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From the Editor

This Issue, containing 12 articles and one case study, broadly caters to the requirements vis-à-vis the objective of the Journal and expectation of the readers. While it covers a complete set of domains of Management, lucid presentation and contemporary touch of each of its components interprets and offers pertinent inputs on those domains. I solemnly aspire that each article and the case study incorporated in this Issue will receive ample adoration from the readers. However, our efforts to make this Journal well-furnished with all required inputs to be par excellence will not yield any result unless we get the feedback from the readers and hence towards the end of the Issue, a feedback form is placed with a request to all the readers to send that back after filling that in.

In a competitive environment, it has been an exceedingly tough task to gain advantage ethically both from personal and professional/business perspective. Still most of us as a person or as an organization are getting accustomed to high level of competition and absence of that makes us feel uneasy and suffocated. In fact, while for addiction to competition, some individuals and organizations keep on upgrading themselves to prove and be a fore-runner in the crowd, some others, at the same time, lose the tempo and get fascinated with unethical practices in order not to lose their identity. Moreover, Competition among information technology-based organizations, changing technologies, and ever-increasing customer expectations create multi-dimensional project management challenges. Prof. Soumendra Narain Bagchi and Prof. Rajeev Sharma, two authors of the article "Organizational Capabilities for Operating in a Multi-Project Mode" have presented a model that explicates the complexity within a single project, and then extrapolate it for a multi-project environment.

Tourism is one of the important sectors of any state's success in economic front. While the growth of tourism depends on the satisfaction level of the tourists, among other factors, the most important one that decides the tourists' satisfaction is restaurant services of the tourists' spots. Three authors Dr. R.H. Taxak, Mr. Naveen Kumar and Prof. Sanjay Kumar Mangla of the article 'Tourists' Satisfaction about Restaurants' Services: a Study of Haryana Tourism

Complexes on NH-1 in Haryana' have lucidly presented a micro case for the justification of the concept.

The slogan 'Conserve Energy' has been alerting us from a dead-weight apprehension of exhaustion of energy required for existence of human-being. At this juncture, India's solar energy mission has undoubtedly been a ray of hope for positivity and growth without apprehension. Still the apprehension related to energy persists. Dr. Dipankar Dey, the author of the article titled 'Major challenges before India's Solar Energy Mission: a political economic analysis' has put forth the most contemporary challenge before the state to restrain large transnational corporations and exercise its sovereign authority to ensure energy security of its citizens.

In the context of growth and development, human resource plays a vital role and hence human resource management has been a pivotal function of any organization or state. But effective human resource management takes place only through advanced information system. Dr. Arjita Jain in her article 'Study on Effectiveness of Human Resource Information System (HRIS) at Vistaar Technologies (Mumbai)' has gone for a micro study to reveal effectiveness of HRIS.

Effect of economic growth of any state if trickles down to grass-root level, we experience the feeling of economic development of that state. To ensure that, the concept of self-help group has come up in India and to finance those groups, the micro-credit provision has been taken up. However, in order to realize the benefits of this provision, it is the right time to assess the economic impact of the concept. Thus, the article titled 'Assessing the Economic Impact of the Self Help Group Based Provision of Micro Credit with Reference to Purulia District, West Bengal' of Prof. Aniruddha Das is a micro study in this regard to validate any so-called claim with respect to micro-credit for self-help groups.

Entrepreneurship in recent time is gaining a lot of emphasis due to emerging competitive economic scenario. It has been observed that efforts on entrepreneurial initiatives in education sector are not

up to mark. Realizing the fact that Social Entrepreneurship is the need of the hour, Prof. Shitika and Dr. Sunita Tanwar have tried to correlate the existing strategies for entrepreneurship development in Business organization with their strategic deployment in educational sector in their article titled 'Social Entrepreneurship: An initiative from Academics'.

While we speak on growth and development, the fact stands relating to deprivation and starvation in India. In spite of India's better performance in economic front, a reasonable size of India's population still struggles for food. At this juncture, from its exterior, National Food Security Bill, 2013 of the govt. has undoubtedly been an encouraging step. However, like many such Projects and Bills in India, this Bill is just operative in pen and paper or beyond, is to be tested. And hence Ms. Tania Chourasia and Dr. Surya Rashmi Rawat in their article 'Socio-Economic Aspects of the National Food Security Bill, 2013' have critically examined the Bill for the purpose.

Budget plays a vital role in any planned or mixed economy. If it's a mixed economy like India, formation of Budget is more critical than its importance. While heads of expenditure get determined in free-hand, determination of heads of revenue gets tied with a lot of constraints like taxable capacity and benefits to taxpayers. Toll fee is such a component of public revenue of India that has been drawing the attention from many fronts for its why and how? The article titled 'Conceptual Framework of Performance Indicators for Operational Performance of Toll Roads' contributed by Prof. Nagarjuna P. and Dr. P. K. Samanta is a modest attempt to identify various indicators manifesting the performance of the toll road organization.

Dynamism has made it a trend from the consumers' perspective to use a product or service just for a short period and expect something upgraded or new in lieu of the old one. This has been aptly tapped by the producers developing new products through innovation. While some new products click and get appreciated by the consumers, some other new products fail in the same market. The article 'Innovation and New Product Development: Why Do New Products Fail?' contributed by Prof. Gopaldas Pawan Kumar attempts to provide some plausible reasons with appropriate examples behind failure of new products, wherever possible, and also few

solutions to avoid pitfalls to enable improve the success rate.

As such managing a heterogeneous group is difficult but if the heterogeneity is pertaining to varied cultures and languages, management becomes more intricate. Since India is having diverse cultures and languages, organizations in India also have stakeholders from varied cultures. Still India and its organizations have been succeeding to maintain unity in diversity. However, the sail has not been smooth all through. Thus, it is vital to have inter-cultural communication for effective and sustainable result. Prof. Chetna Sinha in her article titled 'Intercultural Communication: Key to Diversity Management' has tried to understand the complex nature of communication and hopes to comprehend the essential interface between international commerce, culture, communication, synergy and the global organization.

Mr. Yunus Hayat Khan in his article titled 'Passing the Baton: Succession Planning or Succession Development?' has lucidly advocated the Chair persons and Distinguished Business Owners to call it a day and handover the "baton" to the legal heir or senior leadership team member, who are the true aspirants for the top job, which are more of Success Factors. Ms. R.Sathya in her article titled 'An Analysis on the Effect of Consumer Factors towards Purchase of Private Label Food and Grocery Items in Chennai Region' has tried to reveal that it is managerially important for both manufacturers and retailers to improve on quality of their product and reduce the quality gap of their private label brand as compared to the national brand.

The Case Study 'Municipal Solid Waste Management: A Challenge for Sustainable Development of Cities' contributed by Prof. Nagapavan Chintalapati and Prof. Sumit Kumar Sinha is a good attempt to validate the urge of 'Swachha Bharat Abhiyan' of Govt. of India.

I sincerely wish ingenious minds behind the contents of this Issue accommodate the expectation of the readers.

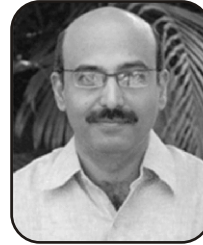


(Dr. Sukanta. Chandra Swain)
Managing Editor

Organizational Capabilities for Operating in a Multi-Project Mode



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Competition among information technology-based organizations, changing technologies, and ever-increasing customer expectations create multi-dimensional project management challenges. Apart from these, project specific complexities require higher order organizational project management capabilities, especially in a multi-project operating environment. Absence of the same would mean either organizational success or failure. In this paper we present a model that explicates the complexity within a single project, and then extrapolate it for a multi-project environment. This model has implications for the managers in software organizations for their training and development programmes. This model also provides to management researchers new avenues to explore.

Key Words: Project Management, Multi-Project, IT-based Organizations, Capability

Introduction

Many software companies handle multiple projects concurrently. Managing multiple projects are important for these organizations as their revenues and profits depends on their ability handle difficult situations. Problems in managing these projects have their origin in issues related to managing team, customer and technology. Managers working in these organizations develop their own individualistic styles, models or routines to manage projects. Over a period of time they become comfortable with their specific models. One of the biggest challenge in the software industry is the rapid change in technology which leads to changes expected by the customers and new development skills that the programmers will have to learn. All of these changes create an interesting challenge for a manager who is expected to deliver on-time, with-in budget and deliver an output that meets or exceeds customer's expectations. This requires managers to update their decision-making frameworks and routines that they implement for managing the projects. Changes in their routines are only possible if they have an understanding of the complex inter-relationship among these different factors within a project, and across projects. In this paper, we are proposing such a model of inter-relationships that exists among these different factors.

Models of project management

Research in project management originated from the engineering domain. It began with the precedence network diagramming techniques developed for the

Polaris project in the late 1950s (Fondahl, 1987). Until the last decade or so, project management existed only as a technical subject and was not considered as a management subject. That changed as organizations realized that their success depended on projects' success (Morris, 1994).

Managing projects can be considered as one of them most important activity in organizations that are considered to be part of the information technology (IT) industry. It is not that projects are important only in IT industry but the reason for their increased importance is also because of intangible nature of the outcome. In most of the other industries there is a significant part of the output that is tangible in nature; e.g., in construction, it is just the reverse in IT industry and people have both a historical sense of what is expected, as well precisely articulated technical drawings, material and workmanship specifications and so on. Such detailed description of inputs, processes and outputs do not exist in IT, where in most cases clients require the service provider to define the final output!

Academic literature, in general, purposes that project management tools help in getting something done on time, on budget and to a specified level of quality or functionality. They emphasize the importance of formalization and rationality, the underlying message is that successful project management requires high performance in project planning, proper choice of organizational structure, and formalized operating and management procedures (Stuckenbruck, 1982; et. al.). This was also reflected in the waterfall model of the 1960s, which explicitly embraced that rationality.

Over the last four decades software project management has moved on to newer paradigms like that of agile model in today's time. From a completely planned approach of waterfall model, to what can be called as an approach which believes in doing rather than in planning. We expect that in real life, in most real projects, project managers strive to find a middle path based on their idiosyncratic mental models (Boehm et al, 2004)

Models of organizational capabilities.

Resource based view posits that firms possess resources, a subset of which enables them to achieve competitive advantage. Resources that are valuable and rare can lead to the creation of competitive advantage (Barney, 1991). Increasingly researchers have questioned this view for ignoring factors surrounding resources, i.e., understanding of how these resources are developed and how they are integrated within the firm (Eisenhardt, 2000). In this paper our focus is on the complex combination of resources, as achieving the combination requires an understanding of what is required. Requirements, as already articulated earlier, are ever changing in the IT world.

Organizational capabilities have to be, in order to be determinants of success, dynamic in nature. Successful organization has the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments (Teece et al, 1997). Organizations should have project management capabilities for successfully managing projects. This is increasingly becoming important in organizations that are facing rapidly changing customer preferences and technology advancements where players with no track-records are increasingly challenging the existing industry players.

Theories on project management or organizational capabilities will not directly lead to a model that a manager can rely on. These creates an interesting problem for a software project manager, as that person has to manage a project and use the resources so as to be successful in controlling cost, delivering on time and meet the expectations of the customers. In the next section we propose such a model that will help a manager in making sense of the complexity of the problem.

Conceptual model

Managing even a single IT project is challenging due to multitude of factors which can cause failures. A model for single IT project is first conceptualised. We conceptualise these capabilities as employee-resident capabilities and these can be articulated as three different types of capabilities: customer/client management, team management and scope management. Scope management is a complex activity which requires technical skills, understanding of team's competence, and managing and moulding customer's expectations.

However, project based organisations operate in an uncertain environment. The major sources of uncertainty are:

1. Obtaining a project through bidding process – certain periods there may be dearth of projects, and in certain periods the organisation might be loaded with projects. Success in bidding process should be accompanied with the availability of knowledgeable employees. The attrition rate in IT industry makes this as another factor of uncertainty.
2. Changes in technology – newer technology means higher efficiency which in turn implies lower costs. A change in technology also implies lesser skilled (or experienced) resources on the new technology and lesser resource-base.
3. Opportunistic behaviour from the client – from single-sourcing to multiple-sourcing agreements. The intangible nature of the output implies that the client can, and often do, look out of interpretations that allow them to enlarge the features of the project.
4. Attrition and employee turnover – highly skilled manpower would move to those companies that value their skill more.

A success for a single IT project would require organisational members, i.e., project managers to be vigilant of the different factors that contribute to project success. Ignoring any single factor would lead to a delay in a single project. We have proposed a model which can help the managers to successfully manage a project (give in the figure 1).

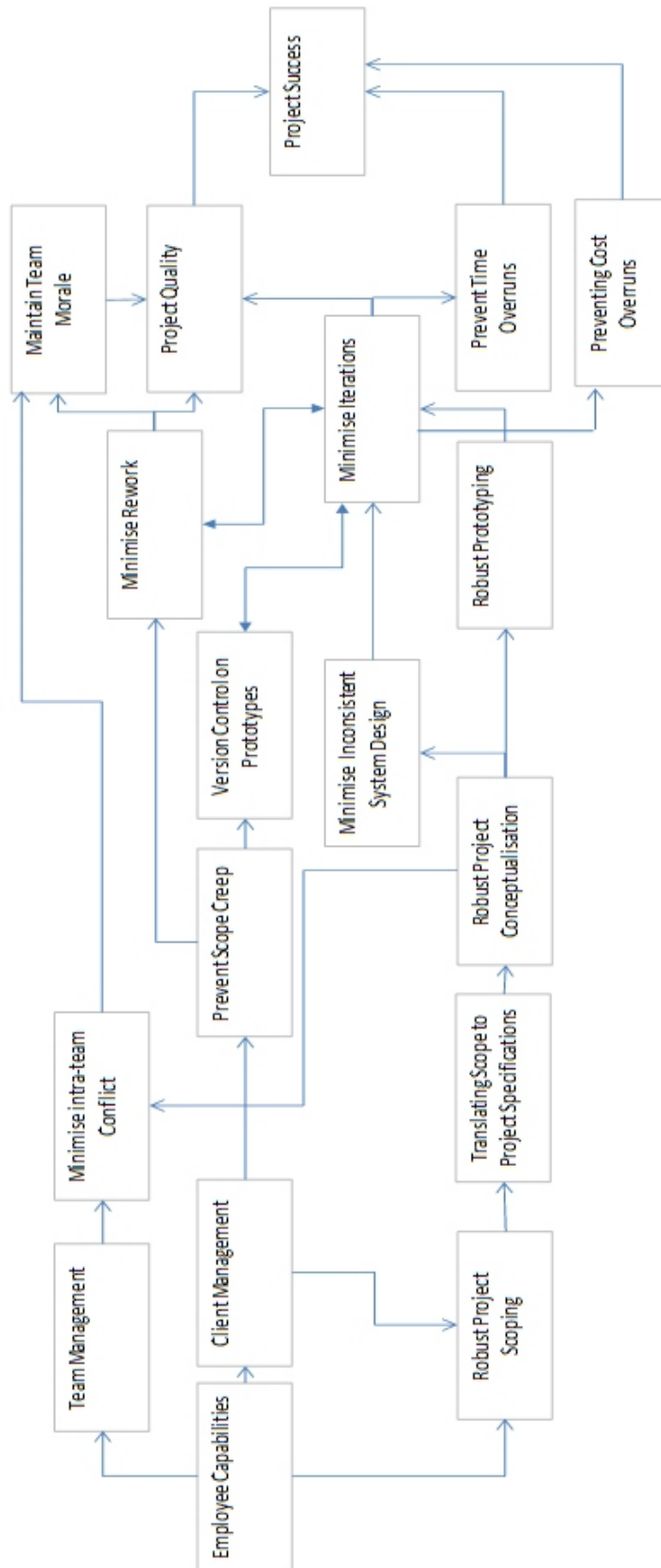


Figure 1: Conceptual Model of Factors Contributing to Project Success

From the figure 1, we can clearly see the relationship between project's success and capabilities required to achieve that success. For describing the model we will work backwards from a project's success.

A project is called as a success when it achieves three critical things (as per Forrester group's report): no time overrun, no cost overrun and meeting the client's expectation. We have included one more factor team morale to emphasize the facts that: 1) development of software involves both technical skill and creativity, and multiple inputs from team members are required at various points of time, and, 2) an organization would be handling multiple projects, and since employees are working in multiple projects in the same time period, a dissatisfied employee can impact all the projects he/she is involved in.

Adherence to principles of software engineering ensures that a project manager would be likely to meet delivery deadlines, budget target, expectations of the customer. Concepts of system engineering can help in reducing iterations, rework, and excessive time spent on prototyping. At the same time these concepts can also help in better management of the scope and effort spent by various team members.

The above mentioned activities can be only performed by a manager who has the capabilities for managing the customer expectations, team morale/conflicts, and scope of the project. Software engineering methods are important, but potential silver bullets are more likely to be found in areas dealing with people, values, communication, and expectations management. Ability to engage with the client in a positive, professional and yet non-aggressive manner is more related to customer management and might have a stronger influence on project success than technical capabilities.

Based on the above discussion the following propositions have been generated:

P1: Project success for IT projects requires the different skills, client management, team management and technical capabilities, in a specific combination. These desired capability-combination ratios would change based on the project complexities.

Researchers have time and again raised the issue of importance of people in software development, e.g., Weinberg's 1971 Psychology of Computer Programming, the Scandinavian participatory design movement (Ehn (ed.), 1990), DeMarco and Lister's (1987) Peopleware, and Curtis's studies of people factors (1988) and development of the People Capability Maturity Model (Curtis, 2001). There is also a wealth of corroborative evidence that people factors dominate other software cost and quality drivers, such as the Grant-Sackman (1966) experiments showing 26:1 variations in people's performance and the COCOMO and COCOMO II cost model calibrations showing 10:1 effects of personnel capability, experience,

and continuity (Boehm, 2000).

P2: Organisation high in any single uni-dimensional competency would not be able to deliver projects successfully.

The statistics mentioned above in the studies conducted over the years have shown that people skills are very important for project managers. A very high score on technical competencies alone will not automatically result in project success. However these capabilities cannot be looked at in isolation and would have to be understood within the context of IT project.

P3: Initial scoping robustness drives project success by preventing multiple prototyping and rework.

As mentioned earlier, scope management is a complex activity where it requires a skilful manager to carefully negotiate with the customers and the development team. A manager has to carefully balance the expectations of the customers with the skills of the development team. At the same time it has to be insured that long-term relationship is built with the customer as well as among the team members for ensuring future success.

Most project-based organizations employ their employees so that their utilisation is maximised. This requires that an employee is engaged in multiple projects at different point of times or the engagement may be in multiple projects simultaneously, often using the Matrix based organizational structure. This is the reality in most IT companies, especially the mid-sized ones. This engagement of employees in simultaneously running multiple projects creates spill over effects through which the potential problems of one project could spill over into other projects. This is elaborated in the illustration below.

To illustrate, let us take the example of time overrun. A developer is working on Project A, B and C. These three projects are expected to be completed in the next three months. One month into the project A, the customer of project A called up the manager and requested for certain changes in the reports expected as output from the system. Manager of the project agreed as it was a project from a customer who is expected to give even larger projects in future. This resulted in our fictitious developer to be called in for a one-to-one with the manager where these changes are informed to him with the deadlines. At the same time this particular developer is working on two other projects and this change was not noticed by the managers of the projects B and C. These managers would be expecting their outputs to be delivered on time. This is not possible anymore because this developer is being used "optimally" by the organization. Hence, there would be expected delays in project A and unexpected delays in project B and C. Now, one can imagine the situation if similar changes take place in project B and C then what would be cumulative impact of time overruns on all the projects.

Therefore, we have developed this conceptual model

(figure 2) for exploring multi-project organization. The three factors which are indicated are the typical spill-over mechanisms of problems from one project to another.

All projects have a life of their own. We have seen that success of a project is influenced by the team, technology and customer. An organization having highly competent

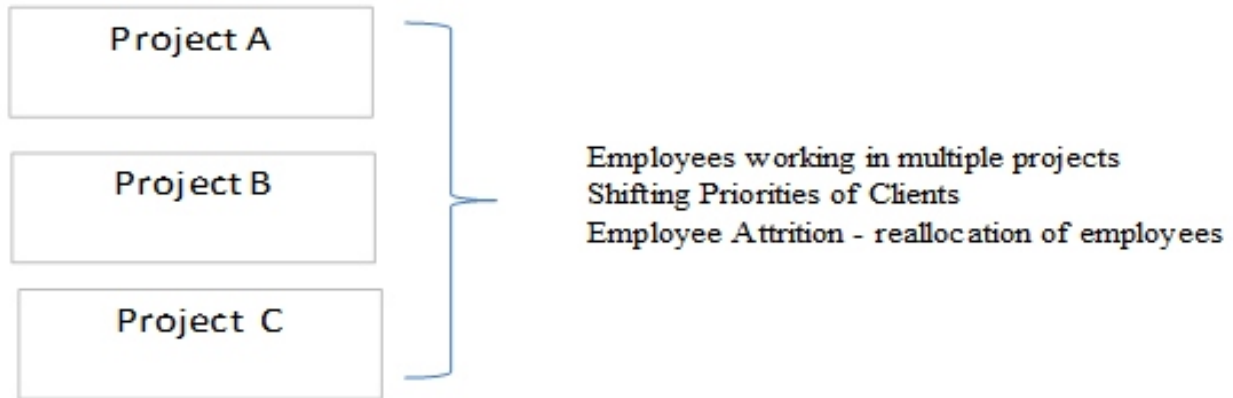


Figure 2: Interconnections between different projects

P4: Spill over mechanisms like sharing of resources, like in Matrix organisations, re-allocation of employees due to changes in client's expectations etc., would lead to project failures.

As may be understood by the reader, an organization with a large number of spill-overs due to these three points will be witness to multiple projects not achieving their targets. These spill-over mechanisms would lead to delay in delivery and low morale among the team members, setting the stage for lesser effort or quality issues in output.

P5: Organisational vulnerability in having all projects getting delayed is increased by following a matrix based organisation.

There are different kinds of matrix based organisations – light, balanced, heavy, the classification of an organization into one of these is difficult due to lack of unanimity in the choice of metric for doing so. We can define it based on percentage of employees engaged in multiple projects simultaneously. Higher is the “matrixfication” of an organization involved in multiple projects, higher would be the rate of project failures. This follows from P4 and the narration about resource sharing in a fictitious organization.

P6: There exists a tipping point, irrespective of the size of organisation, beyond which the percentage of employees engaged in multiple projects, would accelerate the decline in the projects running in parallel.

This follows from P4 and P5, as the number of overlaps among the different projects will increase with increase in number of people working on same project. Increase in overlaps would lead to decline in the success rate of the projects.

Implications for organizations

technical manpower will not necessarily be successful in satisfying its customers. Similarly an organization having very good customer relationship currently will not survive for very long because of challenges from competition. Since many organizations are concurrently handling multiple projects-customers therefore it becomes even more important for managers to understand the on-going continuous evolution of projects. Key implications for the organization can be summarized under as:

1. Organizations need to have managers who can continuously make sense of the changing landscape because of changes in technology and customer requirements. This requires managers to continuously update their decision making models.
2. Development of project managers so that they are constantly multi-dimensional in their capability and not leaning towards specialists in any one capability.
3. Customer management needs to be taken as a continuous and important activity and not just an event in the life of a project. Customer management and management of internal project team-members would need to be carried out in a synchronised manner.
4. Technology has to be harnessed so as to successfully take advantage of efficiency gains that are associated with new technologies.

All of the above implications call for a manager who is continuously evolving and changing according to the changing technology, team members and customers.

Implications for researchers

Looking at projects from the perspective of continuously evolving phenomenon helps in developing a complex understanding of the interplay between the technology, team and customer. Most of the researchers have focused on the static dimension of just one or couple of these factors. Even those researchers, who have explored decision-making through the lens of sensemaking (Weick, 1995), have typically adopted a single frame of reference. New research should focus on exploring project engagements with multiple sensemaking frameworks (Weick et al., 2005), this will hopefully allow for a better approach towards grappling with complexity in multiple-project environment. This throws open a new perspective through which to explore the subject of project management.

Apart from exploration of single projects, the mental frameworks, and the operational paradigm adopted by organisational leadership while managing multiple projects is a relatively unexplored area. It is the mental frameworks, such as for example to be cost conscious, which sets into motion the matrixification, the sharing of resources across projects. While apparently proving cost advantages, the issues in becoming spill-over mechanisms for project failures seem to have not been explored in sufficient detail.

Additional research in these areas will also expand the current literature on organisational structure design and implementation. Such research will be invaluable in areas like IT, Design and Engineering consultancy, Advertisement firms etc., where the output is of intangible nature and organizations would be tempted to optimise their employee costs by making employees part of multiple projects.

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Tourists' Satisfaction about Restaurants' Services: a Study of Haryana Tourism Complexes on NH-1 in Haryana



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Naveen Kumar²



Sanjay Kumar Mangla³

Tourism industry is one of the fastest growing industries in India as well as world and restaurants & hotels are the important components of it. National highways (NH) in India connect all the big cities and are the most important for road transport. NH-1 connects national capital Delhi and Attari in Punjab near Pakistan border. Many holy, tourist and industrial towns such as Amritsar, Jalandhar, Phagwara, Ludhiana, Rajpura, Jammu, Kashmir, Shimla and other places of Himachal Pradesh, Ambala, Kurukshetra, Karnal, Panipat, Sonapat etc are either situated on it or their way goes from this highway. Looking at the importance, Haryana Tourism Corporation (HTC) has opened several restaurants on this highway. This study has covered five restaurants i.e. Bluejay in Samalkha, Skylark in historical city of Panipat, Oasis in Karnal near Karna Lake, Parakeet in the holy city Kurukshetra and Kingfisher in Ambala located on NH-1 between Delhi and Chandigarh. The main objective is to measure the visitor's satisfaction for restaurant services and to identify various factors affecting this satisfaction. A Structured questionnaire has been used to know the visitors' response and arithmetic mean, ANOVA and factor analysis have used to achieve the objectives. It has been found that Prakeet and Oasis restaurants gave maximum satisfaction among all five restaurants while Kingfisher gave minimum. The overall satisfaction for all services and by all restaurants is 3.15 out of 5 i.e. 62.92%. ANOVA analysis reveals that all five restaurants differ significantly in the level of services provided and factor analysis shows that factors/services taken in the questionnaire explains 52.427% satisfaction of the visitors.

Key words: visitors' satisfaction, restaurants, NH-1 and Haryana Tourism Corporation

Introduction

Tourism industry is one the fastest growing industries in India and restaurants are the important components of it. Nowadays one of the biggest challenges for managers in the restaurant industry is to provide good quality food service and sustain customer satisfaction. Customer satisfaction is a business philosophy which tends to the creation of value for customers, anticipating and managing their expectations, and demonstrating ability and responsibility to satisfy their needs. Kotler (2000) defined that satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectation.

The Tourism Department Haryana came into existence in the year 1966 when the State of Haryana was created as a separate state from joint Punjab. The department has been making continuous efforts to get maximum possible Financial Assistance from Govt. of India for the creation of tourism infrastructure. The tourist complexes one developed and furnished are handed over to the Haryana

Tourism Corporation (HTC) for their maintenance and operation as an agent of the State Government. The department has so far set up a net work of 44 Tourist Complexes spreading all over the state.

NH-1 (National High-1) also called GT Road is one of the busiest highways in India connecting all the major northern states (Delhi, Haryana, Punjab) and major tourist places such as Chandigarh, Amritsar etc. and there is a series of private and govt. restaurants on the highway. All these restaurants provide different quality of food services and visitors' satisfaction also differs for these restaurants. This paper studies the visitors' satisfaction and determining factors among five Haryana tourism restaurants located on NH-1 between Delhi and Chandigarh.

Literature Review

Restaurants dining facilities are generally assumed to be in the business of only selling food. They are mainly retailers of a "foodservice experience."

Parasuraman et al. (1988) suggested that customer

perceptions of service quality can be measured by the gap between customer expectation and perceptions of performance levels. SERVQUAL consists of five distinct dimensions, which are: assurance, empathy, reliability, responsiveness, and tangibles. Since it is a simple and easily-applicable instrument, SERVQUAL has been employed in a variety of fields.

DINESERV is widely used to assess the service quality of restaurants. It was developed by Stevens, Knutson and Patton (1995) to assess customers' perceptions of restaurant service quality. The instrument was adapted from SERVQUAL and was proposed as a reliable and relatively simple tool for determining how customers view a restaurant's quality. The final version of DINESERV contained 29 items, measured on a seven-point scale. DINESERV items fall into five service quality dimensions. In the restaurant industry, tangibles refer to a restaurant's physical design, appearance of staff and cleanliness. Reliability involves freshness and temperature of the food, accurate billing and receiving ordered food. Responsiveness in restaurants relates to staff assistance with the menu or wine list or appropriate and prompt response to customers' needs and requests. Assurance means that restaurant customers should be able to trust the recommendations of staff, feel confident that food is free from contamination and be able to say any concern without fear. Finally, empathy refers to providing personalized attention to customers by anticipating special dietary requirements or by being sympathetic towards customers' problems.

Ryu & Jang (2008) developed a new scale to measure the customer dining perception that would lead to customer satisfaction. This scale is DINESCAPE. Kim et al. (2009) found out that five extracted restaurant dimensions (food quality, service quality, price and value, atmosphere and convenience) had a significant effect on overall customer satisfaction. Wu and Liang (2009) reported that restaurant employees positively affect Service Quality. The findings of Liu and Jang (2009) indicated that food quality (taste, food safety, menu variety, food presentation), service reliability, environmental cleanliness, interior design, and neat and well dressed employees significantly influenced customer satisfaction.

Objectives

Following are the main objectives of this paper:

1. To measure and compare the satisfaction from different services among five restaurants of Haryana Tourism Corporation (HTC) restaurants located on NH-1 in Haryana.
2. To identify factors affecting visitors' satisfaction level for the services offered by HTC restaurants located on NH-1 in Haryana.
3. To suggest measures to be taken by HTC to improve the service quality of its restaurants.

Research Methodology

This study has covered the five restaurants of HTC located on NH-1 between Delhi and Chandigarh namely Bluejay in Samalkha, Skylark in historical city of Panipat, Oasis in Karnal near Karna Lake, Parakeet in the holy city Kurukshetra and Kingfisher in Ambala. The study is completely based on primary data collected through a structured questionnaire using convenience sampling method. The questionnaire has two parts, part 1 has questions related to general information such as name, age, gender, education level, income and nationality of the respondent (restaurant visitor) and part 2 has questions (variables shown in table 1) related to various services of the restaurants which have been classified into four main categories i.e. location of the restaurant, dining area, food and beverages, and service personals. The 5 point likert scale has been used to rate the service quality of restaurants where 1 stands for highly dissatisfied and 5 highly satisfied. Total sample size is 500 visitors (i.e. 100 visitors per restaurants).

Table 1: Variables/factors determining visitors' satisfaction

Variable	Description
Location of Restaurant	
V1	Location of restaurant
V2	Attractiveness of building
V3	Parking facility
V4	Cleanliness in outer area
V5	Safety and security in restaurant
Dining Area	
V6	Walking distance from parking to dining area
V7	Attractiveness of dining area
V8	Cleanliness in dining area
V9	Interior decoration in dining area
V10	Lighting arrangement in dining area
V11	Temperature of dining area
V12	Comfort level in dining area
V13	Seating arrangement in dining area
V14	Variety of menu
V15	Visual appeal of menu
V16	Quality and cleanliness of linen used on table
V17	Tableware provided during dining experience
Food and Beverages	
V18	Presentation of food and beverages
V19	Hygienic value
V20	Nutritional content
V21	Taste of food
V22	Value for price paid for food and beverages
V23	Portion size
V24	Overall dining experience
Service Personnel	
V25	Appearance of staff members
V26	Communication of staff members
V27	Time taken in serving food
V28	Serve exactly as you ordered
V29	Staff seems to be well trained and experienced
V30	Anticipation of individual needs and wants
V31	Feels that staff has guest interest at heart
V32	Feeling of specialness during dining experience

DINESERV methodology has been used to frame the question statements for part 2 of the questionnaire shown in table 1. DINESERV is widely used to assess the service quality of restaurants. It was developed by Stevens, Knutson and Patton in 1995 to assess customers' perceptions of restaurant service quality. The instrument was adapted from SERVQUAL and was proposed as a reliable and relatively simple tool for determining how customers view a restaurant's quality. The final version of DINESERV contained 29 items, measured on a seven-point scale.

Arithmetic mean (A.M.) and standard deviation (S.D.) have been used to examine the satisfaction level of visitors regarding the services offered by the restaurants.

In order to make comparisons among quality of different services offered by restaurants, one-way ANOVA has been applied in the following way:

$$H_0 : \mu_{1i} = \mu_{2i} = \mu_{3i} = \mu_{4i} = \mu_{5i}$$

$$H_1 : \text{At least two mean values are not equal}$$

where

μ_1 = mean value of service i offered by Bluejay restaurant

μ_2 = mean value of service i offered by Parakeet restaurant

μ_3 = mean value of service i offered by Oasis restaurant

μ_4 = mean value of service i offered by Parakeet restaurant

μ_5 = mean value of service i offered by Kingfisher restaurant

The hypothesis is tested at 5 % level of significance and F test statistics has been calculated to reject/accept the hypothesis as below:

$$F = \frac{MSC}{MSE}$$

where

MSC = mean square column

MSE = mean square error

Reject H_0 if Calculated $F > F_{\alpha}$ (upper tail value of F)

In order to determine the various factors deciding the visitors' satisfaction level, factor analysis has been used.

Analysis and Result Interpretation

In order to know the visitor's satisfaction level for the restaurant services offered by five HTC restaurants, mean and standard deviation have been calculated for all the 32 services shown in table 2. The table reveals that Prakeet and Oasis restaurants give maximum satisfaction among all five restaurants while Kingfisher gives minimum satisfaction among all. The overall satisfaction is highest for the variable 'serve exactly as you ordered it' and visitors feel least satisfied for 'visual appeal of menu'. The overall satisfaction for all services and by all restaurants is 3.15 out of 5 i.e. 62.92%.

Table 2: Descriptive Statistics for various Determinants of Visitors' Satisfaction

Var.	Blue jay		Skylark		Oasis		Parakeet		Kingfisher		Overall	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
V1	3.04	0.94	3.53	1.02	4.33	0.77	3.51	1.05	1.90	0.90	3.26	1.23
V2	2.78	0.75	3.43	1.13	3.99	0.89	3.79	1.03	1.75	0.87	3.15	1.24
V3	2.98	0.90	3.96	0.92	3.96	0.91	3.47	0.98	3.35	1.06	3.54	1.03
V4	3.01	0.99	3.16	1.08	3.73	0.91	3.78	0.96	2.49	0.98	3.23	1.09
V5	2.99	0.92	3.42	0.96	3.45	0.94	3.64	1.03	2.44	0.86	3.19	1.04
V6	3.78	0.88	3.75	1.01	3.92	0.96	3.87	0.97	2.93	1.00	3.65	0.98
V7	3.46	0.91	3.41	0.95	3.76	0.91	3.79	0.96	2.74	0.86	3.43	1.07
V8	3.52	0.93	3.44	0.92	3.56	0.88	3.46	1.03	2.59	0.85	3.31	1.06
V9	3.43	0.93	3.47	0.94	3.27	0.96	3.54	1.07	2.20	0.84	3.18	1.11
V10	3.48	0.85	3.04	0.78	3.46	0.91	3.42	1.01	2.17	0.84	3.11	1.07
V11	3.53	0.99	3.16	0.90	3.43	0.91	3.44	0.96	2.07	0.89	3.13	1.09
V12	3.93	0.91	3.12	1.07	3.93	0.81	3.51	0.97	2.37	0.84	3.37	1.03
V13	3.51	1.03	3.44	0.89	3.41	0.88	3.48	0.92	2.87	1.05	3.34	1.07
V14	2.14	0.79	2.22	0.89	2.22	0.96	2.25	0.96	2.23	0.83	2.21	1.01
V15	2.04	0.85	2.07	0.89	2.04	0.96	2.54	0.90	2.07	0.88	2.15	1.02
V16	3.98	0.90	3.18	0.90	2.94	0.97	3.98	0.89	2.33	0.93	3.28	1.05
V17	3.45	0.91	3.39	1.11	3.46	1.18	3.46	1.16	3.29	0.78	3.41	0.99
V18	3.48	0.86	3.43	0.93	3.44	1.06	3.53	0.99	2.61	1.00	3.30	1.04
V19	3.51	0.96	3.45	1.01	3.39	1.04	3.66	0.95	3.38	0.85	3.48	0.95
V20	3.42	1.01	3.50	0.89	3.46	1.10	3.61	0.99	3.54	0.88	3.51	1.02
V21	3.46	0.94	3.04	0.82	3.47	0.88	3.49	1.11	3.51	0.88	3.39	0.97
V22	3.76	0.89	2.48	0.83	3.41	0.94	3.01	1.01	2.42	0.88	3.02	1.03
V23	2.73	0.89	2.37	0.93	2.46	1.01	2.93	0.89	2.47	0.93	2.59	0.90
V24	3.82	0.94	3.41	0.98	3.77	0.98	3.05	0.93	2.41	0.83	3.29	1.28
V25	2.83	0.92	3.07	0.92	3.41	1.00	2.54	1.01	2.05	0.83	2.78	1.02
V26	2.76	0.89	2.85	0.96	3.26	1.01	2.22	0.96	2.08	0.80	2.63	0.98
V27	3.47	0.93	3.34	0.91	3.47	0.93	3.47	0.98	2.35	0.98	3.22	1.24
V28	4.41	0.67	4.36	0.73	4.42	0.70	3.55	0.99	3.72	0.77	4.09	0.97
V29	2.76	0.92	2.78	0.81	3.13	1.03	2.75	1.05	2.15	0.80	2.71	0.92
V30	3.48	1.11	3.24	0.79	3.26	0.91	3.15	1.09	2.53	0.95	3.13	0.98
V31	3.04	0.82	2.49	0.85	3.08	0.95	2.95	1.05	2.08	0.79	2.73	0.75
V32	2.98	0.93	3.03	0.98	3.05	1.03	3.04	1.21	2.06	0.85	2.83	1.03

ANOVA Test Analysis

To compare the visitors' satisfaction level among all five restaurants, one way ANOVA has been used and results are shown in table 3. The table shows that visitors' satisfaction levels are different for all the services among five restaurants except of variety of menu, tableware provided during dining experience and nutritional content.

satisfaction from five restaurants differs in 29 services and is same in only three services viz. variety of menu, tableware provided during dining experience, and nutritional content. Thus, it is clear from the ANOVA analysis that the level of services provide by the five restaurants are different and therefore the visitors' satisfaction level are also different.

Table 3: Visitors' Satisfaction Comparison for Services among Restaurants

Factor Affecting Visitor's Satisfaction	Calculated F	Sig.	Result
V1	89.623	0.00	H ₀ Rejected
V2	92.545	0.00	H ₀ Rejected
V3	19.395	0.00	H ₀ Rejected
V4	29.717	0.00	H ₀ Rejected
V5	26.161	0.00	H ₀ Rejected
V6	17.891	0.00	H ₀ Rejected
V7	21.138	0.00	H ₀ Rejected
V8	19.423	0.00	H ₀ Rejected
V9	34.384	0.00	H ₀ Rejected
V10	40.076	0.00	H ₀ Rejected
V11	42.517	0.00	H ₀ Rejected
V12	50.138	0.00	H ₀ Rejected
V13	7.782	0.00	H ₀ Rejected
V14	0.312	0.870	H₀ Accepted
V15	5.856	0.00	H ₀ Rejected
V16	55.609	0.00	H ₀ Rejected
V17	0.446	0.775	H₀ Accepted
V18	15.850	0.00	H ₀ Rejected
V19	1.408	0.23	H ₀ Rejected
V20	.563	0.69	H₀ Accepted
V21	4.824	0.01	H ₀ Rejected
V22	40.516	0.00	H ₀ Rejected
V23	6.223	0.00	H ₀ Rejected
V24	39.109	0.00	H ₀ Rejected
V25	30.455	0.00	H ₀ Rejected
V26	27.175	0.00	H ₀ Rejected
V27	26.849	0.00	H ₀ Rejected
V28	29.349	0.00	H ₀ Rejected
V29	14.486	0.00	H ₀ Rejected
V30	13.418	0.00	H ₀ Rejected
V31	23.328	0.00	H ₀ Rejected
V32	18.469	0.00	H ₀ Rejected

In table 3, H₀ Rejected indicates that visitors' satisfaction from the understudy variable/services is different among five restaurants while H₀ Accepted indicates that visitors' satisfaction from the concerned variable/services is different among five restaurants is same. Visitors'

Factor Analysis Results:

In order to find out the various factors determining and affecting the visitors' satisfaction for the services provided by HTC restaurants situated on NH-1 between Delhi and Chandigarh, factor analysis has been applied.

Factor analysis can be applied to the data as KMO statistics is 0.825. The factor analysis divides all the 32 types of services provided by all five restaurants in 11 main factors (factor 2 and 3 are clubbed as they include services related

dining, therefore total factor becomes 10) and based on the nature of services in a factor, they have been described as follows:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.825
Bartlett's Test of Sphericity	Approx. Chi-Square	1.935E3
	df	496
	Sig.	.000

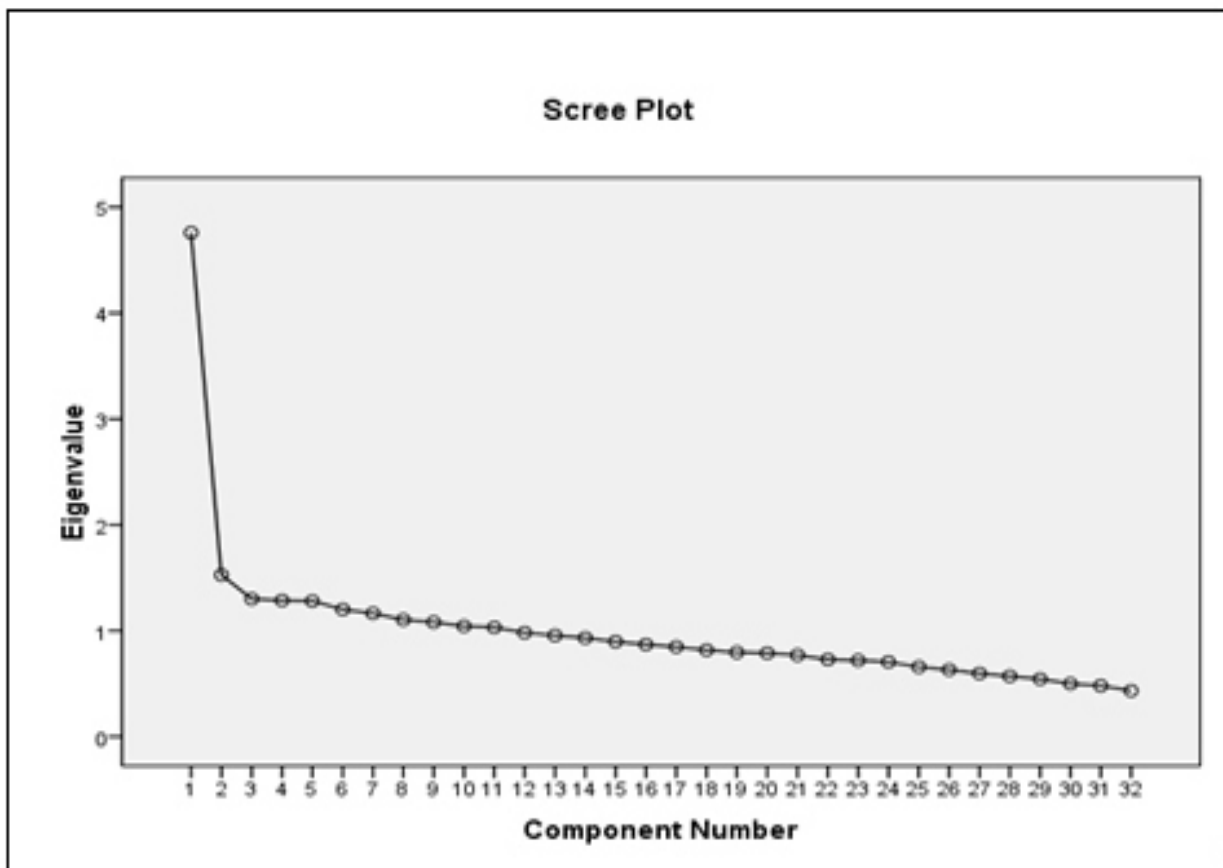


Table 4: Factor Analysis of Variables -Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.759	14.871	14.871	4.759	14.871	14.871	2.772	8.663	8.663
2	1.527	4.772	19.643	1.527	4.772	19.643	2.347	7.334	15.997
3	1.3	4.063	23.707	1.3	4.063	23.707	1.875	5.86	21.857
4	1.286	4.019	27.726	1.286	4.019	27.726	1.309	4.091	25.948
5	1.28	4.001	31.727	1.28	4.001	31.727	1.266	3.955	29.903
6	1.201	3.754	35.481	1.201	3.754	35.481	1.255	3.92	33.824
7	1.164	3.638	39.118	1.164	3.638	39.118	1.22	3.813	37.637
8	1.104	3.449	42.567	1.104	3.449	42.567	1.22	3.811	41.448
9	1.081	3.378	45.945	1.081	3.378	45.945	1.205	3.767	45.215
10	1.043	3.26	49.205	1.043	3.26	49.205	1.164	3.638	48.853
11	1.031	3.223	52.427	1.031	3.223	52.427	1.144	3.574	52.427
12	0.982	3.068	55.496						
13	0.955	2.986	58.481						
14	0.932	2.913	61.394						
15	0.897	2.802	64.196						
16	0.87	2.719	66.915						
17	0.848	2.649	69.564						
18	0.817	2.552	72.115						
19	0.796	2.487	74.602						
20	0.789	2.465	77.067						
21	0.77	2.405	79.471						
22	0.728	2.276	81.747						
23	0.72	2.25	83.998						
24	0.705	2.204	86.202						
25	0.658	2.058	88.259						
26	0.631	1.973	90.233						
27	0.597	1.866	92.099						
28	0.571	1.785	93.884						
29	0.544	1.701	95.585						
30	0.499	1.56	97.145						
31	0.481	1.502	98.646						
32	0.433	1.354	100						

Extraction Method: Principal Component Analysis.

Factor 1: Tangibles and Ambience includes services related to location of restaurant, attractiveness of building, cleanliness in outer area, safety and security in restaurant, interior decoration in dining area, appearance of staff members, and staff seems to be well trained and experienced. As these factors are related to the tangibles and ambience of the restaurants therefore, this factor has been named as 'tangibles and ambience' and this factor accounts for 14.871% satisfaction of the visitors.

Factor 2: Dining Atmosphere includes quality and

cleanliness of linen used on table, temperature of dining area, comfort level in dining area, lighting arrangement in dining area, presentation of food & beverage, feeling of specialness during dining experience and overall dining experience. This factor accounts for 8.835% satisfaction of the visitors.

Factor 3: Waiter & Staff Services includes parking facility, cleanliness in dining area, value for price paid for food & beverage, time taken in serving of food. This factor accounts for 4.019% satisfaction of the visitors.

Factor 4: Food quality and communication of staff members includes Portion size, and communication of staff members. This factor accounts for 4.001% satisfaction of the visitors.

Factor 5: Hygiene includes tableware provided during dining experience, and hygienic value. This factor accounts for 3.754% satisfaction of the visitors.

Factor 6: Variety in menu includes only menu variety and accounts for 3.638% satisfaction of the visitors.

Factor 7: Food taste includes taste of food, and anticipation of individual needs & want. This factor accounts for 3.449% satisfaction of the visitors.

Factor 8: Dining features includes nutritional content, attractiveness of dining area, and feels that staff has guest interest at best accounts for 3.378% satisfaction of the visitors.

Factor 9: Visual appeal of menu includes only visual appeal and accounts for 3.260% satisfaction of the visitors.

Factor 10: Facilities related to area includes seating arrangement in dining area, serve exactly as you ordered it, and walking distance from parking to dining area. This factor accounts for 3.223% satisfaction of the visitors.

Conclusion and Recommendations

The study has covered HTC five restaurants to measure visitors' satisfaction and determine factors affecting it. Prakeet and Oasis restaurants gave maximum satisfaction among all five restaurants while Kingfisher gave minimum satisfaction among all to the visitors. The overall satisfaction for all services and by all restaurants is 3.15 out of 5 i.e. 62.92% which seems to be bit low.

All the restaurants covered under the study are located on prime locations on one of the busiest national highways in India, NH-1, but flyovers under construction affects location and attractiveness of building. These flyovers prevent the way of other side of restaurants and visitors have problem to move other side of road. Parking facility in all restaurants was found suitable and cleanliness in outer area needs some improvements. Safety and security is not major issue but there should be improvement.

Dining area of all restaurants is well maintained and makes visitors able to walk easily from parking. Lighting arrangement and temperature of dining area was found satisfactory. Seating arrangement was found suitable except Kingfisher Restaurant. Furniture of Kingfisher should be changed. Menu of all the restaurants are same and it doesn't have visual appeal so there should be some improvement regarding this. Linen used on table are of good quality and found neat and clean. Tableware provided during dining was found satisfactory. Food is the main component of guest's satisfaction. Food quality in all the restaurants was found satisfactory and food was found nutritional and hygienic. Time taken in serving of food was found satisfactory in all the restaurants. Overall

dining experience was found satisfactory in all the restaurants.

Based on the questionnaire analysis, it can be concluded that although the restaurants fulfilled the visitors' expectations to an acceptable extent but based on the analysis of open ended questions it is proposed that HTC can improve some services i.e. 1) some restaurants need renovation work for attractiveness, 2) portion size and prices requires amendment, 3) service personnel can improve guest's satisfaction by serving them in a better way, 4) appearance of staff was found satisfactory but communication of staff needs improvement, and 5) service personnel need training for anticipation of individual needs and wants.

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Major challenges before India's Solar Energy Mission : a political economic analysis



Dipankar Dey¹

The Jawaharlal Nehru National Solar Mission (JNNSM) as announced, in 2010, by the Indian Prime Minister is not an isolated announcement made in haste. This descriptive study primarily explores answers to the following four questions: (a) what are major challenges faced by the energy policy makers of India, (b) though in 2007 alone India emerged as the world's 4th largest wind energy producer and exported wind turbines worth \$335.8 million, then why a wind energy mission was not initiated by the government instead of solar mission, (c) what were the major drivers for a national solar energy mission, which, till date, is the most expensive form of renewable energy source and was 'based on availability of international finance and technology' and (d) what are major challenges faced by the Solar Energy Mission? The paper concludes that this recent euphoria about solar energy is the continuation of a policy initiative aimed at retaining the state's hegemony on energy needs of its affluent and vocal citizens. But rapid diffusion of solar PV may change the rule of the game. It will be a challenge before the state to restrain large transnational corporations and exercise its sovereign authority to ensure energy security of its citizens. The study also concludes that this Solar Mission will not help the state to address the real challenge of providing affordable modern energy to millions of its energy starved citizens. It recommends that the policy thrust should be on local generation and distribution through community grid/mini grids and not on mega power projects or super grids.

Key Words: Solar India; photovoltaic; political economy, renewable energy

Introduction

On June 30, 2008 the Prime Minister of India has released the National Action Plan on Climate Change. The 'action plan' focuses on Eight National Missions which will be pursued as key components of India's strategy for sustainable development. The National Missions on Solar Energy is one of such Missions. While releasing the document, the Prime Minister stated that India must pioneer in a graduated 'shift from reliance on non-renewable and depleting sources of energy to renewable sources of energy.'

Prior to this, in 2007, the government had announced a three year (to be completed in March 2010) special incentive package scheme (SIPS) for solar energy. Any unit, approved under the scheme, could claim incentives in the form of capital subsidy or equity participation. And in November 2009, few weeks before the crucial UN meet on climate change at Copenhagen, the government of India had approved a new policy on the development of solar energy. Finally, on 11th January, 2010 the Indian Prime Minister has formally launched the Jawaharlal

Nehru National Solar Mission (JNNSM), under the brand name "Solar India'.

The objective of the National Solar Mission is to establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible. It is claimed that the solar mission is very much in line with the vision of Jawaharlal Nehru, the first Prime Minister of independent India, which has made the country a leading nuclear and space power. It needs to be noted that the government of India has accorded very high importance to solar mission as were the cases with nuclear and space research.

To achieve this ambitious target, the Mission aims:

- To create an enabling policy framework for the deployment of 20,000 MW of solar power by 2022.
- To ramp up capacity of grid-connected solar power generation to 1000 MW within three years – by 2013 and an additional 3000 MW by 2017 through the mandatory use of the renewable purchase obligation by utilities backed with a preferential tariff.

- To create favorable conditions for solar manufacturing capability, particularly solar thermal for indigenous production and market leadership.
- To promote programmes for off - grid applications, reaching 2000 MW by 2022 including 20 million solar lighting systems.
- To achieve 20 million square meter solar thermal collector area by 2022.

The thrust of the program has remained primarily on grid connected supply. A target of only 2000 MW by 2022 for off-grid application has been set against the total target of 20000MW.

Achievements in the 1st phase (2010-2013): Around 1000 MW has been installed till March 2013. Progress of Solar PV projects was relatively better than Concentrated Solar Power (CSP) projects. Six out of seven CSP projects were delayed mainly due to lack of fund and delayed supply of imported components. Off -grid projects, mostly targeted for power deprived citizens living in rural and remote areas, had few takers.

Objective and methodology of the study

This study would primarily explore answers to the following four questions.

- (a) What are major challenges faced, at present, by the energy policy makers of India?
- (b) Though in 2007 alone India emerged as the world's 4th largest wind energy producer and exported wind turbines worth \$335.8 million, then why a wind energy mission was not initiated by the government instead of solar mission?
- (c) What were the major drivers for a national solar energy mission which, till date, is the most expensive form of renewable energy source (refer Table 1)?
- (d) What are major challenges faced by the Solar Energy Mission?

This is a descriptive study based on secondary sources. The analysis will be primarily based on data provided by government agencies and multilateral bodies, books written by expert of the field, scholarly articles published in journals of repute and news items gathered from national dailies, magazines and reliable websites.

Analysis and Findings

(a) Major challenges faced by the energy policy makers of India

Energy is a political issue, so is food. The nation states want to retain control on the daily life of its citizens by influencing the supplies and prices of these basic necessities through regulations and subsidies. This is precisely the reason why most of the countries maintain somewhat rigid attitude during negotiation on agriculture subsidies in WTO. To achieve this objective, historically, the nation states have developed a symbiotic

relationship with corporations, both national and global, engaged in food and energy sector.

India did not have an independent long term energy policy. Since its independence in 1947, the Indian state has relied on foreign sources for critical inputs like crude oil, uranium, silicon et al. The state has taken short term initiatives to address the energy needs of an elite group, comprising mainly, of the upper and middle class citizens of urban India; big corporate houses; and large farmers. In this endeavor, the ruling elites and global energy utilities acted in tandem as collaborators to the state and enjoyed maximum benefits in the form of subsidies and easy access to better quality energy sources. Recent developments in India's renewable energy sector -specially its emphasis on grid connected power generation and solar energy program should be analyzed from that perspective.

In 2005, the Ministry of New and Renewable Energy Sources (MNES) came out with their 'New and Renewable Energy Policy Statement 2005'. India is probably the only nation where the concerned ministry, solely responsible for development of renewable energy sources, could project a lesser share of it while preparing plans for the future fuel-mix of the country. For the year 2021-22, the projected share of renewable, (as the Table 2 indicates), was reduced to 30.9% from the actual share of 33.52% in 2001-02. However, unlike the developed economies, the share of renewable energy in India's total energy consumption look very high due to the dominance of traditional biomass in the total renewable sources. The quality of renewable fuel thus remained very low in India.

In 2002-03, electricity generated from different renewable energy sources amounted to 0.330 MTOE (million tone of oil equivalent). This was equivalent to only 0.10% of the total primary energy consumption of India in that year. Against a total generation of 536.8 billion kwh unit of electricity in 2002-03, the contribution of renewable sources were only 4.1 billion kwh. The renewable sources here consist of hydro (1.73%); biomass (31.76%); wind (0.03%); solar and bio fuel (negligible).

Till 2005, the major thrust of India's energy policy remained centered around fossil fuel with occasional indulgence towards nuclear energy. A quick analysis of the differences in the projections made in The Draft Report (Dec 2005) and Final Report (August 2006) of the Expert Committee on Energy will substantiate this observation. (ref Table 3). The projected fuel mix (%) scenario in 2031-32 would highlight that year 2006 was the turning point of India's energy policy. Few pointers:

- Till December 2005 (draft report), the policy makers thought that the contribution of oil would range between 28% and 29%. In August 2006 (final report) it came down to 22.8% -25.7%. For coal, the decline was more pronounced: 42%-65% to 41.1%-54.1%. And for natural gas the projected share declined from 7%-12% to 5.5%-9.8%.

- In case of nuclear and renewable energy the changes were substantial. For example in case of nuclear, the projected mix increased from 0%-6% to 4%-6.4% and for renewable, the change was from 0%-2.7% to 0.1%-5.6%.

Few major developments in India and abroad during 2006 and after might have influenced the government to embark on a massive nuclear and renewable energy programs in the following years. (ref. Table 4). The possible triggers could be:

- a) International pressure, mainly from the European countries, to reduce dependence on fossil fuel due to its adverse impact on global warming and climate change. Kyoto Protocol had become effective by then.
- b) Pressure from nuclear lobby to project nuclear energy as an alternative 'clean' energy. The Indo -USA civilian nuclear agreement (March 2006) is a case in point.
- c) Realization of the policy makers that fossil fuel has lost its glory and the state should rely on alternative forms of 'clean energy' to retain its control on this basic need of the citizens. The state has found a ready solution in nuclear and solar energy as both these industries were desperately looking for markets in the emerging economies of the South.

At present, the main challenge before the Indian energy policy makers are to provide: (i) electricity, at an affordable rate to around 400 million electricity starved population and (ii) clean cooking fuel to 772 million villagers who still rely on traditional biomass for cooking.

Energy economists had prepared village level energy plans, entirely on renewable sources, as early as 1974. Considering the energy needs of a village, consisting of 100 households, they made an analysis of techno economic factors relating to biogas plants. According to the planners, the biogas energy should be sufficient to provide energy for ten pump sets, cottage industry units, and an electric lamp besides energy for cooking in every house. Those plans may be revived and revised again. The experience of the People's Republic of China could be used as a bench mark. It is reported that around 100 million rural people of China now benefit from biogas digesters, which turn livestock manure into clean cooking fuel and organic fertilizer (biogas digesters produce 410 million tones of organic fertilizers in each year) and cut carbon dioxide emissions by up to 61 million tones a year. Along with biogas, which is a more stable source compared to other variable renewable sources, wind and solar energy could be generated and distributed at the village level.

(b) Why not Wind Energy Mission:

Solar Program was initiated at a time when wind energy had already made their presence felt in India with an installation of 5426MW during Tenth Five Year Plan (2002-06) against an installation of only 0.61 MW solar powers in the corresponding period. It also needs to be mentioned that per unit generation cost of solar energy is

nearly three times that of wind energy. (Ref Table 1) German experience also indicate that solar is an expensive elitist energy source.

In 2007, India was the world's 4th largest wind energy producer and exported wind turbines worth \$335.8 million. Indian firm Suzlon Energy Limited had emerged as one of the major players in the global wind industry. Over the years, as many as 26 wind turbine manufacturers had come up in the country. So, it looked as though a rural industry would develop, relying on local manufacturing and employment. Today, however, the wind industry is down in the dumps. As the state focus has shifted to solar, wind power is on the decline. A couple of years ago also, the wind power sector looked very robust, with 3,200 MW of capacity added in 2011-12 alone. Though in 2012, the US-based Lawrence-Berkeley National Laboratory said that India's wind power potential was about 2 million MW – ten times its total installed power capacity, in 2012-13, installations fell to 1,700 MW, and the shrinking market has left little room for smaller turbine manufacturers.

The initial high growth of wind energy vis-à-vis other renewable energy sources could be explained as a result of 'demand pull factor' – a reflection of consumer's eagerness for green and clean energy. The technology used in the early phase of generation of wind energy was not very complex. Industry could develop without much support of the state. A recent Oxfam case study has documented how a Thai farmer creatively designed his own wind mill pump from old bill board cut outs to irrigate water from a well that Oxfam helped to build. Probably this explains why Indian manufactures could establish themselves in the global industry so easily without even investing much in research and development.

However, the next phase of growth of the wind energy will be influenced more by 'supply push factors' where the large corporations and state will play dominant roles. High-end wind technology (say, off-shore, higher hub generation) will get a boost in this phase of renewable energy growth. In the 12th Five Year Plan (2012-17), the target for wind has been set at 15GW grid interactive power generation against a 10GW target for solar. More involvement and support of the state is expected in this phase

(c) Why Expensive Solar Energy

Though as early as 1870s, an ambitious attempt at harvesting energy from the Sun was initiated in India by Williams Adams, who used concentrated sunlight to run boilers imported from Britain, energy planners of independent India did not pay much importance to solar energy till 2007. During the Tenth Five Year plan (2002-06), only 0.61 MW of solar power was installed. For the Eleventh Five Year Plan (2007-2011), a modest target of only 50 MW solar powers was set. Then suddenly, a thrust on solar was observed.

Solar energy, especially solar photovoltaic (PV) technology, fits into the 'state-corporate symbiotic relationship' model. Possible factors which have mainly contributed to this special status of solar energy are:

- (i) Initial high production cost: This has made the energy utilities, especially during this nascent stage of its development, dependent on the states for subsidies and support thereby enabling the states' to retain their control on this form of energy.
- (ii) Technical complexity and huge expenditures associated with its research and development: The technical complexity of solar power helps the large firms retain their control on the industry. Unlike wind, the technology of solar energy experienced a fundamental reinvention following the development of the photovoltaic cell after World War II. As solar PV was a highly capital-intensive and technologically complex product, it sought investment from large established firms in related industries, especially electronics and petroleum. Oil majors like Exxon, Mobil, Arco, Amoco, CFP, Shell, BP, which historically enjoyed the backing of the state, were the prominent early investors in solar energy.
- (iii) Emerging model of energy retailing: A new model of energy retailing is emerging. The basic difference in the emerging model with the conventional one (both primary and secondary) is that in the previous model, the distributed energy was mainly sourced from one or two major suppliers. In many cases, a single integrated firm managed the entire chain; say from exploration of crude oil to marketing of the refined products. Similarly, in many electrical utilities generation, transmission and distribution were integrated. The emerging model consists of numerous producers/generators who supply energy to one or few major distributors/retailers that control the industry by virtue of their technical and marketing superiority. The small and micro entrepreneurs are the forerunner of this revolutionary change. At present more than 1.3 millions of German families produce electricity at their roof tops using solar PV panels. Through 'smart grid' or 'global grid' large utilities ensure total control on electricity transmission. PV has emerged as the global leader with 100GW already installed (by 2012) compared to only 2.5 GW installation of CSP (concentrated solar power) technology. PV technology fits into this emerging trend.
- (iv) Political strategy - a balancing act by the Indian state: EU and USA have taken two distinct approaches for tackling the climate change issue and to seize the advantages of the new business opportunities it has created. While the EU has followed the 'mitigation strategy' by promoting clean technology and alternative fuel, USA has been pursuing the

'adaptation strategy'. In addition to promoting nuclear power, as a 'green energy' source, USA has been trying to retain their control on energy market by shifting the energy base from carbon (fossil fuel) to carbohydrate (bio fuel). On the other hand Spain and Germany have emerged as the main growth centers of solar industry in Europe. In the last decade, the solar markets in these two major European countries have slowed down mainly due to recession. To sustain the industry, a new market was needed and India was a natural choice.

India had already entered into a nuclear agreement with USA in 2006. Then by announcing the Solar Mission in 2008, the government of India tried a balancing act to satisfy the EU. In his last budget speech (February 17, 2014), Indian Finance Minister talked about, 'adding 4 Ultra Mega Solar Power Projects each with the capacity of over 500 MW in 2014-15.' He also informed the Parliament that '7 Nuclear Power Reactors are under construction'.

(d) Challenges before the Solar Mission:

While exploring various challenges faced by this ambitious solar mission (JNNSM), this study has identified at least ten challenges as under

- (i) Finance: Source of fund was the major challenge –both for grid connected and off grid projects. Compared to previous year, investment in India's renewable sector has declined by 45% in 2012. This could be primarily due to collapse of emission trading market. Due to aggressive marketing of CDM projects in developing countries, the inevitable has happened. CERs price, in the international market has crashed resulting in decline in green investment in USA, Europe, Brazil, India et al in 2012. Globally it was a bad year for renewable energy as the total investment of \$244 billion was 12 per cent lower than the record figure of \$279 billion in 2011.

Bitter experience gained by banks in few failed cases has also made the bank apprehensive about solar projects. In the absence of any performance benchmark, banks found it difficult to assess viability of a project. In addition to this very high cost of fund, at around 13% rate of interest, made the situation more difficult for the project developers.

US took advantage of the situation by offering 'First Start Financing Fund' adopted at the Copenhagen climate meet in 2009. US-Exim Bank and Overseas Private Investment Corporation (OPIC) had offered low-interest loans to Indian solar project developers on the mandatory condition that they would buy the equipments from US companies.

Despite huge capital subsidy on solar program off-grid projects in the first phase of JNNSM had few takers as marginalized poor could not afford to mobilize the minimum 20% down payment required to avail cheap loan to finance any such project.

- (j) Efficiency- wide variance in output: The Central Electricity Regulatory Commission (CERC) has set 19% CUF (Capacity Utilization Factor) as the benchmark of efficiency of the solar plants. Compared to this modest efficiency norm, outputs of the plants were on a higher side but it varied widely. For example,
- Six solar PV power plants which were commissioned between 2009 and 2011, had an average CUF range of 12.3% to 18.8%
 - In February 2013, CUF of 20 solar projects of Phase I, Batch I ranged between 16.3% and 24.6%. And in January 2013, performance of 13 projects of Phase I, Batch II of JNNSM ranged between 14.8% and 22%.
 - Performance of the Rooftop PV and Small Solar Power Generation Program (RPSSGP) varied more widely. CUF in July 2013 ranged between 6.26% and 21.39%.

This wide variation could be due to (a) use of non standard equipments; (b) improper project management; (c) poor selection of location.

- (ii) High generation cost: Compared to wind energy capital and generation costs of solar is nearly double. Though cost has declined recently due to glut in global PV supply, the declining trend may not continue for long. At a modest average cost of INR 100 million/MW an estimated INR 2000 billion will be required to install 20 GW of solar power in next ten years or INR 200bn per year. As 30% subsidy is offered on installation cost, per year, INR 60bn will be spent by the government towards payment of subsidy on solar installation. With this money an additional capacity of 1500 MW of wind power could be installed per year at INR 40mn/MW capital cost for wind power. Unless installation cost declines drastically, the government will find it increasingly difficult to politically justify such high subsidy outgo to implement this solar program. Moreover, the grid based solar power continues to reach only those households that are already connected to energy supply.
- (iii) Import dependence: Unlike in wind energy, manufacturing capacity of solar energy supplies has not taken root in India. Currently, bulk of India's solar PV installation is dependent on imports of critical raw materials and components including silicon wafers. CSP projects are also dependent on imported components. Few US firms like Dow Chemical's have monopolized important CSP components like Heat Transfer Fluid (HTF).

In batch I of phase I more than 50 percent and more than 70% of batch II PV projects used thin film technology which is less efficient than crystalline silicon PV, as US Exim Bank offered low interest finance to Indian developers with a condition to use US thin film panels. Globally thin-film does not constitute more than 10% of the installed capacity. In

India it is an aberration. It is estimated that about half of all solar modules installed under JNNSM were manufactured by US companies

- (iv) Entry of dodgy developers: To take advantage of generous subsidies and incentives offered by the government, many first generation developers with poor balance sheet and no experience in any energy related activities have entered the bandwagon to earn quick profit. Solar energy has become every body's business. In the first phase even cloth merchants and animation companies were selected for solar generation. Taking advantage of various loopholes of the government subsidy and bidding policy, these companies have taken the program for a ride. The experience of The Gujarat Urja Vikas Nigam Limited (GUVNL) is a case in point.

The GUVNL has signed at least 88 contracts amounting to a total solar power generation of nearly 970 MW. As per the Power Purchase Agreement (PPA) signed between the GUVNL and the project developers, a feed-in-tariff of Rs 15 per unit for the first 12 years and Rs 5 per unit for the remaining 13 years was awarded. This averages out to Rs 12.54 per unit. The GUVNL claims it considered a capital cost of Rs 16.5 crore per MW to arrive at that figure. But most developers have set up their projects for a capital cost between Rs. 9 crore per MW and Rs. 12 crore per MW. The GUVNL says developers have made windfall gains and mislead the government, and that a 'reasonable and prudent tariff' should be around Rs 9 per unit.

- (v) Ineffective regulation: Viability of expensive solar projects depends on proper implementation of Renewable Purchase Obligations (RPOs). Though most of the states have come up with RPOs proper enforcement of the same, mainly due to non enforcement of any penalty for not meeting RPO obligations by the cash starved power distribution companies (mostly run by the states), is a challenge. Moreover, a counterproductive trend has also been observed. Analysts have noted that 'RPO targets are not ambitious enough to create a market pull. Some states such as Rajasthan have reduced their target to match the actual renewable energy production. Very few states have escalating RPO targets. Tamil Nadu has set a target lower than its (considerable) renewable power generation.'

- (vi) Protection of infant domestic industry: Development of domestic manufacturing industry was one of the prime mandates of JNNSM. But on this the government is in a critical situation. While the manufacturers seek that domestically produced solar equipment should be mandated in the solar power projects, solar power developers want to import cheap equipment. Global players also obviously want to

retain their dominance in the vast retail market. USA has already challenged India's policy before WTO saying India favoring domestic procurement of solar panels.

Domestic content requirement is a serious policy issue. Without technological leadership, mandating domestic content doesn't necessarily ensure that it is actually domestic. The existing solar manufacturing setup in India has a number of inherent disadvantages like continued dependence on imported wafers, poly silicon etc.

Indian suppliers will have to be globally competitive either through price leadership or technological leadership. For this, large scale integrated manufacturing facilities, backed by latest technology and trained manpower is needed. Along with focused R & D suitable discourse on solar technology should be introduced in engineering and polytechnic colleges.

(vii)Unstable technology: The solar industry, still in its nascent stage of 'creative destruction', is in serious crisis and passing through a major transition. The state sponsored solar boom during last decade, especially in Europe, had triggered a significant structural shift in the industry. First, incentives offered by several countries to promote solar PV led to the emergence of specialist poly silicon manufacturers. The market was controlled by a handful of large corporations. Due to this, poly silicon price soured until a sudden crash in 2009. Second, major changes were observed in the ownership of PV manufacturers. Many first generation companies like Q-Cells had emerged as major players. The entry of low cost Chinese firms encouraged the exit of big players, including oil majors like Shell and BP, out of the solar industry. Third, economic recession in 2009, coupled with a sudden reduction in subsidies and other supports in Europe, have made the industry unstable resulting in the bankruptcy of many major players like Q-Cells. Even low cost Chinese firms are feeling the heat. India's ambitious solar program might have provided the much needed oxygen to it. In such an uncertain situation if many suppliers go out of the market, price of the components, as anticipated by the policy makers, may not fall steadily. Government of India might have played a wrong dice in this big gamble.

(viii)Grid modernization: A robust transmission infrastructure is required for proper utilization of grid connected variable renewable energy sources. Though overall contribution of renewable energy in total electricity generation is low, because of its regional concentration, existing power grids are already facing problems in transmitting variable renewable energy. Wind based power generation in the wind rich state of Tamil Naidu has suffered the most due to lack of evacuation infrastructure.

Huge expenditure is needed to upgrade the transmission grids for facilitating transfer of renewable energy across different regions of the country. India is gearing up for the largest transmission network in the world-140000 circuit kilometers by 2014. The government has planned to invest US\$7.9 billion to create a 'green energy corridor' to facilitate the flow of renewable energy into its grid electricity. The corridor would be built across seven states over the next five to six years. The project will be implemented with the assistance of Germany, the World Bank, ADB and India's National Electricity Fund.

(ix)Energy security: Though in the first phase, the share between PV and CSP technology was split 50:50, in the second phase (2013-2017) the ratio might change in favor of PV technology which uses semi conductors to convert energy in photons into electricity. PV technology is the global leader with 100GW already installed (by 2012) compared to only 2.5 GW installation of CSP technology. At present more than 1.3 millions of German families produce electricity at their roof tops using solar PV panels.

The semiconductor based computer and consumer electronics industries are dominated by a handful of firms like Intel, Sony, Sharp, and Nokia et al through their proprietary control on critical technology. In the generation of solar energy also similar tendency is being observed. The emerging model consists of numerous producers/generators who will be supplying energy to few major distributors/retailers those would control the industry by virtue of their technical and marketing superiority. Prosumers will be the forerunner of this revolutionary change but large utilities will ensure total control on electricity transmission through 'smart grid' or 'national grid'. In such a situation, it will be a challenge before the state to restrain large transnational corporations and exercise its sovereign authority to ensure energy security of its citizens.

Conclusion

The Solar Energy Mission, as announced by the Indian Prime Minister, is not an isolated announcement made in haste. It is a pledge to pursue with the policy as followed by the dominant players of the industry. Moreover, it suits the ambitious state to use subsidies to retain its control, as were the case with petroleum and nuclear, on the supply of this renewable source of energy also.

This recent euphoria about solar and nuclear energy is the continuation of a policy initiative aimed at retaining the state's hegemony on energy needs of its affluent and vocal citizens. But rapid diffusion of solar PV may change the rule of the game. Since 1960s, the state has gradually lost its control on underground water resources when 'green revolution' compelled the Indian state to encourage small

irrigation projects. To lift underground water, personal pump sets of the affluent farmers were used. And to facilitate this huge subsidy on diesel was provided. Oil companies were the ultimate gainers of green revolution which created markets for fuel based fertilizer and water. Subsequently, in 1990s, the Kyoto Protocol has established a market for clean air. And now a new market for sunrays has been developed. Thus during last fifty years, huge markets for three 'natural commons', namely water, air and sunlight, have been created. In order to retain its sovereign power and protect the interest of citizens in these fast growing markets of the basic necessities (water, air, sunlight), the 'state', will have to break its long alliance with large corporations.

The expensive solar power of JNSSM, with its focus on grid connected power generation, will continue to reach

only those households that are already connected to energy supply. Ironically, the state of Maharashtra, economically the most advanced state of the country, has the highest number of households without any access to power. Government subsidies and investments should be directed towards off-grid generation of solar and other renewable energy to meet the needs of the millions of energy starved population. A more holistic renewable energy policy, without compromising the energy security of the country, is urgently needed. This Solar Mission will not help the state to address the real challenge of providing affordable modern energy to millions of its energy starved citizens. Policy thrust should be on local generation and distribution through community grid/mini grids and not on mega power projects or super grids.

Table 1: Capital Costs & Typical Cost of Generated Electricity from the Renewable Options in India

Sl No	Source	Capital Cost (Crores of INR/MW) 2005##	Capital Cost (Crores of INR/MW) 2012**	Estimated Cost of Generation (INR/kWh) 2005##	Estimated Cost of Generation (INR/kWh) 2012**
1	Small Hydro-Power	5.00-6.00	5.50-7.70	1.50-2.50	3.54-4.88
2	Wind Power	4.00-5.00	5.75	2.00-3.00	3.73-5.96
3	Bio-mass Power	4.00	4.0-4.45	2.50-3.50	5.12-5.83
4	Bagasse Cogeneration	3.5	4.20	2.50-3.00	4.61-5.73
6	Solar Photovoltaic	26.5	10.00-13.00	15.00-20.00	10.39-12.46

Ministry of Non-conventional Energy Sources, 2005, *New and Renewable Energy Policy, Draft - II.*,
** GoI, 12th Five Year Plan Document Vol II, P 186

Table 2: Fuel- mix in 2001-02 and Scenario for 2021-22

Fuel Type	2001-02, MMTOE*(%)	2021-22, MMTOE*(%)
Fossil Fuel-Total	285.81(65.30%)	595(66.85%)
Non-Fossil Fuel-Total	151.88(34.70%)	295(33.15%)
Renewable-Total	146.73(33.52%)	275(30.90%)
Grand Total	437.69(100.00%)	890(100.00%)

Source: MNES, *New and Renewable Energy Policy Statement 2005*
* Million metric tone of oil equivalent

Table 3: Projected Fuel mix (%) scenario in 2031 - 2032

Fuel mix	Draft Report (Dec. 2005)		Final report (Aug. 2006)	
	Range (%)		Range (%)	
Oil	28.0	29.0	25.7	22.8
Natural gas	7.0	12.0	5.5	9.8
Coal	65.0	42.0	54.1	41.1
Hydro	0.0	4.0	0.7	2.2
Nuclear	0.0	6.0	4.0	6.4
Renewable	0.0	2.7	0.1	5.6
Non- commercial	0.0	5.0	9.8	12.0
Total	100.0	100.0	100.0	100.0

Source: *Planning Commission (2005, 2006), Govt of India*

Table 4: India's Changing Structure of Fuel for Electricity Generation (%)

Energy Source	2007*	2012#	2017#	2030#	2050**
Coal, gas, oil	67	77(70+7+0)	74(69+5+0)	61(58+3+0)	34
Hydro (Large)	26	14	12	11	11
Renewable energy	4	6	9	16	51
Nuclear energy	2	3	5	12	0.2

Source: *The Telegraph, Kolkata, April 10, 2007, #12th Five Year Plan, Vol II, P 147, GoI
 **Greenpeace, 'Energy Revolution: A Sustainable Energy Outlook for India', April, 2007

Notes and references

- 1 This is a modified version of the two presentations made by the author in (i) Session 1-5: Solar Energy Investment and Business Development, September 28, at BIT's 3rd New Energy Forum 2013, September 26-28,2013, Xi'an Qujiang International Centre, Xi'an, China, Organized by Euro Asia Economic Forum, EAEF-2013; (ii) in Session VII: 'Off-grid, rooftop and mini grid', September 26, at The 4th World Renewable Energy Technology Congress, September 25-27, 2013, Convention Centre-NDCC, Parliament Street, New Delhi, India.
- 2 The eight missions include National Missions on Solar Energy; on Enhanced Energy Efficiency; on Sustainable Habitat; on Conserving Water; on Sustaining the Himalayan Ecosystem; on creating a 'Green India'; on Sustainable Agriculture; and on establishing a Strategic Knowledge Platform for Climate Change.
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- 4 Ministry of New and Renewable Energy, Government of India, 2009, Government Announces Jawaharlal Nehru National Solar Mission. Refer to Union Minister for New and Renewable Energy, Dr Farooq Abdullah's statement in the Parliament on 23rd November, 2009.
- 5 http://mnre.gov.in/annualreport/2009-10EN/Chapter%203/chapter%203_1.htm, visited May21, 2010
- 6 Dey, Dipankar, (1999), State and Foreign Involvement in the Development of Indian Petroleum Industry between 1970 and 1989. Available at SSRN: <http://ssrn.com/abstract=2317203>
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 - 17 See, Business Line print edition, dated September 3, 2013
 - 18 See, http://www.oxfamblogs.org/eastasia/wp-content/uploads/2009/09/thai_casestudy_eng_yaso_thorn.pdf, visited June 23, 2010
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 - 21 For details see, Dey D (2011), The Political Economy of India's National Solar Energy Mission, Electrical India, Vol 51, No 1, January
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 - 24 See Down to Earth, Sept 15, 2013
 - 25 Dey, Dipankar, 2009, Energy Management in 21st Century: An Inquiry into the Mounting Corporate Hegemony Over Basic Human Necessities and the Role of Civil Society as a Countervailing Force (March 23, 2009). Available at SSRN: <http://ssrn.com/abstract=1366977>
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Study on Effectiveness of Human Resource Information System (HRIS at Vistaar Technologies (Mumbai)



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Human Resources Information Systems (HRIS) is an integration of HRM and Information Systems (IS). HRIS helps HR managers to perform HR functions in a more effective and systematic way. This paper makes an attempt to study usage/effectivity of HRIS at Vistaar Technologies. Research type is descriptive. The study is based on primary and secondary information. Primary sources comprise of interviews and responses collected through structured questionnaire. The data base has been framed from a sample size of 64 out of 150 employees. The secondary data has been collected from the company manual, intranet and management journals etc. Chi-square test has been applied. Data has been analyzed using SPSS. The research findings reveal that the quick response and access to information were the main benefits of HRIS implementation. The main barriers in implementation of new HRIS were the difficulty in changing the organization's culture; improper induction and training; lack of commitment from top level managers.

Key Words: HRIS, Systematic Training, Learning, Employee Attitude and Motivation Level

Introduction

The developments in Information Technology have dramatically affected traditional HR functions with almost every HR function (like compensation, staffing, and training) experiencing some sort of reengineering in its process. This process of change has created significant challenges for HR professionals resulting in the transformation of traditional processes into on-line processes. This resulted into the emergence of Human Resource Information System (HRIS). It is a database management or a software solution to automate and manage a company's payroll, accounting and other HR functions. HRIS is defined as the 'systematic approach to storing, updating and retrieving information stored as data items, usually in the form of records in a file, by which many users, on even many remote installations, can use common databases.'

HRIS aims to provide the capability to more effectively plan, control and manage HR costs; achieve improved efficiency and quality in HR decision making; and improve employee and managerial productivity and effectiveness. Most of the Human Resource Information Systems are flexibly designed with integrated databases that help in managing the workforce of any company.

HRIS also facilitates communication processes and saves paper by providing an easily-accessible, centralized

location for company policies, announcements, and links to external URL's. Employee activities such as time-off requests can be automated, resulting in faster approvals and less paperwork. Selecting the right HRIS is important for every company. Companies are required to customize the system to meet their specific and unique needs.

Review of Literature

There are a few researchers who have tried to explore the area in terms of working papers and brief discussions on the subject. Aamir H Kaki & Pratiksha Srivastava, in their article, "Science of HR", reveals that, Human Resources have a unique function in the world of business and it is the most important aspect of running any size business, but it is also said to be an underappreciated area that relies on outdated methods. Kaushik Gopalan, in his article, "Mechanise, Don't Robotise", explains that HR automation system should be designed and adopted with a focus on efficiency and effectiveness. But HR leaders must make the choices carefully and ensure that the right roles are identified. Sucheta Shetty, in her article, "Quest for Competitive Advantage", states that HR function should continuously know the pulse of its talent assets, indicators and key engagement contributors towards reduced employee turnover, profitability, shareholder value, productivity and customer loyalty. Raju Foujdar, in his article "Latest HR Tools to Simplify Process", explains that HR has transformed its approach in recent times.

There are various tools and techniques available which can help in identifying HR problems and proving the solutions thereof. Jared Lewis, in his article "How do technology impact HR practices?" says that, technology has changed the business world many times over. In the Information Age, the advent of computers and the internet has increased that impact significantly and this impact is seen in nearby all areas of business, including human resources, where technology continues to have a significant impact on HR practices.

Research Gap

Since HRIS is emerging concept, there are a few researchers who had a chance to get into this domain. As a result, there are very few papers and studies based on this area in India. So there is a huge research gap which can be identified clearly.

Objectives of The Study

- To understand the Effectiveness of new HRIS installed at Vistaar Technologies.
- To understand the Employee behavior toward new HRIS.
- To analyze the perspective of employees towards the training program introduced for new HRIS.
- To study issues and challenges faced by the company during implementation of new HRIS.

Limitations of the Study

Time is the important limitation. Due to time constraints only limited population was taken for the study. The study is limited to Vistaar Technologies. The effectivity of HRIS cannot be generalized. There are chances of misrepresentation of the responses. Few respondents were reluctant to disclose correct information. Some of the interviews were telephonic, respondents were least interested in sharing their experiences with new HRIS, few conversations were done through mails, and the questionnaires were not completely filled.

Vistaar Technologies

It is a Business Process Outsourcing. Vistaar offers both on-site and service-based solutions. Vistaar delivers leading-edge price and promotion software to many global business units. Vistaar provides comprehensive price management functionality for all pricing processes –analytics, price setting, promotions planning, deal management and optimization. 3M, Cisco, HP, IBM, Intel, Motorola, Pfizer, Texas Instruments, Toshiba, Caterpillar and Whirlpool, are few client companies of Vistaar.

Research Methodology

A descriptive non parametric research has been carried out in this study. To conduct an entry level research, a pilot survey was conducted on existing HRIS at Vistaar Technologies. The questionnaire was prepared to test the employees on the variables as Motivation Level, Training, Satisfaction and Attitude etc. Variables were tested on Resistance towards HRIS. The focus of this study was to

investigate interventions taken while introducing HRIS and its impact on the relationship of independent and dependent variables.

Chi square test was applied for the descriptive questionnaire which was developed purposely to study the objectives needed to be fulfilled by the employees when change is introduced in the working style. The resistance to HRIS and implementation success in the organizations was the focus of the study where the respondent were tested on the above mentioned variables by answering 'yes', 'no' or 'unsure'. The unit of analysis is individual employees.

The questionnaire was sent to 150 employees but only 64 filled questionnaires were found to be valid. The age of the employees varied between 21 years to 35 years. As per the position of the employees involved around 75% of the employees were of executive level. Only 25% of the employees were senior level executives.

Hypothesis

The formula for calculating chi-square (χ^2) is:

$$\chi^2 = \frac{(o-e)^2}{e}$$

chi-square is the sum of the squared difference between observed (o) and the expected (e) data (or the deviation, d), divided by the expected data in all possible categories.

The chi-square test is always testing the null hypothesis, which states that there is no significant difference between the expected and observed result. The following hypotheses are postulated to justify the statement of the problem and objectives of study.

1. H1: Introduction of HRIS in organization has significant relationship with its acceptance in Organization.
2. H0: Introduction of HRIS has no significant relationship with its acceptance in organization.

Data Analysis & Interpretation

Training

Whenever new technologies or software is implemented in any organization it is mandatory for organization to train the employees on that technologies or software. The new software can be effective if the employees are properly trained, if they are willing to use that new technology and are comfortable with the new technology. These three can be considered as sub-variables which encompass the first variable i.e. training for the test.

Test 1: Training before the introduction of Human Resource Information System (HRIS): Only 48.4 per cent of the respondents had some clue about the system. The negative response was alarmingly high around 37.5% where 14.1% employees were unsure about training need. This seems to indicate that the line managers do not thoroughly ensure proper training before change is induced.

Chi Square Analysis on Test-1:

Did you get proper training before the introduction of Human Resource Information System (HRIS) in your organization?	Response	Observed N	Expected N	Residual
	Yes	31	21.3	9.7
	No	24	21.3	2.7
	Unsure	9	21.3	-12.3
	Total	64		

Table - 1

The observed number of the employees who responded positive is 31 in comparison to the employees who responded negatively which is 24. While 9 employees has responded as neutral or undecided in relation to this statement. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who answered positively is 9.7(31-21.3), employees who answered negatively is 2.7(24-21.3) and employees who answered neutrally is -12.3(9-21.3). Squaring the residue for positive response we get 94.09, and then dividing it by expected response (which is 21.3) we get 4.417 as answer. Following same steps for negative response we get 0.342 and for neutral response we get 7.102 as answers. Adding all the above answers i.e 4.417+0.342+7.102 we get chi-square for this statement that is 11.861

Test 2: Comfort level with the old system or readiness for new: On the comfort level of the system where respondents were questioned by the researcher whether they are ready to learn new system; 62.5% showed interest and were ready for new. But 7.8% rejected and 29.7% were not sure. It's the lookout of the line managers to convert these 29.7% towards learning the new system.

Chi Square Analysis Test - 2

Are you more comfortable with the old system or ready for new?	Response	Observed N	Expected N	Residual
	Yes(Ready For New System)	40	21.3	18.7
	No	5	21.3	-16.3
	Unsure	19	21.3	-2.3
	Total	64		

Table-2

The observed numbers of the employees who are ready for new HRIS is 40 in comparisons to the employees who are not ready for new system are 5. While 19 employees are as neutral to new system. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who are Happy are 18.7(40-21.3), employees who are unhappy are -16.3(5-21.3) and employees who are neutral are -2.3(19-21.3). Squaring the residue for employees who are ready for new system we get 349.69, and then dividing it by expected response (which is 21.3) we get 16.417 as

answer. Following same steps for employees who are not ready for new system we get 12.47 and for neutral response we get 0.248 as answers. Adding all the above answers i.e. 16.417+12.47+0.248 we get chi-square for this statement that is 29.135.

Test 3: Willingness for a systematic training program in learning HRIS: 81.3% respondents were open for the systematic training program and were willing to learn and adjust according to the change induced. 9.4% were unsure and needed proper guidance on adopting the training program. Only 9.4% showed their unwillingness to learn it through systematic training program.

Chi Square Analysis Test - 3

Are you open for a systematic training program in learning HRIS?	Response	Observed N	Expected N	Residual
	Yes	52	21.3	30.7
	No	6	21.3	-15.3
	Unsure	6	21.3	-15.3
	Total	64		

Table-3

The observed numbers of the employees who wants to have a systematic training due to introduction of new HRIS is 52 in comparisons to the employees who don't want to have a systematic training due to introduction of new HRIS are 6. While 6 employees are as unsure about this statement. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who wants to have a systematic training due to introduction of new HRIS 30.7(52-21.3), employees who don't wants to have a systematic training due to introduction of new HRIS -15.3(6-21.3) and employees who are neutral to this statement are -15.3(6-21.3). Squaring the residue for employees who want to have a systematic training due to introduction of new HRIS we get 942.49, and then dividing it by expected response (which is 21.3) we get 44.248 as answer. Following same steps for employees who don't wants to have a systematic training due to introduction of new HRIS, we get 10.99 and for neutral response we get 10.99 as answers. Adding all the above answers i.e. 44.248+10.99+10.99 we get chi-square for this statement that is 66.228.

Motivation Level

The second Variable deals with employee motivation for change. Motivation for change is proportional to willingness of learning new software. Test 4: When tested on motivation level 92.2% respondents answered in favor of learning the new system, only 7.8% were unsure about the introduced change. This is a valid indication that the manager's intervention was necessary for the success of HRIS implementation.

Chi Square Analysis Test - 4

Do you feel motivated learning new system introduced recently in your organization?	Response	Observed N	Expected N	Residual
	Yes	59	32.0	27.0
	Unsure	5	32.0	-27.0
	Total	64		

Table-4

The observed numbers of the employees who are motivated for new HRIS is 59 in comparisons to the employees who are unsure about being motivated for new system are 5. The expected number of employees who should respond to this statement according to chi-square technique is 32 for each option. Hence the residual numbers of employees who are motivated are 27(59-32), employees who are unsure about being motivated are -27(5-32). Squaring the residue for employees who are motivated for new system we get 729, and then dividing it by expected response (which is 32) we get 22.781 as answer. Following same steps for employees who are unsure about this statement we get 22.781 as answers. Adding all the above answers i.e. 22.781+22.781 we get chi-square for this statement that is 45.5625.

Test 5: Willingness for a systematic training program in learning HRIS: 81.3% respondents were open for the systematic training program and were willing to learn and adjust according to the change induced. 9.4% were unsure and needed proper guidance on adopting the training program. Only 9.4% showed their unwillingness to learn it through systematic training program.

Chi Square Analysis on Test-5:

Do you feel like rejecting or felt happy learning new HRIS system?	Response	Observed N	Expected N	Residual
	Happy	53	21.3	31.7
	Unhappy	9	21.3	-12.3
	Unsure	2	21.3	-19.3
	Total	64		

Table - 5

Observed number of the employees who are happy with new HRIS is 53 in comparisons to the employees who are Unhappy are 9. 2 employees were undecided about new HRIS system. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who are Happy are 31.7(53-21.3), employees who are unhappy are -12.3(9-21.3) and employees who are neutral are -19.3(2-21.3). Squaring the residue for employees who are happy with new system we get 1004.89, and then dividing it by expected response (which is 21.3) we get 47.177 as answer. Following same steps for employees who are unhappy we get 7.10816 and for neutral response we get 17.4877 as answer. Adding all the above answers i.e. 47.177+7.108+17.4877 we get chi-square for this statement that is 71.77.

Satisfaction Level

Satisfaction depends on perception of employees. More

the employees will be satisfied with new software more will be its acceptance and effectiveness in company. Rewards were added for the change acceptors, so as to increase satisfaction level of employees.

Test 6: On general perception according to them about the new system in the company: 89% accepted the new system introduced in the company. Only 10.9% were unsure of the new system due to different reasons lack of skills, peer attitude, lack of motivation & no immediate benefits.

Chi Square Analysis Test - 6

What is the general perception according to you about the new system in the company?	Response	Observed N	Expected N	Residual
	Accepted	57	32.0	25.0
	Unsure	7	32.0	-25.0
	Total	64		

Table -6

The observed numbers of the employees who accept new HRIS is 57 in comparisons to the employees who are unsure about being motivated for new system are 7. The expected number of employees who should respond to this statement according to chi-square technique is 32 for each option. Hence the residual numbers of employees who are motivated are 25(57-32), employees who are unsure about being motivated are -25(7-32). Squaring the residue for employees who accept new system is 625, and then dividing it by expected response (which is 32) we get 19.531 as answer. Following same steps for employees who are unsure about this statement we get 19.531 as answers. Adding all the above answers i.e. 19.531+19.531 we get chi-square for this statement that is 39.0625.

Test 7: On attachment of learning the new system with incentive or reward after completion: 75% were positive about it and took the training as a challenge. Only 6.3% were not sure and 18.8% totally rejected the idea and were not willing to accept the challenge.

Chi Square Analysis Test - 7

Should learning be attached to incentive or reward after completion?	Response	Observed N	Expected N	Residual
	Yes	48	21.3	26.7
	No	12	21.3	-9.3
	Unsure	4	21.3	-17.3
	Total	64		

Table-7

The observed numbers of the employees who thinks that incentives or rewards should be attached for learning new HRIS in order to motivate employees is 48 in comparisons to the employees who think that incentives or rewards don't have any impact on motivating employees for learning new HRIS in order to motivate employees are 12. While 4 employees are as unsure about this statement. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who thinks that incentives or rewards should be attached for learning new HRIS in

order to motivate employees are 26.7(48-21.3), employees who don't want thinks that incentives or rewards should not be attached for learning new HRIS is -9.3(12-21.3) and employees who are neutral to this statement are -17.3(4-21.3). Squaring the residue for employees who think that incentives or rewards should be attached for learning new HRIS in order to motivate employees we get 721.89, and then dividing it by expected response (which is 21.3) we get 33.46 as answer. Following same steps for employees who think that incentives or rewards should not be attached for learning new HRIS we get 4.060 and for neutral response we get 14.05 as answers. Adding all the above answers i.e. 33.46+4.06+14.05 we get chi-square for this statement that is 51.57.

Attitude

Test 8: On attitude of the manager being positive on learning HRIS system towards employee: 40.6% of respondents were of the view that the manager was positive and helpful but 17.2% were not of the same opinion. For them the managers were not at all showing interest on learning HRIS. 42.2% seem to be unsure about their manager's attitude.

Chi Square Analysis Test - 8

Is the attitude of your manager positive on learning HRIS system?	Response	Observed N	Expected N	Residual
	Positive	26	21.3	4.7
	Negative	11	21.3	-10.3
	Neutral	27	21.3	5.7
	Total	64		

Table-8

The observed numbers of the employees who thinks that the attitude of the manager is positive towards new HRIS is 26 in comparisons to the employees who think that the attitude of manager is negative towards new system are 11. While 27 employees are as unsure about the attitude of manager towards new system. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who think that manager have positive attitude for new system are 4.7(26-21.3), employees who think that attitude of manager is negative are -10.3(5-21.3) and employees who are neutral to this statement are 5.7(27-21.3). Squaring the residue for employees who think attitude of manager is positive towards new system we get 22.09, and then dividing it by expected response (which is 21.3) we get 1.037 as answer. Following same steps for employees who think attitude of manager for new system is negative we get 4.98 and for neutral response we get 1.525 as answers. Adding all the above answers i.e. 1.037+4.98+1.525 we get chi-square for this statement that is 7.542.

Test 9: On manager's openness towards employee problems: The question was put to the respondents and around 75% were in favor of the line managers 20.3% were

unsure and only 4.7% said that the managers were not open to discuss their problems. Here the managers can convert the unsure 20.3% of the respondents in their favor just by attending to them and explaining them the importance of learning and benefits attached to learning of HRIS.

Chi Square Analysis Test - 9

Is your manager open to your problems?	Response	Observed N	Expected N	Residual
	Yes	27	21.3	5.7
	No	34	21.3	12.7
	Unsure	3	21.3	-18.3
	Total	64		

Table-9

The openness of the manager helps the employees to get rid of problems in less amount of time. Here observed numbers of the employees who thinks that the manager is open towards problem arise in new HRIS is 27 in comparisons to the employees who think that the manager is not open towards the problems in new system are 34. While 3 employees are as unsure about the openness of manager towards problems in new system. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who think that manager is open for handling problems in new system are 5.7(27-21.3), employees who think that attitude of manager is negative are 12.7(34-21.3) and employees who are neutral to this statement are -18.7(3-21.3). Squaring the residue for employees who think manager is open towards handling the problems in new system we get 32.49, and then dividing it by expected response (which is 21.3) we get 1.525 as answer. Following same steps for employees who think that manager is not open for handling problems in new system we get 7.572 and for neutral response we get 16.417 as answers. Adding all the above answers i.e. 1.525+7.572+15.722 we get chi-square for this statement that is 24.819.

Test 10: On feeling of burden learning the new system: On the question of feeling burdened 25% respondent answered in positive. Out of remaining 75% respondents 64.1% said that they are motivated and will not feel burdened learning HRIS and will support implementation. 10.9% were unsure but they sounded positive with a very little resistance.

Chi Square Analysis Test - 10

Do you feel burdened learning the new system?	Response	Observed N	Expected N	Residual
	Yes	16	21.3	-5.3
	No	41	21.3	19.7
	Unsure	7	21.3	-14.3
	Total	64		

Table - 10

The observed numbers of the employees who thinks that they are burdened learning new HRIS is 16 in

comparisons to the employees who think that they are not burdened learning new system are 41. While 7 employees are as unsure about this statement. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who think that they are burdened learning new HRIS are -5.3(16-21.3), employees who think that they are not burdened learning new HRIS 19.7(41-21.3) and employees who are neutral to this statement are -14.3(7-21.3). Squaring the residue for employees who think they are burdened learning new HRIS we get 28.09, and then dividing it by expected response (which is 21.3) we get 1.318 as answer. Following same steps for employees who think they are not burdened learning new HRIS is we get 18.22 and for neutral response we get 9.6 as answers. Adding all the above answers i.e. 1.318+18.22+9.6 we get chi-square for this statement that is 29.138.

Test 11: On introduction of HRIS and compulsory learning of the software will be pressure enough on them to look for a new job: On compulsory learning during introduction of new system 43.8% respondents answered 'yes' they would prefer exit. 56.3% respondents including 9.4% of 'unsure' response were positive and said 'No' on leaving the organization. They seem to be motivated enough to learn the new system.

Test Statistics

Chi Square Analysis Test - 12

Sr. No.	Statement	Chi-square	D.F	Asymp. Significance	Null Hypothesis
1	Did you get proper training before the introduction of Human Resource Information System (HRIS) in your organization?	11.861 ^a	2	0.003	Rejected
2	Do you feel like rejecting or felt happy learning new HRIS system?	71.772 ^a	2	0.000	Rejected
3	Are you more comfortable with the old system or ready for new?	29.135 ^a	2	0.000	Rejected
4	Do you feel motivated learning new system introduced recently in your organization?	45.563 ^b	1	0.000	Rejected
5	Is the attitude of your manager positive on learning HRIS system?	7.542 ^a	2	0.023	Rejected
6	Is your manager open to your problems?	24.819 ^a	2	0.000	Rejected
7	What is the general perception according to you about the new system in the company?	39.063 ^b	1	0.000	Rejected
8	Do you feel burdened learning the new system?	29.138 ^a	2	0.000	Rejected
9	Is introduction of HRIS and compulsory learning of the software will be pressure enough on you to look for a new job?	16.932 ^a	2	0.000	Rejected
10	Are you open for a systematic training program in learning HRIS?	66.228 ^a	2	0.000	Rejected
11	Should learning be attached to incentive or reward after completion?	51.57 ^a	2	0.000	Rejected

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 21.3.
 b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 32.0.

Table-12

Chi Square Analysis Test -11

Response	Observed N	Expected N	Residual
Yes	27	21.3	5.7
No	31	21.3	9.7
Unsure	6	21.3	-15.3
Total	64		

Table-11

The observed numbers of the employees who wants to look for new job due to introduction of new HRIS is 27 in comparisons to the employees who happy with new system and don't want to change the job are 31. While 6 employees are as unsure about this statement. The expected number of employees who should respond to this statement according to chi-square technique is 21.3(21 approx.) for each option. Hence the residual number of employees who wants to look for new job due to introduction of new HRIS are 5.7(27-21.3), employees who don't want to look for new job due to introduction of new HRIS 9.7(31-21.3) and employees who are neutral to this statement are -15.3(6-21.3). Squaring the residue for employees who wants to look for new job due to introduction of new HRIS we get 32.49, and then dividing it by expected response (which is 21.3) we get 1.525 as answer. Following same steps for employees who don't want to look for new job due to introduction of new HRIS is we get 4.417 and for neutral response we get 10.99 as answers. Adding all the above answers i.e. 1.525+4.417+10.99 we get chi-square for this statement that is 16.932.

Findings

The Null hypotheses was rejected @ $\alpha=0.95$ in all the cases hence the research data was found to be significant. Mainly by completing the pilot research on the related issue and after the review of literature of different researchers this can was an observation that introduction of HRIS plays an essential role in the development of the organization and if introduced in a systematic way leads to less resistance by the employees.

Conclusions and Suggestions

HRIS has the potential to affect both efficiency and effectiveness. Use of HRIS results into reduced cycle time for processing paperwork, increased data accuracy, and reduced human resource staff. It also results into improving the capabilities of both managers and employees to make quick decisions. The research findings reveal that the resistance for implementation of new HRIS needs to be recognized and diagnosed clearly by the HR heads of the organization. Certain suggestions proposed by the researcher are as follows:

- Before implementing any new system Organizational Structure, Job Descriptions, Performance and Compensation Systems should be in line with the organization vision.
- Identify people who are resisting the change, and help them see what's needed. The resistance to HRIS introduction needs to be recognized diagnosed to the very root level and then with a very careful and positive intervention the change needs to be introduced by the change leaders.
- Management should take action to quickly remove barriers (human or otherwise). Proper induction and training should be given before implementing any systemic change.
- A skilful handling of Human Resource is a necessity and can be graded as one of the most important positive intervention.

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Assessing the Economic Impact of the Self Help Group Based Provision of Micro Credit with Reference to Purulia District, West Bengal



Aniruddha Das¹

Micro Credit is defined as a provision of thrift, credit and other financial services and, loans of very small to the weaker section of the society at affordable cost. It is the key variables which would lead to the rise in the standard of living of the poor families by using the credit amount into income generating activities. In India micro credit is mostly disbursed through group lending methodology i.e. Selfhelp Groups. This paper makes an effort to examine the economic impact of the micro credit disbursed to the members of the self help groups. Primary data has been collected by using a structured interview schedule and simple random sampling method was used for selecting the members of the Self Help group in Block 2 of Purulia District, West Bengal. The sample size of the study was 116. SPSS package was used to analyse the collected data. It has been observed from the analysis that micro credit has an affirmative impact on the average income which in turn also influences savings. It was also observed that receipt of the micro credit by the rural poor reduces the dependence on the local money lenders. Thus the study concludes that micro credit is an efficient programme in enhancing financial inclusion and in addition opens up self employment opportunities by taking up different productive activities.

Key Words: Micro Credit, Self Help Group, Economic Impact, Savings and Money lenders.

Introduction

“Maybe our great-grandchildren will go to museums to see what poverty was like” - Muhammad Yunus

The above statement of Muhammad Yunus stands testimony for the importance of micro finance as a tool for alleviating poverty.

Economists have long agreed that access to finance plays an important role in reducing inequality in income distribution and enhancing household income and employment of poor and hardcore poor households all over the world. About 90% of the people in developing countries lack access to financial service like credit or savings from financial institutions (Robinson and Marguerite S, 2002). Thus there was a pressing need for a service which can uplift the poor section of the society to lead a poverty free life. This resulted in creation of Micro Finance concept - “An Anti Poverty Tool of God” in the year 1976. The proponent Muhammad Yunus, Nobel Peace Prize winner (2006), out of the frustration and in need of attention unknowingly initiated “Microfinance Programme” by way of lending small amounts of money to the people of Jobra, a poor village in Bangladesh that turned into one of the most popular anti-poverty strategies throughout the world. As Yunus (1994) states that “if we are looking for one single approach which will enable the poor to overcome their poverty, I would go for

credit. Money is the power”

In 1960, India had made one of the largest interventions in rural credit market and it was made as the “Social Banking Phase”. Social Banking phase was characterized by broadening the access to the poor and marginalized and to section of the people with no formal banking. In the development strategy adopted up to 1980s, institutional credit was considered as a powerful instrument for enhancing production and alleviating poverty. A multi-agency approach was adopted for delivering credit to the rural poor people. The nationalization of fourteen major commercial banks in 1969 and another six commercial banks in 1980 and the setting up of regional rural banks in 1975 enabled the creation of an extensive financial infrastructure for taking banking to the remote rural areas. Despite the physical outreach of the formal financial institutions the rural poor continue to depend on the informal sources of credit. Even though the share of the formal financial sector in total rural credit increased ever more from 8.8 per cent in 1951 to 53.3 per cent in 1991 but it was found that the rural banks served only the needs of mostly rich rural class instead of the deserving poor (Basu and Srivastava, 2005).

Realizing the need and the importance for rural financial services, NABARD (National Bank for Agriculture and Rural Development established by Indian Government by

an act of Parliament on 12 July 1982) and aptly supported by Reserve Bank of India through its policy support prepared a pilot project "Self Help Group Bank Linkage Programme- Flagship Programme" for linking informal groups to banks. NABARD decided for an approach which used the existing infrastructure of banks and social organizations, was savings-driven rather than credit-led and favoured bank rather than donor resources in the provision of credit (Seibel, 2006). Thus SHG-bank linkage model which has developed in India is now a major model of microcredit globally which has evolved over a period of about 25 years since the first SHGs of MYRADA received NABARD support and 20 years since the launch of the pilot project for SHG-bank linkage.

The present study attempts to find out the economic impact of micro credit through the establishment of the Self Help Group with reference to Purulia District, West Bengal.

Literature Review

Microfinance, according to Otero (1999) is "the provision of financial services to low- income poor and very poor self-employed people". The author also stated that microfinance creates access to productive capital for the poor, which together with human capital, addressed through education and training, and social capital, achieved through local organization building, enables people to move out of poverty. These financial services according to Ledgerwood (1999) generally include savings and credit but can also include other financial services such as insurance and payment services. Johnson and Rogaly (1997) have demonstrated that availability of credit for micro enterprises can have positive effects on the individual income and that of the household. Thus, access to financial services play an important role in the fight against poverty. Ray (1998) advocated that there is an indispensable need for micro credit amongst the poor. The author categorizes the need on the basis of the following:

- 1) Credit for fixed capital which is required for startups
- 2) Credit for working capital necessary for continuing production, and
- 3) Credit for consumption which aims to reduce the gaps between income and expenses.

Though the poorer demand credit for all the above mentioned need but they lack access to it.

As pointed out by Ledgerwood et al (2002), one of the major obstacle to escape poverty is the lack of sufficient access to credit by the poor. Snodgrass and Sebstad (2002) noted that microcredit reduces vulnerability by helping micro-entrepreneurs diversify their sources of household income, increase their savings, expand their options for credit, and improve household money management. Bakhtiari (2006) concluded that microcredit have received extensive recognition as a strategy for poverty reduction

and for economic empowerment particularly in rural areas having large poor population. Providing poor people the small amounts of credit at reasonable interest rates give them an opportunity to set up their own business at small scale. R. Bebczuk and F. Haimovich (2007) used household survey data on poor households from a number of Latin American countries to undertake their analysis. They found that credit increased employment in a statistically and economically significant manner. Gurumoorthy (2000) that Self Help Group (SHG) as a viable alternative to achieve the objectives of rural development and to get community participation in all rural development programmes. It was an organised set up to provide micro-credit to the rural women on the strength of the group savings without insisting on any collateral security for the purpose of encouraging them to enter into entrepreneurial activities and for making them enterprising women. Woolcock (2001) addresses the issue of group-lending design. Analyzing five cases of MFI failures in Ireland, Bangladesh, and India, he concludes that group performance depends on MFI lending policies, cost structures, nature and extent of social relations among group members, and MFI staff.

MYRADA (2002) in a study of southern India; Puhazhendhi & Badatya (2002) in a study of eastern India; Gaonkar (2001) in a study of Goa; Misra (2006) in a study of western and central parts of India; and Hoque (2008) in a study of Bangladesh concluded that group loans have reduced the dependence of the beneficiaries on money-lenders; and the participant households are able to face financial crisis through their own savings and group loans. McKernan, Signe-Mary (1996) found that micro finance program participation can exert a large positive impact on self-employment profits which will accumulate savings. Shahidur R. Khandker (2000) examined the household survey data from Bangladesh, econometric analysis was employed which revealed that micro-borrowing has indeed reduced borrowing from informal sources, thereby signifying microfinance as an effective alternative source of finance to the poor and was found that there was an increase in voluntary savings among the households. The study further added a new dimension by stating that impacts of microfinance vary between the gender of borrowers. The savings impact of micro-borrowing is more pronounced for women than for men. In contrast, the informal finance impact is more pronounced for men than for women. Thus salient message conveyed by Zeller, M.; Meyer, Richard L (2002) was that savings and credit facilities help individuals or households build up or acquire funds for all kinds of investments.

Methodology

The study is an exploratory and analytical research as very few studies have been conducted in the present study area. Primary Data for this present study was

collected from SHG members belonging to various self help groups in the study area. 100 self help group were identified covering all the villages in Block 2 of the Purulia District and one member from each group was selected as the respondent on a random basis. Structured Interview Schedule was administered personally for each member in Block 2 of the Purulia District, West Bengal. Later on the gathered data was put into and screened through Statistical Package for Social Sciences (SPSS). Secondary data was collected from published articles in journals, Financial Institutions report, newspaper, websites, research abstracts, books, eBooks, thesis submitted to various universities.

Objectives

In the light of the present research topic, the objective of this study is to show how micro credit works by using

group lending methodology for reducing poverty and how it leaves an impact on income and savings. Therefore, the objectives stated are as follows:

1. To find out the income effect due to the access of micro loan.
2. To find out the impact of microcredit in generation of savings.
3. To explore the extent of decreased dependence on the informal money lenders.

Regional Spread of the Self Help Group Bank Linkage Programme

Table 1: Savings of SHG's with Banks Agency Wise Position

Sr. No.	Name of the Agency	Total Savings of SHGs with Banks as on 31 March 2013		Out of Total - Under SGSY		Out of Total -Exclusive Women SHGs	
		No. of SHGs	Saving Amount	No. of SHGs	Saving Amount	No. of SHGs	Saving Amount
1	Commercial Banks	4076986	553257.05	1098312	107404.11	3367566	444160.47
2	Regional Rural Banks	2038008	152710.20	758306	61018.71	1683036	128054.08
3	Cooperative Banks	1202557	115758.22	191193	13742.29	887917	79272.43
	Total	7317551	821725.47	2047811	182165.11	5938519	651486.98

Source: NABARD Annual Report 2013-14

The table portrays that commercial banks have taken lead role in accumulation of savings from the self help groups. As on 31st March 2013, 55.71 percent of Self Help Groups saves their group corpus in the Commercial bank, 27.85 percent saves in the regional rural banks and the remaining 16.43 percent saves in Cooperative banks. On 31st March 2012, the average savings of SHGs in commercial banks was Rs.8992.8, in RRBs it was Rs. 6111.49, and in cooperative banks was Rs. 9040.24. This increased further by 31 March 2013 to Rs.13, 570 in the case

of commercial banks but showed little change for the RRBs of Rs.7493.11 and cooperative banks of Rs.9626. The share of different banks in savings deposits is positively correlated with the number of SHGs linked by them in a particular year. Thus it was observed that commercial banks and cooperatives banks have expanded at the expense of the Regional Rural banks.

Table 2: Bank Loan Outstanding against SHG Agency Wise Position

Sr. No.	Name of the Agency	Total Outstanding Bank Loans against SHGs		Out of Total - Under SGSY		Out of Total -Exclusive Women SHGs	
		No. of SHGs	Loan Outstanding	No. of SHGs	Loan Outstanding	No. of SHGs	Loan Outstanding
1	Commercial Banks	2643971	2663944.38	641867	483300.14	2247717	2224398.25
2	Regional Rural Banks	1327367	1052122.91	460817	306837.35	1145086	908473.35
3	Cooperative Banks	480096	221462.43	90567	69571.06	364438	151132.89
	Total	4451434	3937529.72	1193251	859708.55	3757241	3284004.49

Source: NABARD Annual Report 2013-14

The above table on the loans outstanding against the SHG' unveils that the maximum no of Self Help Groups outstanding loan belongs to commercial bank which comprises of 67.65 percent of the total outstanding as they have lions share in the overall lending to the Self Help Groups followed by regional rural banks with 26.7 percent share and remaining 5.6 percent of the total outstanding loan amount of cooperative banks. Though the numbers of group with outstanding loan and outstanding loan amount have gone up percent compared to the financial

year 2011- 12 but it is virtually moved at tortoise speed due to the decline in number of fresh disbursements of loans to SHGs particularly in southern states and western states. Due to credit delinquency in disbursing of micro credit, MFI's particularly in Andhra Pradesh were watchful in lending. This led to the decline in the outstanding loan amount.

Analysis and Discussion

Table 3: Number of SHG members received loan

Particulars	No. of Respondents	Percentage (%)
Members received Loan	64	55.17
Members not received Loan	52	44.83
Total	116	100

The table above reveals that out of 116 group members which comprises of 1 member from each group only 55.17 % of the members have received loan either from financial institution or the group corpus fund was availed by the member.

Aim: To know the significant economical improvement of

members after enrollment in the SHG.

Ho: There is no difference on income level of members before and after enrollment of SHG programme

Ha: There is difference on income level of members before and after enrollment of SHG programme

Table 4: Significant economical improvement of members after enrollment in the SHG

Paired Samples Statistics						
	Mean	N	Std. Deviation	Std. Error Mean	t value	sig value
Current income	2,583.33	64.00	821.72	102.715	10.898	.000*
Before Availing Financial Assistance	2,280.44	64.00	793.70	99.2125		

*5% level of significance

From the table, it can be inferred the average incomes of the members have increased after availing the availing financial assistance from Financial Institution through the Self Help Groups. T value is 10.89 and sig value is .007

which is less than .05, hence there is significant difference in the income of the self help group members before and after joining SHG. Thus Null hypothesis is accepted and alternate hypothesis is rejected.

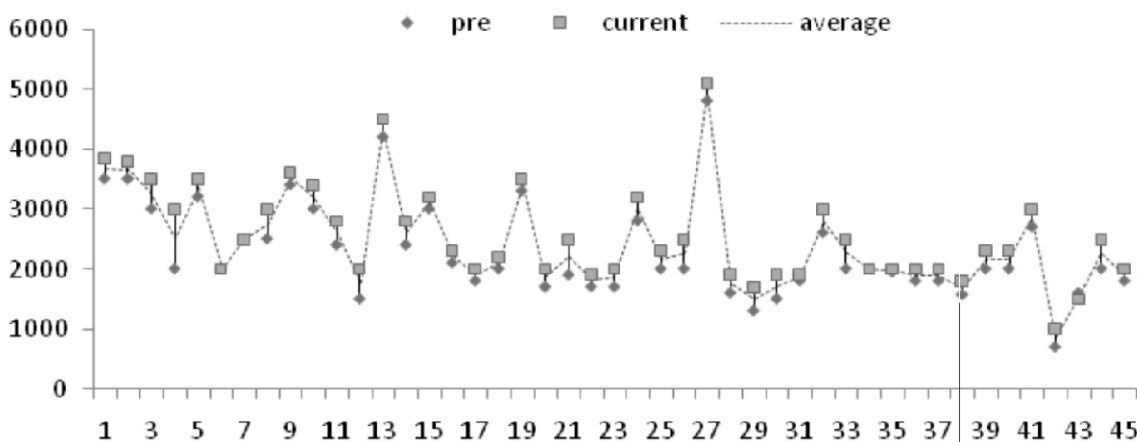


Figure 1

Aim: To know the significant differences in the current income post receipt of the monetary assistance from the Group

irrespective of the monetary assistance received from the Group

H0: The current incomes of the respondents are same

HA: The current income of the respondents varies post receipt of the monetary assistance from the Group.

Table 5: Significant differences in the current income post receipt of the monetary assistance from the Group

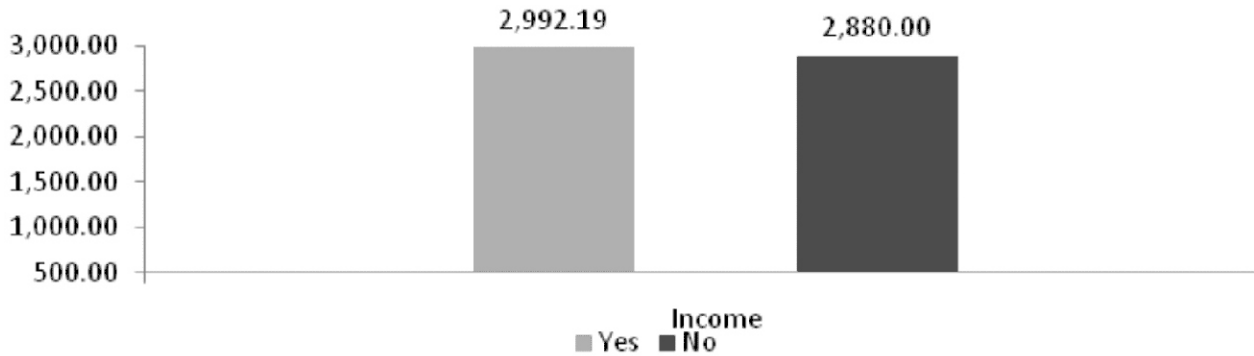
Group Statistics							
	16.i.Have you taken any monetary assistance from the Group:	N	Mean	Std. Deviation	Std. Error Mean	t value	sig value
12.i.current income	Yes	64	2,992.19	2,801.44	350.18	.146	.884
	No	52	2,880.00	1,210.27	167.8343		

*5% level sign.

The mean of current income for the respondents stating "yes" to the query that they have taken any monetary assistance from the Group was 2,992.19 while for those replying "no" to this question was 2,880.00. The above table brings out that the t-value is 0.146 and significance is

0.884. Since the significance value is more than 0.05, the mean difference in the current income across whether the respondents have taken any monetary assistance from the Group or not is not significant at 5% level. Hence, null hypothesis is accepted.

Figure 2



Aim: To find significant difference in the current income across the members of the SHG post receipt of the loan and their decreased dependence on the local money lenders.

of the loan do not decrease dependence on the local money lenders.

H0: The current incomes of the SHG members post receipt

HA: The current income of the SHG members post receipt of the loan decrease dependence on the local money lenders.

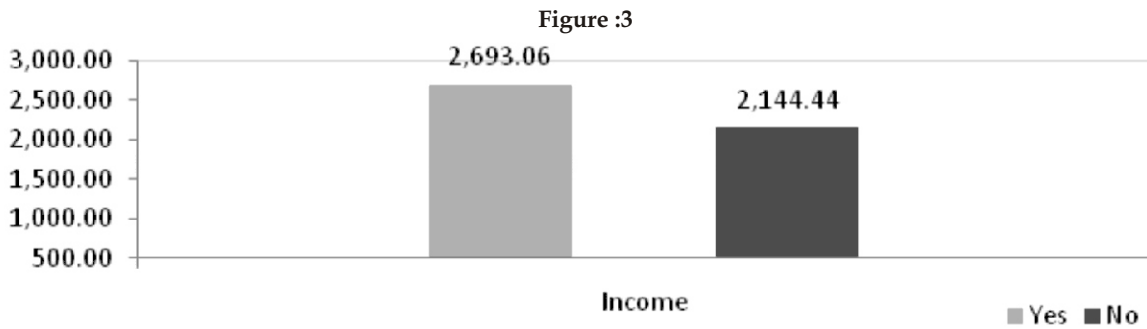
Table 6: Significant difference in the current income across the members of the SHG post receipt of the loan and their decreased dependence on the local money lenders.

Group Statistics							
	10. Has SHG decreased your dependence on the local money lenders	N	Mean	Std. Deviation	Std. Error Mean	t value	
12.i.current income	Yes	51	2,693.06	830.78	116.20	2.207	.031*
	No	13	2,144.44	619.35	173.25		

*5% level sign.

The mean of current income for the respondents stating "yes" to the query that SHG has decreased their dependence on the local money lenders was 2,693.06, while for those replying "no" to this question was 2,144.44. The above table brings out that the t-value is 2.207 and significance is 0.031. Since the significance value is less

than 0.05, the mean difference in the current income across whether the SHG decreased dependence on the local money lenders or not is significant at 5% level. Hence, null hypothesis is rejected and alternate hypothesis is accepted.



Aim: To know the significant differences in the current income of the respondents and their saving.
H0: The current income is same across all the respondents

irrespective of their saving.
HA: The current income differs across the respondents irrespective of their saving.

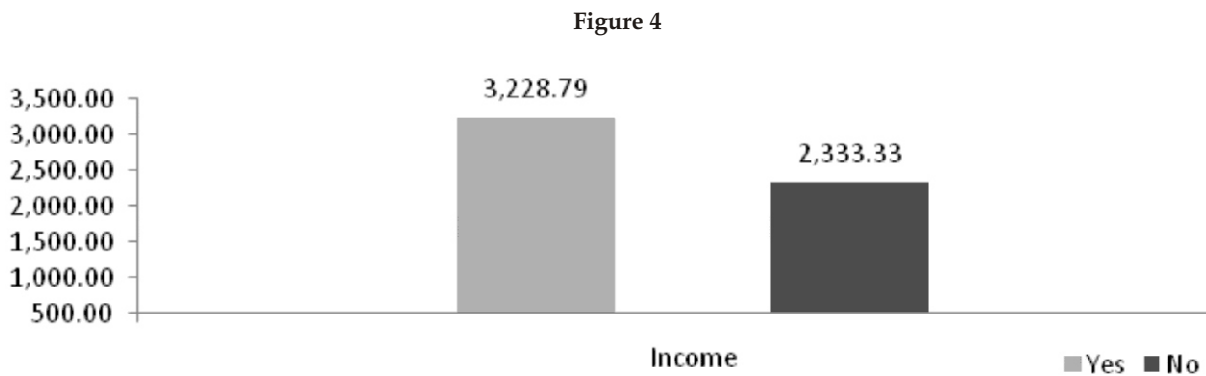
Table 7: Significant differences in the current income of the respondents and their saving.

Group Statistics							
	7. i. Do you save a portion of your Income?	N	Mean	Std. Deviation	Std. Error Mean	t value	sig value
12.i.current income	Yes	64	3,228.79	2,766.32	345.79	2.100	.041*
	No	17	2,333.33	396.68	96.21		

*5% level sign.

The mean of current income for the respondents stating "yes" to the query that they save a portion of their income was 3,228.79 while for those replying to this question in negative was 2,333.33. The above table brings out that the t-value is 2.100 and significance is 0.041. Since the

significance value is less than 0.05, the mean difference in the current income across whether the respondents save a portion of their income or not is significant at 5% level. Hence, null hypothesis is rejected and alternate hypothesis is accepted.



Major Findings

1. 97% of the SHGs formed under the SGSY Scheme.
2. More than 90% the rural SHGs were formed by the members with a similar experience of poverty.
3. 68 % of the rural SHGs pointed that NGO's played a vital role as a facilitator to run the SHG's.
4. 60% of the SHGs paid their savings amount in a monthly manner, 20% in weekly manner, and rest 20% have no fixed schedule.
5. 64% of the SHGs received loan from the financial institution and 97% the members of the SHG said that their members were regular in making repayments of their loan.
6. 75% of the SHGs partly utilized their credit into income generating activities.
7. 80 % of the SHGs opined that Village employment can be generated by utilizing the Micro Credit into different activities.

Conclusion

The goal of this research paper was to find out the impact of micro credit in generation of income by way of undertaking productive activities in small scale. Income generation is a factor which will lead to savings and will also reduce the extent of exploitation by the local informal money lenders. From the results it was found that post receipt of the micro credit the members have started their own business and they have started saving amount from their earnings and the members have discontinued taking loan from local money lenders. It was also observed that the members have not yet taken any monetary assistance from the group or the financial institution the current income was lower which signifies the relationship between micro credit and income generation.

Thus micro finance is a programme which has an affirmative effect for the development of the economy and thereby reducing income disparity more specifically in the rural areas. It has a versatile effect in our society and works in an integrated system. Government, NGO's, Financial Institution are stakeholders who plays a pivotal role to reach the ultimate poor (clients) by delivering this programme through different ways. As the programme is passing through the maturity stage therefore it is advisable if the programme can be made more transparent by integrating technology and opening up more opportunities by developing the skills sets of the clients.

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Social Entrepreneurship: An initiative from Academics



Shitika¹



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Entrepreneurship is an innovative concept which is largely associated with creativity and skill development. In recent times entrepreneurship is gaining a lot of emphasis due to emerging competitive economic scenario. Knowledge and skill provides a path to entrepreneurs from dreaming to doing. In this era of competition and growth, firms need to indulge into indigenous entrepreneurial activities. Research shows that very little efforts have been made to take entrepreneurial initiatives in education sector. Social Entrepreneurship is the need of an hour. The objective of this paper is to analyze and explore the existing literature available on entrepreneurial trends in Indian business organization and to develop strategies for its implementation in the area of academics. It tries to correlate the existing strategies for entrepreneurship development in Business organization with their strategic deployment in educational sector. Therefore, this paper unveils the fundamental dimensions of entrepreneurship development and explores the innovative ways for inculcating the culture of social entrepreneurship in education sector. This is the time for various non-governmental organizations (NGOs), governmental organizations and social entrepreneurs to come ahead and encourage development of social entrepreneurship in educational sector. Future research can be built on the Meta analysis of this integration of entrepreneurship and education.

Keywords: Social Entrepreneurship, Education, Strategic Deployment

Introduction

A framework of entrepreneurship has evolved in U.S. that has considerable applicability in other countries. There has been widespread recognition worldwide that entrepreneurship is the only way to sustain economic growth and development. This has provoked various countries to develop and promote Entrepreneurship in several aspects. In India, though, the phenomenon of entrepreneurship is well accepted in business organization, yet its practice correlating educational values especially in academia needs to be nurtured. Thus, the paper explores the ways through which entrepreneurship can be accepted in the educational sector through "Social Entrepreneurship".

Social Entrepreneurship is a phenomenon that integrates economic and social value creation, promoting a culture of innovation and skill development. In education sector, juggling social and business aims is the key requirement. Academia is deprived of Social Entrepreneurship with educational values. It creates an urge to gain insights into the fundamentals of social entrepreneurship and developing a framework to implement this social learning into the area of academics. Social Entrepreneurship has become the central tenet of the overall development of the country (Parkinson, 2011).

Evolution of Social Entrepreneurship: A historical perspective

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Social entrepreneurship as a focus of academic sector has a brief history. According to Peter Drucker, the 21st century will be the century of Social Entrepreneurship. Although Social Entrepreneurship has been there for many years, there has been a surge of interest in the past 20 years (MacDonald, 2012). Various studies have highlighted that in Indian context, one's duty towards society has a moral perspective (Chakraborty, 1987). The concept of social entrepreneurship has emerged recently which hallowed to employ entrepreneurial capabilities to solve social issues. The test of social entrepreneurship may be a change in social dynamics and system embodied in the survival and expansion of business organisation. In addition to being commercially viable, entrepreneurs

have used business and social skills to create enterprises enriched with a high degree of innovation. There are different approaches as far as the concept of social entrepreneurship is concerned. Some believed that social entrepreneurship is a catalyst for social transformation well beyond the social problems. Others emphasised social entrepreneurship as an innovation for creation of social impact. Still, other views are of combination of commercial enterprises with social aims. whatever approach is being reflected, the jist comes out to be the same i.e. economic development. The prominent social entrepreneurship is the ultimate solution to the problem of deprivation present in education sector. Social entrepreneurs need to understand the lacunaes and the gaps in the area of academics. The critical process of identifying and filling these gaps can be supported by reframing the strategies which are already uprooted in Indian enterprises. This composition can then be implemented in the education sector to generate a robust solution. In particular, this study focuses on unveiling the practices so far developed in entrepreneurship and then integrating these practices into academics by framing a comprehensive model. Before developing any framework, it is necessary to analyse the brief literature review. King and Roberts(1987) describes the impact of public sector entrepreneurs on state government policy. Waddock and post (1991) further extend the definition who social entrepreneurs are and what they do. Campbell (1998) prescribes the ways for developing new social purpose business ventures which can promote the area of social entrepreneurship. Cornwall describes the social impact of entrepreneurs in low income communities. Borrins (2000) studies two sets of entrepreneurial public leaders. Sullivan Mort et al.(2003) develop a conceptualization of social entrepreneurship as a multidimensional construct. Thus this research paper focuses on identifying the dimensions on which the scope for future research can be based.

Sustaining Social Entrepreneurship for education: A multidimensional model

The concept of social entrepreneurship is a complex phenomenon. It introduces a critical element of dynamism into the system. In keeping with the demands for greater innovation in education sector, there is the need to fundamentally redesign structures. Social Entrepreneurship extends beyond the traditional business and economic perspective. Creativity, innovation and bringing a vision to life are the entrepreneurial activities which needs to be synchronized and aligned.

Indians have always been entrepreneurs. We have always heard about the business growing from father to son or rags to riches. But, in recent decades, there has been a shift in entrepreneurial activities. Now all signs points towards joining the new wave of Indian enterprises- Social Entrepreneurship.

Social entrepreneurship is a cycle of actions. It is a complex phenomenon in today's infotech age. A hard practical approach is necessary to implement and manage entrepreneurial activities in academics.

Traditional Model

The earlier model of entrepreneurial activities lies on four fundamental dimensions:

Source: Small Scale Industries and Entrepreneurship, Vasant Desai



1. Predictability: It ensures that an entrepreneur should be able to forecast so that he can generate ideas for innovation and further development.
2. Sustainability: It is achieved by high motivation and continous growth. Being trustworthy is important. No organization can sustain its progress unless it makes a difference in its context.
3. Profitability: Every organization, irrespective of the sector to which it aims to generate higher profits in order to ensure highest returns to its stakeholders. Certainly, profits are crucial for long term success of an organization.
4. De-risking: The entrepreneurial activities should be divested towards de-risking that recognise, measure and mitigates risk along every dimension. Entrepreneur must take risks but it should be carefully thought out.

Every leading Social Entrepreneur is a mass recruiter of local change maker. This research paper tries to explore a multidimensional model of Social Entrepreneurship which can be applied to the educational sector. This approach will provide a strategic direction to the budding entrepreneurs in promoting Social entrepreneurship in deprived areas. The structural framework of this model is as follows:

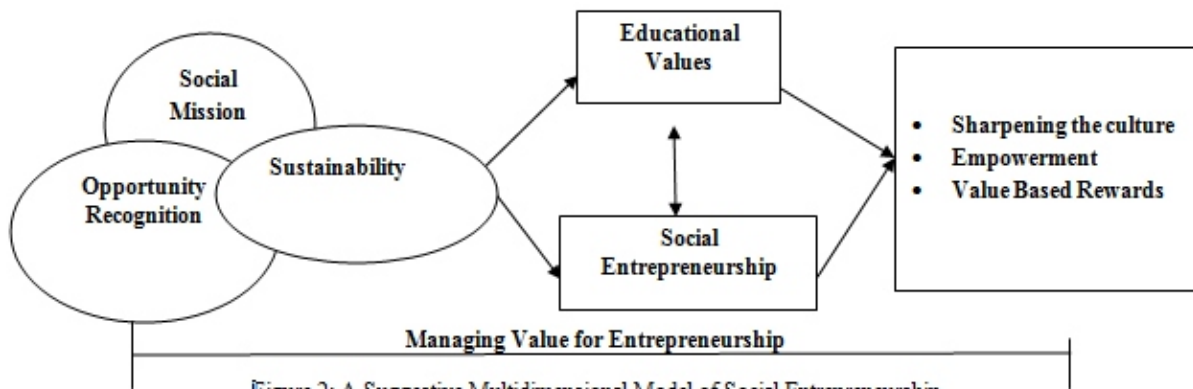


Figure 2: A Suggestive Multidimensional Model of Social Entrepreneurship

The model is divided into 3 structural dimensions. The first dimension relates to the factors which can inculcate the presence of educational values in social entrepreneurship. These factors can induce the necessary changes required for promoting educational values in budding entrepreneurs. The second structural dimension divulge to integration of education with social entrepreneurship which will critically analyse the gap and extend the model for its effective implementation. The third dimension is the combination of strategies that can be implemented to develop educational values in enterprises so that this integration proves to be fruitful for future growth and development. Since these dimensions are the underlying factors which appeal to social entrepreneurs, these entrepreneurial initiatives can be termed as 'key pillars' of entrepreneurial integration with education.

Dimension 1

In the new competitive environment, it is necessary to grow out of a mindset that thinks only control. The key factors that entangled social entrepreneurship are as follows:

1. Social Mission- The primary purpose of entrepreneur is to achieve its social mission , until we are deeply committed to an organization, our social mission remains incomplete. Financial performance and other achievements are secondary.
2. Sustainability- It is the core driver of educational values. The social entrepreneurship actively pursue innovation in all areas of value creation sustaining growth is imperative. In particular, it will help an organisation to create a dynamic balance .
3. Opportunity Recognition- Social entrepreneurship should be responsive to and constrained by opportunity seeking. Entrepreneurs often seek opportunities to create enhanced social values. Education in one such market that can enable Social entrepreneurship to create better social values to their clients.

Dimension 2

The integration of educational values with social entrepreneurship needs no mention. A supportive amalgamation of these is the bedrock upon which the model of social entrepreneurship rests. In substance the risk taking budding entrepreneurs should appropriately engulf the entrepreneurial initiatives with educational values.

Dimension 3

The third dimension of this framework provides insight into the strategies which can be effectively implemented for managing value.

1. Sharpening the culture- Entrepreneurs need to adopt a culture of accountability, aggressiveness and adaptability. It can enhance the level of awareness thereby promoting the proactivity of these entrepreneurs for academics.
2. Empowerment- Organizations need to learn to treat their employees not as mere implementors but as entrepreneurs who can create and generate educational values. In a way, they contribute to the growth of the firm. But empowerment in a few organizations will not serve the purpose. All firms need to take a joint effort in this context.
3. Value based rewards- Entrepreneurial initiatives in education sector can be increased by aligning the interest of the management with those of all the stakeholders. Entrepreneurial freedom is one such educational value which can stimulate Social Entrepreneurship. It will stir entrepreneurial initiatives which is often dominant in support function.

Finally the appropriation of free market model to education sector has critical semblance for the role of budding entrepreneurs.

Conclusion

This paper has demonstrated the integration of educational values with social entrepreneurship by promoting fresh entrepreneurial initiatives in the area of

academics. The concept of social entrepreneurship is not a task of single enterprise. It requires amalgamated efforts of all the enterprises whether NGOs, Government or private enterprises. To build the culture of social entrepreneurship the role of entrepreneurs is akin to that of a venture capitalist who strategize organizational initiatives without compromising educational values. In the absence of this strategic model, it is impossible for an entrepreneur to implement value based management framework for promotion of social entrepreneurial initiatives.

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Socio-Economic Aspects of the National Food Security Bill, 2013



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India is a developing country with a large proportion of people struggling for primary needs like food, water, housing, education, medical facilities, sanitation, etc. The success of a nation is not defined by the extravagant lifestyle of the upper class of the nation, but instead by the quality of life lead by the lower class of the population. A country progresses when the government of that country takes steps to make the life of the lower strata of the country satisfactory. The National Food Security Bill, 2013, through an ordinance was one such attempt by the UPA Government, who had first brought in the Right to Education Act. These bills, if efficiently implemented, would play a quintessential role in uplifting and developing the Indian society at a faster rate. Also, a bill like the Food Security bill which aims at providing food security to not just one-third of the population that is under the poverty line, but to two-thirds of the population could put a huge dent on the fiscal stability of the already unstable Indian economy and completely derail the fiscal arithmetic of the centre. This paper aims at highlighting the socio-economic impact of such a bill.

Key Words: National Food Security, Government, India, Socio-economic, subsidy.

Introduction

Food security is defined as “the availability of food and one's access to it”. A household is considered 'food secure' when the people in the house do not live in hunger or fear of starvation. Stages of food insecurity range from food secure situations to full-scale famine. The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”.

The National Food Security Bill was originally introduced in the Parliament in December 2011. The bill was cleared by a parliamentary committee in January. The Lok Sabha on 8th May 2013 had originally failed to pass the bill because of the inadequate support by the opposition party but it subsequently succeeded in this endeavour and passed the bill. The Bill was passed after rejecting more than 300 amendments in Lok Sabha on 26 August 2013. Sonia Gandhi addressed the Lok Sabha after four years for the smooth passage of the Bill. This Bill is said to be the game changer for not only the UPA in the coming 2014 elections, but also for India's economic well-being, due to which India's current account deficit is likely to balloon to unprecedented levels. In fact, Food security bill promises to ensure what was one of the key promises of the UPA Government and in the light of the impending elections, the UPA Government had been in a hurry to pass this bill and derive political mileage and improve its chances to

win the next election. In the light of the poor sky rocketing corruption that the UPA's term was tainted with and the derailing economy, such a bill would help the UPA in its attempt to come back to power again.

In layman's terms, the National Food Security Bill, 2013 is a provision by the Government to supply food grains at a very cheap price with an aim to secure food for all. The beneficiaries of the Food Security Bill will be almost two-thirds of the population of India of 1.2 billion people. The food grains which will be supplied at subsidised rates are rice, wheat and coarse grains at the rate of Rs. 3/kg, 2/kg and 1/kg respectively, as per the bill. These rates would be valid for three years. Every pregnant woman and lactating mother would get free meal during pregnancy till six months after child birth. They will also get a maternity benefit of Rs. 6,000 in instalments. Children up to 14 years would get free meals. In case of non-supply of food grains, states will have to pay food security allowance to beneficiaries.

Objectives of the Study

The opening line of the National Food Security Bill, 2013 is “A bill to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto.”

Despite ensuring ample availability of food, existence of

food insecurity at the micro-level in the country has remained a formidable challenge for India. This bill aims to address this and marks a paradigm shift in addressing the problem of food security from the current welfare approach to a rights based approach. The subsidy provided by this bill would perhaps be the biggest ever experiment in the world that would aim to achieve food and nutritional security by distributing subsidized grain to almost two thirds of the country's population. This would mean a massive procurement of food grains and a very large distribution network entailing huge financial expenditure. The long-term feasibility of the envisaged strategy needs to be carefully analysed and debated in the national interest.

Even before this Nationalised Food Security bill was passed as an ordinance, state level schemes to ensure food security had already been running in different forms, with different criteria and different benefits. Besides the above social objectives, political motivation to garner votes and win elections was a key driver for all political parties/governments at national and state level to support this bill. There has been a consensus for this bill in the parliament in the broader sense per se and it has been passed very smoothly unlike many other bills which get stalled in the parliament because of difference in philosophies.

This paper aims at going into the depths of the socio-economic impact of the said bill, whether the government can keep the big promises made to two-thirds of the population, or will it succumb to the pressures on the economy.

Research Methodology

The research is based on secondary data in the form of articles published in books, journals, magazines, research papers, newspapers and reports.

Socio-Economic Dimension of the National Food Security Bill, 2013

The rationale of the Bill is best summarized by the following excerpts from the Bill:

“Article 47 of the Constitution, inter alia, provides that the State shall regard raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties. Eradicating extreme poverty and hunger is one of the goals under the Millennium Development Goals of the United Nations.” And “In pursuance of the constitutional obligations and obligations under the international conventions, providing food security has been focus of the Government's planning and policy. Food security means availability of sufficient food grains to meet the domestic demand as well as access, at the individual level, to adequate quantities of food at affordable prices”.

India has been quite successful in ensuring ample availability of food in the country, be it basic staples like

rice and wheat or other food products like edible oils, pulses, fruits and vegetables, milk and milk products, eggs, meat and fish, etc. Most of these are produced within the country to meet the consumption demand, with some surplus being exported (like that of rice where India has emerged as the largest exporter in 2012), and in others reliance is on imports (like edible oils and pulses). But making food available is only one aspect of food security, though an important one. The others are economic access to food and its absorption by people for better nourishment. It is here that India has faced its biggest challenge and paradox. Despite buoyant economic growth in recent years, around one-third of India's population, i.e. 400 million people, still lives below the poverty line (in 2010) as per World Bank's definition of USD 1.25/day. Using the multi-dimensional poverty index (MPI) of UNDP, India ranks at 75 among 109 countries in 2011, much worse than the other BRIC countries- indicating extent of deprivation in terms of living standards, health, and education. According to National Family Health Survey (NFHS-3) conducted in 2005-06, 20 per cent of Indian children under five years old were wasted (acutely malnourished) and 48 per cent were stunted (chronically malnourished). The HUNGaMA (Hunger and Malnutrition) Survey conducted by Nandi Foundation conducted across 112 rural districts of India in 2011 showed that 42 percent of children under five are underweight and 59 percent are stunted. All these estimates point to the existence of food insecurity at the micro-level in terms of either lack of economic access to food or lack of absorption of food for a healthy life.

Cost

This mega program will require a huge food subsidy. The cost of it will go up from 0.8% of Gross Domestic Product to around 1.1% of GDP. This is a serious increase in a situation where the government does not have enough resources as it is. While the intention of the Food Security Bill is quite noble, the real problem arises in the execution and efficiency of these programmes. Taking a look at the inefficiency of the programme, the government first buys the wheat at Rs. 13/kg, then it spends Rs. 10 on brokerage, transportation and storage. It then transports this back to the same rural areas. Under the bill, the government will sell the food to ration card holders at between one and three rupees per kilogram, which is a subsidy of Rs. 20 per kilogram.

India will now join the select League of Nations that guarantee majority of its population food grains. The government says it will provide 62 million tonnes of food a year under the bill and the size of the subsidy is estimated around \$24 billion. Even if the quantity of food remains the same each year, the food subsidy bill will increase annually. As the cost of food goes up (because of wage increases and oil price rises), the amount that the government sells the subsidized food for will remain the

same. It is likely, because of a rising population, that the quantity of the food supplied will also increase. Given the rising costs of the scheme, its sustainability is under question.

The government's estimated cost of food security comes at 11.10% (Rs. 1, 24,723 expressed as a % of Rs. 11, 22,799 crore) of the total receipts. The CACP's estimated cost of food security comes at 21.5% (Rs. 2, 41,623 crore expressed as a % of Rs. 11, 22,799 crore) of the total receipts. Once we express the cost of food security as a percentage of the total estimated receipts of the government, during the current financial year, we see how huge the cost of food security really is. This is something that doesn't come out when the cost of food security is expressed as a percentage of GDP.

It is also worth remembering that the government estimate of the cost of food security at Rs. 1, 24,723 crore is very optimistic. The CACP Report points out that this estimate does not take into account "additional expenditure (that) is needed for the envisaged administrative set up, scaling up of operations, enhancement of production, investments for storage, movement, processing and market infrastructure etc." Food security will also mean a higher expenditure for the government in the days to come. A higher expenditure will mean a higher fiscal deficit.

Finance and Procurement

The bigger question is that how will this higher expenditure be financed. Seeing the shape of the economy, higher taxes are not feasible. The government will have to finance food security through higher borrowing. Higher government borrowing by the government crowds out private borrowing. The private sector (be it banks or companies) in order to compete with the government for savings will have to offer higher interest rates. This means that the era of high interest rates will continue, which will not be good for economic growth.

This is another factor that can put pressure on the rupee. In a particular year when the government is not able to procure enough rice or wheat to fulfil its obligations under right to food security, it will have to import these grains. But that is easier said than done, especially in case of rice. "Rice is a very thinly traded commodity, with only about 7 per cent of world production being traded and five countries cornering three-fourths of the rice exports. The thinness and concentration of world rice markets imply that changes in production or consumption in major rice-trading countries have an amplified effect on world prices," a CACP research paper points out. And buying rice or wheat internationally will mean paying in dollars. This will lead to increased demand for dollars and pressure on the rupee. The weakest point of the right to food security is that it will use the extremely "leaky" public distribution system to distribute food grains.

Duplication of schemes, where the same person gets multiple benefits from different programmes run by the

government, example, an individual can get money through employment guarantee scheme, as well as subsidised food grains. Another fundamental point, if you satisfy the needs of the people without making efforts, are we creating a laid back economy? In most countries, like China, the poor people in rural areas, move to urban areas and take jobs in production sector, which has increased competitiveness, one of the key driving forces for China's huge economy.

Distribution

The government intends to use the Public Distribution System for delivering subsidies to the poor. The Public Distribution System is already used to deliver food subsidies to the poor but around 58% of the food delivered that way is currently lost to leakages. It is sold on the open market for a higher price. Extending the Public Distribution System might make another channel for these leakages.

The government is also considering using direct cash transfers. In cases where the government is not able to make food available in the Public Distribution System then they will give cash payments to be used for food directly into people's bank accounts. The Delhi government has already started distributing subsidized food using the Public Distribution System but also started direct cash transfers for kerosene allocations. This was unsuccessful because people had the cash but there was no kerosene for them to buy. It is yet to be seen how this will unfold for food.

Conclusion

The key debate is between short term goals and long term goals. In the short term, providing subsidies to the public would alleviate the suffering and poverty of the masses, however, these do not ensure the growth of the economy. In order to achieve long term growth, our country requires investment on basic infrastructure, basic industries like roads, ports, power plants, mining, etc. So it is clear that the socialist approach of the government is coming at the cost of long term economic development and growth of the country.

The question of the hour is whether a faulty National Food Security bill is better than none at all. This bill should come and should help the poorest of the poor. But it is felt that it should be targeted only to the poor. Right now it's targeting 50% of the urban population and 75% of the rural population. The government needs to reduce the leakages from the distribution system and make it transparent. If the poor are getting food at a subsidised rate, then it is better than none at all.

Recommendations

- Instead of wasting money on logistics, the government could directly provide money to the eligible people so that they can buy the food grains which are locally produced and easily available. Such an action would

potentially cut down the cost of this programme by nearly half. Towards this, the current UID (Unique Identification) project, which is under active implementation, which now also has a large number of bank accounts linked to it, could be actively considered for making effective cash transfers. This method would reduce the scope for corruption and involvement of middlemen would be completely eliminated.

- The bill should have included subsidized rates for pulses which for many of the poorest are their only source of protein and highly nutritious. The price of pulses has gone up, making them out of reach for many.
- We need to reduce the leakages from the distribution system and make it transparent. This bill has transparency provisions which need to be effectively implemented.
- Community based agricultural programs and teaching about sustainable farming shall enhance production in the country. And this in turn would bring down the prices of various essential commodities and people can be self-sufficient themselves. Reliance on government programs would reduce and this would give people a feeling of security and not fear of dependence.
- For reducing loopholes in Public Distribution System, government must take lessons from Chhattisgarh government where after the delivery is made to PDS branch, all the beneficiaries get a message through mobiles about the same, so they know about it and reach the distribution centre on time.
- The Government should invest in education and vocational training programmes and make them employable, so that they effectively strengthen the

work force of the country, thereby increasing the economic growth. The Government should progressively aim to reduce the number of people who are being provided subsidised food, i.e. instead of making them dependant on subsidies; the effort should be on making them self-reliant.

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Research Paper

National Food Security Bill: Challenges and Options, CACP Report

Conceptual Framework of Performance Indicators for Operational Performance of Toll Roads



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Evaluation is a tool for analysing failures and identifying successes in organisation operations. It is possible to identify the areas of concern and thereby, the means of overcoming it through the process of evaluation. However, this evaluation process seldom gets adequate attention in most of the organisations, and toll road organization is no exception to this fact. So, this article is a modest attempt to identify various indicators manifesting the performance of the toll road organisation. The indicators listed in this exercise are intended to capture the performance of certain variables in the operational environment of toll roads and can be used to help evaluate the progress of the industry against its objectives, and to guide future development of plans and objectives. As the subject is relatively new in this area, various fundamental aspects associated with performance indicators are touched upon in order to make the approach very clear. A comprehensive list of the relevant indicators is presented in the study.

Keywords: Performance Indicator, Road project, Road user, Operations, Standards

Introduction

Performance is the barometer of measuring the effectiveness of doing something. It can be perceived as a measure of the system's ability to produce efficient and satisfactory results compared to the standards set out prior to its implementation. In other words, it can be further defined as the operational objectives (comprehensive list given below) of each business area forming the project. Further, it can be equalled to actual results on the standard expected results. Performance central to the Highway Projects on BOT model as the performance particularly revenue stream depends on the effective Operation and Maintenance (O&M) of the project as this phase is one of the important phases of the Highway projects. In BOT road projects, the developer (concessionaire) has to maintain the project road as well as recover investment by charging toll / user fee from road users as set out in Concession agreement. The O&M activities essentially include traffic operation, toll collection, etc. As the toll road is high profile public project as many different categories of road users operated on the facility and pay the toll and user expectations are high on the quality of service. Thus the contractor is required to deliver high quality operations through multiple services for which the operational objectives are established. 'The high level of operational performance' means the system must be well maintained and individual operating units must collaborate well with each other, and be available for use. For monitoring,

performance evaluation of the operating conditions is carried out from time to time for all the performance areas through 'Performance Indicators (PIs)' – the data provided by the systematic observations in the field. The data, either internal or external, can be further ordered into statistical / textual information and presented into 'indicators' that are believed to express structure or change of the operational condition of the system. However, the questions arise as to what all the services that need evaluation, the parameters that need to be checked, whether the contractor provide quality services to road users, are the road users guided adequately for safe travel on the road? Are adequate safety measures provided? Why the strict actions can not be initiated against road service offenders, why the public is not acting against contractors and why the legal provisions are so lenient that contractors can get away with it with poor penalty. To address all these problems the performance of the system need to be analysed holistically.

Operational Objectives of Functional Toll Roads

The comprehensive list of objectives in all performance related areas of toll road projects during operation period is presented below:

- i. To determine actual flow of traffic on the project road
- ii. To demand and collect road user fee from users
- iii. To revise the toll fee annually

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- iv. To make provisions for toll exemption for local users
 - v. To provide toll pass to the frequent users
 - vi. To check over-loading of goods vehicles by setting up weigh-in- Motion bridge at toll plaza
 - vii. To display toll fee rates for one km. before toll plaza and at the toll plaza
 - viii. To maintain a public relations office at each of toll plaza
 - ix. To keep a complaint register open to public access at all times for recording of complaints by any person
 - x. To inspect the complaint register every day and take prompt and reasonable action for redressal of each complaint.
 - xi. To provide emergency medical aid post at the toll plazas.
 - xii. To provide ambulance service round the clock
 - xiii. To provide traffic aid post round the clock with patrolling services
 - xiv. To prepare toll fee statement monthly and submit to the Authority
 - xv. To Co-ordinate with the safety audit of project highway
 - xvi. To develop, implement and administer a surveillance and safety program for providing a safe environment on the project road
 - xvii. To provide materials and equipments
 - xviii. To train employees
 - xix. To provide road user amenities

Defining PIs

PIs can be defined in a variety of ways:

- i. PI is a measure, usually quantitative, which reveals information about certain characteristics of a service as it remains in both statistics and textual form.
- ii. PI is a variable that indicates functional performance of a system either at processing level or output level. The indicators that are used to measure company's objectives are called output indicators.
- iii. PIs are powerful tools for monitoring and improving system services. The system may be business, manufacturing, transit, etc.
- iv. Performance Measures / Indicators (PIs) are nothing but a basic input for a variety of decision processes and activities in infrastructure management (Frannie, 1994)
- v. It is the result of the comparative analysis of a performance measurement out come to the corresponding performance goal. These measurements give an indication of performance

vi. PIs form the criteria for assessment of the performance of the system. For example, 'Profit' is a PI parameter that the firm / business is interested in, where as the 'customer satisfaction' is another PI parameter that can be obtained by customer ratings through customer satisfaction survey.

Performance Indicator and Performance Index

When we have too many indications to consider as it is necessary to present information from several related areas simultaneously, performance indexing becomes a useful performance management tool. Simply put the index combines indicators of all the performance areas. The philosophy behind using performance indexes is simple: they condense a great deal of information into one number- a statistical measure of how a variable, or a set of variables, changes over time.

Application/Users of PI

The stakeholders relevant to the sector use the PIs depending on the requirement and interest. For example, quantitative variables such as "Toll Traffic" and "Toll Revenue" are important to the operators and agencies as they measure the output of the system as it is mentioned in the company's objectives framework. While the indicators used to measure a company's objectives are called output indicators, the variables used to tap the concept of user satisfaction on various dimensions of quality of road user services are called process indicators. The list of indicators with their corresponding application area is given in the Table 1.

How to Obtain PIs

Some of the PIs readily available in most systems, and others can be collected and analysed as conditions warrant. Some PIs can be measured objectively at individual facility level, e.g. "Toll Fare Processing Time (in seconds) at the Toll Booth". However, some PIs need to be derived through other simple and readily available variables or statistics. Example, for analysing quality of travelling experience toll paying customers is targeted for feedback on the service or the facilities of the system (Shaw, 2003).

How Many PIs Required

For analysing a complex system like transport, one could probably devise much number of PIs. However, experience has shown that in many situations a relatively small number of measures can be used effectively. In a particular study, it was mentioned that a total of 72 PIs in 10 categories were selected to represent the economic, social, safety and environmental performance of the road sector (Ralph Haas et al.2009).

Classification Based on the Nature of PIs

For the sake of computational convenience, the PIs can be categorised as Simple, Composite and Complex.

Simple PIs: It can be measured and recorded by direct observation.

Example: 'Traffic Density', this variable can be measured in number of vehicles per time (such as an hour or a day) as low, medium and high volumes of a particular road.

Composite PIs: It can be calculated by using minimum two simple variables

Example: Delay on Toll Road Segment:

Segment Delay (sec.) = [Actual Travel Time - Acceptable Travel Time] x Vehicle Volume

The acceptable travel time is the total travel time it would take to travel a segment during expected conditions, normally less than actual travel time. Such model calculation deriving PIs are presented in Table 1.

Complex PIs: It is an abstract concept multidimensional in

character. As such it cannot be measured directly, they are measured indirectly by indicators - in this case items in likert scale and such indicators are manifesting variables.

Example: Road user satisfaction or travelling experience that has several dimensions with various elements in each dimension. In order to measure this type of PIs scale are required to be designed. In short, the PIs are analysed to determine if the system's performance is satisfactory relative to the goals set for the system, or with respect to an external norm. The method of determining the performance score with multiple variables is explained in the subsequent paragraph - 'Method of Calculation of PIs'.

Table 1: Model Calculation for Select Indicators

S. No.	Name of the Indicator	Nature	Measure	Data Source	Method of Calculation	Application / User
1	Category of roadway	Textual	NH / SH	Toll office	N.A	Road building agency
2	Length of stretch	Simple statistic	Kms.	Toll office	N.A	Road -building agency
3	Number of lanes	Simple statistic	Number	Toll office	N.A	Road -building agency
4	Project cost	Simple statistic	Rs.	Toll office	N.A	Road- building agency/toll contractor
5	Traffic density	Simple statistic	Number of vehicles per day	Toll office	Traffic volume counts	Govt. and Contractor
6	Volume / Capacity (V/C)	Simple statistics	Number.	Toll office	Ratio between traffic volume and Capacity	Utilisation of roadway
7	Speed on the toll way	Simple statistic	Km/ph	Toll office	N.A	Road user
8	Delay on toll road	Simple statistics	Minutes	Field survey	Delay on toll way=(Actual travel time -acceptable travel time) x traffic volume	Road user
9	User satisfaction on safety	Abstract variable	Opinion /attitude	User survey	Performance index = average score of all safety elements	For decision on improvement
10	User security	Abstract variable	Opinion /attitude	User survey	PI= average score of all security elements	For decision on improvement

Model of Performance Measurement: The Key-Area / Performance Indicator Framework

Step 1 : Job Purpose (Be concise and precise. In this case, it is O & M of Toll Road)

Step 2 : Key Areas (Aspects of the job vital to success. In this case Operational, Financial, Safety, Security, User Amenities, etc.)

Step 3 : Performance Indicators (How performance is

evident, generally as many as possible include subjective indicators, In this case, Toll Traffic, Toll Revenue, Road Way Signs, Signals, Markings, and Quality of Services etc.)

Step 4 : Objectives and Standards (review performance indicators, select most useful, write SMART objectives and /or standards, In this case Comprehensive list of Objectives are mentioned above)

Key Area 1	Key Area 2	Key Area 3	Key area 4
*	*	*	*
*	*	*	*
*	*	*	*

(*: Performance Indicator)

Table 2: Key Performance Areas and Indicators Framework

KEY PERFORMANCE AREAS				
Provision Of Infrastructure	Traffic and Toll	Road Users (commuters and drivers) - Services and Safety Measures	Financial	Operational
1. Category of Road 2. Length of project road 3. Number of lanes 4. Project cost 5. Number of toll plazas on the toll road 6. Number of toll lanes 7. Type of technology 8. Toll collection system	1. Traffic composition 2. Traffic estimate 3. Toll exempted vehicles 4. Local commuters / pass holders	1. Communication facilities 2. Rest rooms 3. Repair and service centers 4. Road fencing 5. Road marking 6. Sign posts 7. Signaling system 8. Lighting facilities 9. Safety devices 10. Parking lay-byes 11. Emergency medical aid posts 12. Ambulance services	1. Gross Toll receipts 2. Net revenue 3. Operation & Maintenance expenses 4. Profit/ Loss 5. Toll leakage	1. Toll fee processing time 2. Toll plaza outfit (equipment and staff) engagement 3. Number of vehicles processed per hour or a day 4. Average Travel time saved by commuter in one way trip 5. Journey experience (excellent/ good/ bad) 6. Users satisfaction on the wayside an amenities 7. Percentage of traffic that by passing toll road (Toll road should capture maximum traffic with few vehicles on the alternative road is allowable)

It is to ensure that the objectives are clear as per the version of the SMART format as below.

- 1) Specific indicators should be identified
- 2) Measurable outputs should be prioritised
- 3) Accountability to public should be upheld
- 4) Reporting on periodic basis should be undertaken
- 5) Transparency and training should be pursued.

Method to Calculate PIs:

For measuring the concepts like 'Quality Of Service' or 'User Experience' on the quality of services delivered by the road contractors, likert scale is designed to collect user opinion on the series of the items (statements) of various dimensions of the services like safety, security, information technology, general amenities etc. The opinion is collected on 5-point numeric rating scale. The series of statements- the rating questions or descriptions are combined to measure a wide variety of concepts such as customer loyalty, service quality and job satisfaction. For each of these concepts the resultant measure is represented by a scale score created by combining the scores for each of rating questions. Therefore, the 5 point numeric scale allocated to response categories (5 = Excellent, 4 = Good, 3 = Reasonable, 2 = Poor and 1 = Awful) will make it easier to aggregate responses using a computer to SATISFACTORY (Scores 5, 4 or 3) and

UNSATISFACTORY (2 or 1). The underlying method of quantifying the data on the variables manifesting the concept of 'travel experience' through dummy variables, v1, v2 and v3 is illustrated in Table 3.

Table 3: Simple Performance Index

Variables Respondents	V1	V2	V3
	1	3	3
2	4	2	3
3	4	2	2
4	2	3	3
5	3	2	4
6	4	2	3
7	3	3	4
8	5	3	3
9	4	2	4
10	4	2	4
Performance Scores	3.6	2.4	3.4

Conclusion

Performance measures include measures applicable to both users and non-users of toll road system, as well as measurement of roadway facility itself. The PIs are to be practical and usable by a transport agency and they should be linked to realistic policy objectives of the road agencies. It is suggested that the policy objectives should be based on or fit with the agency's mission statement. A set of realistic policy objectives and associated PIs is provided in the study as an example. It should be easily available from the sources, easily collectable and be calculated using readily available data. It should reflect the objectives of clients / organisation, (example: 'travel time') as a key indicator and recommended for use as it has the strongest fundamental link between user perception and the mobility provided.

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Innovation and New Product Development : Why Do New Products Fail?



Gopaldas Pawan Kumar¹

The old saying 'necessity is the mother of invention', sums up the requirement of present organizations for innovative products to gain competitive edge. The current offerings may not be meeting the financial objectives set in the recent past. To grow and survive, mere cosmetic changes to existing products may not help in the long run. Innovation, on the other hand, could provide alternatives to create new products for organic growth. Moreover, it could help a company gain 'first mover' advantage for sustainable profits. History shows that only a few new products are successful in terms of meeting organizational goals. Even some of the professionally managed companies have faced failures of their new products. On the other hand, startups with little or no prior experience of business, but having an innovative product have seen runaway successes. Thus, it is seen that success or failure of new products in the market are due to various reasons which many organizations fail to identify in advance. The reasons for failures could be within and/or outside the organization. While planning the different stages of new product development, some important aspects might have been overlooked. The paper attempts to provide some plausible reasons with appropriate examples behind failure of new products, wherever possible, and also few solutions to avoid pitfalls to enable improve the success rate.

Key Words: Organizations, Innovate, New Product (NP), Goals, Consumer

Introduction

In the context of innovation vis-à-vis NPD, history shows that the numbers of failures are more when compared to successes. In Indian context, a survey conducted in 1993-94 showed that new products failure was to the extent of 74% with new brand names. This figure is confirmed by Copernicus Marketing Consulting and Research in article, "Top 10 Reasons for New Product Failure." dated 2nd October 2013.

New products have different connotations and hence require clarification. Incremental innovation could be a modification of an existing product or a brand extension making it more appealing to existing or new customers. This strategy is not long term but could extend the product life cycle (PLC) tenure by few months/years.

Whereas, innovation through emerging technologies and new processes provides a platform to introduce NP's which could catapult companies to newer and sometimes unassailable orbit to attain competitive edge long enough to reap sustainable profits.

The reasons for failure are many depending on the industry as well as the criteria the organizations fix as targets. If a proper analysis is done to find the root cause of failures, the problems may be found both within and

outside the organizations.

The paper discusses Innovation, Product Vs NP and NPD process setting the trend for discussions on why NP's fail. A number of reasons for failures with examples along with suggestions to improve success rate are provided, gathered from experience and various secondary data. Lastly, the author proposes a framework called "OEEM" to guide organizations to improve success rate of NP's.

Innovation

Definition of Innovation has been elusive. In the words of Werbach (2013), "Everyone thinks they know it, but when you ask them to explain exactly what an innovation is, it gets very hardIt's something new that creates new opportunities for growth and development". Kahn (2008) provides clarity in connecting inventions and innovations with products by explaining that inventions are technical devices that lack clear benefit offering, while innovations, both continuous and discontinuous, represent a total package of features, forms and functions which marketing program converts into benefits for satisfying the needs and wants of the customer. Continuous innovations represent minor modifications to existing products, whereas, discontinuous innovations help introduce new products that may change the market and consumer

lifestyles and in some cases, rendering existing technologies obsolete.

Product Vs New Product

Kotler et al (2013) define a product as anything that can be offered to a market to satisfy a want or need which may include physical goods, services, experiences, events, persons, places properties, organizations, information and ideas.

New Product (NP) could be made available by way of:

1. Cost Improvements due to cost optimization
2. Product Improvements to improve form or function
3. Line Extensions which are copies of existing product with unique features
4. Market Extensions which are original products positioned differently in new markets
5. New Category products which are new to the company but not new to the customers.
6. New-to-the world products which are technological innovations that create new market.

Pessemier (1986) opines that any product that users consider as a new addition to the current market offerings

qualifies as a new product with newness implying change and absence of consumer experience.

New Product Development (NPD) Process

The NPD process consists of idea generation, idea screening, concept development and testing, marketing strategy development, business analysis, product development, market testing and finally commercialization. Please see Figure-1 on the next page(5) . The process is not to be seen as continuous and linear. A few iterations are attempted before the product sees the light of the day. To manage NPD, organizations adopt different methods. Some of the popular arrangements are establishing NP departments, cross functional teams (CFT), high-level management committees, venture teams etc as per the importance the NP commands. Some of the methodologies used in NPD process are spiral development, concurrent engineering, and stage-gate systems. The latter being more effective as progress depends on achieving the planned results before each gate, enabling control of the process. It is common with organizations to work simultaneously on many NP's at different stages of development. Some may get dropped at earlier stages and some may come through successfully suitable for launch.

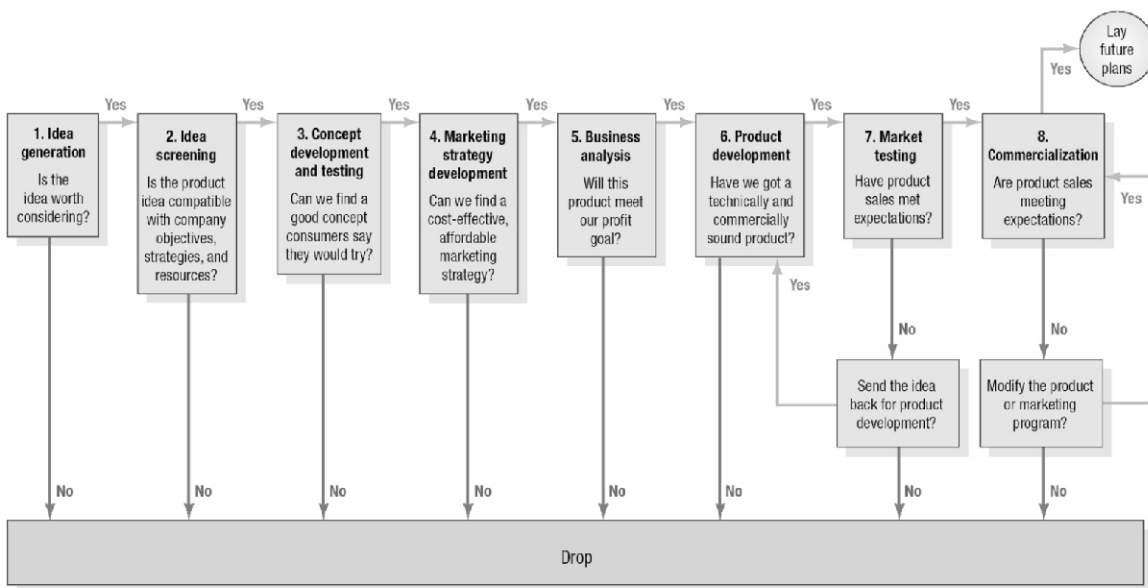


Figure- 1 Source: Kotler et al , “Marketing Management” , Dorling Kindersley (I) Pvt Ltd.,2013

It is not out of place to mention that major problems and mistakes are committed by organizations during the development process resulting in the product failure. It could be at any critical stage, in particular at idea generation, marketing strategy, business analysis, product development or/ and at market testing stages.

According to Leo Burnett Company , leading ad agency , the important principles to guide success in NPD are :

Distinguishing new product from competition, capitalizing on key corporate competencies and brand strengths, developing products to people's needs and habits , giving importance to research findings ,timing the launch right and offering real value to consumers .

Why New Products Fail

According to Forbes magazine, 250,000 new products were introduced to the world in 2010 alone. Survey of the

literature provides important data on organizations which used innovation to launch new products to stay ahead of competition. But, there are instances of more failures than successes when you look at the customer response to these NP's. Even reputed organizations lost enormous amount of money when they launched new products in the market. The reasons vary depending on the industry and the product category. It is found that in many instances the organizations overlooked certain basic tenets of marketing.

A sample of costly product failures gives an idea of the high stakes that are involved when new product bombs in the market. Classic cases are that of Ford's Car Edsel- Loss of \$350 million , Dupont's Corfam – Loss of \$100 million , RCA Videodisc- \$500 million and IBM's PC jr - Marketing cost\$ 40 million . These cases are from abroad. In India the failure saga is less documented.

Understanding the reasons of product failures is important for organizations to gain insight so that similar mistakes in future endeavors are avoided. However, the reasons may keep changing due to dynamic market conditions. Notable failures can be seen in automobiles, computer, FMCG, photographic, food and beverages segments.

Berry (2013) defines a new product failure as when:

1. It is withdrawn from the market for any reason.
2. The required market share in a desired time period is not realized.
3. The anticipated life cycle as defined by the organization is not achieved and
4. The desired profitability is not realized.

In order to know why NP's fail, Urban & Hauser (1993) provide a few noteworthy reasons which command attention. They are:

1. The market was too small
2. The product was not new to the customer /market.
3. The product offered no tangible benefit.
4. The product was not positioned properly.
5. Poor support from channel partners.
6. High forecast variance
7. Strong competitors' response.
9. Major shift in Technology base.
10. Change in customers preferences
11. Environmental constraints.
12. Poor after sales service
13. Inadequate return on investment
14. Lack of coordination among various departments
15. Poor diffusion of innovation.
16. Conflict of personalities at higher echelons.

On the other hand, Cooke (2013) lists out few reasons which emanate from various departments failures. They are a) Lack of robustness and reliability in the product due to poor concept b) Poor control of costing in manufacturing c) Not emphasizing quality from the design stage itself and d) Working in functional 'silos' due to ego problems of departmental heads.

According to Lindsay (2013), 66% of new products fail within two years and that 96% of all innovations fail to

return their cost of capital due to a number of factors which include economic conditions and failing to monitor the latest trends.

Few other contributors identify failures due to various reasons like NP not meeting the claims made or creating a new category product necessitating customer education (Schneider and Hall , 2011) changing customer preferences , lack of product distinctiveness, (Wheelwright and Sasser ,1989) ideas pushed by management that do not fit the targeted market, high research and/or product development costs ,underestimating competitive activity, ignoring marketing research findings (Berry 2013), consumers not being informed of the applications, and new technologies not addressing market opportunity correctly (Moote ,2012)

Examples of few classic New Product failures

Krishnan (2013) opines that in many organizations engineers and technologists have preconceived notions about what consumers need and fail to see the importance of 'immersion' in the customer's life to understand the existing needs and actual usage conditions. To substantiate his statement he quotes the examples of TATA Motors pickup truck, Ace, and the small car Nano. Ace is successful as it was designed based on market requirements whereas Nano is yet to find its bearings in spite of being touted as a marvel of frugal engineering because the process of development looked at cost optimization, thus, not meeting customer's expectations in full. Nano's failure was also compounded by incorrect positioning.

A few noteworthy NP failures in the overseas market are:

1. Zune, a music device launched by Microsoft to compete with iPod failed because it lacked style and the simplicity of Apple's interface.
2. Sony introduced Betamax , the first home video recording tape in May 1975. JVC came out with VHS format in 1976. Betamax lost because VHS could hold four hours of video compared to Betamax one hour.
3. In 1957, Ford debuted with Edsel and ended production in 1960, having lost \$350 million on the car, because the car's market positioning was confusing and unclear.
4. LaserDisc was introduced commercially in 1978, two years after VHS, it had several problems. Most importantly, they were expensive, large, awkwardly shaped and they could not be used for recording.
5. Brand extensions can be highly successful. They can also fail miserably like Colgate Kitchen Entrees, a line of frozen dinners. Colgate thought that consumers can eat a Colgate meal, and then brush their teeth with Colgate toothpaste. Customers did not like the positioning.
6. Vista was released in 2007 after its predecessor

Windows XP had been on the market for five years. Though designed to fix many of the security flaws in earlier windows operating systems, customers rejected Vista as it was found unusable for internet.

The Indian market also had its share of NP failures but they were less costly due to small market size. The best Indian example of NP failure could be the most touted car Nano. During the pre-phase launch, it was the most sought after product by many Indians as the "World's Cheapest Car". Later, it failed to garner reasonable volumes due to bad marketing and positioning. Ratan Tata, the Chairman Emeritus of the Tata group himself admitted in an interview on CNBC, Managing Asia TV show on 29th Nov'13 that the car should have been marketed.

A few more auto failures in India can be mentioned - Fiat Palio, Daewoo Cielo and Tata Estate. Palio failed because of poor marketing by Indian partner's, Premier Automobiles Ltd. Cielo and Estate from failed due to bad pricing strategy.

Glamour, a Hero Moto Corp motorcycle failed because it was not promoted to showcase its advantages in terms of engine performance. Praga Tools Ltd, now a division of HMT Ltd launched CNC Lathe in the market during 1995 in collaboration with Keiyo Seiki but could not sell more numbers as the specifications were higher than the market requirements.

In consumer market segment there were many products which had a short successful run but later were mauled by the Japanese and Korean brands on quality parameters. Examples - Dayonara, Televista, Weston, Bharat, EC, Uptron televisions, Murphy transistors, Jawa, and Rajdhoot motorcycles, Fiat and Ambassadors cars, once popular passenger cars were forced out of the market by Japanese models due to outdated technologies and designs.

Bajaj auto had to vacate the scooter (Figure-9) space with the advent of 2-stroke motorcycles (Figure-10) which in turn were usurped by 4-stroke motorcycles. Geared scooters gave in to gearless scooters. However, the above examples had reasonably long Product Life Cycle (PLC) to provide profits.

Most of the companies keep the new products that are failures in their product mix and try to revive through re-launches but once a brand takes a beating it is better to discard and move on to the next development. Bajaj Auto stopped manufacturing Caliber and Boxer motorcycles models, similarly TVS motors discarded Victor motorcycle when the sales declined. On the other hand, online e-commerce firms like Flipcart, Snapdeal, Zomoto, Redbus etc based on internet proliferation are having a dream run which do not have huge investments in fixed assets when compared to brick and mortar format firms.

Reasons for the success of the New Product

After having identified the reasons for failure of NP's from the perspective of different experts it may be worthwhile to look at the reasons which could help organizations launch NP's with success.

In the words of Lord (2000), "effective and successful new product development has to start with the customer. Having identified the market opportunity, the next step involves studying and understanding the dynamics of the consumers in the category, using extensive market research... identifies customer needs, wants, and preferences, and to define what the customer sees as a 'better product'".

A few critical factors suggested for success of NP are top management involvement, disciplined new product development process, dedicated development teams, identifying market opportunities that fit core competencies, focused product definition at product at screening, a well-executed launch and most importantly to adapt, grow, and improve as market and competitive conditions evolve.

Few of the critical drivers to win the market as propounded by various experts are building new products on the company's strong asset which could be technology, brand or process (Hawkins 1996), innovative, superior value products and effective communication between various departments. (Urban & Hauser 1993), building product on voice of customer, using spiral development global (global concept, locally tailored) product and a well executed launch (Cooper 2011a).

Conclusions

It is imperative that customer current needs and wants and their future desires and demands are captured in order to compete in the market. NP's help organizations to meet changing consumer preferences, constantly. The very reasons which make an NP fail, if taken cognizance of, would help organizations succeed. Large companies can take risks and survive if a particular NP fails but, small companies cannot make mistakes and hence they should aim at 'first time right' and do thorough planning.

It is found that many factors are responsible for NP failure depending on maturity level of the product category and the industry. However, the dynamic nature of market and shifts in consumer perceptions would keep throwing up challenges for the firms in future.

A proactive organization, disciplined NPD process, adoption of latest technology, constant mapping of environment, strong execution skills, continuous improvement in process and a finger on the pulse of the consumer would go a long way in nurturing success of the NP's.

Further, a perfect fit between internal resources and external environment would help organizations to evolve into dynamic organizations to exceed customer expectations through appropriate offerings.

Suggestions

In order that the percentage of NP success rate increases, the author proposes a framework called OEEM (The OEEM Framework, Pawan, Gopaldas, 2014), an acronym for Organizational Excellence, Execution Skills, External Factors and Marketing Mix Strategy, which form the four pillars having a number of activities as building blocks which act as enablers.

The few OEEM activities under each factor are:

- 1) Organizational Excellence: Includes professional management, strong R&D, multi-skilled employees, innovative, technology seeker, flexible and adaptable manufacturing, strong grounding in TQM, Six Sigma and Benchmarking.
- 2) Execution Skills :Strong NPD Process, CFT's for NPD's, collaborative departments, strong project execution skills, first-time-right motto, speed in development, excellent planning skills, effective supply chain management, environmental mapping.
- 3) External Factors: Large market size, growing economy, tab on competition, constant vigil for opportunities, Strong network of suppliers, access to raw materials, knowledgeable customer, conducive business atmosphere and proactive Government.
- 4) Marketing Mix Strategy : Right Price, knowledgeable channel partners., service excellence, effective segmentation, product differentiation, strong base in forecasting techniques, effective positioning, integrated marketing communications and strong brand equity.

It is hoped that the framework would assist organizations in planning NPD meticulously. A few specific activities may be added or deleted to suit the product category.

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Intercultural Communication: Key to Diversity Management



Chetna Sinha¹

We live in an organized society and organizations are an accepted part of life. Today, many organizations are becoming multinational global alliances with advanced telecommunications and data processing and a diverse, multicultural mobile workforce. Those in such international business are exposed to communicate daily to a bewildering variety of value system and differing business practices. And to communicate effectively this hectic business environment requires understanding of other cultures, an awareness of the interdependence of nations, and the need to break interfering cultural barriers in order to find productive ways to work constructively with people of all cultures. Against this backdrop this paper tries to understand the complex nature of communication and hopes to comprehend the essential interface between international commerce, culture, communication, synergy and the global organization. It also explores how culture and communication are intertwined in the process of communicating with people from different cultures and identifies the essential intercultural communication endowment that the workforce needs to effectively cope with an emerging world culture and to compete in an international arena.

Key Words: Communication, Multicultural, Diversity, Culture, Global

Introduction

“Most delightful pleasures cloy without diversity” is a universal opinion. And of all forms of diversity Genetic Diversity is the most ascertained phenomena which not only adds to the beauty of the world but also favors the survival of species. That apart our own society is known for its diversities. We are today more actively divided by race, gender, ethnicity, cultural standards, physical ability and socio-economic status, than ever before. Thus diversity is in existence since long. However, it is only recently that it has attracted greater attention of the Corporate and Industry mandarins.

There are quite a few reasons behind such heightened attention. As businesses are becoming increasingly global, the world as a workplace is shrinking and being reduced to a “Global Village”. Distances are diminishing and the workforce is becoming more and more mobile with the emerging fact that the workforce is progressively becoming more multicultural. It is not at all strange to find people from different nationalities as well as varied cultures employed as colleagues within organizations. Secondly, diversity at workplace in terms of human skills has tremendous potential to make organizational success a reality. Thirdly, diversity in society itself is capable of impacting the behavior of employees at workplaces. And

from any of these perspectives, corporate interest in 'diversity' appears to be well founded.

In order to better appreciate this growing interest in 'diversity', it is essential to understand the concept of diversity at workplace.

By 'diversity' we generally mean differences based on national origin, religion, gender, age, sexual orientation and disability. However scientifically, diversity is beyond these visibilities and encompasses an infinite range of individual's style of communication, height and weight, speed of learning and comprehension, socio-economic and educational backgrounds. Researches¹ have identified seven major individual differences among employees which are productivity, ability & talent, propensity for achieving high quality results, intensity of empowerment & involvement, the style of leadership, need for contact with other people and amount of commitment & loyalty to the firm. Apart from these certain visible diversities such as demographic diversity, sex & gender differences, racial & ethnic differences and disability status are known to heavily impact an employee's performance at the workplace. Personality factors, intelligence, emotional intelligence are other sources of diversity. Of these, the diversities associated with education, socio-economics¹ and work experience are considered more critical for organizational success.

Human beings are ethnocentric. They tend to see the world through their own narrow view and judge the world by what is familiar to them. There is a tendency to seek the company of those most similar to them for they find comfort and trust in 'likeness'. It is difficult for people to share power, and history shows that it is rarely done voluntarily. They resist change and continually strive for a state of homeostasis. This social reality makes the constant adaptation that is required for functioning under diversity that includes everyone – young and old, homeless and affluent, Hindu or Muslim or Christian – more difficult. Diversity calls for each person coming to terms with attitudes, beliefs and expectations and gaining comfort with the differences. And in this context diversity becomes a resource for organizations fostering varied responses, ideas and outputs which the organization can use at the requisite slots

If properly managed, 'diversity', at the workplace, optimizes the willingness and ability of all employees to contribute to the organizational success by encouraging each employee's talents, points of view, skills and practices that have been brought into the system by a heterogeneous group of employee for the benefit of both the individual and the organization. It is in fact the organization which could induct diversity into the system in tune with their vision and strategic objectives.

To profit from the richness of talents and perspectives that can only come from having a wide assortment of people in decision making roles, managements have to train employees to understand the differences that exist within cultures and also value the similarities that exist between varying cultures. Even to retain people with different backgrounds and characteristics who are endowed with required skills, organizations have to ensure that such employees are not required to abandon their unique personal and cultural traits, as the price of raising such unique cultural inputs within the organization is pretty high. Furthermore, there is also the danger of such people finding their own way to other firms which want them on their own terms.

At times, diversity also poses challenges to managements, for differences among the workforce can lead to difficulties in maintaining harmony at workplaces. For instance, mergers bring new leaders, cultures and systems that require major personal adjustments from the staff of the acquired company, which has proved to be great challenge for businesses to tackle. Thus, in order to create an all inclusive, respectful and equitable environment which best serves the diverse members with culturally sensitive services and to change the organizational culture through leadership, policies, and practices 'diversity' needs to be consciously managed.

It is worthwhile to mention here that managing diversity is nothing but changing the organizational culture or its standard operating procedures. The fostered culture

should enable employees to closely examine their values and beliefs and question themselves as to why others look different for them. Diversity management must create an environment that works naturally for the total diversity mixture.

From undertaking a diversity audit in order to collect relevant information on employee attitudes, management practices and policies, and culture from suppliers, customers etc to determining areas to be improved and establish teams to work on these gaps and monitor the progress there are, of course, a wide range of strategies for managing diversity. Facilitating intercultural communication within the businesses and with external stakeholders like suppliers, customers, clients, banks etc, is the most important and uniquely suited strategy to manage the diverse workforce.

Main Thrust

A communication focus concentrates on the dynamic unfolding relations among people and also underscores structure, process, and interpretation and is sensitive to diverse cultural environments in an organization. Communication is the substance of global organizing and the ability to navigate the treacherous waters of intercultural conflict and the level of skill and tact necessary to coax high-quality decisions out of multicultural teams require effective communication.

Since in the global marketplace, most natural boundaries and national borders are no longer the impassible barriers they once were and domestic markets are opening to worldwide competition businesses of all sizes look for new growth opportunities outside their own countries. Researches show that three out of every four multinational companies now manage networks of twenty overseas operations which put the burden of coordinating and communicating with a wide range of geographically and linguistically diverse workforce, customers and suppliers.

Throughout its long history of employing and working with people from different cultures IBM has learnt some important lessons the most significant being that successfully managing a diverse workforce and competing in a diverse marketplace starts with embracing the differences and not trying to ignore them or pretending they don't affect interpersonal communication. Ted Childs of IBM states that communicating successfully across the diverse workforce is no simple task – particularly in a company that employs more than 325,000 people and sells to customers in roughly 175 countries around the world. An alarming barrier to communication is presented by language alone considering that IBM's workforce speaks more than 165 languages. However, it must not be forgotten that language is just one of many elements that play a role in communication between cultures. IBM's experience illustrates both the challenges and the opportunities for

business professionals who know how to communicate with diverse audiences.

To a large degree the fundamental differences between cultures have profound effect on communication. Every attempt to send and receive messages is influenced by culture. This process of sending and receiving messages between people whose cultural background could lead them to interpret verbal and non-verbal signs differently is defined as Intercultural Communication. For successful communication one needs a basic grasp of the cultural differences one may encounter and should be able to handle them. This effort to recognize and surmount cultural differences while communicating can open up business opportunities throughout the world and maximize the contribution of all the employees in a diverse workforce.

It may not be out of place to mention here how the interaction of culture and communication is so pervasive that separating the two is virtually impossible. The way one communicates – from the language one speaks and the non-verbal signals one sends to the way one perceives other people – is influenced by the culture one is raised in. The meaning of words, the significance of gestures, the importance of time and space, the rules of human relationships – these and many other aspects of communication are defined by the culture. To a large degree one's culture influences the way one thinks, which naturally affects the way one communicates as both a sender and a receiver. Hence, intercultural communication is much more complicated than simply matching language between sender and receiver from the diverse background and is of vital importance to managing diversity.

An important step towards successful diversity management through intercultural communication is becoming aware of the intercultural communication rules and the way they influence the whole network of functioning.

In order to understand this one must know what culture is. Culture is a shared system of symbols, beliefs, attitudes, values, expectations, and norms for behavior. Cultural background influences the way one prioritizes what is important in life, helps define attitude towards what is appropriate in any given situation, and establishes rules of behavior. Given the automatic influence of one's own culture, people become ethnocentric comparing their culture to others' and often concluding that their own group is superior and even go up to a more extreme reaction called xenophobia (a fear of strangers and foreigners). Apart from these, sometimes people assign a wide range of generalized attributes to an individual on the basis of membership in a particular culture or social group. For instance, assuming that an older colleague will be out of touch with the youth market or that a younger colleague can't be an inspiring leader is an example of

stereotyping age groups. Clearly, businesspeople who take these views are not likely to communicate successfully across cultures. In order to communicate effectively in business one needs to adopt cultural pluralism – the practice of accepting multiple cultures on their own terms. When crossing cultural boundaries, one can be even more effective if s/he chooses to move beyond simple acceptance and adapt one's own communication style to that of the new cultures one encounters – even integrating aspects of those cultures into own. It is quite unfortunate that even highly motivated people find it extremely difficult to overcome ethnocentrism and stereotyping. It needs to change lifelong beliefs about oneself and one's culture. Moreover researches suggest that people often have beliefs and biases that they are not even consciously aware of – and that they may even conflict with the beliefs they think they have. Thus, whenever one communicates the basic instinct is to encode ones messages using the assumptions to one's own culture whereas, members of audience decode the message according to the assumptions of their culture. Consequently, the greater is the difference between cultures, the greater the chance for misunderstanding. From having the brand names that are obscene slang in another language to misunderstanding attitudes about worker-manager relationships, companies around the world have made numerous mistakes that have damaged relationships and lost sales.

It is important to mention here how intercultural communication breakdowns occur for a variety of reasons, from simple carelessness to assuming that other people's attitudes and lives are like ours. Part of the problem stems from treating others the way one himself or herself wants to be treated. While the best approach when communicating with people from diverse background and cultures is to treat them the way they want to be treated. This can be done by recognizing and accommodating eight main types of cultural differences – Contextual, Legal & ethical, Social, Non-verbal signals, Age, Gender, Religion, and Ability.

Apart from recognizing these cultural differences, communicating successfully in the diverse workforce requires a variety of skills. Organizations can improve its employee's intercultural communication throughout their career by imparting training about other cultures and languages, making them aware about respecting preferences for communication styles, helping them to write and speak clearly, listening carefully, knowing when to use interpreters and translators, and helping to adapt to various cultures.

Considering the globalization of commerce, the demand for multilingual communicators continues to grow as well. Shifts in business patterns affect language learning too. For instance, U.S. Companies continue to outsource a variety of business functions, knowledge and ability to

speak English language has become an important career asset. Not only this, the growing international status of China as a manufacturing powerhouse is prompting many professionals across the world to learn Mandarin, the official language of China. To simplify matters, most of the multinational companies ask all their employees to use English when communicating with employees in other countries, wherever they are located.

Level of directness, the degree of formality, preferences for written versus spoken communication and such other factors together form the communication style. It is important to know the expectation of communication partners before adapting to any of the styles. The variation of tone, pitch, speed and volume that forms the vocal pattern of language also are very important aspect of intercultural communication. The key is simply to accept what is heard first, without jumping to conclusions about meaning or motivation. One must allow other people finish what they have to say. If interrupted something important may be missed. If not understood properly, a repetition or a clarification must be asked for. Any momentary awkwardness which might be felt in asking for extra help in a formal situation is less important than the risk of unsuccessful communication.

For written communication too businesspeople need to familiarize themselves with the written communication preferences and adapt their approach, style and tone to meet their expectation. Some generalities can be followed in this regard viz. using simple and clear language, being brief, using transitional elements, addressing international correspondence properly, citing numbers and dates carefully, avoiding slang, idiomatic and business jargon and avoiding humor and other reference to popular cultures.

When talking with people whose native language is different from ours, it is important to remember that the processing of even everyday conversation can be difficult. To be more effective in intercultural conversations it must be remembered to – speak slowly and clearly, not to rephrase until it's obviously necessary, look for and ask for feedback to make sure that the message is getting through, not talking down to the other person by over enunciating words or oversimplifying sentences and at the end of the conversation, double-checking to make sure speaker and the listener agree on what has been said and decided.

Of late has emerged the requirement for an interpreter (for spoken communication) or a translator (for written communication) in business situations. Most customers expect to be addressed in their native language, particularly concerning advertising, warranties, repair and maintenance manuals and product labels. These documents certainly require the services of a translator. Microsoft spends several hundred million dollars a year to make virtually all of its software products, websites and help documents available in dozens of languages.

Similarly, automotive giant Ford markets to customers in some 130 countries providing websites that offer local information, usually in the local language.

Skilled professional in the form of interpreters and translators provide invaluable assistance for communicating in other contexts. Keeping up with current language usage in a given country or culture is also critical in order to avoid embarrassing blunders. Landor Associates, a leading marketing agency, usually engages three native-language speakers to review translated materials to make sure the sense of the message is compatible with current usage and slang in the given country. Some companies use back-translations to ensure accuracy. Once a translator encodes a message into another language, a different translator retranslates the same message into the original language. This back translation is then compared with the original message to discover any errors or discrepancies.

The time and cost required for professional translation has encouraged the development of machine translation, any form of computerized intelligence used to translate one language to another. Dedicated software tools and online services such as world Lingo offer some form of automated translation. Major search engines such as Alta Vista and Google offer translated version of the websites. Although none of these tools promises translation quality on a par with human translators, they can be quite useful with individual words and phrases, and they can give the overall gist of a message.

Effectively adapting one's communication efforts to another culture requires not only knowledge about the culture but also both the ability and the motivation to change one's personal habits as needed. Unfortunately, a thorough knowledge of another culture and its communication patterns can take years to acquire. Fortunately, one does not need to learn about the whole world all at once. Many companies appoint specialists for specific countries or regions, giving a chance to focus on fewer cultures at a time. Some firms also provide resources to help employees prepare for interaction with other cultures. For instance, on IBM's global workforce diversity intranet site employees can click on the Going Global link to learn about customs in specific cultures.

Conclusion

Global corporations are increasingly reaching across borders to find the skills they need. The need for knowledgeable workers has caused industrialized nations to reconsider their protectionist immigration policies as they come to rely on and compete for foreign-born workers. Moreover, nations having slow-growing workforces but rapid growth in service-sector jobs are becoming magnets for immigrants. Additionally nations whose educational systems produce prospective workers faster than their economies can absorb them are exporting people and their skills. The result is a major redefinition of

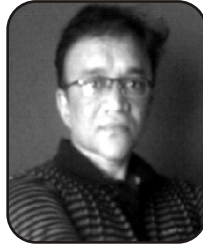
labor markets and a workplace that is increasingly diverse and multicultural at both the unskilled and skilled levels. Thus the combination of a global workforce and multinational organization means that managers and employees must be able to work and communicate effectively with more and more people with differing cultures, customs, values, beliefs and practices. Apart from this widespread increase in free trade agreements and bilateral investment treaties opening new vistas for liberalization and free flow of products and services emphasizes on the fact that understanding of and developing intercultural communication in the international business can assist us in developing self-awareness and building a vigorous trading community keenly committed to the promotion of peace and a spirited market community and world at peace will require considerable effort and hard work but without it there may be very little future to think about at all.

To sum up, researches over the past few years have increasingly shown that the best theories and models in the areas of management, marketing, finance and production can be transformed into successful operations only through effective business communication and intercultural communication adds to the dynamics of business communication by mixing diversity of language and culture.

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Passing the Baton: Succession Planning or Succession Development?



Yunus Hayat Khan¹

Globally, it is said that between 60 to 85 per cent of business families or corporate houses are able to retain or build on the success upto the third generation in case of family run businesses and one-level up executive leaders in case of corporate environment . e.g.: Mafatlals, Dalmias, Goenkas, S. Kumar's Kasliwals, Singhania's, Murthys of Infosys, Dhoots, Rohm and Hass (now Dow), Wipro ,Merrill Lynch, & Citigroup etc. The point researcher would like to draw here is on two fundamental concepts : one is 'Succession Planning'¹ as a System or a Process in a given firm and second is what occurred to my mind is "Building-on Skill sets, Competencies, Qualities viz, Business acumen, Shock-absorbing capacity, Dynamism, Business Pressures, most importantly financial & other resource optimizations, at times being Lying Low and so on and so forth.... to all these which is felt more of Skill Legacy left behind by the Chair persons and Distinguished Business Owners when they call it a day and handover the "baton" to the legal heir or senior leadership team member, who are the true aspirants for the top job, which are more of Success Factors.

Keywords: Skill legacy, Success Factors, Succession Planning, Succession Development, Competencies, Boards, Retention.

Introduction

Passing the Baton...Means the transition of Business powers or a stick or reigns to the next generation or deserving senior leadership successor in a family run organizations or corporate houses respectively.

The emphasis here is passing on the Business and Behavior related Success Factors that will enable new comers as a "Default Password" to hold the fort and take their respective organization it to a next level. Some of the broad parameters along with their skill-sets are worth a mention here and they are as under: (India's Business Houses, Business Today 1998)

- Strategy
- Operations (including Sales & Marketing and Technology)
- Finance
- People

1. Strategy includes:

- Existence of a Defined Line of Business
- Willingness to seek assistance on strategy
- Use of a Strategic Approach instead of Opportunities
- Focus on Competitive instead of Political mileage

- Define and action out the choice for CA – Competitive Advantage

- Forward thinking for Global footprints etc

2. Operations may include:

- Ability to develop or acquire technology
- Brand Building
- Make or Buy Decisions
- Quality of products & process
- Customer Segmentation
- Productivity improvement throughout the Value Chain
- Supply Chain resources

3. Finance function include:

- Strong business acumen to plan financial framework
- Management & control of Funds and Working capital
- Cost Leadership
- Ability to raise funds
- Return of Capital (RoI)
- Transparencies in Financial disclosures

- Delivering on Stakeholders expectations
- Focus on Shareholder Value

4. People Focus

- Strategic & Operational HR Road map for the company
- Personal involvement into Development of Senior Leadership team
- Feeling the pulses of employees
- Driving Performance framework and Rewards for all
- Creation of Talent management framework for Hi-Pots and Performers including Retention strategies.
- Open Door to employees
- Training, Mentoring and Coaching

McDonald's CEO, James Cantalupo, died of a Heart Attack in 2004 and the next day the name of Charlie Bell was announced by the board to take over as CEO, without a formal succession plan in place, the reason being the board never prepared any system in advance for such an un-certainty.

In 1971, a seemingly ordinary man named Darwin E. Smith was made chief executive of Kimberly-Clark, one of the members of the board was not sure about his competencies and abilities to lead, and however, Darwin remained the CEO for 20 years and created a stunning transformation at Kimberly-Clark, turning it into the leading consumer products company in the world. He is a classic example of Level 5 leader-an individual who blends extreme personal humility with intense professional will.

Ratan Tata, the then Chairman of Tata Sons and his Senior Executives including Satish Pradhan (Chief of Group HR). Looking at diverse factors, it appears that selection committee has given preference to the following points while making a choice for the successor for Ratan Tata.

1. Long Run Leadership Continuity for the next 20 odd years or so
2. Matured leadership with a diverse exposure to work dimensions of similar size, scale, scope and complexity
3. Someone holding strong ethics and values
4. Shareholders acceptance etc

Another interesting scenario and controversies of Succession Planning of Indian Software company called Infosys during the induction of Rohan Murthy into Infosys which could undermine succession planning to choose a new CEO if his interactions are not handled with tact and integrity, experts have warned.

The presence of Rohan, whose father NR Narayana Murthy returned from retirement as its executive chairman on June 1, could unsettle senior executives with aspirations for the top job.

"The way Rohan was paratrooped into Infosys, it seems that the greater intent is to train him on the job than making an objective choice from the 1.5 lakhs employees of Infosys," "This is bound to cast a shadow of doubt in the minds of current senior leadership who have aspirations for the top job."

- Among internal candidates, V Balakrishnan (India business and BPO head), Ashok Vemuri (Americas head) and BG Srinivas (Europe head) are widely regarded as frontrunners to succeed SD Shibulal when he retires in March 2015 upon completing 60 years. No non-founder has become the CEO of Infosys since its founding.

What happened the next move; we all know very much and to the utter surprise of all of us and Corporate Pundits were the announcement of Vishal Sikka He has earlier worked with German business software maker SAP AG as its head of products and innovation. He quit SAP AG in May this year. At SAP, Dr Sikka was key in developing its flagship product, Hana, which helps firms analyze large amounts of data quickly and bring it to market. The point to be noted about the above stunning developments is the failure of Succession management as a system or a complete absence of the same and another message it carries, is all about the Leaders at helm and that too the likes of Stalwarts and Ethical Leaders called Mr. Narayana Murthy.

"The critical thing for Murthy is to balance the way it is being done. It must look like a project rather than a re-definition of the top management and succession system in the organization," Those who have known Murthy closely and worked with him for several years said they were surprised at his request to bring along his son and even more mystified that it was approved by the board. "For many of us who have seen him in action, it's not quite in his character,"

Romesh Sobti, CEO of INDUSIND Bank, who transformed INDUSIND Bank into \$ 3 Billion Bank from \$ 200 Million about five years ago. He goes on to assert that Succession Planning has been happening in the INDUSIND for the past six years. I don't determine my successor. It's the prerogative of the nomination committee, I would love to give them internal senior team names that I found in my tenure as CEO, well deserving and qualified in all manners to take the bank forward. I am of the strong opinion to that succession at senior level needs to be filled from within the reason being of continuity approach. (Economic Times, February 17, 2014).

Well, with the above citations and examples of real life corporate world. Let us, focus on the realms of my paper on "Passing the Baton ... (Succession Planning or Succession Development)

Some Definitions:

Succession planning is the process of developing the talent already existing in the organization for future deployment.

Succession management is the daily process of cultivating future talent through Assessing, coaching, mentoring, feedback, counseling and development.

Professor Ren Nardoni (Nardoni Strategic Solutions, Florida) defines succession planning as “career planning at the top”, an extension of the principles and procedures that the company uses to merge the career aspirations of individual managers with organizational goals and management needs. Both career planning and succession planning are (in my opinion) should be “developmentally oriented,” focusing on the long-term development of managers for future positions etc. But, because succession planning typically focused on the five to ten percent of key positions in the organization that are considered critical leadership posts and because these position often have different requirements that all other management jobs, therefore succession planning usually requires a separate or additional set of “position requirements”. The skills and talents required to lead key functions, business units, or the organization as a whole, are not necessarily the same as those needed at intermediate or specialized management levels.

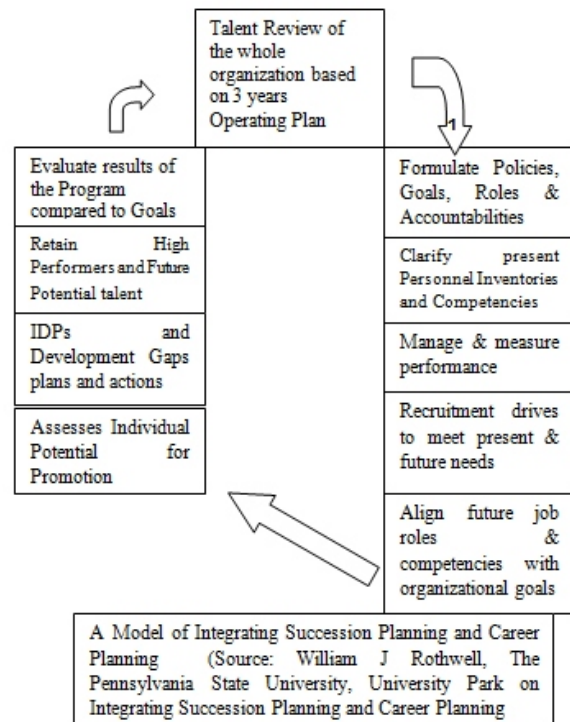
With the above definition I would like to re-call what Marshall Goldsmith, an acclaimed author on Leadership and Coaching states, “Plans do not develop anyone-only development experiences develop people.” Companies put more effort and attention into the planning process than they do into the development process. For eg: many human falls into the same trap regarding physical fitness. We have fantastic plans in place to lose weight, we may be very proud of our plans, which include detailed daily goals for diet, alcohol consumption and exercise, and if the execution is half as impressive as our planning, we would be very svelte. Our focus should be on weight loss, not planning for weight loss.

Many CEOs/ Business Heads even during my discussion during client visit express concern about the lack of bench strength in their companies and lacks “ready now “ potential employees to replace planned and unplanned executive exodus. With the above paraphernalia on Succession Planning, let me take you all to the core of the system to be successful in a practical corporate life and see the color of the day.

There are primarily four basic steps of successful transitions. (CEO Succession Planning, Marshall Goldsmith)

1. Planning for the Transition
2. Identifying and Developing the successor
3. Guiding the successor
4. Finally, Pass the Baton.

Integrating Succession Planning and Career Planning



1] t
A Model of Integrating Succession Planning and Career Planning (Source: William J Rothwell, The Pennsylvania State University, University Park on Integrating Succession Planning and Career Planning)

helm and if he /she have done exceptionally well, the organization may last long after he or she has left the firm. This longevity is highly dependent on the success of the leadership baton pass between CEO and successor. One does not realize that even during the process of succession, things moves on irrespective of wrong or right ways in an organization set-up and the stakeholders and Competitors keep a close eye on the entire drama as the current incumbent i.e.: CEO slows down and the successor speeds up and the handoff is made.

Is the CEO ready for succession?

The answer to this question is simply “it all depends “like..

- CEOs competitive drive
- Team's resistance not to quit
- CEO wants to stay just a little longer

In addition to the above adoration and accolades, there are other predicaments, which make Letting Go of the CEO position so difficult.

- Power: The sudden loss of power, the potential of influence and achieve big results that accompanies leaving this position can be hard to take.
- Wealth: Money sometimes becomes a personal scorecard. It may not seem hard to walk away from making money.
- Perquisites: Perks like private jets, sporting events, luxurious hospitality and dedicated staff of professionals are hard to give up.

- Status: Being, a CEO brings with it status, and a fear of successful people is becoming a “used-to-be CEO.”
- Relationships: CEOs enjoy most of their close coworkers, these people are practically family.
- Happiness: They are in love with the contents of their jobs, work, Projects, deadlines, meetings, touring, jet-lag.

Meaning: CEOs are important. With direct impact on people and products, their work is trivial.

Most importantly, the top boss develops people, create jobs and generate economic benefit. They are most proud of these things. Not making a contribution can lead to emptiness. As I re-call one of my contemporary HR practitioner personifies by coaching colleagues as “Concentrate, Penetrate and Practice”, which I certainly sense has commendable results, subject to one's adoption of the said philosophy.

2. Identifying, Developing and Closing on the successor

It's the prerogative of the Board to ensure that the identified internal candidates are being nurtured appropriately. It is imperative to help key talent understand the requirements to become CEO. Candidates should be left to wonder. A comprehensive, challenging and actionable development plan needs to be established for each candidate. One critical component of the plan is to identify enterprise-wide initiatives that each candidate can lead to demonstrate his or her strategic, collaborative, and silo-breaking leadership competencies. Research has demonstrated that “stretch assignments” can account for up to 70 percent of leadership development impact.

Whether it is international, cross-functional or cross-business unit exposure to broaden a candidate's understanding of the entire business, the best training for the CEO role is often leadership away from headquarters, where the business unit leader has the opportunity to captain the ship. Companies such Northrop Grumman has moved successor candidates into staff roles.

Another tipping point to be taken into consideration by the Board is all about Outsider's possibility of being the new Executive Chief. This happens typically when an organization in discussion, facing disruptions in their business, a marked increase in competitive pressure, or a failed CEO and management team, will not have a pool of inside candidates to draw upon. In these cases, the board should know the outside leadership community well and have their eyes on potential successors, even if from a distance.

The board should maintain a quite “stable “of outside candidates. Of course, the identification of capable outsiders is best conducted without formal contact with the potential candidates until the board “pulls the trigger” and moves quickly on a CEO transition.

3. Guiding the successor

When the success process requires an external coach, the CEO should be involved to make sure the coaching process is successful with a prior handful of knowledge of questions like

1. Does he/ she really want this person to be the next CEO? If there are any doubts, if the CEO doesn't really want this person to have the job, then he or she will not be very helpful in the coaching process and the transition will probably not be successful.
2. Will this person be given a fair chance by stakeholders? The CEO may think this person is perfect for the job, but if the board doesn't think so, it won't matter.
3. Does the person want to change? The motivation for change has to come from inside the successor. It will not happen because the CEO is a great coach. No one gets better because of the coach; they get better because they are willing to and work toward change.

It's important to involucl key stakeholders in the coaching process and in determining the successor's strengths and areas for growth. These are the people who will be involved with the successor long after the CEO has passed the baton, so it's important that they be on board for a number of reasons as per the suitability and the nature of business the firm is into.

The CEO should look for key patterns, what areas of strength and weaknesses (if any) for improvement will make the most difference in bringing the candidate into the best position to become a great CEO?

The most important variable in achieving positive, lasting change is follow-up. It's the utter most duty of the successor to follow rather than the CEO (Goldsmith and Morgan 2004).

Regardless of whether the CEO selection is internal or external, it is too soon for boards to declare the victory and hand the new leader the keys. CEO retention is an increasing issue in today's corporate corridors. Due care needs to be taken for their on boarding. This is best directed by the retiring CEO in partnership with the board. The new CEO will be evaluating the existing team, and care must be taken to ensure that on boarding does not become political. Nor this is the invitation for boards to meddle, the new CEO needs a free hand once he/ she is being given a clear road map and board expectations and strategic agendas with the helping hand from the boardroom

4. Finally, Pass the Baton.

When the successor is ready to move into the role of CEO, the CEO will finally have to go. The CEO may be tempted to stay on the board or in some other capacity. It is best to just go if the successor is going to be successful. Hanging on is not helpful.

The best thing the CEO can do is show integrity on the way out by doing everything possible to ensure that the next CEO is successful.

In addition to the above, I would like to mention about the best practice of Succession Management (Source: Right Management: 2010 Publication)

Best Practices on Succession Management

- Review and Refine the Strategic Business Imperatives
- Determine Critical Roles Required to Achieve the Business Imperatives and also
- Conduct Systematic Talent Reviews Integrated with the Business Planning Process

Conclusion

Succession management begins the day a new CEO takes the helm and continues until the next CEO takes over. At P&G (Procter & Gamble), the board works with the new CEO during the first year of the CEO's tenure to develop a plan for his or her succession. It's not a one-off event that happens every seven to ten years, nor is it just a transaction in which a search committee is formed and executive head hunter retained. Rather, it's a systematic process integrated into a company's talent management approach. When done well, a company has multiple internal candidates, as well as younger up- and-comers with recognized future CEO material and has specific tailored development plans to fit.

While the development plans and succession charts aren't promises, they are often communicated as such and can lead to frustration if they aren't realistic. Bottom line; don't jerk around high performing leaders with unrealistic development expectations. Only give the promise to development with an eye of realistic approach at an appropriate time to come by building a "stable of good horses"

Departing leaders must ask themselves, "What legacy do I want to leave?"

Finally the board's single greatest ability to influence the strategy of the company is through the CEO they hire.

Therefore, one can very well conclude that, Succession management and Development should be one of the major point of Board's Agenda with properly and professionally conceptualized, drafted strategic-driven, management-informed set of leadership competencies with an inclusive process involving the entire board, the current CEO, the head of Human Resources, and often the outside key business advisors.

Management reports to the CEO, but only the CEO reports to the board. Therefore, the board, in a sense exercises strategic execution through the CEO. The leader chosen by the board must be properly geared to develop and implement the strategic direction the company must take with complete autonomy to hold the fort and take it to the next level subject to board's supervision of the ship on a regular basis.

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An Analysis on the Effect of Consumer Factors towards Purchase of Private Label Food and Grocery Items in Chennai Region



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Consumer's buying factors that influence purchase of private label products is complex. Private label products need to be examined on its own merit. This research paper analyzes the effect of consumer factors towards buying private label brands. Moreover, consumers usually have different perceptions for different products, as each product category has certain characteristics, which in turn may have a significant effect on buying behavior variables. Retailers promote private label products (offer, price discounts) strategically in response to national brand pricing promotions to protect private label market share during national brand promotions. However, the extent of the retailer response varies widely across supermarket departments and is also affected by both the density of food stores and the market share of supercenters within a market area. These findings hold true regardless of the state of the economy, although the magnitude of the interaction between national brands and private labels differs in times of recession and recovery.

Key Words: Consumer Factors, Perception, Buying behavior variables, Super market and Recession.

Introduction

In studies of food and grocery retailing Private label food and grocery items generate interest because of the ways in which they differ from National brands. National brands travel from farm gate to consumer's plate by way of branded food manufacturers and distributors. In contrast, supermarkets obtain private label through vertical coordination or from manufacturers specializing in private label products. PLs are unique to the chains at which they are sold, or at least are so marketed.

Over the past years most of the food categories are struggling, private label have grown at a rate 6 Percent over years. Private label branding is a strategic decision which makes manufacturers to see it as an opportunity for cementing the relationship with retailers. They can choose to manufacture those retail brands which are in alignment with their operations strategy and from whose manufacturing they can learn something which they can apply in making their own brands better.

It is therefore necessary for all retailers to understand and give importance to private label brands, because now premium brands in some categories are retailer brands. Instead of considering the business of own label brand as ancillary to the main business of retailing, some retail chains see this as an important of their business and a significant contributor to their revenue. Customer perceptions about retailers brand have changed to the

extent that they find the price of manufacturer brands too high compared to those of retailer brands, whereas they find quality of the two to be comparable. Customers have become sophisticated enough to understand that the reason for lower price of retailer brands is the lower cost incurred by retail chains in distribution and promotion and not because they are of lower quality.

The Importance of Private Label in the Indian Retail Industry

PLBs are an important source of profit for retailers and a formidable source of competition for national brand (Hoch and Banarjee, 1993). On the one hand, the success of PLBs can be seen as a consequence of cleverly designed branding strategies employed by the retailers (Keller, 1998). On the other hand PLBs have been claimed by manufacturers as category killers, me-too products taking profit out of market by making consumers more price-sensitive (Dunne and Narasimhan 1999).

Private Label Importance for Retailers

The importances of PLBs for retailers have been evident in several ways. PLBs bring greater profit for retailers' market power and generate store loyalty and differentiate retail outlets from other store outlets (Ailawadi, 2001).

Higher margin is the ultimate reason for retailers to promote PLBs over national brand. Strong PLB programme can lead to double profit for the supermarkets

(Morris, 2002). Hoch and Banerjee (1993) indicate that gross margin on PLBs are 20 to 30 percent higher than on national brands. To obtain higher margin retailers must allocate resources to procurement, packaging, promotion, shelf space and branding. Grant and Schlesinger states that if a grocery chain store is able to persuade every consumer to substitute two private label brands for two national brand items on each occasion, the store could increase its profitability by 55%.

In addition successful PLBs can strengthen negotiation position of retailers in relation to national-brand manufacturers. Retailers have the advantage of controlling shelf space which increased bargaining power over manufacturers. Mills(1995) and Narasimhan and Wilcox (1998) has found that PLBs can allow retailers to claim better terms of trade from the manufacturers, such as high margin on national brands by negotiating for a lower price on the national brands (Ailawadi 2001 and Steiner 2004).

Theoretical Framework

This review focuses on important factors which are attitudinal determinants. The effects of demographic factors on consumer receptivity to buying PLBs are reviewed.

An Overview of PLB Studies on Consumer Factors

Studies focusing on the effect of consumer- factor on PLB purchase date back to the 1960s. (Frank 1967; Frank and Boyd 1965) found that PLB-Prone and National- brand-Prone consumers are not two distinct groups of segments. PLBs and National brands are consumed by the households who are virtually of the same socio-economic and total consumption characteristics. Myers (1967) states that general personality traits and socio-economic variables are not strong predictors for distinguishing PLB buyers and Non-buyers.

In the 1980s, another research steam emerged in the literature which focuses on comparison of consumer's perception on generic, Private label brands and National brands. PLBs are perceived by consumers as middle alternative between generic and national brands in terms of variety of product attributes. Several researchers have also found that PLBs are perceived as better than generic but poor when compared to national brands in attributing measures such as reliability and textures, in satisfaction measure such as confidence in use and repurchase encouragement, and in demographic measures such as age and education.

In relation to the above studies, later research from 1990s till present has investigated the influence of consumer psychological factors on PLB purchase. These factors include Perceived quality, perceived risk, perceived economic situation, price consciousness, brand loyalty, brand attributes, familiarity towards PLBs, price - quality perception and brand personality(Ailawadi et al, 2001;

Baltas 1997; Baltas and Doyle, 1998; Batra and Sinha, 2000; Burton et al, 1998; Richardson et al., 1996). In addition, findings from the later studies also suggest that consumer characteristics such as marital status, household size and household income (e.g Dick et al., 1995; Richardson., et al 1996).

The various consumer level factors examined in prior studies that have great influence in consumer intention to buy PLBs has been reviewed in depth in the following section.

Quality Perception towards PLBs

Quality perception is defined based on the eight dimensions by manufacturer's performance, feature, reliability, conformance, durability, aesthetics, serviceability and quality. From consumers point of view quality refers to the extent to which the product meets or exceeds consumers expectations (Garvin, 1987; Sebastisnelli and Tamami, 2002).

Consumer Risk Perception towards PLBs

Perceived risk is, Risk in terms of consumer perception of uncertainty and adverse consequence of buying a product (Dowling and Staelin 1994). In other words Perceived Risk is "expected negative utility" or the "expected penalty" associated with purchase of a particular product or brand. Several studies have confirmed the importance of perceived risk in purchase of PLBs. Perceptions of uncertainty and danger associated with PLB purchase are key variables that differentiate PLB prone consumers to national brand buyers (Bettman 1973). Dunn et al (1986) noted that perceived risk is important construct in supermarket product decisions. Their findings reveal that national brands are associated with low performance risk and high financial risk than PLBs.

Price Perception towards PLBs

Consumer's perceptions of price are central to influencing purchase behavior (Miranda and Joshi 2003). One important basis for selling PLB products is relatively its low price to national brand products (Raju, Sethuraman and Dhar 1995). Dhar and Hoch (1997) have found that price gap between PLBs and national brands have an importantly positive effect towards PLB performance in a category. These findings implies that low price of PLB is a strong indicator enticing consumer purchase of PLBs.

Brand Loyalty

Brand-loyal consumers usually have the habit of buying a brand over time due to the emotional attachment towards that brand (Lim and Razzaque 1997). Prior studies have found that consumers concerned with paying low prices are less loyal towards specific brands, instead tends to exhibit stronger variety seeking behavior (Garettson and Burton. 1998; and Garettson et al., 2002). Batlas (1997) found that PLB buyers are likely switchers or variety seekers who do not have a stable, narrow brand selection.

These consumers easily switch to national brand when the price gap is narrow between PLBs and national brands (Blattberg 1980; Livesey and Lenon 1978; Puttis and Cotteril., 1999).

On the whole consumer loyalty and shopping habits are the major factors in battle between retailers' PLBs and manufacturers' national brand (Omar, 1996). For retailers understanding consumer loyalty enables in formulating effective strategies for brand promotion.

Objectives of the Study

1. An analysis on demographic variables that have impact on PLB purchase decision.
2. To analyze general buying behavior of consumers' by way of analyzing general shopping behavior.
3. To analyze perception associated with consumer factors which are correlated with PLBs.
4. To suggest alternative routes to position PLBs successfully.

Methodology

A non-probability, convenience sampling technique was used to administer a consumer survey. The sample obtained where somewhat representative of supermarket shoppers in Chennai, Tamil Nadu. The aim is to verify the relationship between consumer factors that was given in the previous research. A questionnaire survey was conducted among consumers in retail outlets of Chennai in the period 2012. Participants are shoppers from retail outlets in Chennai with a sample size of 365. T-test, One-way ANOVA, Chi-square test Correlation and F-Test were employed to find out the relationship proposed in the hypothesis.

Empirical Findings

Composition of the Sample

The demographic factors have significant association with psychographic characteristics which have influence in market segmentation, targeting and communication (Ailawadi et al., 2001), it is important to examine the effect of these factors on PLB purchase over time. This reveals whether their effect have changed after a period of time. The five demographic factors including age, gender, house hold income, education and household size are given below.

Age

Age is the factor most frequently examined in PLB studies. Older shoppers may use their shopping expertise to evaluate the brands and may consider PLBs as viable alternative to national brands for wider range of products. Nearly more than half the respondents belong to the age group 20-29 years. Respondents aged in the years of 20-29 years are 54.4% , those under the age group of 30-39 years account for 28.9% and those above 40 years are 16.7%. The analysis reveals that old people may tend to avoid

PLB brands but younger people are more likely to accept them.

Gender

The buying behavior of males differs from that females need to be examined. Female buyers are more likely to buy PLBs than male buyers. Among the total respondents female respondents constitute 58.8% and male population 41.2%. This reveals that sample of this study is slightly skewed towards females.

Household Income

Annual household income can be related to product price that consumer wishes to pay. During economic recessions, as income falls, consumers become more prices conscious and likely to choose low price products. Higher income consumers are lesser price sensitive as they are less price sensitive. Most of the households in the sample had incomes between 10,001 to 20,000 account for 32.1%, income between 20,001 to 30,000(23.6%), above 30,000 is 26.2% and below 10,000 (18.1%).

Education

Well educated consumers have more confidence in their ability to evaluate brand and they are better informed about relative quality of PLBs than compared to national brands and they do not rely on brand name as indicator of product performance. Among the total respondents 46.7% are graduates, 37.9% are post-graduates, 9.6% have completed their higher education, 4.4% are those who have not completed their schoolings and 1.4% are others.

Household Size

Family size is a strong factor in indentifying PLB buyers, larger the size of households, the greater the PLB proneness. It is found that there is positive relationship between household size and PLB purchase. The analysis of household size reveals that (72.5%) of the respondents belong to the household family size of 1 to 4, (26.4%) of respondents belong to household size of 5 to 8 and 1.1% have household size of more than 8.

General Buying Behavior of Consumers

Product Selection

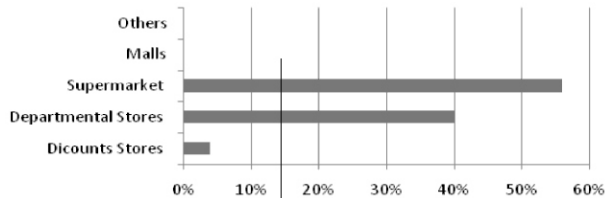
As consumer proneness towards PLBs is examined, categories offering PLB products are considered. Based on market size of top seven products and growth rate of some of the PLB products the following products were taken for study Staples, Food items, Cooking oil, Milk related items, Spices, Fresh fruits and vegetables and any other items. Staples accounted for 30%, Food items 28%, Cooking oil 14%, Milk related items 6%, Spices 18% and Fresh fruits and vegetables 4%

Retail Format

The retail stores where PLBs are made available for consumers also influence the consumers to make purchase decision. The location, the brands available, the

level of discount etc influence consumers to purchase from a particular retail format. The retail formats where private label brands are sold to consumers are Department stores, Discount stores, Malls, Supermarkets and other stores. The preference for retail outlets from which PLBs are purchased are Supermarket (56%), Department stores (40%) and Discount stores (4%)

Figure 1: Retail Format Preference



Data Analysis and Interpretation

The demographic hypothesis associated with PLB purchase are Sex, Type of Family and Household income. T-test was employed to test the hypothesis. The t-Test examining whether two categorical groups differ significantly on a continuous dependent variable is tested by hypothesis

H1: There is significant difference between genders and often to buy brands.

H0: There is no significant difference between genders and often to buy brands.

TABLE1: T-Test of Mean Difference of Gender Groups

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig(2-tailed)	Mean difference
Equal Variances assumed	1.945	0.164	-.789	362	0.431	-.044
Equal Variances not assumed			-.784	212.667	0.434	-.044

Source: Primary Data

In Levene's test for equality of variances, the F value is 1.945 with a significance of 0.164. This value indicated the variances of brand often purchased were equally distributed in the male and female groups. The t value (-.789) was significant at 0.431, indicating the mean difference of often to purchase brand between the male and female groups was not significant (P > 0.05). It is implied that the respondents' purchases of a brand very often were not associated with gender.

H1: There is significant difference between Income and Often to buy brand.

H0: There is no significant difference between Income and Often to buy brand.

TABLE 2: Test of Homogeneity of Variances for Income and Often to buy brand

Levene Statistics	Df1	Df2	Sig
2.154	5	358	.059

Source: Primary Data

The homogeneity of variance has not been violated (p>.05) so the population variance for each group is approximately equal.

TABLE 3:ANOVA for Income and Often to buy brands

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.716	5	.143	.664	.651
Within Groups	77.204	358	.216		
Total	77.920	363			

Source: Primary Data

Given that p>.05 the null hypothesis is accepted and alternate hypothesis is rejected which states that buying private label brand or manufacturer brand does not depend on income level of respondents.

H1: There is significant association between Type of family and often to buy brands.

H0: There is no significant association between Type of family and often to buy brands.

TABLE 4 : Often to buy * Type of family Cross tabulation

			Type of family		
			joint	Nuclear	Total
Often to buy	Private label brand	Count	29	84	113
		Expected Count	29.5	83.5	113.0
		% within Often to buy	25.7%	74.3%	100.0%
		% within Type of family	30.5%	31.2%	31.0%
		% of Total	8.0%	23.1%	31.0%
Manufacturer brand	Count	Count	66	185	251
		Expected Count	65.5	185.5	251.0
		% within Often to buy	26.3%	73.7%	100.0%
		% within Type of family	69.5%	68.8%	69.0%
		% of Total	18.1%	50.8%	69.0%
Total	Count	Count	95	269	364
		Expected Count	95.0	269.0	364.0
		% within Often to buy	26.1%	73.9%	100.0%
		% within Type of family	100.0%	100.0%	100.0%
		% of Total	26.1%	73.9%	100.0%

Source: Primary Data

TABLE 5: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.016 ^a	1	.899		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.016	1	.899		
Fisher's Exact Test				1.000	.504
Linear-by-Linear Association	.016	1	.899		
No of Valid Cases	364				

Source: Primary Data

- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 29.49.
- b. Computed only for a 2x2 table

Pearson has a value of .016 with a significance of .899. The significance value is well above the alpha level of .05 and is therefore not significant. The minimum expected cell frequency is 29.49, which is > 5, and therefore the main assumption of Chi-square is not violated. Here it can be concluded that Nuclear family prefer to buy Manufacturer brand while the joint family do not have marked preference for private label brands.

H1: There are significant differences between key motivators towards PLBs.

H0: There are no significant differences between key motivators towards PLBs.

TABLE 7: KEY MOTIVATORS TO INFLUENCE PLB PURCHASE

Key Motivators	Mean Rank
Price	5.03
Quality	5.54
Discounts and offers	5.07
Store Image	5.47
Home delivery	5.43
Additional emergency requirement	5.98
Convenient opening and closing hour's	5.67
No other source available	5.65
Proximity to house	5.57
Easy entrance and exit	5.59

Source: Primary Data

TABLE 8: Test Statisticsa

N	364
Chi-Square	28.396
df	9
Asymp. Sig.	.001

The result of Friedman test indicates that significant differences do exist in key motivators in influencing Private label brands, $\chi^2(9, N=364)=28.396, p<.05$, and that additional emergency requirement motivates less in influencing the consumers to buy PLB Food and Grocery items.

Conclusion and Findings

The current study aims to analyze the effect of consumer factors towards purchase of PLBs. This research also investigates whether demographic factors affect proneness towards PLBs and also provides insight for marketing researchers to better promote their own brands.

Discussion of Findings

Genders, Type of family and household income have significant difference between often to buy brands. With regard to relationship between familiarity and interest towards PLBs there is a positive relationship between which indicates that being familiar about a brand creates strong interest in the brand. On analyzing the key drivers that influence purchase of PLBs different have importance based on the how consumers relatively give preference to various factors in their purchase decision. The analysis on the values of mean rank reveals that price and discount factors are influencing more in purchase decision with regard to PLBs.

Suggestion

The importance of examining the influence of consumer factors on Private label buying reveals that it is managerially important for both manufacturers and retailers to improve on quality of their product. The retailers should focus their attention to reduce the quality gap of their private label brand when compared to the national brand. Furthermore retailers and manufacturers can concentrate on demographic differences between PLBs and national-brand buyers to avoid competing for the same consumer segments.

Finally several limitations existed in the current study and it can be suggested that conducting similar study in other industries, collecting data from multiple stores and examining relationship among variables.

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Municipal Solid Waste Management: A Challenge for Sustainable Development of Cities



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The creation and growth of cities especially capital cities and business hubs has been a requirement throughout the human civilization. Jharkhand is a state formed only in the last decade and Ranchi the state capital is slowly but surely on the way to a more cosmopolitan, economically advance city in the Eastern part of India. This increased concentration has necessitated the need for a good system for waste management in Ranchi city. Currently the city is serviced by A2Z Waste Management Company which is registered for thirty years by the Ranchi Municipal Corporation (RMC) on contract basis. The company initiated door-to-door service of collection of garbage from August 2011 and services all the 55 ward of the city. The case study will document the status of waste generation in Ranchi city, the process of collection, processing, and disposal by the A2Z Waste Management Company, role of A2Z Waste Management Company and RMC in effective management of environment, other stakeholders, etc. The case will also discuss the issues arising from waste collection, processing and disposal and the measures initiated by RMC and A2Z to effectively address waste management on all three Rs – Reduce, Reuse and Recycle. The social conditions and safety aspects of the employees will also be a point of interest in this case study.

Key Words: Solid Waste Management, Ranchi Municipality Corporation, A2Z

Introduction

The state of Jharkhand was formed as the 28th state in the Union of India on 15th November 2000 with Ranchi as its Capital. The city of Ranchi had to host the entire state administrative infrastructure (Legislative Assembly, the Secretariat, High Court and the Raj Bhavan) and also the private enterprises doing business in Jharkhand. The inter-state as well as intra-state migration has increased manifold as population has started migrating in search of employment opportunities. The population and its density have increased. The environmental impact of this urban expansion in terms of waste management has thus been a point of concern. This Case Study essentially examines the case of handling Municipal Solid Waste (MSW) in the city of Ranchi.

Historically, Ranchi had hosted Public Sector Undertakings like Central Coalfields Ltd., Steel Authority of India Ltd., MECON, CMPDI, HEC, etc., had resulted in the growth of population which are housed in the company managed colonies. These colonies were completely managed through company resources and the local municipality had not much of a role. After the formation of the new state, the migration of population to Ranchi has significantly increased. Most of the new migrants occupied independent accommodation and

housing colonies which are to be supported by the municipal services for the waste management. The Ranchi Municipal Corporation (RMC), was established on 15th September 1979, had to update their facilities in terms of sanitation.

Solid Waste Management in Ranchi

The sanitation facilities were initially managed by the RMC through their own staff and infrastructure. They used to collect the solid waste from various parts of the city and transport it to a distant location which was designated as dump yard. No scientific, systematic mechanisms were used for ensuring optimization of the resources. The Jawaharlal Nehru National Urban Renewal Mission (“JNNURM”) of the central government has recommended the case of RMC to improve the urban sanitation facilities through an Integrated Solid Waste Management facility. RMC was advised to tie-up with a private partner with the capabilities of management urban sanitation facilities.

RMC has advertised for a Public Private Partnership agreement in the DBFOT structure where the private party will be responsible for the Design, Build, Finance, Operate and Transfer of facilities after the agreed concession period is completed. A2Z Infrastructure Ltd was selected as the private developer after the tender

process was completed. It was responsible for enabling collection, transportation, processing and disposal of MSW and reclamation/ alternative use of existing dump sites and for that purpose to design, develop, part-finance, construct, operate and maintain the Integrated Solid Waste Management (ISWM) facilities. A2Z Infrastructure Ltd formed a special purpose vehicle A2Z Waste Management Ranchi Ltd. (A2Z WMRL) to enter into a concession agreement with RMC. RMC and A2Z WMRL entered into a concession agreement for the period of 30 years.

RMC has offered a PPP agreement with a clear premise that the existing system of waste management in Ranchi has faults in every stage of the process. In the project overview statement for the Request for Proposal (RFP) floated under the JNNURM scheme the RMC has stated "The existing Solid Waste Management system in Ranchi is deficient in all components i.e. waste segregation at source, primary collection, secondary storage, transportation, treatment and processing, and scientific disposal of waste." It had also identified the deficiency in the existing infrastructure facilities to meet the requirements of the Municipal Solid Waste (Management and Handling) Rules 2000. The project financing is covered under the JNNURM scheme of the Government of India. The capital cost will be a grant from the central government to the tune of 80% of the total cost and the remaining 20% has to be borne by the state of Jharkhand and the RMC in equal proportion of 10% each. The capital cost is distributed over the life of the agreement and is granted in a phased manner. The maintenance and operations expenditure will be covered through the User Charges, Sale of Compost, etc.

Some of the critical components of the ISWM project under the Municipal Solid Waste Rules, 2000 are as follows:

- i. Door-to-door collection of municipal solid waste from households, commercial units, industrial units, and institutions in segregated manner
- ii. Street sweeping and de-silting of drains
- iii. Secondary storage and transportation of waste including street sweeping waste, drain silt
- iv. Construction, operation and maintenance of the engineered sanitary landfill facility (SLF) and the waste processing facility with composting as one of the main processes.
- v. Timely collection of the user charges, on behalf of RMC as determined by the RMC.
- vi. Collection, transportation, processing, and disposal of the SWM littered within the jurisdiction of the RMC at the time of commencement of the collection and transportation services.
- vii. Procurement and operation of equipment, vehicles and tools for door-to-door collection

viii. Assist RMC in public education/ IEC program/awareness related to SWM

The waste generation from RMC is estimated at 491 MT per day in 2011 and is expected to increase to 577 MT per day in the next five years. The physical composition of the MSW will consist of compostables (51.49%), Recyclables (9.86%) and other including inert (38.65%).

The storage of waste at the primary point (point of waste generation) will be in separate containers of 10.0 litres each for biodegradable and non-biodegradable waste for a household and 120 litre bins for hotel/guest house/restaurant. The bins will be in green and black color respectively. 100 litre twin bin set of Litter bins will be placed near schools, colleges, offices, etc. This twin bin sets are visible to public and useful outdoor advertising media.

Table 3: Proposed Equipment at the Primary Storage Point

S.No.	Type of Equipment	Description	Nos. of equipment
1.	Two covered bins for household	10 litre capacity bins	4,71,139
2.	120 litre capacity of bin for hotel/ restaurants etc.	Capacity 120 litre	400
3.	Litter bin with advertisement Capacity	100 litre	300

Source: www.ranchimunicipal.com/docs/swmrfp.pdf Accessed on May 17, 2013

The door-to-door collection of waste will be undertaken through 840 containerized tricycles with 6 containers each of 35 litres capacity each (This equipment will be used to cover 36 wards out of 55 in RMC). 4 containers will be used for biodegradable waste and 2 containers will be for non-biodegradable waste. This is aimed at Waste Segregation at the source. The remaining 19 wards will be covered through 45 mini tippers of 1.5 m³. The collection is done all 365 days of the year and manpower as per the labour law of government of India will be available for this. The wards 1,2,3,4,5,35,36,37,38,39,42, 49,50,52 and 55 will be covered using mini tippers and the remaining wards will be covered through tricycles/rickshaws. The collection from the households will be from 7.00 AM to 12.00 Noon and the waste collection from the markets and vegetable markets will be twice a day (morning from 6.00 AM to 7.30 AM and afternoon 3.00 to 5.00 PM).

Another aspect of urban sanitation is the street cleaning. The streets will be swept regularly. RMC has a 558.95 km of roads which are cleaned regularly as part of the cleanliness of the city. Prime roads (Main Roads) around 56 kms will be cleaned using street sweeping machines and other roads will be manually cleaned. 470 wheel barrows and 2 machines will be used for the purpose of street sweeping. Around 850 employees are employed for this purpose. RMC has 295 permanent and 221 temporary sweepers, who will be undertaking the responsibility in specific wards and remaining wards had to be managed by A2ZWMRL.

The secondary storage of the waste before transfer to ISWM facility is a critical infrastructural issue in municipal solid waste management. The primary waste

collectors from the households and commercial establishments will transfer the waste to these closed bins at the secondary storage facilities. The secondary storage waste collection location will be spread at a distance of 500 m. It was necessary to ensure that no primary collector travels more than 250 m for transfer of the waste collected. In cases where mini tippers are used the distance between two secondary collection points may be 800 m. It is estimated that 455 collection points are required to cover the total area of 175.09 Sq. Km of RMC. These collection points will have separate closed container (refuse collector bin/dumper placer container) provided for collection of biodegradable (in green bin) and non-biodegradable waste (in blue/black bin). Adequate numbers of containers for storage of biodegradable and non-biodegradable waste are placed at each location to ensure there is no spillage of waste. 1110 refuse collector bins (984 bins of 1.1 cum. capacity and 126 bins of 0.6 cum. capacity) and 230 dumper placer containers (of 2.5 cum. capacity) are required for waste storage at secondary collection points.

Table 4: Summary of Required Infrastructure

S.No.	Type of Equipment	Description	Nos. of equipment
1.	1100 litre capacity RC bins	Capacity 1.1 m ³	984
2.	600 litre capacity RC bins	Capacity 0.6 m ³	126
3.	2.5 cum DP container	Capacity 2.5 m ³	230
4.	Cemented platform for placement of RC bins	Platform of size 1.5mx3m at secondary locations	455

Source: www.ranchimunicipal.com/docs/swmrfp.pdf Accessed on May 17, 2013

The waste management in a city is not complete without good transportation network to shift the waste to the disposal site. MSW from all the secondary collection points shall be first brought to the transfer station (four places in the city) and then transported to integrated solid waste management site (Jhiri around 25 km from the city centre). MSW will be unloaded from collection vehicles and reloaded onto larger vehicles for transportation to integrated solid waste treatment and disposal facility on the same day. The waste will be handled using hydraulically operated equipment. Waste from 8.0 m³ Refuse Collector trucks and Dumper Placers (which are used for transfer of waste from secondary storage to transfer stations) will be transferred to the bigger haulage trucks. 8m³ capacity Refuse Collectors are used for lifting waste from RC bins and twin container dumper placer are utilized for lifting of 2.5 m³ capacity DP containers. 22 refuse collector trucks and 23 dumper placers are required for transportation of waste from secondary storage points to the transfer stations. The waste from hotels/restaurants/banquet halls will be collected through four 6 cum. capacity refuse collector trucks. 4 tipper trucks of 6 cum. capacity each are utilized for collection of waste from litter bins. The transportation of waste from transfer stations to the integrated solid waste management facility site will be through 23 large haulage trucks of 10 cum. The biodegradable and non-biodegradable waste shall be transported in separate

vehicles during all the stages from primary collection to the transport to ISWM facility. 2 Cattle lifting vehicles and 2 dead animal lifting vans are used for lifting of stray animals and dead animals respectively. The transportation of construction & demolition (C&D) waste from waste generation to ISWM site will be through dumper trucks.

Table 5: Transport Equipment for Waste movement from Transfer Stations to ISWM facility

S. No.	Type of Equipment	Description	Nos. of equipment
1.	Refuse collector	8 m ³ capacity	22
2.	Twin-container Dumper placer	To carry 2.5 m ³ DP container	23
3.	Cattle lifting vehicle		2
4.	Dead animal pick up van		2
5.	Large haulage vehicle	10 m ³ capacity	23
6.	Refuse collector for the collection of waste from hotel/restaurants/ guest house	6 m ³	4
7.	Tipper trucks required for the collection of waste from litter bins	6 m ³	4
8.	Multipurpose high jetting machine auto mounted		2

Source: www.ranchimunicipal.com/docs/swmrfp.pdf Accessed on May 17, 2013

The processing of waste at the ISWM facility in Jhiri will have a multi-pronged strategy. The first aspect will be a sanitary landfill facility. Along with the landfill, the A2ZWMRL is required to develop a compost plant of 300 MT/day capacity for processing biodegradable waste and brick manufacturing plant for procession of construction and demolition waste. A2ZWMRL has to develop alternative technologies to recycle the waste and the target is to reduce the waste to be land filled to less than 20% of the total waste generated. However, the existing 11 acre facility at Jhiri will not be sufficient for the future requirements of waste generated by stakeholders of RMC. The entire project covered under PPP will have the following physical locations under the control of A2ZWMRL but owned by RMC.

Table 6: Sites Identified for transfer to Concessionaire under the PPP agreement

S. No	Description	Location
1	Transfer Station	Madhukam
		Ranchi Old Jail
		Bus Station
		Jagannathpur (backside of Jagannath temple)
2	Workshop	Bakri Bazaar
3	ISWM Facility	Jhiri

Source: www.ranchimunicipal.com/docs/swmrfp.pdf Accessed on May 17, 2013

Current Status

Currently the city is serviced by A2Z WMRL which is registered for thirty years by the Ranchi Municipal Corporation (RMC) on contract basis. The company initiated door-to-door service of collection of garbage from August 2011 and services all the 55 ward of the city. The case study will document the status of waste generation in Ranchi city, the process of collection, processing, and disposal by the A2Z Waste Management Company, role of A2Z Waste Management Company and RMC in effective management of environment, other stakeholders, etc. A2ZWMRL currently employees more

³ Delay in distribution of garbage bins irks public, *The Times of India* June 21, 2012

http://articles.timesofindia.indiatimes.com/2012-06-21/ranchi/32351124_1_garbage-bins-dustbins-a2z Accessed on May 30, 2013

⁴ Kiro, Santosh K, "March fast for Solid Waste Plant" *The Telegraph* December 13, 2012

http://www.telegraphindia.com/1121213/jsp/jharkhand/story_16308120.jsp Accessed on May 30, 2013

than 1500 people for waste collection, transportation, processing and disposal.

There was considerable delay in the distribution of the garbage bins to the different localities in the city due to the delay in procuring the bins and also the carelessness in distribution of the bins. However A2Z claims to have distributed over 2 lakh bins already and the rest will be distributed in consultation with the ward counselors.

Arun Kumar Singh the General Manager of A2ZWMRL has expressed confidence that the ISWM plant developed in 43 acres at Jhiri will become operational at the end of March 2013. The basic infrastructure like the weight bridge and an office room are already functional. The solid waste management plant will comprise a bio-fertiliser unit, a power unit and an interlocking brick-making facility. According to A2ZWMRL nearly 95 per cent of the garbage collected and dumped at Jhiri, a village some 15km from the capital, would be used as raw material in all these units and the power unit will generate 14MW. With the development of this plant the provision to recycle waste is available to the RMC. This is expected to address the health problems and improve the sanitary conditions in the city.

A2ZWMRL started collecting user charges of Rs. 30 per month from each household for the door to door collection of garbage. RMC has around 2,08,000 houses and the revenue from user charges is around Rs. 1 lakh per day.

The experience during the last Independence Day was one of overflowing drains, flooded streets and mounds of garbage which made commuting a tearful experience. There were no signs of civic service. The Ranchi Municipal Corporation and A2Z started a drive to clean drains before the monsoon. The drains were cleaned, but the garbage was allowed to collect along roads. Once it started raining, the garbage was swept into the drains. The residents expected the city to be cleaner when the A2Z employees started cleaning the drains but were disappointed with the quality of roads. The public relations officer of A2Z, Ashish Saurabh, maintained, "We agree the city is not clean but we are trying our best. In fact, we will be putting in an extra effort to ensure the city is cleaned well before Independence Day."

A2ZWMRL faced manpower crunch to discharge its various responsibilities of keeping the RMC clean. The company which started door to door collection of waste last year has already carried out a cleanliness drive in all 55 wards of the city. The inadequate manpower of A2Z is supplemented with the existing staff of RMC. The machinery is also not available or performing at the expected standards and the work of ensuring the city is

comfortable for the monsoon and drains are kept clean is getting hampered due to the manpower crunch. Chief executive officer of RMC, Deepankar Panda has expressed "We have started a fresh cleanliness drive in the city to make sure that the main roads are cleaned in the first phase and the artery roads are cleaned in the second phase."

RMC has threatened A2Z with termination of the 30 year contract for waste management blaming the company is not doing sufficiently for keeping the city clean. During April there are major festivals like Ram Navami, Sarhul and Manda puja. We are planning to use our resources and start a cleanliness drive ahead of festivals as we cannot rely only on A2Z Company anymore," said RMC's Lal. A2Z started working early in the morning to address the concerns of the RMC officials. The citizens are also happy that the city is getting cleaned and are willing to take the hassles for a little longer.

The strategy for Waste Management is presented as 4Rs - REDUCE, REUSE, RECYCLE, RECOVER. The A2ZWMRL and RMC have done little in the last two years to educate the public on the reduction of the waste. The segregation of the waste is also not promoted though the bins are colored differently. The recycle of waste is part of the JNNURM scheme of ISWM in Ranchi. However the recovery of resources from the waste is currently not practiced. The cultural change in the way the garbage is handled by the public and awareness of their role in the sanitary conditions of the city is not visible in the efforts of the stakeholders.

Conclusion

The municipal solid waste management system and practices in Ranchi city is an interesting case to study for better understanding of the challenges of urbanization in India. Ranchi, since being announced as a capital of the new state of Jharkhand in the last decade had a growth rate - economic and population wise - which is unprecedented. There was not much of an opportunity to plan the new capital city similar to Naya Raipur for Chattisgarh. The basic sanitation is itself a challenge in terms of infrastructure, manpower and cultural attitudes of the residents of Ranchi, sanitation workforce and other stakeholders. This is a developing case study on the success/failure will be decided by the unfolding of future events. Analysis of this case study will help enlighten the readers on the challenges with relation to sanitation, a necessity for a clean and attractive city. Thus, this case study is a useful tool for public policy professional, administrators and management staff dealing with ecology and environmental sustainability.

⁵ Kislaya Kelly, A2Z starts collecting user charge from 55 wards, *The Times of India* December 5, 2011

http://articles.timesofindia.indiatimes.com/2011-12-05/ranchi/30477104_1_a2z-garbage-collection-user-charge Accessed on May 30, 2013

⁶ Kislaya Kelly, I-Day spruce up goes for toss as Ranchi swims in garbage" *Times of India* August 7, 2012

http://articles.timesofindia.indiatimes.com/2012-08-07/ranchi/33081952_1_clean-drains-garbage-a2z Accessed on May 30, 2013

⁷ *ibid*

⁸ Manpower Crunch hits RMC's cleanliness Drive, *The Times of India* Feb 20, 2013 http://articles.timesofindia.indiatimes.com/2013-02-20/ranchi/37199518_1_cleanliness-drive-a2z-waste-management-manpower-crunch-hits Accessed on May 30, 2013

⁹ Kislaya Kelly, Ranchi Municipal Corporation may end deal with A2Z, *The Times of India* April 4, 2013 http://articles.timesofindia.indiatimes.com/2013-04-04/ranchi/38277121_1_a2z-company-ranchi-municipal-corporation-garbage Accessed on May 30, 2013

¹⁰ A2Z starts work early after RMC warnings *The Times of India* April 12, 2013 http://articles.timesofindia.indiatimes.com/2013-04-12/ranchi/38490959_1_a2z-workers-a2z-company-garbage Accessed on May 30, 2013

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