh/ton) | Energy Savings from Recycling (1-4) |
|-----------------------|--|--|--|---|--|
| Paper | 11,699 | 1,875 | 9,824 | 6,442 | 5,257 |
| Plastics | 9,619 | 2,403 | 7,216 | 1,222 | 8,397 |
| Aluminium | 62,512 | 0 | 62,512 | 4,865 | 57,647 |
| Food | – | –4435.78 | 4435.78 | 0 | 4435.78 |

The table shows that when waste materials are incinerated, a lot of energy is waste - energy that went into manufacturing the materials and that could have been saved had the products been recycled, reducing the need for production of fresh materials. The author illustrates his point by saying ‘Burning usable resources to produce a meagre amount of electricity is like burning your furniture to heat your house and then bragging about all the heating oil saved’ (Buruss, 2013). Thus, W2E is criticised even in developed countries, where waste contains much greater proportions of dry ‘combustible’ waste and only 13% of wet waste. In India, MSW is composed of nearly 51% of wet waste, which actually requires nearly 4435.8 Kwh/ton of additional energy to burn.

3. Ambiguous Environmental Impact of W2E

The other problem with the centralised incineration based model is that of environmental degradation due to harmful emissions produced from the plants. W2E companies and governments promoting them have been vociferously campaigning to sell a clean image for the technology. Experiences on the ground have shown otherwise. The Okhla W2E plant in Delhi, promoted by Jindal Ecopolis, has been engaged in a long standing social and legal battle with the residents of nearby areas, who say they are being affected by the emissions from the plant. The battle which took a legal form with the Pollution Control Boards, Delhi Government, Ministry of Environment and Forests and the company, all stacked up on one side, and the neighbouring residents of Sukhdev Vihar on the other, came to some conclusion on 10th September, 2013. The National Green Tribunal found the emissions from the plant to be not meeting environmental standards and said the plant could

face closure if it did not improve pollution control measures in three weeks.

In 2012, the villagers of Mandur and Mavallipuram near Bangaluru were fed up of receiving the city’s waste dumped upon them and began stopping waste carrying vehicles from coming in. Their demands were supported by the Karnataka State Pollution Control Board and the High Court. The civic authorities tried to convince the villagers to allow the waste to be dumped, saying they would soon install a waste to energy plant which would be absolutely clean. The villagers promptly responded saying if the technology was so clean why doesn’t the mayor install the plant in his own garden!

4. Economic Costs of Mechanised Collection and Transportation and Centralised Processing

Finally, there is the concern over the massive economic costs to the economy of such centralised waste management systems. The government of India has already spent millions of dollars on setting up waste processing plants and their operation through private companies in the form of ‘tipping fees’ - payment per tonne of waste disposed. The investment, largely coming from the Ministry of Urban Development through JNNURM and the Ministry of New and Renewable Energy (MNRE) is intended to meet twin objectives - rid cities of their waste woes and produce electricity to meet the burgeoning energy needs of this energy starved nation. Much more similar investment is in the pipeline. However, it is time to step back and assess the performance of all the investment till now. Fuelled up by the Finance Minister’s budget statement in February, 2013, whereby he promised to increase budgetary allocations for W2E projects, cities are heading for a mad rush to adopt and

implement such projects without assessing the performance of earlier such projects. Despite the massive controversy surrounding Delhi's Okhla W2E plant, the Delhi Government has already invested in two other similar projects in Ghazipur and Narela-Bawana.

This is not to say that the traditional model of dumping waste openly was any better. Indeed, as opposed to the open dumping of waste that was universally being practiced by all cities, the use of waste to produce energy is certainly a better alternative. However, it must be recognised that there are alternatives which exist which are much cheaper, much more environmentally friendly and can lead to greater citizen engagement while contributing towards a more harmonious society with responsible citizens and sensitive public service delivery mechanisms.

An Alternative Model for Waste Management - Focus on Recycling, Community Engagement and Decentralisation

1. An Alternative Vision of Waste Management

The conventional system of waste management, therefore, focuses upon getting 'rid' of waste in the least harmful manner. Is it possible to transform our vision of waste management and view waste instead as a combination of different materials and resources, all of which have been made after expending considerable amount of energy and extracting resources from the earth? Is it possible to view waste pickers as skilled workers - whose skill lies in being able to identify recyclable materials, sort them, grade them, and ensure they enter the re-enter the economy as raw materials rather than add to the waste burden and pollute the environment? Is it possible to practically design sustainable systems based on such a transformed vision?

2. Redefining Responsibilities

Implementing an alternative vision, however, would have to begin by redefining responsibilities as well. The draft waste rules mention that the responsibility of the Municipality is "responsible for the implementation of the provisions of these rules and for the necessary infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid waste directly or by engaging agencies or groups working

in waste management including waste pickers". The rules therefore assign no responsibility to the waste generator other than to "avoid littering, deliver the municipal solid waste to authorised agency or waste pickers as notified by the Municipal Authority" and to not burn waste openly.

■ **Segregation :** The task of 'segregation' of waste i.e. separation of dry waste and wet waste is therefore the responsibility of the Municipality which assigns the task to the agency responsible for collection or 'disposal'. However, anyone who has worked with waste realises that it is next to impossible to achieve 100% segregation of wet and dry waste after it has been mixed at the source. Anyone who attempts to do the segregation manually must by default perform a hazardous task since they would have to come in contact with rotting, decomposing organic waste and be exposed to micro-organisms which cause skin, respiratory and gastro-intestinal diseases. The Government has spent, and continues to spend, billions of rupees of public money on large scale waste processing facilities which have ultimately failed because they were dependant on getting segregated waste. In the absence of such waste, the systems ultimately became defunct. The Timarpur Okhla waste processing plant in Delhi, one of the first such plants in the country is the most cited example.

Instead, the task of segregation is best, most easily and efficiently achieved by the waste generator himself or herself. However, achieving source segregation of waste requires policy changes which mandate source segregation and then puts in place an enforcement mechanism to strictly monitor and enforce such segregation. However, such systems are rarely put in place. Instead municipalities make several half hearted attempts and spend lakhs of rupees to ensure segregation without achieving any results. A large amount of public money is spent on distributing two coloured dustbins to all households hoping that simply by distributing dustbins - citizens would start putting wet and dry waste separately. In 2011, the Pune Municipal Corporation distributed white and green dustbins to all households in order to achieve complete segregation of waste. Clearly, the effort yielded no results and waste generators continued to give mixed waste to waste collectors and promptly stacked the other dustbin away or put

them to other uses - such as filling water.

Yet, it comes as a surprise to Municipalities that segregation is not being achieved. When asked why greater levels of recycling are not achieved, municipal officials are promptly ready with their response - 'citizens refuse to cooperate. We have provided everybody with two dustbins but they refuse to segregate'. When asked the same question to the head of service provision at Jawaharlal Nehru University, the official responded 'we have placed two dustbins at every street corner - green ones for organic waste and blue ones for inorganic waste - but people continue to dump mixed waste in both of them'.

Clearly, simply spending money on infrastructure and equipment, particularly dustbins, to ensure segregation is a waste of public money unless it is supplemented with a strict enforcement mechanism.

However, simply enforcing segregation of waste is also not going to achieve higher levels of recycling. Several municipalities, in the belief that segregation is synonymous with recycling, enforce source segregation of waste, while continuing with existing systems of collection, transportation and disposal of waste. Municipal workers or agencies then collect the segregated waste from households and dump it together in their vehicles. Angry citizens quite obviously realise the futility of their efforts and stop segregating altogether.

Instead, the waste management system must be bifurcated, with the two separate streams of waste - wet waste and dry waste - being dealt with in completely different ways. Their systems of collection, transportation and 'disposal' must also be kept separate from each other. Indeed, it may make sense to segregate the systems of managing the two types of waste altogether.

- **Collection:** Wet waste, since it decomposes rapidly in tropical conditions such as ours, must be collected daily. On the other hand, dry waste does not decompose rapidly so it can be collected once in two or three days. Several successive committees have recommended that collection should be done by groups or cooperatives of waste pickers. The High Powered Expert Committee on Reforms in urban waste management had recommended - way back

in 1995 - that collection of waste should be carried out by cooperatives of waste pickers. However, the recommendations have not been implemented in any city, except very few cities where the waste pickers' organisations have been strong enough to negotiate with the city administration such as Pune and New Delhi Municipal Corporation. Even in cities where there are waste picker organisations which have at some point been involved in waste collection, they have been displaced by larger corporations which have greater influence on municipalities. In Ranchi, Nav Bharat Jagriti Kendra (NBJK), a Hazaribagh based organisation successfully implemented a worker centric waste collection model in 34 out of the 37 wards from 2002-2010 when it was displaced as the administration decided to hand over waste management to A2Z Services Pvt. Ltd. Similar were the experiences of organisations working in Pimpri Chinchwad, Ahmedabad and Indore. In Delhi, waste pickers work autonomously to collect waste from residential and commercial complexes.

They purchase their own rickshaw-trolleys, stitch their own sacks and engage in door to door collection. Often, they have to pay money to the government appointed sweepers in the area, for allowing them to collect waste. The usage fees collected from households is also kept by the sweepers. Yet, the waste pickers provide the door to door waste collection service to get access to the recyclable dry waste and earn an income. Once the recyclables have been removed, they have to dump the non-recyclable and wet waste at the transfer station. Often, they even have to pay a bribe to the agency in charge of waste management which manages the transfer station for allowing them to dump non-recyclable and wet waste there. Thus, despite the odds, waste pickers provide waste collection services without any support from government.

However, the Municipal Corporation of Delhi, instead of supporting them in their efforts has contracted out waste collection to private companies which are paid heavily from the public exchequer to run vehicles and collect waste from households - a service which was already being provided free of cost by waste pickers. These vehicles, besides being much more environmentally destructive, employ non-waste pickers who do not have any interest in recycling, and displace the existing waste pickers.

On December 20th, 2012, nearly 300 such waste pickers from the slums of Kapashera, Naseerpur, Kakrola, Matiyala, Rangpuri and Chandra Vihar gathered in front of the office of the South Delhi Municipal Commissioner to protest against their displacement and to demand inclusion into formal waste management systems.

However, the long run success of SWaCH cooperative in Pune and the short lived successes of other organisations have demonstrated that such integration is possible. Waste pickers are highly skilled at recognising recyclable materials, grading, sorting and selling them. When they are given direct access to dry waste at source, they would be able to achieve much greater levels of recycling, would not be exposed to the hazards associated in manually handling organic waste. Dry waste such as paper and plastics which have not been contaminated by coming into contact with organic waste command higher rates in the market as the yield of the recycled product is greater per unit weight of input.

This may not necessarily lead to greater incomes for waste pickers however. It has been observed that when citizens keep wet and dry waste separately, the value of dry waste increases and there is incentive for other intermediaries, domestic servants, guards etc. to also accumulate and sell off high value recyclables for additional income. Thus, while resource recovery would certainly increase, it may not directly lead to additional incomes for waste pickers and safeguards would have to be made to secure a basic minimum income for them.

▪ **Recycling :** The organic waste that is collected can then be recycled locally. If it is an institution, the organic waste can be recycled and used within the institutional complex such as within the housing society, university, college, official complex, commercial complex, market area. Else, the organic waste can be recycled within the ward, colony, etc. in any open space such as in a park or in an empty land. Various local small scale recycling techniques have been developed in recent years beyond the traditional technologies such aerobic composting, vermin-composting, bio-methanation, terrace farming/gardening, use of bioculture for direct application of organic waste to plants, bracketing for making fuel. Concerned individuals and organisations have tested and built

wonderful sustainable models of such local level organic waste recycling. These models need to be promoted on a very wide scale by government policy. Several municipalities have taken initiatives to promote local recycling initiatives. The building codes in Pune, Bangalore and some other cities for instance, mandate the construction of organic waste recycling plants. Further, the housing societies are allowed a 5% rebate on their property tax if they follow 2 out of 3 resource conservation practices viz. rainwater harvesting, composting and sewage treatment.

Several institutions such as the University of Pune, National Chemical Laboratories, the RBI's branch in Pune, the Bhaba Atomic Research Centre (BARC) in Mumbai, Tata Institute of Social Sciences, Mumbai etc. have put in place their own organic waste treatment facilities - thus taking responsibility for their own organic waste and not leaving it for the Municipality. They have employed waste pickers to manage the organic waste recycling facility and have also regularly invest in uniforms, gloves, rakes and other safety equipment for the workers, thus taking care of the occupational health and safety of their workers. Other states must also learn from these practices and made it mandatory for all institutional complexes to recycle their own organic waste.

In February, 2011, Pune Municipal Corporation (PMC), in association with SWaCH, Janwani and other organisations, began work towards creating a 'zero waste ward'. The ward, called Katraj, lies in the south of the city and consists of a population of nearly 10,000 households (approximately 50,000 people). The municipality set up a bio-methanation plant (which converts the organic waste to biogas) within the ward with a capacity to take in 5 tonnes of organic waste per day which recycles all of the ward's organic waste. Waste pickers are engaged to collect segregated wet waste from households and commercial establishments. Waste pickers are also provided a sorting shed where they are able to sit and sort through the day's collection of dry waste, store it for a few days and sell it when enough has been collected. In a bid to show that the problem of plastic waste is a problem of mismanagement and not a problem with the material per se, the Maharashtra Plastic Manufacturers Association (MPMA) also joined hands in the zero waste

project. Representatives of MPMA would buy the low value, non-recyclable plastic waste (wrappers, thin plastics etc.) and convert it into ply boards which would be sold in the market. A tractor comes to the ward to collect the non-recyclable waste from certain locations and transport it to the W2E plant. The model received an ISO certification in 2012 - the first of its kind for a decentralised, sustainable zero waste model. Following the success, PMC decided to replicate the model across 25 other wards in the city (out of a total of 152 wards).

The initiative has shown that a ward can be an effective administrative unit for managing all the waste generated within itself. If separate streams of waste are collected separately, the organic waste can be recycled within the ward, while waste pickers can sort, grade and sell the recyclable dry waste. The only waste which is required to be 'transported' in such a case is the non-recyclable dry waste. In such a case, the amount of waste to be transported reduces tremendously, thus reducing not only economic cost to the municipality but also huge environmental costs from transportation of tonnes of waste on diesel vehicles across the city every day.

States must learn from this small scale experiment and create a policy framework which facilitates the replication of such decentralised waste management models. Promoting such a model would also help operationalise the 74th amendment to the constitution in its true spirit. The Karnataka Municipal Corporation (Ward Committee) Rules, 2013 is an excellent example of a policy which empowers citizens and creates more participatory local governance which must be promoted through other state and central rules as well.

Besides decentralised organic waste recycling, cities must also provide spaces for waste pickers to sort, grade and store recyclable waste. Waste pickers face huge problems trying to find space where they can sort waste according to different categories - paper, cardboard, plastic bottles, glass bottles, metals etc. Further, in the absence of space for storing the waste, they are often compelled to sell it off every day, thus earning lower rates and recovering much less than they could. The benefits of providing a decent space for sorting and storing of recyclable scrap to waste pickers have been proved to be manifold - it acts as a space to sit together, discuss, have lunch,

thus improving their nutritional health; it reduces conflict between waste pickers and citizens as they are not forced to spread waste out in public spaces such as busy streets and sidewalks; it also increases the rates that they can demand as they are able to sell in bulk; finally it increases recovery rates as they can spend more time sorting and grading scrap in a more relaxed manner. Given the known benefits from such sheds, SWaCH, in association with Pune Municipal Corporation, has provided nearly 45 sorting sheds to waste pickers in different parts of Pune. While some of them were not well designed and hence find little use, SWaCH has managed to perfect a low cost design over time. These better designed sheds are loved and used by numerous waste pickers. These sheds, which the waste pickers fondly call their 'office space', enhance the working conditions of nearly 280 waste pickers in Pune. These lessons, gained over more than a decade of trial and error, are invaluable lessons which need to be studied and replicated throughout the country through appropriate policy and investments.

Conclusion

It can be shown that this alternative model of waste management would lead to tremendous social, environmental and economic gains for society in terms of increased employment for people, massive environmental benefits and huge economic gains to society in terms of savings to the government and recovery of resources. However, adoption of the alternative model of waste management requires political will and an increase in public consciousness regarding its benefits.

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The New Age Business Analyst: Managing Business Analysis for Agile Development

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Abstract

Rapidly changing market conditions are requiring companies to shorten delivery cycles and become more responsive to customer expectations. Agile development methodologies are leading the way, helping software development teams adjust to the new economy. Agile challenges our notion of software engineering best practices, project management methodology, and how we lead our teams. The Agile movement impacts every role on a project team differently and creates opportunities to learn new skills and develop new ways of working together. Agile development is having a significant impact on the Business Analyst community. Agile introduces a significant shift in how teams look at requirements and when they are defined in the process. Agile Business Analysts are an integrated part of the team throughout the life of the project and facilitate collaboration across a broader cross section of the project team and the business. Collaboration, facilitation, leadership, coaching, and team building become significant new skills required for Business Analysts on Agile projects. Leadership and collaboration are key components critical to their success. With these new skills and new ways of looking at the development process, Business Analysts are well positioned to become critical to the success of Agile teams.

Keywords : Agile Development, Agile on conventional project, Collaborative requirement, New Business Analysis skills, Project management.

Introduction

Business analysts are responsible for discovering, synthesizing, and analyzing information from a variety of sources within an enterprise, including tools, processes, documentation, and stakeholders. The business analyst is responsible for eliciting the actual needs of stakeholders—which frequently involves investigating and clarifying their expressed desires—in order to determine underlying issues and causes (BABOK v 3.0, 2015).

Agile software development evolved in response to deficiencies with document-heavy waterfall development. It is useful to begin by outlining some of the limits of the traditional approach to requirements before moving on to the main subject of this article, Agile Requirements (Davies, Rachel, 2005).

Moving from traditional project work to agile project work will impact each functional role on a project team differently:

- For Business Analysts (BA), successfully managing an agile project depends on defining

requirements in smaller increments and working more collaboratively with the team through the life of the project.

- For Project Managers, success moving to Agile development methodologies depends on acquiring the skills necessary to progressively plan a project through its lifecycle rather than at the onset. Project Managers will also need to adopt new ways of understanding project control and risk.
- For Quality Testers, evolving to an agile framework will mean developing the skills necessary to write tests and validate code in parallel with development.

This paper will explore the impact agile development methodologies are having on the BA community, what new skills are required, and what BAs can do to ease the transition.

Conventional Requirements Definition

Business Analysts are conditioned to believe that they can and should define detailed requirements

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at the beginning of a project. Inherent in this philosophy are several challenging assumptions. Traditional requirements analysis:

- Assumes that the customer can definitively know, articulate, and functionally define what the system or software should do at the end of the project
- Assumes that, once documented, the requirements will not change – at least not without potential project delays, budget overruns, or stunted feature sets
- Assumes that the requirements process is confined to a single product owner who sits apart from the development team envisioning the product
- Does not acknowledge the inherent uncertainty in software development that Agile methodologies seek to embrace

Experience tells us that these assumptions are faulty. As we learn more about the evolving system, our knowledge will influence the system we want to build. The process of building the system helps the team learn more about what is possible. The very act of creating the requirements will cause them to change. Agile methodologies encourage us to embrace this kind of adaptation in our projects. We begin to realize that change really is good, it helps us deliver greater value to our customers and attempting to define everything up front results in constant change management. To fully understand the impact that Agile has on the Business Analyst role, it is helpful to understand how Agile projects are run.

Agile Project Management

Scrum is a process framework that has been used to manage complex product development since the early 1990s. Scrum is not a process or a technique for building products; rather, it is a framework within which you can employ various processes and techniques. Scrum makes clear the relative efficacy of your product management and development practices so that you can improve (Schwaber, Ken. Sutherland, Jeff, 2016).

Agile Project Management assumes that the processes required to create high-value working software in today's economy are not predictable:

requirements change, technologies change, and individual team member productivity is highly variable. When processes are not static and outcomes cannot be predicted within sufficient tolerance, we cannot use planning techniques that rely on predictability. Instead, we need to adjust the processes and guide them to create our desired outcomes. Agile project management does this by keeping progress highly visible, frequently inspecting project outcomes, and maintaining an ability to adapt as necessary to changing circumstances.

The benefits of Agile Project Management are derived in part by placing a tremendous amount of responsibility and accountability on the individual team members. There is an understanding that great teams build great software and those teams should be trusted and empowered to deliver. A good Agile Project Manager (PM) is an enabler of the team. The Agile PM helps the team stay focused on the larger business issues and removes obstacles that impact the team's ability to deliver. The focus is on the team because ultimately the team is on the hook for delivery.

Agile teams require people with greater flexibility, greater discipline, and the willingness to work in an evolutionary manner (Scott W, Ambler 2015). Because Agile teams are self-organizing and empowered, the Agile PM focuses more on leadership than in a traditional development environment. Skills such as facilitation, coaching, and team building become key components for project success. The PM is creating a culture of empowerment and trust, and an environment where individuals are motivated to contribute to the team's success. Agile Project Managers focus less on assigning tasks and managing the plan and more on maintaining the structure and discipline of the Agile team; trusting that through visibility, inspection, and adaptation the team will deliver the desired results. This philosophy change the role of the BA for how requirements are gathered, distilled, and managed (Mike Cottmeyer, V. Lee Henson, 2011).

Collaborative Requirements

As opposed to traditional requirements gathering, where the BA primarily works with the product owner to collect specifications, agile team members

from all disciplines are involved in defining project requirements. Technical team members and Quality Assurance (QA) collaborate with the product owner and the BA to develop the project specifications; each bringing their skills and experience into this collaborative process. Increasing the level of interaction ensures the team develops specifications that can be built and tested within the overall project constraints.

To effectively deal with scope on an Agile project, specifications must be considered in two dimensions: breadth first and then depth. It is essential that we understand the breadth of what we want to build early in the project. Dealing with the breadth of the solution helps the teams understand scope and cost and will facilitate estimating and release planning. The breadth of a project begins to frame the boundaries of the project and helps to manage the organization's expectations. Looking at the breadth of the requirements is a much smaller investment of time and resources than dealing with the entire depth. The details are most likely to evolve as we progress through the project so defining them early has less value.

Having a solid understanding of the breadth of project requirements early in the lifecycle helps the development team begin to define the set of possible solutions. The Business Analyst plays a key role facilitating the conversation between the product owner, executives, the technical team, and the QA team. The BA is a key player in ensuring that the full scope of requirements has been defined and balanced by an overall technical understanding of the solution.

Once the team has established the breadth of the solution, it is time to begin incrementally looking at the depth of the solution. The BA will typically take the lead helping the team bring the requirements down to this next level of detail. To incrementally look at the depth of the requirements, we have to abandon our traditional notions of the Marketing Requirements Document (MRD), Product Requirements Document (PRD) and the list of "the system shall" specifications. Instead, we focus on how the system is going to behave in future.

To manage requirements effectively in a conventional and traditional environment, Business Analysts sort through many-to-many

(M-to-M) relationships between business design, and specifications elements. Because of complex interactions among these M-to-M relationships, requirements management industry had created tools to trace their interdependence among them. BA will track the impact of any requirement change to its corresponding design element or from a change in design element back to requirement. This process can get even more complex when one traces into the software component and test results.

Agile Requirements

Depending on the level of formality required by an organization, BAs will want to consider using either use cases or user stories. Agile methods typically tend to be "lighter weight" specifications and requirements are written as user stories. A user story is a high level description of system behavior. It is not a full specification of the requirement but a placeholder for conversation about the requirement. The user story will be fully specified as it is brought into an iteration or development cycle. Once delivered, a user story represents a fully functional (although possibly incomplete) slice of the overall system. Several in the agile community have suggested guidelines to help us determine what makes a good user story. Bill Wake defined the INVEST model for requirements definition (Heap, Tony (2011).

Independent

- Avoid dependencies with other stories
- Write stories to establish foundation
- Combine stories if possible to deliver in a single iteration

Negotiable

- Stories are not a contract
- Too much detail up front gives the impression that more discussion on the story is not necessary
- Not every story must be negotiable; constraints may exist that prevent it

Valuable

- Each story should show value to the Users, Customers, and Stakeholders Estimable

- Enough detail should be listed to allow the team to estimate
- The team will encounter problems estimating if the story is too big, if insufficient information is provided, or if there is a lack of domain knowledge

Sized Appropriately

- Each story should be small enough to be completed in a single iteration • Stories that may be worked on in the near future should be smaller and more detailed
- Larger stories are acceptable if planned further out (Epics)

Testable

- Acceptance criteria should be stated in customer terms
- Tests should be automated whenever possible
- All team members should demand clear acceptance criteria

Managing Agile Requirements

To effectively manage requirements in a traditional environment, BAs sort through the many-to-many relationships between business needs, specifications, and design elements. Because of the complex interactions between these many-to-many relationships, the requirements management industry has created tools to trace their interdependencies. Out of necessity, the Business Analyst will track the impact of any requirement change to its corresponding design element, or likewise, from a change in a design element back to the requirement. This process can get even more complicated when one traces into the software component, tests, and test results.

Agile is focused on driving toward simplicity rather than creating systems that manage complexity. What the Agile methodologies are also doing is that they are forcing requirements to be decomposed much earlier in the lifecycle such that their scope can be understood and mapped to an Epic or User Story in the backlog to be prioritized (McLean, Caterina, 2011). Because of the nature of agile requirements, we have a planned independence between features. Design is contained within the user story and each

story is able to be tested independently, eliminating the need for complex requirements management tools. Agile teams will frequently use specialized management tools to track requirements and manage them through the development lifecycle.

Teams and organizations can also use analysis to determine the right things to deliver, and the things not to deliver. Because most of the agile frameworks do not mention this, they defer that responsibility to a specific role, without much insight into how to do it (McDonald, Kent, 2017).

New Analysis Skills for BA

Much like the Agile Project Manager, the Agile Business Analyst will rely much more on people facilitation skills than they may have on traditional projects. The BA's role is to facilitate a discussion between the product owner and the technical team. The BA will typically bring a tremendous amount of system knowledge to the discussion and is well positioned to draw out functional requirements from the product owner. BAs can also help translate user needs into more technical language for the developers.

In addition to facilitation, coaching, and team building, the agile BA needs to think about the software development process in new ways. Agile encourages us to decouple the breadth of the solution from the depth of the solution in order to continuously deliver smaller increments of production-ready code. This can present a challenge for some analysts making the transition to Agile and will create opportunities to learn more about how to write feature driven requirements. Developing a good understanding of software architecture concepts will help bridge the gap between the development team and the business and enable the Business Analyst to show how features will be implemented in the resulting system.

Finally, understanding Agile team dynamics and collaborative decision-making techniques is important in part because agile requirements definition involves more than just the BA and the product owner. These skills enable the BA to accept input from all the team members, specify a more robust solution that meets the evolving needs of the business, and help create a strong sense of confidence that the solution can be delivered to

market.

Agile BA will basically depend on facilitation skills of people instead of on conventional projects. BA's role is to conduct a discussion between product owner and software development team. BA will bring a tremendous amount of system and domain knowledge to the discussion and is positioned to get functional requirements from product owner. BAs help to translate user requirements into more technical language for the development team. Apart from coaching, facilitation and team building, agile BA needs to think about the software development process in new and non conventional ways. Agile helps us to decouple breadth of the solution from the depth of the solution to deliver smaller increments of production-ready code. This can cause a difficulty for some analysts making the transition to Agile from traditional way and will create opportunities to learn about how to write feature (functional) driven requirements (Scott W, Ambler, 2015). BA can be asked to work on an agile project as the project has a high need for written functional specifications and design documents. In both case, BA primary role is to conduct understanding and communication.

While it is ideal is to have a product owner or an on-site customer, for many teams this is not possible. For those teams, the BA may have to fill the role of a customer proxy. Having the role of the customer proxy puts a significant amount of additional responsibility on the role of the BA. In this scenario, the BA is asked to understand the needs of the customer and translate those needs to the development team. This model introduces risk because the true end customer is not directly involved with the people developing the product. The BA can mitigate this risk by encouraging the product owner to review the evolving system as frequently as possible.

Agile on Conventional Project

The Business Analyst is not the one who usually decides whether the project moves to agile or not. However, given the BA's critical role on the project, there is often quite a bit they can do to help set the stage for an agile transition. The BA can encourage collaboration between the product owners and the technical teams. This will ensure that requirements are balanced and feasible (Avsharn Bachoo, 2006). This will go a long way toward

managing expectations and helping the product owner understand the cost of the solution they are conceiving. The BA can begin to demonstrate the value of loosely coupled functional specifications and begin introducing use cases or user stories to the team. Even where the specifications are completed up front, the development team will derive value from a clear functionally-driven specification. The system will be easier to develop and easier to test, and traceability will be a non-issue. If the software development team has a dedicated QA function, agile requirements will enable the functional testing process. Test plans can be derived directly from functional organized specifications.

Conclusion

Success in today's economy requires us to respond quickly to ever changing market conditions. Traditional product delivery methodologies cannot deliver fast enough in highly uncertain project domains. Agile processes allow teams to meet the changing demands of their customers while creating environments where team members want to work.

The BA role on an Agile team is not always obvious but it does exist, hiding behind an alias like Product Owner or Customer. The role is essential in allowing the team to meet business goals and maximize business value (Allan, Kelly, 2010).

The Business Analyst can play a key role on an agile team. To be successful, BAs first need to shift their traditional thinking about requirements. Additionally, BAs need to consider learning new skills for writing requirements and new techniques for managing them. Success will depend largely on how well BAs adapt to these new ways of working with requirements, setting up teams, and using group collaboration.

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A Study on Training and Development in Central Coalfields Limited, Ranchi

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Abstract

Energy requirement has been the basic pushing factor for the establishment and growth of almost all industries. Coal is the dominant energy source in India and has been the best alternative source of energy particularly for electricity generation. The Central Coalfields Limited (CCL), is very much concerned about its human resources and arrange for necessary training and development programmes through its human resource management department. The present study aims at examining the role of training in developing human resources and understanding how the organizational and individual development need integrated through the training system. Whether the employees benefitted from training and development at the CCL has been examined by sample survey of fifty employees (executives) who have undergone training. The survey data sufficiently indicates that the employees of CCL feel that the training and development system of organization is beneficial to the employees as well as for the organization. The study emphasizes the need for making the employees aware of the training programmes of the organization and creating system to evaluate the effectiveness of training and development programmes for the greater benefits of both employees and the organization.

Keywords : Central Coalfields Limited, Human Resource Development Department, Training and Development, Training Practices.

Introduction

In recent years we have seen great advancement in almost every industries and every such advancement needs some basic pushing factors. One most important among these pushing factors is energy requirement of the firms. Whether the case is of bigger companies like few major public sector companies or the smaller and medium size companies in India, they all require energy to meet its production and other requirements.

Coal is the dominant energy source in India, accounting for more than half of the country's requirements. About seventy percent of India's Coal production is used for power generation, with the remainder being used by heavy industries and public use for domestic purposes. However, in the late 20th Century, oil, gas, nuclear power or renewable energy sources are being used as an alternative form of coal for generating electricity and industry uses. But coal remains an important

energy source, due to its low cost and abundance as compared to other fuels, particularly for electricity generation. Coal mining in national sector started in October 1, 1956 with the establishment of National Coal Development Corporation (NCDC), with 11 state Railway collieries with annual production of 3.11 MTs. After Nationalization of non-coking coal sector in 1973, NCDC became the central division of Coal Mines Authority Ltd. (CMAL). Again in the year 1975 with the Re-organization of CMAL as Coal India Ltd., central division of CMAL was known as Central Coalfields Ltd. (CCL). It is a Category-I Mini-Ratna Company since October 2007. During 2011 – 12, Coal production of the Company reached the highest ever figure of 47.08 million tones, with net worth amounting to Rs. 2644 crore against a paid-up capital of Rs.940 crore. CCL is one of the nine subsidiaries of Coal India Ltd., the central authority in Kolkata as shown below in Figure – 1.

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CCL, Ranchi, One of the Subsidiaries of CIL, Kolkata

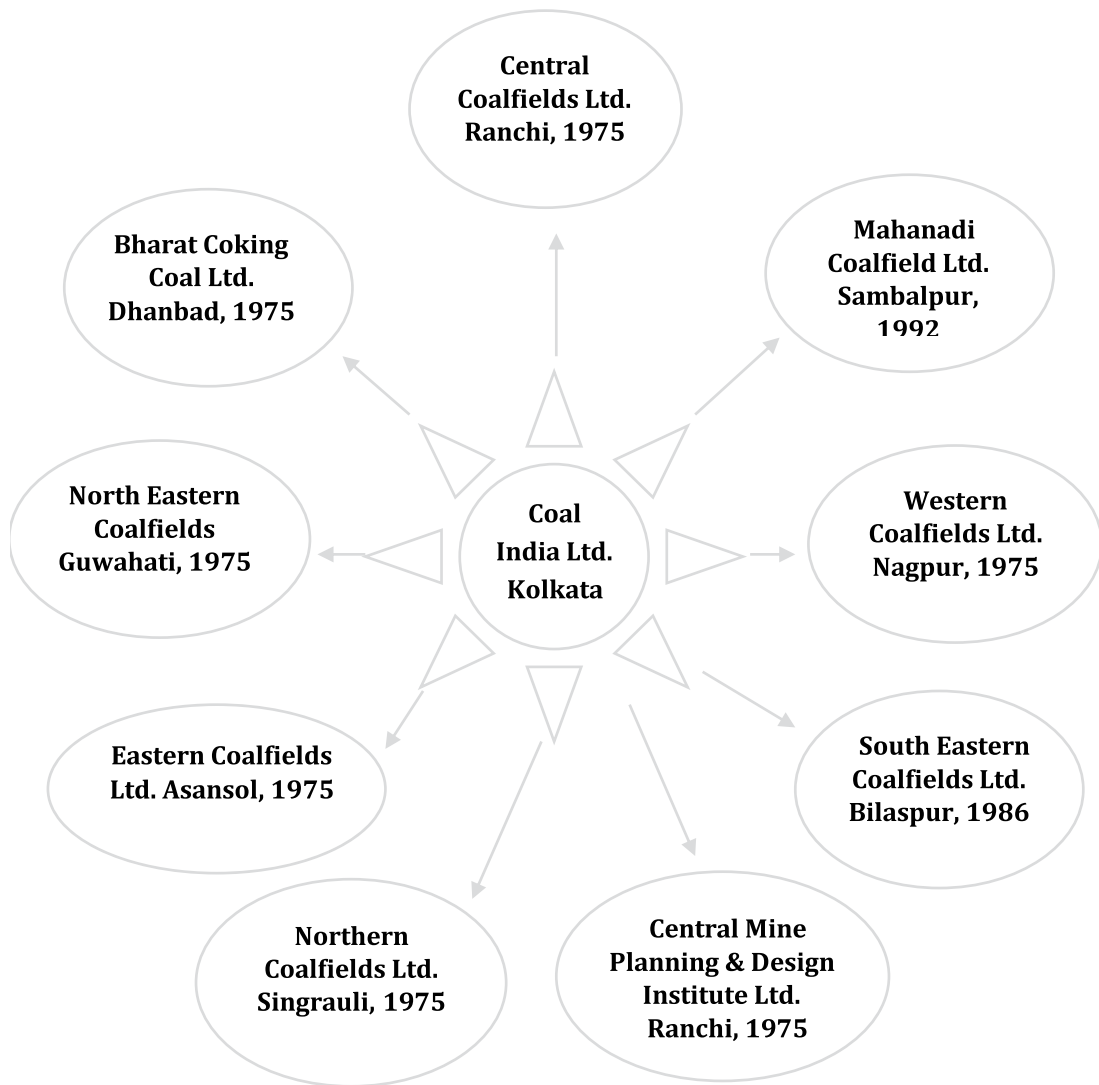


Figure - 1

The CCL is very much concerned about its Human Resources. In order to fulfill the growing need of coal, CCL utilizes their human resources at its highest potential. They treat their employees as a major factor of production, which continues for improvement. Human Resource Management (HRM) department in coal sector has been setup to deal with the development of existing as well as newly inducted human resources, with reference to technological advances and to fulfil demand of production technology.

Objective, Data and Methodology

The present study intends to study the training and development in CCL with the following objectives.

1. To examine the role of training and Development practices in organisations.
2. To know and understand how the organizational and individual development need integrated through the training system.
3. To know whether the employees benefitted from training and development at the CCL.

Both primary and secondary data have been used. The primary data collected from the personal interview of randomly selected fifty employees (executives) who have undergone training. The questions related to training and development were asked to the selected respondents. The major secondary data includes the CCL Annual Report, CCL in House Journals, information given by the Executives of CCL and CCLO website.

The major research question asked to the respondents was “the training and development system of CCL is beneficial for the growth of employees as well as for the organization.” The information collected was processed to get the result in terms of percentage of respondents—strongly agree, agree, and disagree and are presented.

The Concept and Role of Training and Development Training

According to traditional approach, most of the organizations before never used to believe in training. They were holding the traditional view that managers are born and not made. There were also some views that training is a very costly affair and not worth. The organizations used to believe more in executive pinching. But now the scenario seems to be changing. The modern approach of training and development is that Indian organizations have realized the importance of corporate training. Training is now considered as more of retention tool than a cost. The training system in Indian industry has been changed to create a smarter workforce and yield the best results (Raheja, 2015, p.35).

Training is short-terms education process utilising a systematic and organized procedure by which non-managerial personnel learn technical knowledge and skills for a definite purpose. Development, in reference to staffing and personnel matters, is a long-terms education process utilizing a systematic and organized procedure by which managerial personnel learn conceptual and theoretical knowledge for general purpose (Grubb, 2007).

Training is the most important subsystem which contributes directly to the development of human resource. According to Prasannasai (1993) and Rao

(1986) it is the most frequently used subsystem of Human Resource Development (HRD). Many of the Indian organizations equate training with HRD and limit HRD activities to training only.

According to Mani (2002) training for staff constitutes a process that gives specific knowledge and skills and also behaviour in purpose to let the staff skilled and be able to perform their responsibilities better relevant with the standard. In this case, development has broader scope. It may form to upgrade knowledge that will be used soon or frequent for future interest. Development is often recognized innexplicit for management development, organization development and personal development. However, it mainly focuses on management development. On the other word, it does not focus on current and future job, but on long-term organization need accomplishment (Kuvaas, 2011).

Training plays active role in increasing efficiency of employees in an organization. Training increases skills for doing a job in a better way. This becomes most important especially in the context of changing technology because the old method of working may not be relevant. Training also increases employee's morale by relating their skills with their job requirements. Trained employees can see job in more meaningful ways because they are able to relate their skills with job. Besides trained employees require less supervision, they maintain organizational viability and flexibility.

Training is beneficial to both individual as well as the organization. Training helps the individual in making better decision taker and effective problem solver. Besides increasing the motivational level of an employee it helps individual to increase job satisfaction and recognition, handling stress, tension, frustration & conflict and encouraging and achieving self-development & self-confidence. At organization level, training helps create a better corporate image and help employee identified with organizational goal and increased productivity. Training also helps organization to create an appropriate environment for growth and business excellence. The role of training is depicted in Figure – 2 below.

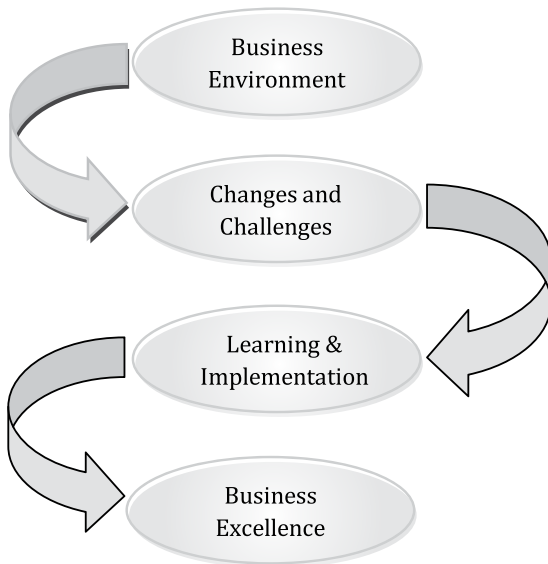


Figure - 2

Training and Development

The training and development can be defined as planned effort from the organization to improve staff's knowledge, skills and competence. Training

and development are two same concepts i.e. to improve knowledge, skills and capabilities. However, concerning on the objectives, these two concepts are distinguishable, Training is focused more on capability improvement for current specific purposes, while development for future job where the process is carried out in integrative ways with other activities to better work behaviour (Mulang, 2015, p.196-197).

According to Vinesh (2014) training and development are broadly defined as those activities aims at raising the standards of employee practice and thus lifting the quality of the employees, customers learning and organization experiences (Vinesh, 2014, p.2018).

The right training can ensure that the business has the right skills to tackle the future. It can also help attract and retain good quality staff, as well as increasing the job satisfaction of those employees who are presently with the organization leading to competent managers. The process of transferring input in to output through training and development programs is shown below in Figure-3.

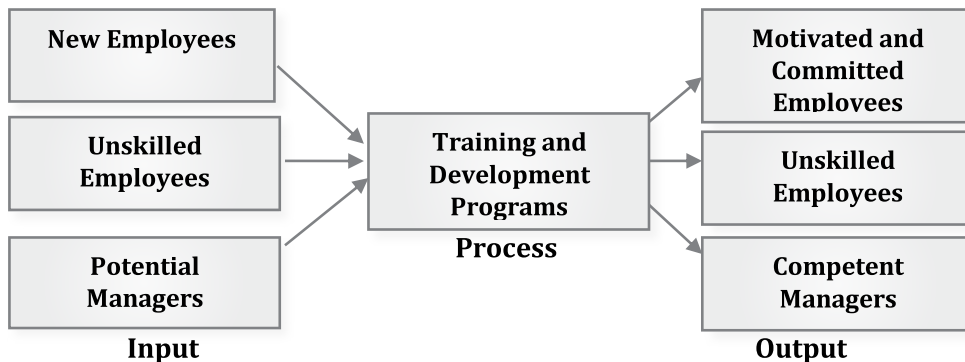


Figure - 3

The output of training and development will open an opportunity for individual career development. In this context, career development or promotion is specified by ownership or skill qualification. When has a hard time, it tends to lower head counts; thus, training and development strengthen individual through job security warranty by virtue of competence acquisition. The organization requirement covers:

- Training and development have the potential to improve labour productivity;

- Training and development can improve quality of the output, a more highly trained employee is not only more competent at the job but also more aware of the significance of his or her action;
- Training and development improve the ability of the organization to cope with change; the success implementation of change whether technical (in the form of new technology) or strategies (new product, new market, etc.) relies on the skill of the organization's member (CSmither, et al. 2005).

Billimoria (2013) has, however, noted that “It will be useful to remind ourselves that training effort is not complete with mere determination of training needs or selection of trainer, or holding of training programmes. But one has to go beyond this. This training objective is only attained if the skilled knowledge/know-how reaches the lowest possible level and this results in application of the perceived advantage of the organization and to the trainee. This is the primacy of the feedback (Billimoria, 2013, p.49).

According to Pandey et al. (2014), Training is an important factor in every organization's business strategy, but organizations don't assess the impact of training programme over the employees all the time. Training is effective only if it produces desired outcome. When the organization is implementing a training programme, there should be an ideal forum on which the evaluation method can be built and assessment of effectiveness of training and development activities can be done (Pandey et al. 2014, p.1.).

Training Practices in CCL

There are altogether six training centres of human resource development department of CCL. Different types of training programmes both for executives and non-executives at different training centres are being organised. The main areas of training include management training, technology training, general

development training and transformation training.

The training process at CCL involves need assessment of training, develop training objective, design training programme, conduct training and development and evaluation & effectiveness of training.

The 3 tier training structures by CCL are as under

- In the 1st tier the semi-skilled and unskilled workers are being trained at Vocational Training Centres.
- In the 2nd tier the semi-skilled and skilled manpower are being trained at Central Excavation Training Institute & Bhurkunda Technical Training Institute.
- In the 3rd tier training is mainly meant for junior and middle management level employees, which is being imparted at Management Training Centre.

Besides the above mentioned training centres two other institutes namely – Security Training Institute and Institute of Occupational Medicine & Hygiene also impart the training to the employees of CCL.

Survey Result and Discussion

Question : “The training and development system of CCL is beneficial for the growth of employees as well as for the organization”.

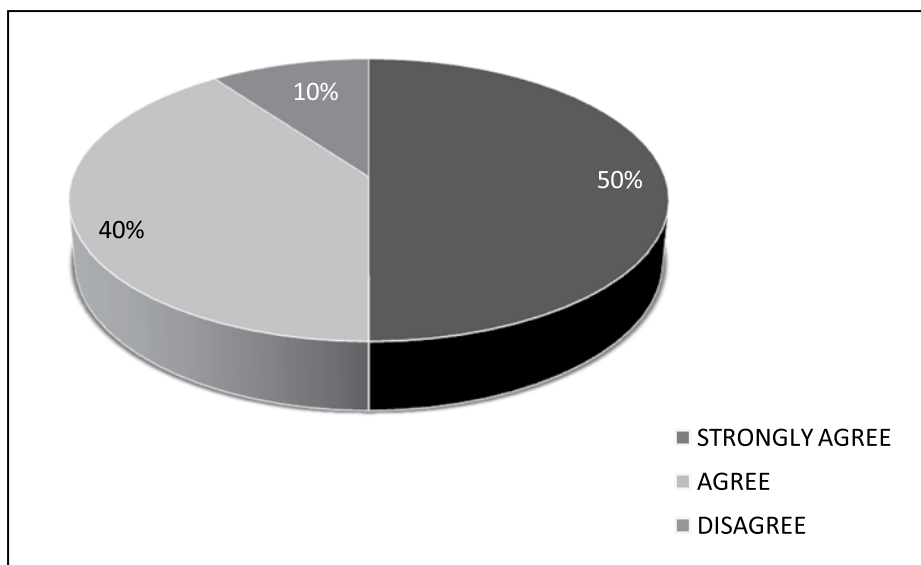


Figure - 4

Above figure indicates the extent of success of the training programmes at CCL. As per analysis 90 percent of the respondent executives (50% strongly agreed & 40% agreed) expressed that the training and development system of CCL is beneficial for the growth of employees as well as for the organization and only 10 percent were not in agreement with it. This may be due to the fact that the employees of CCL are comfortable with training and development programmes of the organization as it solves almost all problems of the employees towards their work needs.

Conclusion

The study sufficiently indicates the positive role of training and development in the organization under study. The survey result indicates that the employees are comfortable with Training and Development programmes of the organization as it solves almost all problems of the employees towards their work needs. The survey report sufficiently indicates that the employees of CCL feel that the training and development system of organization is beneficial to the growth of employees as well as for the organization. The study emphasizes the need for making the employees aware of the training and development programmes of the organization and creating a system to evaluate the effectiveness of training and development programmes for greater benefits of both employees and the organization. The management should also take into consideration the training need of each workers, formulate favourable training policies and act as appropriate.

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