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APPLICATION OF SEMANTIC SIMILARITY USING ONTOLOGY FOR DOCUMENT COMPARISON**PALLAWI UNMESH BULAKH****ASST. PROFESSOR****DEPARTMENT OF COMPUTER SCIENCE****MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE****PUNE****DR. AJIT MORE****PROGRAM DIRECTOR (MCA)****BHARATI VIDYAPEETH DEEMED UNIVERSITY, INSTITUTE OF MANAGEMENT & ENTREPRENEURSHIP DEVELOPMENT****PUNE****ABSTRACT**

Semantic Web and ontology are the new area of interest as the information is not only treated and presented as document but the semantics of the information is considered as well. Ontology provides a conceptual specification of the content or meaning. There has been a lot of research on measuring the semantic similarity between documents/ words/ sentences. Using this concept of document similarity, we thought of designing a tool for assessment of subjective answer sheets of students. The assessment of subjective answer paper is still done manually. Manual assessment of the answer paper has its own pros and cons. The paper presents a brief introduction of semantic web and ontology. We discuss the application of semantic web as semantic similarity using ontology, also, the current manual assessment system and its lacuna are elaborated. We propose a framework for automated assessment of theoretical question papers using semantic similarity and ontology.

KEYWORDS

Ontology, Semantic web, Semantic Similarity, WordNet.

INTRODUCTION

 Semantic web and its applications is a new growing era in the world of www. Berners-Lee defined the Semantic Web as “a web of data that can be processed directly and indirectly by machines” (Vladimir Oleshchuk, 2003). It is concerned with the meaning of data rather than its structure. It is a mesh of information linked up in such a way as to be easily processable by machines, on a global scale. Here, information is given well-defined meaning, better enabling computers and people to work in cooperation.

Semantic web is an effort to enhance current web so that computers can process the information presented in www, interpret it and connect it to find required knowledge (Cambridge Semantics, 2013).

The main focus of semantic web is sharing of data instead of documents. It provides a common framework for sharing data across enterprise, applications. It also provides the language for describing the information in machine readable form (Vladimir Oleshchuk, 2003).

Ontologies play a key role to shaping information as they provide conceptualizations of domains. Ontologies have been very useful in information integration, peer-to-peer systems, electronic commerce, semantic web services, social networks etc. They provide the conceptual meaning to data (Neepa Shah, (2009).

The WorldWideWeb contains huge repositories of information in HTML documents, it contains so much, that, locating information entities that are “of interest” for a user becomes a great challenge. Even sorting through a tiny subset of HTML documents for particular objects of interest is a tedious task. It's very difficult to find relevant information required by a wide variety of users (Tim Berners Lee, 2005).

The application areas of Semantic web are mainly knowledge management which includes acquiring, maintaining and accessing the information using ontology. Here, in this paper we are concerned with the application of semantic web regarding semantic similarity between the words, documents.

Semantic similarity or semantic relatedness is the concept which defines the relation between two words. It attempts to find the relationship between the words. Humans can easily justify the relationship between the two words though they are lexicographically different, or how a pair of word is related to each other. Budanitsky and Hirst point out that semantic similarity is used when similar entities such as apple and orange or table and furniture are compared (Budanitsky, 2006). There are two main types of methods used to calculate the semantic similarity between the words. Dictionary based methods and corpus-based methods. Also some hybrid methods are used to find the degree to which the two concepts or words are related.

REVIEW OF LITERATURE

A paper on semantic matching of software project documents elaborates the approach for finding the similar project documents in the repository. The method makes use of ontological comparison to find the similarity between documents specified in a structured format (M.V.Deshpande, 2009).

In a study on Semantic Similarity, authors consider ontology as knowledge structures that specify terms, their properties, and relationships among the words for extraction of knowledge from text. Authors represent the ontologies using a graph based model which represent the terms and their semantic relationships. The authors have used a concept named document articulation which means finding the links between document contents and ontology terms. This articulation can be built using structural matching between ontologies and documents. Here, mere text document comparison is avoided; instead, the augmented document by document articulation is used which gives more relevant similarity results. (Vladimir Oleshchuk, 2003)

CURRENT ASSESSMENT SYSTEM

Multiple-choice questions (MCQs) are being increasingly used in higher education as a means of supplementing or even replacing current assessment practices. The growth in this method of assessment has been driven by wider changes in the higher education environment such as the growing numbers of students, reduced resources, modularization and the increased availability of computer networks. On this background, the online assessment of subjective question papers is done manually. There are various tools for context summarization. But further research in assessing the subjective answers is still in process. Thus there is a need to automate this task by developing software that can automatically extract ontologies from given documents, and perform semantic analysis on it, eliminating the need for manual work.

Manual assessment of subjective answer papers of students has its own pros and cons. Being a laborious and time-consuming activity, it naturally takes up a significant amount of human time and effort. This project proposes to automate this activity.

In order to achieve this, the answer papers are first represented in ontological form. We present a method which provides the user with a value of similarity between the terms of two ontologies. The method is based on the use of the lexical database defined by WordNet and the application of semantic similarity algorithms. We have applied this concept specifically to obtain similarity between the model answer paper and the answer paper to be assessed.

The objective of the system is to automatically assess the subjective answer papers of students semantically and perform semantic matching and effective assessment of these papers. The system will then generate a measure of the similarity between two papers.

PROPOSED SOLUTION

The given system accepts answers of questions as input from keyboard. The objective is to compare the current paper with the paper in the repository and display a measure of the similarity between them. These values are displayed in terms of marks obtained.

In order to achieve the above objective we need to represent the answer entered by student in the form of an XML document such that it is feasible to extract knowledge from it. Each sentence in the paper is represented as an XML tag. The contents of the subtitles are further divided into XML sub-tags to obtain in depth knowledge representation for ease of syntax and semantic analysis. This is the first step called ontology creation.

We then perform a tag-by-tag semantic comparison of the two papers. This is accomplished with the help of WordNet lexicon. We compare the meanings of the tags rather than just a simple letter-by-letter word comparison. WordNet also helps us to determine the relationship between the tags-whether they are synonyms, hypernyms, hyponyms, etc. This comparison returns the depth of the relationship between the two words by constructing a relationship tree. This depth is used by our algorithm to compute the measure of similarity between the two documents.

Compute the final similarity measure. The tags which are higher in the hierarchy are assigned higher values for the weight as compared to the tags which are lower in the hierarchy. The similarity measure is in percentage form and is the final output of the system.

CONCLUSION

In this paper, we have presented a framework for automated assessment of theoretical answer papers. The study can be further extended for semantic search, text summarization. Also, the framework for semantic integration of data can be proposed.

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ORGANISATIONAL CULTURE AMONG THE APPAREL MANUFACTURING AND EXPORTING ORGANISATIONS LOCATED IN TIRUPUR CLUSTER

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ABSTRACT

The Indian Textile industry occupies an important place in the economy of the country and its contribution to the industrial output, employment generation and foreign exchange earnings is tremendous. Over the last two decades, Tirupur has emerged as a leading export cluster in knitwear and has established its presence in Europe, US and in the Pacific. This cluster has grown as a highly linked cluster of units which together convert cotton to knitwear products. Individual units are highly specialized at the manufacturing of fabric, dyeing, processing, knitting and export marketing. A business organisation can create a trust and strong network relationship with suppliers, customers, and other organisations and the relationship is habitual and characterised by trust, open communication, and joint problem solving. Organisational culture is the major distinguishing feature in successful business, the most important competitive advantage and a key ingredient for the success. The sustained success of these firms has had less to do with market forces than company values; less to do with competitive positioning than personal beliefs; less to do with resource advantages than vision. With this context an attempt was made to study the organizational culture prevailing among the Apparel manufacturing and exporting organizations located in Tirupur using the Denison's model.

KEYWORDS

Organizational Culture, Apparel Manufacturing and exporting organizations, Denison's Model on organizational culture.

1. ORGANISATIONAL CULTURE- AN OVER VIEW

The business scenario world-wide, be it competitive or monopolistic, demands everyone in the business to formulate the strategies for their sustainability. One of the most accepted views of experts for sustainability of the business is creating the customer base, by creating a kind of trust and strong network for the business. The term culture is an ever-changing element and it is as old as mankind. Culture is normally understood as the shared values, norms, rules and regulations among mankind. The evolution of civilisation has a greater contribution from the changes in the various aspects of culture. As the term culture is as old as mankind, so is the term 'business' which is not an exception.

Edgar H. Schein (1984)¹ one of the renowned authors of organisational culture, describes it as a pattern of basic assumptions that a given group has invented, discovered or developed in learning to cope with its problems of external adaptation and internal integration and that have worked well enough to be considered to be valid and therefore to be taught to new members as the correct way to perceive, think and feel in relation to those problems. Cheng (1989)² assumed that organisational culture is a dominant factor affecting organisational members' job attitudes and productivity. Strong organisational culture can promise high satisfaction, commitment and performance among members.

Kathryn A. Baker's³ review of organisational culture literature makes the following clear: (i) culture is essential for both successful organisational change and maximising the value of human capital; (ii) culture management should become a critical management competency; and (iii) while the right culture may be a necessary condition for organisational success, it is by no means a sufficient condition. Although all organisations have cultures, some appear to have stronger, more deeply rooted cultures than others. Initially, a strong culture was conceptualised as a coherent set of beliefs, values, assumptions, and practices embraced by most members of organisations. The emphasis was on: (i) the degree of consistency of beliefs, values, assumptions, and practices across organisational members; and (ii) the pervasiveness of consistent beliefs, values, assumptions, and practices.

Organisational culture includes unspoken assumptions, beliefs, values and also visible behavioural norms. Organisational culture is influenced by a critical environment which includes a set of assumptions, expectations, values, and norms shared by most of members in an organisation. The pattern of aroused needs of a new member may be modified or shaped by the existing organisational culture and then the behaviour will be changed according to organisations. If a person's needs or patterns cannot be adapted to the existing organisational culture, then the person will be alienated in organisations. Leaders often shape their organisations according to their assumptions about human nature. Most of the time the leader's assumption may influence organisational culture significantly.

Greatest numbers of research based suggestions have been implemented in organisational culture to bring organisational effectiveness which is ever expected from the business. People working for organisations from the founder to the basic level employee have greater roles in creating, practicing and following the values, norms, rules required for the business. The basic elements which make people to follow a certain culture would be trust, the way of relationship, the structure of the relationship inside organisations, the need for knowledge or all of these elements.

The research by Michael *et al.* (2004)⁴ explains that organisational culture represents the best available "lubricant" that permits Small and Medium-sized Enterprises (SMEs) to function smoothly and effectively. One of the key factors that may influence SMEs information search, filtering and responsiveness is its organisational culture. This indicates that organisational culture is not a term for only well structured and larger organisations and the best culture is required for the development of SMEs also. This view gives a back bone idea for the present research to study the prevailing organisational culture in Apparel Manufacturing and Exporting Organisations (AMEOs), since most of them located in Tirupur cluster are SMEs.

¹ Edgar H. Schein (1984), 'Coming to a New Awareness of Organisational Culture', Sloan Management Review, 25 (2), p. 3.

² Cheng Yin Cheong (1989), 'Organisational Culture: Development of a Theoretical Frame Work for Organisational Research', CUHK Education Journal, 17(2), pp. 128-147.

³ Kathryn A. Baker, Chapter 11, Organisational Culture documented on 02.20.02.

⁴ Michael Stoica, Jianwen Liao and Harold Welsch (2004), 'Organisational Culture and Patterns of Information Processing: The Case of Small and Medium-Sized Enterprises', Journal of Developmental Entrepreneurship, 9(3), pp. 251-266.

Culture starts with leadership, is reinforced with the accumulated learning of the organisational members, and is a powerful set of forces that determine human behaviour. An organisation's culture goes deeper than the words used in its mission statement. Culture is the web of tacit understandings, boundaries, common language, and shared expectations maintained over time by the members (Smith 2004).⁵

An important challenge for managers is to inculcate the most effective culture is for their organisation and, when necessary, how to change the organisational culture effectively. Although all organisations have cultures, some appear to have stronger, more deeply rooted cultures than others. Initially, a strong culture was conceptualised as a coherent set of beliefs, values, assumptions, and practices embraced by most members of the organisation. The emphasis was on: (i) the degree of consistency of beliefs, values, assumptions, and practice across organisational members; and (ii) the pervasiveness of consistent beliefs, values, assumptions, and practices. Many early proponents of organisational culture tended to assume that a strong, pervasive culture was beneficial to all organisations because it fostered motivation, commitment, identity, solidarity, and sameness, which, in turn, facilitated internal integration and coordination.

Denison (2004)⁶ noted that 'because of the dominant role of the founder, not only during the entrepreneurial period but also potentially through successive stages, values and owner motivations are powerful cultural drivers. As founders are individuals and hold sometimes contradictory opinions and values, so these are reflected in the companies they establish. This cultural uniqueness, if understood and nurtured, can be one of a corporation's greatest advantages. Ownership and control bring an element of freedom to families in business.

A thorough understanding of an organisation's cultural character may be management's last, best weapon. Many literatures clarify that cost, quality, technology, product and process innovation, customer service, talent and brand are considered to be the key factors of the organisation's competitive advantage. The less obvious or less tangible factor which also contributes to the determination of competitive advantage is organisational culture. Culture is a major determinant of productivity; it shapes organisational responses to external pressure and suppresses or enhances the cooperative effort level of the work force (Tom Davis and Michal Landa 2001).⁷ A culture is born and becomes embedded in the behaviours and actions of all the people connected with the organisation.

Culture of the organisation will enable the leaders to maximise the intellectual, attitudinal and behavioural capital that each employee owns and chooses to share with the organisation. Darcy (2003)⁸ said that the culture that leaders influence and build with their employees exerts a huge impact on what individuals and teams achieve for their organisation. The culture of an organisation may be created in which all employees feel secure and the culture will sustain as an asset of an organisation. Desired shift in the organisational culture may be caused by agreed upon vision, guiding principles and administrative practices and policies.

Culture may not be defined in a very precise manner but it is very precious to feel and sense by the members of the organisation. Generally in society, culture provides the guidance to human beings for their behaviours and greatly influences their decisions. The culture of an organisation is increasingly being viewed as an important determinant of performance.

For most organisational writers, culture is a stable, conservative and resistant force that is likely to change only through management intervention. Cultural reinterpretation can involve the reading of old meaning into new forms but it can also involve the retention of old forms that have been given new meanings. In this regard socialisation can be seen as a process through which individuals contribute to cultural pattern maintenance as well as change (Mary and Vade Ven 2004).⁹

Eleni T. Stavrou *et al.* (2005)¹⁰ say that the culture of the firm can be in three forms such as paternalistic, laissez-faire, participative or professional. In the paternalistic business, relationships are managed hierarchically. The founder or other family leaders retain all authority to make decisions and the key information about operations.

William (2005)¹¹ proposed that in a strong and cohesive culture, the organisation's core values are both intensely held and widely shared. This high intensity of common beliefs makes it relatively easier to draw consensus among employees, to build a focus on important goals and objectives, to reduce potential conflicts, to cultivate a learning environment, and to lower staff turnover. He and his co-authors also described culture as a set of values, beliefs, common understanding, thinking and norms for behaviour that are shared by all members of a society. The unusual part of practicing cohesive culture in an organisation may make the employees not to change with any kind of changes in the environment. He also feels that a strong culture could bind people together to form a defensive or non-adaptive strategy, sometimes to the extent of being catastrophic and uncontrollable.

William proposed that a desired organisational culture is stable and flexible- stable in their vision, values and mission, but elastic in the structure and operations; it should focus on both external adaptation and internal integration, adapting to the customer and market and satisfying to employees at the same time. Also measuring the organisational culture may be a valuable tool to assess the prevailing culture and the required change in various levels. In short, measurement of organisational culture can be a strategically important tool kit to develop the competitive advantage of an organisation.

Randel and Caroline (ND)¹² warn that limited understanding of the cultural implication may lead to confusion about culture with disastrous results.

Organisational culture either promotes or inhibits the changes needed for a successful integration. Leaders who ignore organisational culture are likely to be burnt by the organisational culture. Understanding of culture involves knowing the strengths, and weaknesses, anticipating the consequent dynamics, intelligent choices for leveraging current capabilities as well as untapped capacities.

Cheng (1989)¹³ in his article on development of theoretical frame work emphasises the definitions of Schein in 1985 and Hellriegel and Slocum in 1974 as follows: organisational climate and culture seems to be mainly a set of shared perceptions of behavioural norms and attributes of an organisation. Climate is a set of overt, perceptible, and behavioural norms but culture may be multi-level including implicit assumptions, beliefs and values and also explicit behavioural norms. In other words, organisational climate seems to be the overt part of organisational culture, partly reflecting the implicit assumptions, beliefs and values shared among members. He assumed that organisational culture is a dominant factor affecting organisational members' job attitudes and productivity and that strong organisational culture can promise high satisfaction, commitment and performance among members.

Cheng also viewed organisational culture as multi-level including implicit assumptions, beliefs and values and also explicit behavioural norms. Organisational culture is a critical environmental influence, including a set of assumptions, expectations, values, and norms shared by most of the members in an organisation. The pattern of aroused needs (or values system) of a new member may be modified or shaped by the existing organisational culture and then his/her behaviour will be changed or 'socialised'. If his/her pattern of needs (or values) cannot be adapted to the existing culture, he/she will be alienated by the organisation. Changes in organisational culture result in changes in behaviours of members. Leaders often shape their organisations according to their assumptions about human nature. Since they have the largest power in organisations, their assumptions can influence organisational culture most.

⁵ Aiman L. Smith (2004), 'What Do We Know about Developing and Sustaining a Culture of Innovation?'

⁶ Daniel R. Denison, Colleen Lief and John L. Ward (2004), 'Culture in Family-Owned Enterprises: Recognising and Leveraging Unique Strengths', *Family Business Review*, 17(1), pp. 58-70.

⁷ Tom Davis and Michael Landa (2001), 'Changing Dynamics', *CMA Management*.

⁸ Darcy Lynn Marc and Simon Far brother (2003), 'Changing Organisation Culture: One Face at a Time', *Public Arrangement*.

⁹ Mary Jo. Hatch and A. Vade Ven (2004), 'Dynamics in Organisational Culture: New Direction in the Study of Organisational Change and Innovation Processes', *Forthcoming in M.S. Poole*, New York, Oxford University Press.

¹⁰ Eleni T. Stavrou, Tonia Kleanthous and Tassos Anastasiou (2005), *Leadership Personality and Firm Culture During Hereditary Transitions in Family Firms*, *Model Development and Empirical Investigation*, *Journal of Small Business Management*, 43(2), pp. 187-206.

¹¹ William H. Mobley, Lena Wang and Kate Fang (2005), 'Organisational Culture: Measuring and Developing it in Your Organisation', *China Organisational Culture*, *Harvard Business Review*, China, pp. 128-139.

¹² Randell J. Alford and Caroline Fisher (ND), 'Making the Merger Work', *Hand Book of Business Strategy*.

¹³ Ibid. 2

In organisations at times the culture may be understood by the visible slogans, languages, behaviours, even dress codes and the arrangement, the rituals but these may not give the exact picture of the organisations. However, a deeper analysis and reflection of collective beliefs, values and assumptions of employees of an organisation may help in understanding the culture in the organisation.

Culture starts with leadership, is reinforced with the accumulated learning of the organisational members, and is a powerful set of forces that determine human behaviour. An organisation's culture goes deeper than the words used in its mission statement. Culture is the web of tacit understandings, boundaries, common language, and shared expectations maintained over time by the members (Smith 2004).¹⁴

A top executive who has too much power has been found to be a major source of organisational decline. A lack of trust also affects job satisfaction and the organisational climate. An organisation's ability to innovate and change is essential for its survival in a changing market environment. The lack of change and innovation led to increasingly outdated product offerings and cost structures significantly above the competitive level. Carrying out change requires strong leadership that can assert itself against resistance within the organisation. Standard fixed payment and tenure-based promotion systems provide further employee security. Firms should thus limit their growth to an optimum rate.

2. TIRUPUR TEXTILE CLUSTER

The fragmented nature of Indian textile industry which comprises apparel manufacturing as a sector is the building blocks of the economy of the country. One of the major clusters in India identified as highly potential for textile business, especially in earning foreign exchange, is Tirupur. Tirupur is a textile town where commerce precedes everything and gain stems from its performance in technology and the quality of its macro-economic environment. It also derives much of its ascent from improved perception of its public service. Buyers from 35 countries frequently visit this place regularly, and the industry can deliver customised samples in less than 12 hours; half a million pieces in a matter of days. 56% of India's total knitwear exports come from this district.

The rich availability of raw materials, the strong entrepreneurial and personalised management, contributes to efficient management of negotiations and direct control of operations causing cost effective competitiveness of the industry. Quick delivery and quality products add dimension to it's prowess as a centre to outsource excellent products. The industry structure of fragmented nature extends to manufacturing exporters, merchant exporters and job workers. These factors give rise to external economies such as specialised suppliers of raw materials, components and machineries, sector specific skills etc. These favour the emergence of specialised technical, administrative and financial services, create a conducive ground for the development of inter-firm cooperation and specialisation. Also it leads to cooperation among public and private local institutions to promote local production, innovation and collective learning.

3. PRESENT STUDY

Many factors may contribute to the success of any business such as financial capital, human capital, technology, quality of products and customer satisfaction. Organisational culture is one of the prominent factors which determine the success in the long run. Also, organisations located in a particular region are involved in the similar product chain such as textile products have greater dependability on the others related business for example: suppliers, transporters, bankers, customers, job workers and so on. One of the prominent factors which make all these business people to stay together is the trust and cooperation. A lot of research attempted to study organisational culture in view of performance of organisations. This study aims to understand the organisational culture prevailing among the apparel manufacturing and exporting organisations.

4. OBJECTIVE AND METHODOLOGY

To evaluate traits of organisational culture in AMEOs located in Tirupur District.

The current descriptive study aimed to describe the organizational culture collected the primary data required for the study relate to the profile of entrepreneurs and managerial level employees, their age, experience, educational qualification and their opinion on organisational culture by them in their organisations by questionnaire. The basic source of population for the study is Membership Directory of Apparel Export Promotion Council (AEPCC). Two

stage sampling method was employed to arrive the sample size for the study. In the first stage, Organisations which have membership in both AEPCC and Tirupur Exporters Association (TEA) were chosen. Since TEA is an association as a result of cooperation of the exporters in the district, the members of this association were taken for the study to ensure the reliability of data. According to the membership list of AEPCC, 4461 small and medium enterprises have registered from south India. This includes 1819 merchant exporters and 2642 manufacturing exporters. The manufacturing exporters include 1912 from Tirupur District. TEA has totally 658 members including 307 manufacturing exporters have the membership in AEPCC. 12% (37) of the manufacturing exporters from TEA were chosen.

It was attempted to select 12% of the AMEO in a systematic manner. This is done by selecting one in ten organisations from 307. When these organizations were approached to collect the data, few hurdles such as unwillingness of the owners to provide the data and non-existence of few organisations (8 and 4 respectively) were experienced. Hence, for the present study samples were chosen in a random manner. In the second stage the representative sample size of 10% (225/2250) of entrepreneurs and managerial level employees were chosen from all 37 AMEO depending on the number of employees.

5. PROFILE OF AMEO

The AMEO included in the study varied among them as follows:

Among the 37 organisations taken for the study six organisations were in the field of manufacturing and exporting for more than 25 years, 20 of them were in the business for more than 16 years. The study comprises 10 organisations who were into the business ranging from 6-15 years and only one organisation which with less than five years of presence in business. Out of 37 organisations taken for the study 7 organisations have more than 1000 employees working followed by 11 organizations with 600-1000, 15 organizations have 100-500 employees and 4 of them have less than 100 employees working. Among the sample organisations, 20 of them have registered their business under Partnership, 16 of them were registered under Sole Proprietorship and one organisation has registered as Company. All the organisations are into the export business, 20 organisations had 0-5 customers, 14 organisations manufacture the goods for 6-10 customers and 3 organisations have more than 10 customers who import their products to sell in the global Market.

These organisations taken for the study get the work done through job workers particularly during the seasonal orders. Among 37 organisations taken for the study 8 of them have more than 30 job workers, 3 work with 21-30 job workers, 17 of them get the work done by 11-20 job workers and 9 operate their business with the help of at least 10. The organisations source the raw materials from varied number of suppliers. 16 of them source their raw materials from 20 suppliers, 13 depend on 21-30 suppliers and totally 8 depend on 40-60 and more than 60 suppliers for their raw materials. Among these organizations 17 of them have transactions with at least 2 bankers and 20 of them have interactions with 2-3 bankers for their business transactions.

6. INSTRUMENT TO MEASURE ORGANISATIONAL CULTURE

Denison's Model on organisational culture was taken for the study and the instrument was validated according to the Indian context. The Denison Model is the result of fifteen years of research by Dr. Daniel Denison (1990)¹⁵, on the link between organisational culture and bottom-line performance measures such as return on investment, sales growth, quality, innovation and employee satisfaction. The model is the basis for two diagnostic surveys namely, organisational culture Survey and the Leadership Development Survey, developed by Daniel R. Denison and William S. Neale which have been used by over 500 organisations worldwide. The Denison Model used for the study measures four critical traits of organisation culture such as involvement, consistency, adaptability and mission. Each of these traits is further broken down into three indices (for a total of 12).

¹⁴ Aiman L. Smith (2004), 'What Do We Know about Developing and Sustaining a Culture of Innovation?'.
¹⁵ Daniel R. Denison (1990) Corporate Culture and Organisational Effectiveness, New York, John Wiley and sons.

6.1 INVOLVEMENT

Empowerment, team orientation and capability development are considered by Denison as the indicators of the trait Involvement. Empowerment is individuals who have the authority, initiative and ability to manage their own work. This creates a sense of ownership and responsibility toward organisations. Team Orientation related with value is placed on working cooperatively toward common goals for which all employees feel mutually accountable. Organisations rely on team effort to get the work done. Capability development is investing in the development of employees' skills in order to stay competitive and meet ongoing business needs.

6.2 CONSISTENCY

Consistency is defining the values and systems that are the basis of a strong culture. The indices of consistency trait are: coordination and integration, agreement, core values. Coordination and integration are the two different functions and units of organisations are able to work together well to achieve common goals. Agreement is that an organisation is able to reach agreement on critical issues. This includes both the underlying level of agreement and the ability to reconcile differences when they occur. Core Values are the set of values shared by members of organisations which create a sense of identity and a clear set of expectations.

6.3 ADAPTABILITY

Organisations hold a system of norms and beliefs that support organisation's capacity to receive, interpret, and translate signals from its environment into internal behavioural changes that increase its chances for survival, growth and development. Three aspects of adaptability impact an organisation's effectiveness. First is creating change which is the ability of organisations to perceive and respond to the external environment. Successful organisations always focus on their customers and their competitors. Second is customer focus of organisations which is the ability to respond to internal customers, regardless of level, department or function. Third is organisational learning which is the capacity to restructure and re-institutionalise a set of behaviours and processes that allow organisations to adapt. Without this ability to implement adaptive response, an organisation cannot be effective.

6.4 MISSION

According to Denison mission is defined as a meaningful long-term direction for organisations. Denison has found the indices of mission trait as strategic goals, vision, strategic direction and intent which convey organisation's purpose, make it clear how everyone can contribute and "make their mark" in the industry. Goals and objectives can be linked to the mission, vision, and strategy, and provide everyone with a clear direction in their work. Vision refers to organisation's shared view of a desired future state. It embodies core values and captures the hearts and minds of organisations' people, while providing guidance and direction.

7. ORGANISATIONAL CULTURE AMONG THE AMEO'S**7.1 ORGANISATIONAL CULTURE PRACTICED BY RESPONDENTS BASED ON AGE****TABLE 7.1: ANOVA ON AGE GROUP AND ORGANIZATIONAL CULTURE**

Index	Age group of respondents (Mean Values)				F	Sig.
	18 - 25 years	26-35 years	36-45 years	>46 years		
Involvement	54.88	58.74	59.88	60.04	2.962	0.033
Consistency	50.64	56.76	57.99	58.93	7.136	0.000
Adaptability	54.84	57.63	58.12	60.32	3.092	0.028
Mission	54.20	58.35	58.94	60.46	3.329	0.020

Table 7.1 shows that mean values are higher for all traits of organisational culture with the age group more than 46 years. This shows that these respondents have more involvement, consistent pattern of working, adaptability and meaningful mission. The experience in the work place might have helped them to understand the importance of following certain culture in organisations. However, the significant difference among mean values is tested by applying ANOVA. As per the different age group categories of the managerial level employees, the test indicates statistically significant difference ($p < 0.05$). Hence, it is understood that age is one of the factors that may differentiate the way in which organisational culture is practiced.

Above all, the present scenario of young managers with a tendency to apply different work practices might have indicated their less consistency of work pattern. These young managers may be less involved in their job because they are yet to finalise their career choice. This leads to less adaptability to the demands of an organisation from the external environment and less orientation towards mission of an organisation.

7.2 EDUCATIONAL QUALIFICATIONS OR RESPONDENTS AND ORGANISATIONAL CULTURE**TABLE 7.2: ANOVA ON EDUCATIONAL QUALIFICATIONS AND ORGANISATIONAL CULTURE**

7.2. ANOVA ON EDUCATIONAL QUALIFICATIONS AND ORGANISATIONAL CULTURE						
Index	Educational Qualification of respondents (Mean Values)					
	School Level	Diploma	UG	PG	F	Sig.
Involvement	63.23	60.29	58.28	58.33	2.104	0.101
Consistency	58.77	57.83	56.15	56.94	0.742	0.528
Adaptability	61.69	59.37	57.13	57.43	2.566	0.055
Mission	61.92	58.31	57.96	58.36	1.006	0.391

Table 7.2 shows that mean values are higher for all traits of organisational culture with respondents who have school level education. However, these mean values are tested by ANOVA to find the significant difference. Organisational culture based on the educational qualification indicates that p values are greater than 0.05. Hence, there is no significant difference on organisational culture based on educational qualification among managerial level employees. This indicates that practice of organisational culture has nothing to do with educational qualification and it is the fine human quality such as the acceptance rather than understanding.

7.3 YEARS OF EXPERIENCE OF RESPONDENTS AND ORGANISATIONAL CULTURE**TABLE 7.3: ANOVA ON YEARS OF EXPERIENCE AND ORGANISATIONAL CULTURE**

Index	Experience of the Respondents (Mean Values)					F	Sig.
	<5 years	6 - 10 years	11 - 15 years	15 - 20 years	> 20 years		
Involvement	55.34	58.46	62.08	59.78	59.32	5.064	.001
Consistency	51.89	57.04	59.86	57.91	57.76	7.747	.000
Adaptability	54.64	57.54	60.28	57.65	59.21	5.091	.001
Mission	54.74	58.46	60.66	58.00	59.95	4.359	.002

Table 7.3 shows that mean values are higher for organisational culture among respondents who have 11-15 years of experience whereas those with less than 5 years of experience have less mean values for all traits. This shows that those who have 11-15 years of experience ultimately in their mid-career cycle may have more involvement, and consistent pattern of working, adaptability and mission. This may be due to their understanding and the ability to learn in their work places. Moreover, vast experience might have created a confidence in them to perform the job in a better way which ultimately made them to involve, adapt, follow the constant work practices and have mission. However, the significant difference among mean values is tested by ANOVA. As per the analysis, there is a statistically significant difference ($p < 0.05$) among respondents in practicing organisational culture.

7. 4 EXPERIENCE IN THE PRESENT ORGANISATION OF RESPONDENTS AND ORGANISATIONAL CULTURE

TABLE 7. 4: ANOVA ON EXPERIENCE IN THE PRESENT ORGANISATION AND ORGANISATIONAL CULTURE

Index	Organisational Experience of the Respondents (Mean Values)					F	Sig.
	< 2 years	2 - 5 years	5 - 7 years	7 - 10 years	> 10 years		
Involvement	54.50	58.87	60.16	62.34	61.43	8.443	0.000
Consistency	51.64	56.49	59.13	60.28	59.69	12.431	0.000
Adaptability	54.64	55.87	59.60	61.56	60.54	10.677	0.000
Mission	54.29	57.42	60.62	61.47	60.89	8.290	0.000

The work experience in the present organisation may have the impact on organisational culture. Hence, ANOVA is performed to understand results based on experience in the present organisation. Mean values of respondents who have 7 - 10 years of experience are higher among all other respondents with different years of experience in the same organisation. This shows that there is a significant difference among the opinion on the organizational culture based on their experience in the organisation.

7. 5 DESIGNATION OF RESPONDENTS AND ORGANISATIONAL CULTURE

TABLE 7. 5: ANOVA ON DESIGNATIONS AND ORGANISATIONAL CULTURE

Index	Organisational Experience of the Respondents (Mean Values)				F	Sig.
	Managing Directors	Marketing and Merchandising Managers	Production Managers	Administrative Managers		
Involvement	60.68	57.91	59.90	58.60	1.394	0.246
Consistency	58.46	56.60	55.98	56.63	0.739	0.530
Adaptability	58.97	57.35	58.28	57.56	0.595	0.619
Mission	59.19	58.00	57.55	59.00	0.476	0.699

Table 7.5 investigates the difference in the practice of organisational culture among respondents based on designation using ANOVA. It is understood that there is no difference with in the practice of organisational culture with various designations since $p > 0.05$. Designation may not be the criteria to understand and practice the values in organisations or in the society. Many people without any definite designation and educational qualification lead a better life than designated and educated people. Respondents also have proved that designation is not a criterion to practice a better organisational culture.

8. RESULTS

Respondents in the age group more than 46 years have more involvement, consistent pattern of working and adaptability. Experience in the work place might have helped them to understand the importance of following certain culture in organisations. It is understood that age is one of the factors which may differentiate the way in which organisational culture is perceived. There may be a possibility that less age group employees take more time to accustom themselves with existing organisational practices. These practices may be new to them since most of them are directly from the educational institutions which create the possibility of expectation gap in organisational practices. The young respondents may be in need of more time to involve and to be familiar with the elderly respondents. Mean values are higher for all traits of organisational culture with respondents who have school level education. Organisational culture based on the educational qualification does not show significant difference among the various education qualifications. This indicates that educational qualification is not a criterion to follow the culture practices of organisations but it is only basic understanding of the practices. Values for organisations are common to every one who creates organisations.

Respondents with 11-15 years of experience ultimately in their mid-career cycle may have more involvement, consistent pattern of working, adaptability and mission. This may be due to their understanding and learning in their work places. The experience might have created a confidence in them to perform the job in a better way which ultimately made them to involve, adapt, follow constant work practices and have mission.

The higher mean values for respondents with 11-15 years of experience indicate that they have significantly high involvement compared with respondents with less than 5 years experience. The respondents of less years of experience ultimately may need some more time to be more involved in organisational practices. They also have less mean values for all traits. Respondents less than 5 years of experience significantly differ in their opinion on consistency from all others. The same respondents significantly differ in their opinion on adaptability and mission from respondents with experience of 11-15 years and more than 20 years.

Less mean values of responses from the less experienced category clearly indicate that they have less consistent work practices when compared with other respondents. This may be due to the early career stage which may contribute to less consistent work practices due to non-settlement in their work place. The respondents with the experience of employees of 11-15 years are ultimately in their mid-career cycle may have more involvement, consistent pattern of working, adaptability and mission. The more experience might have created a confidence in to perform their job in a better way. The study indicates that designation may not be the criteria to understand and practice values in organisations or in the society. Many people without a definite designation and educational qualification lead a better life than well designated and educated people. Respondents also have proved that designation is not a criterion to a better organisational culture.

9. CONCLUSION

Successful organisations have developed something special that supersedes corporate strategy, market presence, or technological advantages. They have found the power that resides in developing and managing a unique corporate culture (Cameron and Quinn 1999).¹⁶ Organisational culture created primarily by the initial founder of the firm may be based on the participation of management teams and it is developed consciously. Management teams also decide to improve their company's performance in systematic ways. Considering this view the study recommends that a better organisational culture according to the vision of the founder may be inculcated in AMEOs by the top level management as it contributes largely to the sustainable development of the business. Though specific cultural properties will vary from organisation to organisation, the principles used in determining the appropriateness of these properties are applicable across organisations. Understanding of values and ideologies to be not only shared by organisation's members but they must be communicated to new members. It is a fact that organisations located in a cluster contribute tremendously to the growth of the industry nation wide and particularly exports contributes to the national income. Identifying the suitable culture and inculcating the same may help the organization for its constant presence in the business and gives an unique identity to the cluster.

10. REFERENCES

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INDIAN CONSUMER BEHAVIOUR ON BRAND LOYALTY: SUBSTANCE STILL SCORES OVER STYLE**RIDDHI BISWAS****PROFESSIONAL****M/S BEACON INSURANCE BROKERS PVT. LTD.****MUMBAI****ABSTRACT**

This article tees off with what drives brand loyalty, the psychology behind human behaviour as it pertains to brand selection which can be rudimentary as well as complicated. It shows how with changing behavioural patterns, Indian consumers' preferential list has given space to branded products and shown exit door to many other products and how people are tending more towards brand savvy and it mentions current research, opinions of experts and a convergence of ideologies advocating techniques used in order to deepen current and potential relationships to create brand awareness and brand consciousness. It also clearly displays that nothing happens by chance by establishing the fact on evolutionary accommodating patterns of consumers' behaviour and on how consumers substantially move from non-brands to brands, from utilitarian to impulsive, to symbolic purchases and pinpoints methods conducive to evoke the use of consumers' five senses to evaluate, develop, and drive a deeply-rooted brand preference. It discusses general consumer behavioural and attitudinal characteristics and goes through the Indian psyche in detail. It will also touch upon different marketing mix used to change the consumer behavioural pattern to make them more loyal to a particular category as compared to others. The psychology behind how and why economic boom or doom altogether shifts people's preference from one brand to another or why consumers totally display indifference to brands are shown using noted psychologists' views like B.F Skinner's 'Situationism' model. It concludes by defining who are Indian consumers and what should be the focused area to make them really brand savvy and brand loyal and what really rules the roost, substance or style?

KEYWORDS

Brand, Indian consumers, Style, Substance.

ABBREVIATIONS USED

BL- Brand Loyalty

BA- Brand awareness

INTRODUCTION

Marketing battles take place in the mind of a consumer or prospect. That's where you win. That's where you lose."

Jack Trout, Big Brands, Big Trouble

What drives brand loyalty? The psychology behind human behaviour as it pertains to brand selection can be both rudimentary and complicated at the same time. I will explore this conundrum by investigating noted authors' insight into the realm of brand preference. But this conundrum becomes more complicated as per as India is concerned. The business mantra in India is "Half monk and half warrior", the two features remaining poles apart. Here people have typically different mindsets as compared to its western counterparts. Here pricing, faith, quality play key role in creating brand and then brand loyalty among the consumers. By current research and opinions of experts, a convergence of ideologies will advocate techniques in order to deepen current and potential relationships. Methods will be adopted which evoke the use of our five senses to evaluate, develop, and drive a deeply-rooted brand preference. The article will discuss general consumer behavioural as well as attitudinal characteristics and go through the Indian psyche. What are the psychological factors that affect a consumer to pick up a product? It will also touch upon different marketing mix used to change the consumer behavioural pattern to make them more loyal to a particular category as compared to others.

LITERATURE REVIEW

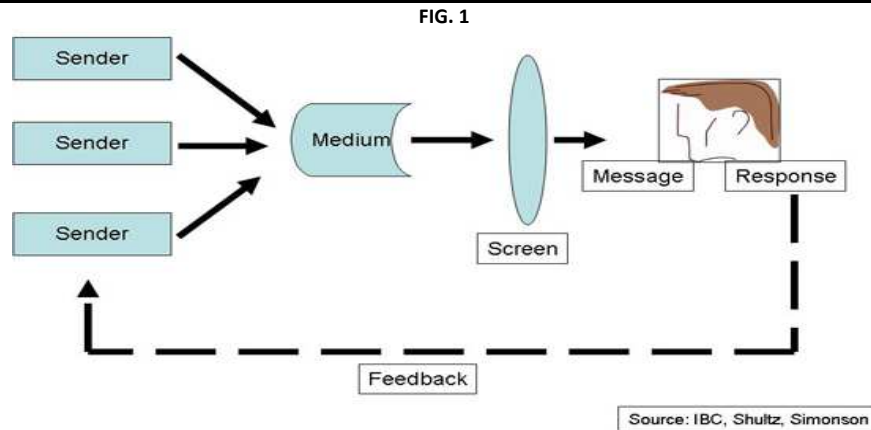
The ripples of globalization have reached every shore and make people to think beyond only products and go for brands whether local or foreign brands. In some developed countries people have more preferences on foreign brands to local brands for some symbolic meanings (Kottak,1990). Post reform India is opening up its market and becoming more brand conscious. This priority on preference list is very much conspicuous with the products related to conspicuous consumption and status-revealing as in clothes, automobiles, etc. (Piron, 2000). Kumar et al. studied more on Indian consumer's perception on US and local brands and how the attitude people have but does not give in detail brands in general. Mukherjee and Patel, 2005 emphasises on the fact that India is going to see a swathe of foreign brands in Indian stores and people will be ready to expend more on those brands. Aaker (1991) says that experimental products are the most to be influenced in the coming years by brand attributes and brand image.

COMMUNICATION TECHNIQUE

To better realise the process of what one prefers, let's first look at a basic communications process. The five components of this model are:

1. sender
2. medium
3. filter
4. receiver
5. feedback

Every day, we are exposed to messages (sender/medium) via our radio, television, billboards, Internet, mail, and word-of-mouth. In spite of pervasive nature of these, we continually screen out (perceptual screen) or ignore content that has little or no relevance to us. All messages are coded patterns and sensations – sounds, odours, smells, etc. Those messages deemed recognizable and relevant, or a basis for a relationship, are decoded and stored in our memory (filter/screen). A successful convergence between sender and receiver will culminate in some type of response to a brand's compelling message (feedback). The association with the brand depends upon the intensity of feedback. The stronger the responses, the more loyal the customers would be.



People who visit a Macdonald restaurant and have nice feeling in having food there they will remember the experience and prefer to Macdonald restaurant to others. Here the customers consider the overall product, service as superior to other restaurants. This gives a clear message that how customers become associated with a particular brand. This heralds that it is customers not the organization, who are the real owners of brand.

WHAT IS BRAND LOYALTY AND HOW IS IT CONNECTED WITH PSYCHOLOGY?

According to Kotler Brand loyalty can be defined as Degree to which a consumer repeatedly purchases a brand. For advertisers to achieve their ultimate goal of brand loyalty, the consumer must perceive that the brand gives a right amalgamation of quality and price. Many factors do influence brand loyalty, such as consumer attitudes, family or peer pressure, and friendship with the salesperson, the kind of promotional sales, price, quality, the maker of the product, the country of origin, etc. The advertiser must consider all such factors. Brand loyalty is stronger on established products than on new products and for these products consumers don't prefer brand switching.

FIG. 2



Loyalty exhibits the following attributes:

- Biased
- Attitudinal response
- Behavioural response
- Expressed over time
- By some decision-making unit, with respect to one or more alternate brands
- A function of inertia
- Then this inertia is replaced with a psychological process resulting in brand commitment

Indian consumers can not be categorised into a particular groups. In every part people differ on the basis of religion beliefs, dresses, food, lifestyle, rich-poor divide and what not. Any concrete conclusion about them can be hardly made. But some common thread that passes through Indian consumers is that people are loyal to brands that have a well track record of reliable service, quality and the best value of money but people are not so obsessed to premium 'image brands.

INDIAN SCENARIO

India is a very lucrative market for business over 1.1 billion people and 400 million are living in urban area. Catching Indian market can have a larger consumer base at a time when GDP is growing at 8% annually (except the current economic slowdown) and the new generation have much disposable income as compared to previous one. But the dismal side is that no particular yardstick can be assigned to gauge the consumers and many have put together into one and it makes the most difficult task for Brand managers. Whatever one will tell about India, the opposite also holds equally true. With these ambiguous and amorphous conditions, one can't reach to the conclusion whether BL exists in the Indian consumer market observing the way the country is going, especially the urban areas and people are fast changing, becoming more conscious, having more money, exposed to the western culture. But the same time also vibrant are multiple income levels and with a multitude of cultural and social patterns, and the way brand loyalty is perceived is equally varied. Instances of BL may be there for image brands and functional brands but the right equation of price and value key to preference. It does not say that brand consciousness is altogether absent what it means that a right combination of price and quality rule the roost.

Brand loyalty in India is markedly different contextually from the way developed economy perceives it. In India when the consumers can derive substantial value as compared to other brands, it can guarantee a sense of loyalty, not the mere brand value can do it. So from Indian context what underscores about BL is that to get much more at the cost of lot less and it offers a guarantee of trust with maximum value and then consumers consider it worth to become loyal.

THE BEHAVIOUR OF EMERGING YOUNG URBAN LIBERALIZED INDIAN CONSUMERS (YULICS)

Nearly two-thirds of 1.1 billion Indian people are aged below 40 years world and it has made India the youngest nation in the world. With that one the job opportunities are also opening up across various sectors. They have fast disposable incomes and are all likely to make a shift in their life-styles as compared to their previous generations. These are the real consumers who flock the shops for brands, having much more brand consciousness and brand awareness. They are not loath to hand our extra bucks to buck the trend to satisfy their attitudinal needs. These yulics are now becoming more liberalized consumers in making a decision on what to buy, what to eat, what to put on, etc.

In the graph it is shown how these clusters of liberalized populations are growing rapidly.

INCREASING PERCENTAGE OF LIBERALIZED INDIAN URBAN CONSUMERS

FIG. 3

	1991	1996	2001	2006	2011
>60	5.8	6.2	6.7	6.6	6.5
55-59	2.4	2.6	2.7	2.7	2.7
50-54	3.5	3.7	3.8	3.7	3.7
45-49	4.4	4.7	5.1	5.0	4.9
40-44	5.4	5.7	6.0	5.9	5.8
35-39	7.0	7.3	7.6	7.5	7.4
30-34	7.7	7.8	7.9	7.8	7.8
25-29	9.1	9.1	9.0	9.0	9.1
20-24	10.0	10.0	9.9	10.0	10.0
15-19	10.3	10.4	10.6	10.6	10.7
10-14	11.6	11.5	11.4	11.4	11.5
5-9	12.0	11.2	10.5	10.6	10.8
0-4	10.7	9.8	8.9	9.0	9.1
Total	100.0	100.0	100.0	100.0	100.0

Source: UN, Edelweiss research

Figures in grey indicate the population maturing in liberalised India and figures in the black boxes are absolute figures in millions

As this population is on the rise, there is little doubt that these are the real consumers who cast their choice for brands. The growth of service sector and other sector will also bolster this trend for years to come. The employability created by IT sector and other sector by recruiting the fresh college graduates are the real bet on the brands. The growth of IT sector remains uplifting and expected to continue this pattern. Though job creation is made available across various sectors, I will cite an example how the growth of high net worth individuals in IT sector continues and just adds catalysts into the consumer spending on brands.

EMPLOYABILITY IN IT & ITES

FIG. 4

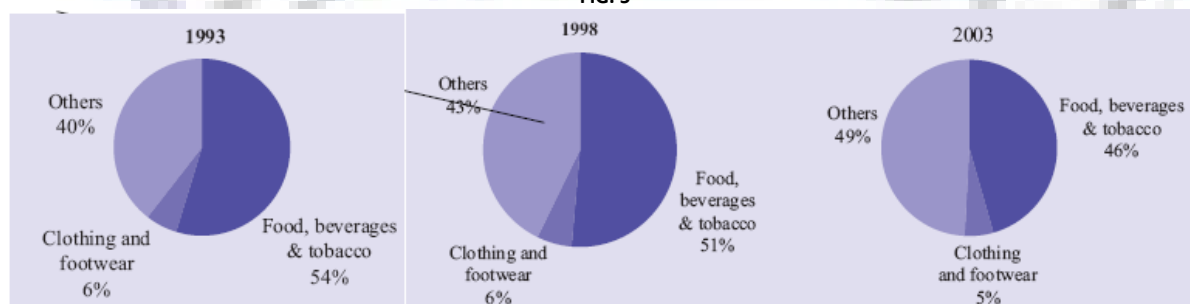


Source: NASSCOM, Edelweiss research

With this deep pocket and globalization, these consumers are exposed to western culture and style. So a noticeable shift in behaviour is to do expenses. Where food and beverages are on the decline year-on-year (YoY) basis, the life style and cosmetic products are grabbing the attention. These folks are turning from mere utilitarian products to hedonistic, symbolic and impulsive purchases.

CHANGE IN SPENDING PATTERN

FIG. 5



Source: Edelweiss research

So the behaviour of these Yulics is predominantly fulcrummed about their high income levels. These clusters of consumers take the reins of driving the brand movement. And it's all expected that with growth of the number of these consumers as well as the growth of their incomes, these consumers will tend more to the attitudinal products resulting in loosening their purses on brands.

BEHAVIOURAL CHANGES IN CHILDREN ATTITUDE ON PRODUCTS, ESPECIALLY ON BRAND: CHILDREN ARE NO LONGER A MUTE ASSESTER

FIG. 6



Marketers have walked extra miles and discovered that this generation kids have much more say in decision-making as compared to the generation before. And if kids have say, then why not "catch 'em young". It promises double-edged benefits- one is the short-term: they make children much familiar with the products and take a safe haven in their subconscious minds, so when they will try to purchase those kind of products, these are brands of products that will strike them first and help to narrow down their decision to that particular branded products only. The little monsters have a fabulous ability to gall their 'wallet-carriers' parents to loosen their strings. And much, much better and commendable one is the long-term. Marketers are well known to the cliché "habits learnt in childhood stay longer". Marketers seem to add that lessons learnt in childhood may live a lifetime. So they bombard toddlers ever since they open their skinned eyes for the first time with all the marketing campaigns. Today children can instantly recall so many brands that their parents in their early ages hardly can do a few. If a children given a choice of Nike shoes and non-branded one, they will immediately jump at the Nike one without a great deal of deliberation. So the marketing campaigns easily catch kids' fancy and then get the much expected and desired fantastic fitting. Who's who of children community just fall an easy prey to it. Kids are not only the present customers but also prospective future customers. These are enough to egg on marketing guys to work out a plan and then plan out the work to target the kids to instill brand consciousness and brand awareness into children's minds. So the brand loyalty is being embedded into the minds of the kids at their very early stage and thus these folks grow up in a situation that they are accustomed to a swathe of brands. So brand loyalty is high among these generation kids and thus it invariably makes an impact on their parents' choice on brands.

Still fact is that these promising pictures for brands are palpable in the urban middle class families only. It does not hold true for the 650 million people and their kids who live in villages. They still are content with whatever they get. Creating the mass scale brand awareness (BA) among this important group of people is still a long journey. The behaviour of these rural people is more or less same as it was couple of years back. This behavioural change can only be experienced among the urban well-heeled families.

EVOLUTION OF ACCOMMODATING PATTERN

FIG. 7



CHANGE IN BEHAVIOURAL PATTERN IN PURCHASE

Some decades before most of the Indians stick to the habit of utilitarian purchases. Post reform period India has seen a shift from utilitarian purchases to other means of purchases like symbolic, impulsive and then they might have been conditioned to a particular brand.

Mere utilitarian

Impulsive, hedonistic, symbolic purchase

It is not before 1991 that Indian consumers have got a taste of multi brands in various sectors. The constant inflow of foreign companies, people from different ethnicity, culture has injected into the minds of people brand consciousness and brand awareness. Before this people used to only rely upon functional attributes. There is no remarkable place for symbolic or impulse buying. Style had hardly mattered to the mass. But post reform people have been being offered

more range of options. They started giving people the feeling of symbolic and impulse buying. It is not only that foreign brand has conditioned customers here but also they had themselves portrayed themselves into 'Indianness'. The changing assimilation habit and plurality in society has transformed some of the multinational brands into Indian ones such as Life Boy, Dettol, Bata, Colgate, Ponds and the recent entrée into the foray are Coca-Cola, Pepsi, Hyundai, etc among many others. Though India is fast becoming globalized and trying habituate to the developed countries' culture, it still carries some characteristic traits that are truly Indian, family values are still in vogue and kept in high esteem, the mutual respect shown to each other, especially the seniors while interacting with them and elder people are hardly called with name and loyal and respectful to own religion, culture value still play the first fiddle. With this Indian's usual friendliness and accommodating traits to outside world is also commendable. This easily adjusting attitude and behaviour are where the brand can impact positively as it can be seen in Nokia, Samsung mobile phones, Nike, Reebok sports wears and FMCG products offered by so many MNCs are perfect examples of it.

In India the aspects that consumers emphasise high are trust and reliability and thus have still a soft spot for public sector company and the government. LIC is the most trusted brand name to Indian households and run across every geography with its undiluted brand value. This brand loyalty is born out of trust that people have imposed in it. While when 10 years back insurance sector was thrown open to private sectors and then FDI was allowed, many might have written the melancholy note for LIC. But to much chagrin and surprise to everybody, it is not only thriving and has created such kind of brand name that it has bagged 'the Most Trusted Service Brand in India' for many consecutive years. Still when most companies were struggling to find a comfortable journey, its performance in 'Brand Equity's Most Trusted Brands' survey has been stellar (LIC has been the Most Trusted Service Brand in India for five consecutive years in the study), LIC has delivered on the numbers front as well. Even as, post recession in 2008-09, most Indian businesses had struggled to find a comfortable place on the profitability street, Brand LIC showed stellar show and continued growing streak in 2008-09. One thing that surfaces the Indian consumers that more the valuable product or service it would be, the more trustworthy the organization should be to establish its brand loyalty. Even when Maruti800 outperformed previous four wheelers like Ambassadors and Premiers, it was clear that not only it was more modern but customers got the assurance that Indian Government's stake was also there.

By the end of 1991, India had found new genre of consumers and their expectations also varied. They were all set to experiment with new range of products and brands. The following trend observed in the new consumers-

- Increase in income
- Women participation in workforce
- A remarkable shift in the expansion of the consuming class.
- The proportion of people living below the poverty lines is decreasing by 65%
- Urban life style
- Becoming more globalized

The increase in the number of families in the consuming class have created demand for many businesses like clothes, health care, foods, Mobile Telephony, Auto, Restaurants, entertainment and TV Stations.

Thus Indian consumers are turning from insular, passive to trendy and global consumers. It has exposed them to new brand consciousness and brand awareness. This BC and BA give rise to the best and the latest stuff.

The automobile sector is one of the first kinds that made people familiar with the brands like Daewoo, Hyundai, Ford, GM, TATA, M & M and Indian consumers were also making a sagacious decision in picking up one brand over others. They are using a lot more criterion such as brands image, brand, prices, quality and other factors such as after sale service, resale value, and value for money, etc.

In the very early of 2000s, mobile phones were a luxury brand and were purchased for utility purposes. As the decade passed on, it was turned into a commodity product. This is no longer an utilitarian purchase but an impulsive or symbolic or image-based.

Nokia made a head start with a wide range of products with varied prices and made a good image of durability, reliability at valued price. Now other competitors like LG, Sony Ericsson, and Motorola are breathing down the neck with better features and more mouth-watering prices. The result is consumers' splitsville with Nokia. So consumer behaviour is conspicuous with the old British love-story fact that "I am with you as long as someone better is not around me."

Till last century an air travel was considered to be a snobbery journey. But with the relaxation of policies in the aviation sector, a lot more low cost flights came to rule the sky. This made a flight journey accessible to a large number of people and really changed the whole game. This flirtatious behaviour is conspicuous to other sectors too.

This BL was clearly tested in the 2008-09 recession period and how consumers became close-fisted and took every calculated steps not to leave their pockets too much lighter is showing how fictitious nature of people are they as per as Brand is concerned. So it clearly shows how consumers preferences vacillate triggered be situational aspects. So consumers can be judged on the **B.F Skinner's 'Situationism'**.

Behaviour- Person x situation interaction

How the same person changes his attitude on a brand during different situation. So it's not that people will remain loyal to brand whether it is a heyday or gloomy days.

Observable easily is that people make a huge beeline whenever there is a promotional offer and much discount are offered in any sale bonanza. This same cluster of consumers refuse to queue up in the same number when there are no such discount offers. So brand value flip-flops with the way offers are made on sale.

Brand loyalty further dipped down as brand usage became diffused across different segments and on the perception of brands being commoditised. Post recession consumers seem to become more punctilious in casting their choice in purchase and even more eager to run from pillar to post to find the right equation between value and price. It does not mean that consumers necessarily stick to cheap products when they are making an optimization of purchases. Brands that are based on image have been given strong red signal as they are flocking around the products promising multiple benefits with reasonable cost. Which is why Mega Mart and Brand factory draw a high loyalty on selling aspirational brands but at reasonable prices? The same thing sounds true with Brands from Future Group.

MARKETING MIX HAS A SAY ON BRAND LOYALTY

PRODUCT DIFFERENTIATION

Loyalty can be driven by functional or symbolic benefits when the products are differentiated in their characteristics and this difference is perceivable, there are chances of brand loyalty being formed based on satisfaction with greater performance or fit of product with needs. Here the tangible benefits are associated with functional benefits and intangible ones with symbolic benefits.

PRICE DIFFERENTIATION

If the price differentiation in the market is perceived, price-led loyalty may exist in the market, as it is evidenced with supermarkets, airline companies and FMCG brands, which come out with frequent sales promotions based on freebies but care must be given that there is no dilution in product quality, especially at the low price segments

BRANDING ACTIVITY

It has been noticed that an organised category with branding activity will have greater loyalty than there would have been if the category were unorganised. Branding activities include brands on name, symbol, images and associations. Branding activity here stresses on creating strong associations which will influence the consumers not only with regard to functional attributes but also with symbolism. "I am a Complan boy and I am a complan girl" is one such kind of ads that has caught the appeal of parents and children both. Branding activities in a bigger sense can run from advertising to sales promotion and public relations involving several aspects.

LEVEL OF RISK

The perceived risks that typically encounter are functional, social and psychological risks. In India people still harbour an uncanny fear about some chemical products used for personal care or some food items. If these perceived risks are obviated through proper campaign and message and establish its functional benefits aspect, it can easily reach to consumers

INVOLVEMENT OF CONSUMER

A high brand involvement could lead to repeat purchase and then loyalty through customer satisfactions. Study on consumer involvement shows that which of the marketing mix elements can be useful to create a trial, and hence loyalty. That Dettol floor cleaner advertises that children will less fall easy prey to sickness as it kills bacteria has found consumers with a large number of Indian households.

SALES PROMOTIONS

One very interesting phenomena is observed about Indian consumers that they are very much attracted to the price-discount. If one product is sold at Rs 500 without any discount and another similar product is on display for Rs 500 after 50% discount offer, consumers tend more to latter one. This psychological effect can again be boosted during any festive seasons when consumers are on a bit shopping spree.

FIG. 8



How Indian consumers throng at one Big Bazaar on a promotional event and price-discounts

CONCLUSION ON THE INDIAN CONTEXT

Consumers, for whom price-driven loyalty dominates, will be more inclined to strong behavioural loyalty and only weak attitudinal loyalty, generating a spurious loyalty.

FOCUS AREA

The key to build Brand Loyalty is to believe in one's brand, provide value to customers and be authentic.

WHO ARE INDIAN CONSUMERS

To draw a finishing line about Indian consumers is as arduous and fallacious as to give a direction to a lost ship in the deep ocean. Truly speaking, no concrete judgement can't be delivered. It is far too complex and vacillating so fast that any prophecy would be sheer audacity to deny the truth that prediction has seldom any truth. Although consumers are variedly different to each other on preferences and brand frontline, a common thread that embroiders all consumers here is that to gain maximum value at minimum cost. The product that offers it can earn loyalty. So brand building is far more important on its functional attributes than image brands. People, here, are loyal to an image brand to some extent. Beyond it consumers will stick to its badge value.

Britannia is rated as the top most branded product category this year too. They have learnt this by offering those products which are, in one hand, nutritious, value adding and are also affordable at low prices. Britannia is always innovative in coming up new range of products with affordable prices so that it can reach to the rich and the poor alike. Their marketing concept is to drive top-line growth with value added products now and then. When they come up with many promotional offerings, they very frequently woo a lot of customers.

This story also finds the 'Hero' in Hero Motors corp. They sold the bikes that are technology driven, robust, reliable, economical, good mileage and service facility free of cost for a certain period. So people have over the years observed it and then found their aspirations in the offer. Now the company has found loyalty among many customers.

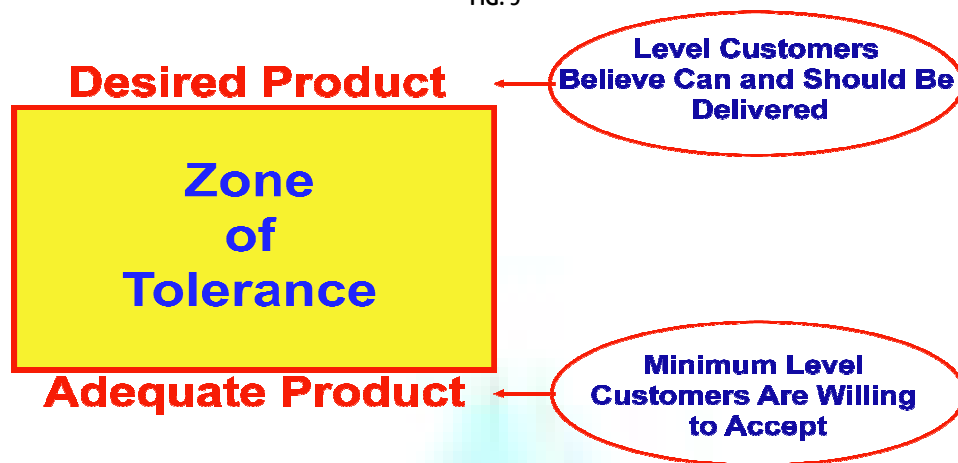
Brand loyalty comes a cropper when it comes medication sector in India. Study shows that no BL exists among pill poppers. Brand recalling hardly haunts people's minds and doctors' prescribed drugs that supersede all brand patronage. The word of mouth from medicos is enough to leave the people to buy the prescribed ones.

Paradoxically, brands in the premium segment often don't seem to build as much BL. Let's take the case of sports apparel brands Nike, Adidas and Reebok. All three brands may own their share of loyalists, up to a point. But, when offered at a discount, they become simply interchangeable. This is because, beyond a point, the Indian consumer feels them as image brands with sufficient badge value – they would rather have a premium brand, but at a bargain price. Individual brand values don't play. It's not unusual to see consumers sporting a sporty look with Nike T-shirt, Adidas sneakers and a Reebok cap in the same outfit.

Add to it, for Indian consumers, the value that a brand dispenses with must be tangible – either one gets more of the stuff with a lot more features, or other freebies, and obviously at a lower price. They will not be loyal to a brand merely just because of the image the brand will shower upon them.

To draw a conclusion it can be said that, in the fractured, schizophrenic Indian consumer market, where price-value rules the roost, brand loyalty does exist but up to a certain point. But it can scarcely be taken for granted. Many things can be factored for building brands and brands must toil hard to find a space in the consumer's trust zone. When they pay a premium price for a product their expectations of its features also go up from minimum attributes to the 'it should provide' all these features too. Loosening purses heavily on brands call for functional, aspirational, and symbolic and many more value added aspects. So adequate product is replaced by desired product.

FIG. 9



Finally, it is not to transplant a brand's global strategy but to find ways to develop more customised local strategy in tune with Indian market and then it can only proffer an appropriate share of consumers' brand loyalty.

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ROLE OF TEACHERS IN QUALITY ASSURANCE IN INDIAN HIGHER EDUCATION

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ABSTRACT

'Quality in education has been described as a 'degree of excellence'. In order to meet the requirements of modern industry, business and society, it is necessary to develop effective quality assurance and assessment systems that are internationally standardized and recognized. The entire educational process revolves around the two major components of the educational systems, the teacher and the student. This study has been focused upon one of these components, that is, the role of teacher in quality assurance. The main objective of this study is to explore the relationship of socio-economic background of the college teachers of Haryana and their impact on their role performance for quality assurance in higher education.

KEYWORDS

Quality assurance, Teacher, Socio-economic, Role, Higher education.

1.0 INTRODUCTION

Regular monitoring and assessment of educational institutions is essential for quality assurance, recognizing this need, the GOI has framed the National Policy on Education. The role of teacher is at the focal point so far as the quality in education is concerned. To play this role effectively, the teacher should be more aware and need to be responsive towards societal concerns. Rapidly changing society requires the acquisition of more and more knowledge in lesser and lesser time. The challenge for the teachers and educational administrators is to ensure the quality in diverse area such as knowledge, cultural and sports and above all to make one good citizen for the society who is productive and employable in the society.

Considerable attention has been directed for quality assurance in higher education during the last two decades, largely because of the fact that 'education is essential for national development and economic prosperity. The quality issues in education are viewed to be multidimensional, to be conceptualized in terms of input indicators, process indicators and output indicators.

In this context, quality assurance means the development of mechanisms and procedures that are designed and used to maintain and enhance institutional effectiveness. It is probably best described by the Japanese term "kaizen" meaning 'continuous improvement'. For effective quality assurance in higher education, the aspects that need to be motivated and assessed are:

- Infrastructure and learning resources including student support
- Curricula design
- Teaching and learning methodologies
- Evaluation and mechanisms of student progression
- Linkages with research and community.

2.0 MAIN OBJECTIVES OF THE STUDY

- To find out the socio-economic background of the college teachers in Haryana
- To find out the linkage between the responses of teachers and their socio-economic backgrounds in the context of teacher-student interaction.

3.0 REVIEW OF LITERATURE

Sachchidananda (1997) discusses researches in sociology of education under five broad categories namely (i) education as a social system, (ii) school as a social system, (iii) education and society, (iv) education and politics, (v) miscellaneous category which includes a review of research in sociology of education'. He has commented that the teachers' role in education has not received as much attention as it deserves. The problem of teacher's absenteeism is becoming acute.

Halim (2004) Considerable attention has been directed to quality assurance in higher education during the last two decades, largely because of the fact that 'education is essential for national development and economic prosperity. The quality issues in education are viewed to be multidimensional, to be conceptualized in terms of input indicators, process indicators and output indicators.

4.0 RESEARCH METHODOLOGY**NEED FOR THE STUDY**

There is an urgent need to look at the priorities of our times as far as social development through education is concerned. The socio-cultural aspects of society are inter-related with each other and system of education is to be seen in this framework, since it is dependent on political, economic, social and cultural factors operating in society. The findings of the study pertaining to educational problems as perceived by teachers are expected to provide an insight to educational planners and administrators to find out the solutions to these problems and strengthen the mechanisms to improve quality of higher education, necessary in last-changing Indian society.

SCOPE OF THE STUDY

The scope of the study restricted to the teachers of the colleges in Haryana. For the collection of the primary data, the study was confined to the districts of Ambala, Kurukshetra and Panchkula

SAMPLING UNIT

In this study, the sampling units were the teachers of colleges (Govt. & Private) of the state of Haryana.

SAMPLE SIZE

The total sample size was restricted to 200.

SAMPLING DESIGN

Keeping in mind the nature of data required for the study, convenience sampling technique has been used.

DATA COLLECTION

In the present study, we have made use of primary data collected through questionnaire. We have also used information available on web-portals.

QUESTIONNAIRE METHOD

The primary data was collected by administering structured questionnaire to the teachers of colleges of Haryana.

STATISTICAL TOOLS AND TECHNIQUES

In this study, Weighted Average and percentage techniques have been used.

5.0 SOCIO-ECONOMIC BACKGROUND OF COLLEGE TEACHERS

- The distribution of the teachers on the basis of gender revealed that 57.47% were females and 42.33% were males.
- As regards to their marital status 86.21% of the teachers belonged to married strata and the rest of 13.79% were unmarried.
- The distribution of the teachers according to their monthly income indicates that 70.50% teachers falls in the category of above Rs. Fifty Thousand income group and the others 29.50% fall into the category of upto fifty thousand.
- The family background of the teacher consists of two categories one who came under rural background and the others from the urban background majority of the teachers i.e. 67.05% belonged to urban background and 32.95% of the teachers were from the rural family background strata.
- The school background of the teachers was also taken under consideration as one of the socio-economic variables. The school background of the teachers is divided in two categories – government school background and public/private school background. There were 46.68% of the teachers with their schooling from public/private and 56.32% of the teachers with government school background.
- The distribution of the teachers according to their nature of job revealed that 78.93% of the teachers had permanent jobs and 21.07% of the teachers came under the category of temporary jobs.
- Two major faculties of the teachers – science faculty and arts faculty were undertaken. A large proportion of the teacher i.e. 66.28% came under arts faculty and 33.72% under science faculty.
- The distribution of the teachers according to their teaching experience indicated 39.85% of the teachers had up to ten years teaching experience, 31.80% had their experience between ten and twenty years and the rest of the teachers 28.35% had more than twenty years teaching experience.

The responses of teachers were analyzed in terms of nine sociological variables i.e. age, gender, marital status, monthly income, family background, school background, type of recruitment, type of faculty and teaching experience.

6.0 TEACHING-LEARNING PROCESS

The analysis of the data regarding responses of the teachers regarding teacher-student interaction leads to certain findings as following:

6.1 The teachers were asked to give their responses regarding extra time given by them to their students outside the class. The findings in this context are as follows:

The data revealed that 72.03% of the teachers were giving extra time to the students outside the class, but 27.97% were not giving any extra time to the students outside the class.

The responses given by the teachers in the concerned question were studied across levels of nine socio-economic variables. The findings in this regard are as follows:

- A higher proportion of middle age group (76.92%) and elder age group (88.89%) of teachers were giving extra time in comparison to the below 30 years age group of the teachers.
- A higher proportion of males (85.59%) in comparison of females (62.00%) were giving extra time to the students.
- A higher proportion of married teachers (69.78%) were giving extra to the students in comparison to un-married teachers (33.33%).
- A large number of the teachers belonging to both lower income group (71.43%) and higher income group category (72.28%) of the teachers were giving extra time to the students.
- A large number of teachers belonging to government school background (93.88%) were giving extra time to the students in comparison to public/private school background (43.86%).
- Majority of the teachers belonging to urban family background (90.86%) were not giving extra time to the students as compared to the teachers belonging to rural family background (33.72%).
- A higher proportion of the teachers in permanent jobs (84.95%) were giving extra time but the temporary teachers (23.64%) were not.
- A large proportion of teachers belonging to arts faculty (96.53%) were giving extra time to the students in comparison to the teachers of science faculty (23.86%).
- A higher proportion of teachers having more than ten years (97.59%) and more than twenty years of teaching experience (75.67%) were giving extra time to the students as compared to the teachers having less than ten years of teaching experience (49.04%).

6.2 The teachers were asked to give their responses regarding type of appreciation given by them to students for hard work. The findings in this regard are as follows:

47.51% of the teachers adopted direct ways of appreciation by recognizing their work in presence of other students and 36.02% of the teachers adopted indirect ways of public appreciation by involving other students to clap so that whole class appreciates their work and emulate the same and 16.47% of the teachers have not adopted any way of appreciation.

The responses given by the teachers in the concerned question were studied across levels of nine socio-economic variables. The findings in this regard are as follows:

- The data in this regard revealed that majority of the teachers below the age of thirty years (70.18%) were adopting direct ways of appreciation as compared to above 40 years category of teachers (46.83%) adopted indirect ways of appreciation.
- A higher proportion of male teachers (55.87%) adopted direct ways but female in majority adopted (51.33%) indirect ways of appreciation.
- A large number of married teachers (53.33%) adopted direct ways but public school teachers in majority (50.87%) adopted indirect ways.
- Majority of science faculty (59.09%) adopted direct ways in comparison to arts faculty (41.62%).
- A large proportion of teachers belonging to less than 10 years experience category (66.35%) adopted direct ways in comparison to more than 20 years of teaching experience (57.70%) adopted indirect ways.

6.3 The teachers were asked to give their responses regarding ways to control their class. The findings in this context are as follows:

A large number of teachers i.e. 57.68% adopted persuasive ways to control the class. 42.32% of the teachers giving more class work as a ways to control the class.

The responses given by the teachers in the concerned question were studied across levels of nine socio-economic variables. The findings in this regard are as follows:

- The analysis of the data reveals that a large proportion of teachers belonging to younger age group (56.14%) adopted persuasive ways in comparison to elder age in majority (69.05%) adopted punitive ways to control the class.
- A higher proportion of the males (47.45%) adopted persuasive ways in comparison to 60.67% of females adopted punitive ways.
- A large proportion of lower income group of teachers (77.92%) adopted persuasive ways but 66.30% of higher income group adopted punitive ways to control the class.
- Rural background teachers in majority (58.14%) adopted persuasive ways but urban in majority (56.57%) adopted punitive ways to control the class.
- A very large proportion (72.18%) of public/private school background teachers adopted punitive ways in comparison to 45.58% of government school background in majority adopted only persuasive ways.
- Permanent category of teachers in majority (54.37%) adopted punitive ways as compared to temporary teachers in majority (61.82%) adopted only persuasive ways to control the class.
- Art faculty teachers (55.49%) adopted punitive ways as compared to science faculty (46.59%) adopted only persuasive ways to control the class.
- A very large proportion of teachers belonging to less than 10 years teaching experience category (53.84%) adopted direct ways to control the class in comparison between 10 to 20 years teaching experience category (63.86%) and more than 20 years (60.22%) adopted indirect ways to control the class.

6.4 The teachers were asked to give their views about need of regular class tests for the studies. The findings in this regard are as follows:

A large proportion of the teachers i.e. 87.74% were in favour of regular class tests and 12.26% of the teachers were not in favour of regular class tests.

The responses given by the teachers in the concerned question were studied across levels of nine socio-economic variables. The findings in this regard are as follows:

- a) The analysis of the data shows that a higher percentage of teachers belonging to younger age group (92.98%) responded in favour of regular class tests in comparison to 92.31% of the teachers belonging to middle and 89.69% elder age group variable.
- b) Female teachers in large proportion (885) were in favour of regular class tests in comparison to male (87.39%).
- c) A higher proportion of unmarried teachers (94.44%) were in favour of regular class tests than married teachers (86.67%).
- d) A large proportion of teachers belonging to lower income group strata (89.61%) were in favour of regular class tests than the higher income group of teachers (86.96%).
- e) Urban background of teachers (88.57%) in large proportion favours regular class tests than the rural background teachers (86.05).
- f) A higher proportion of temporary (96.36%) were in favour of regular class tests than permanent teachers (85.44%).
- g) A large proportion of the teachers belonging to science faculty (88.64%) were in favour of regular class tests in comparison to arts teachers (87.28%).
- h) A higher proportion of the teachers belonging to more than 20 years teaching experience category (89.19%) were in favour of the tests in comparison to the others i.e. younger age group (88.46%) and middle age group (85.54%).

7.0 CONCLUSION

In the context of age, gender, rural-urban difference, there are significant variations in the responses of the teachers in regard to the entire gamut of questions. As far as, gender difference is concerned, there is a significant difference among male and female teachers towards the class discipline. Number of male teachers are more which are inclined to give personal attention and more time to the students in comparison to female teachers. In the context of age and experience, the younger lot is more enthusiastic for participation but discontented with their working conditions. The teachers belonging to younger and older, males and females, married and unmarried, higher and lower income group, permanent and temporary arts, and science, government and public school background have different outlook in assuming the quality in higher education.

In the processes of nation building, the role of teacher is pivotal. The investment made by any nation for the development and enrichment of their teachers is a long term investment. It may not have immediate tangible results but there is no short cut for the credible human resources development. Present study shows that the younger and new generation of the teachers, despite their best intentions, is not feeling involved in their work and are unable to relate to the entire educational process. This study thus leads us to the conclusion that if any radical improvement in the field of education is desired and wanted in higher education, due weightage must be given to the teachers views. We have to create an atmosphere where the job involvement level of teachers can be boosted up for up gradation of accountability in teaching profession which is essential to ensure better quality, effective, relevant, timely and meaningful education to the students for economic and social growth of society.

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THE ROLE OF ENTREPRENEURS IN THE ECONOMIC DEVELOPMENT OF INDIA

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ABSTRACT

The Indian economy provides a revealing contrast between how individuals react under a government-controlled environment and how they respond to a market-based environment. Evidence suggests that recent market reforms that encouraged individual enterprise have led to higher economic growth in that country. India can generate additional economic growth by fostering entrepreneurial activity within its borders. To pursue further the entrepreneurial approach to economic growth, India must now provide opportunities for (1) education directed specifically at entrepreneurial skills, (2) financing of entrepreneurial efforts, and (3) networking among potential entrepreneurs and their experienced counterparts. Further, although the Indian government should establish policies supportive of entrepreneurial efforts, its role overall should be minimized so that the influence of the free market and individual self-interest can be fully realized.

KEYWORDS

entrepreneurship, economic development.

INTRODUCTION

Economic development, achieved largely through productivity growth, is very important to both developed and developing nations. However, even though we know that higher productivity leads to improved economic outcomes (for example, higher income, more choices to the consumers, better quality products, etc.), there has been no consensus among researchers about either the desired path of development or the role of state in economic development. Concerning the path of development, Lall (2001) says that the appropriate strategy for any country depends not only on its objective economic situation but also on its government policies and national views regarding the appropriate role of the state. Regarding the appropriate role of the state, it seems that for every argument in favour of a smaller government role one can find a counter argument in favour of a more active government role.

The role of the state in economic development began to change dramatically with the advent of the Industrial Revolution. In the West, the resulting industrialization and economic development were based on the establishment of individual property rights that encouraged the growth of private capital. Competition and individual enterprise thrive in this environment because individuals pursue their self-interest of survival and wealth accumulation. The instinct to survive under competitive pressures yields innovation and productivity increases, which eventually lead to both increased profits for business and lower prices to consumers.

However, the rise and spread of capitalism led a number of thinkers to examine the consequences of the market-based approach to development. Socialists argued that capitalism (or private ownership of capital) can lead to greater inequalities of income and wealth, while developmental economists argued that private decisions may not always lead to socially desirable outcomes (particularly in the case of market imperfections). Indeed, many policymakers at the time saw market failures as quite common and therefore assumed that only appropriate government interventions could guide an economy to a path of sustained economic development (Krueger, 1993). In the early 20th century, the former Soviet Union attempted a bold experiment of improving individual well-being without sacrificing the objective of greater equality of income and wealth through total ownership of capital by the government. Initially, the Soviet Government was able to raise productivity through directed industrialization and, within a span of 25 years (by the end of World War II), emerged as a superpower. It was around this time that substantial number of colonized nations were gaining their independence (for example, India, Pakistan and Burma). Unfortunately, during their time as colonies to the Western nations, these countries, for the most part, had been deprived of the industrialization that had engulfed those same Western nations. Based on the successful experience of the former Soviet Union, many economists and policymakers concluded that, particularly in a poor country, planning was essential for the efficient allocation of an economy's resources.

The governments in these newly independent nations assumed a significant role in economic development. They sought to quickly and substantially raise the standard of living through directed and controlled economic development. Apart from everything else, these developing countries invested heavily in education to promote literacy and to ensure an adequate supply of technical manpower to meet their growing needs. Further, these previously colonized nations did not want to subject their poor and weak economies to international economic fluctuations and thus sought to industrialize through import substituting industrialization, where imports were expected to be increasingly replaced by domestic production.

In this paper we examine economic development in India, a former British colony that became one of the most closed economies in the world, to contrast the roles of government intervention and individual enterprise in that country's economic growth. In particular, we demonstrate that, given recent economic reforms in India, along with the evidence for the role that individual enterprise can play in a country's economic growth, the Indian government should devise policies that rely more on individual enterprise, with its emphasis upon individual initiative and self-interest, to spur economic development. Further, we describe the special role that can be played in the economic development of India by a greater emphasis upon entrepreneurship.

The plan of the paper is as follows. Section I summarizes the strategy of economic development and the overall economic environment that has prevailed in India since its independence from the United Kingdom. Section II analyses the consequences of regulated economic development in India, with particular emphasis on the implications of the microeconomic aspects of India's approach to its economic environment. Section III assesses the results of India's economic reforms since the country's economic crisis of 1990, and highlights the role that individual enterprise has played and can continue to play in that country's economic fortunes. Section IV describes the special role that entrepreneurship can play in India's efforts at economic growth. Finally, section V summarizes the main findings and concludes the paper.

INDIA'S STRATEGY FOR ECONOMIC DEVELOPMENT

India's economic development strategy immediately after Independence was based primarily on the Mahalanobis model, which gave preference to the investment goods industries sector, with secondary importance accorded to the services and household goods sector (Nayar, 2001). For example, the Mahalanobis model placed strong emphasis on mining and manufacturing (for the production of capital goods) and infrastructural development (including electricity generation and transportation). The model downplayed the role of the factory goods sector because it was more capital intensive and therefore would not address the problem of high unemployment in India. Any increase in planned investments in India required a higher level of savings than existed in the country. Because of the low average incomes in India, the needed higher levels of savings had to be generated mainly by restrictions on the growth of consumption expenditures. Therefore, the Indian government implemented a progressive tax system not only to generate the higher levels of savings but also to restrict increases in income and wealth inequalities.

Among other things, this strategy involved canalization of resources into their most productive uses. Investments were carried out both by the government and the private sector, with the government investing in strategic sectors (such as national defense) and also those sectors in which private capital would not be forthcoming because of lags or the size of investment required (such as infrastructure). The private sector was required to contribute to India's economic growth in ways envisaged by the government planners. Not only did the government determine where businesses could invest in terms of location, but it also identified what businesses could produce, what they could sell, and what prices they could charge. Thus the strategy of economic development in India meant (1) direct participation of the government in economic activities such as production and selling and (2) regulation of private sector economic activities through a complex system of controls. In addition, the Indian economy was sheltered from foreign competition through use of both the "infant industry argument" and a binding foreign exchange constraint. Imports were limited to goods considered essential either to the development of the economy (such as raw materials and machines) or to the maintenance of minimal living standards (such as crude oil and food items). It was further decided that exports should play a limited role in economic development, thereby minimizing the need to compete in the global market place. As a result, India became a relatively closed economy, permitting only limited economic transactions with other countries. Domestic producers were sheltered from foreign competition not only from abroad but also from within India itself.

Over time, India created a large number of government institutions to meet the objective of growth with equity. The size of the government grew substantially as it played an increasingly larger role in the economy in such areas as investment, production, retailing, and regulation of the private sector. For example, in the late 1950s and 1960s, the government established public sector enterprises in such areas as production and distribution of electricity, petroleum products, steel, coal, and engineering goods. In the late 1960s, it nationalized the banking and insurance sectors. To alleviate the shortages of food and other agricultural outputs, it provided modern agricultural inputs (for example farm machinery, irrigation, high yielding varieties of seeds, chemical fertilizers) to farmers at highly subsidized prices (World Economic Indicators, 2001). In 1970, to increase foreign exchange earnings, it designated exports as a priority sector for active government help and established, among other things, a duty drawback system, programmes of assistance for market development, and 100 per cent export-oriented entities to help producers export (Government of India, 1984). Finally, from the late 1970s through the mid-1980s, India liberalized imports such that those not subject to licensing as a proportion to total imports grew from five per cent in 1980-1981 to about 30 per cent in 1987-1988 (Pursell, 1992). However, this partial removal of quantitative restrictions was accompanied by a steep rise in tariff rates. This active and dominant participation by the government in economic activities resulted in the creation of a protected, highly-regulated, public sector-dominated economic environment. Along with this government domination of the economy, India soon faced not only some major problems in its overall approach to development, particularly in the area of industrialization (Ahluwalia, 1985), but also a dramatic increase in corruption in its economy. Finally, like another growing economy, the Indian economy faced a number of serious sectoral imbalances, with shortages in some sectors and surpluses in others. These consequences of India's government-controlled economy are discussed in depth in the next section.

THE CONSEQUENCES OF INDIA'S REGULATED ECONOMIC DEVELOPMENT

India's environment of regulated economic development led to the formulation of policies that were concerned with both macroeconomic and microeconomic aspects. Whereas much attention in the literature has been devoted to the macroeconomic issues, we focus primarily on the microeconomic aspects of Indian economic policies. In particular, we examine how individuals guided by their self-interests of survival and wealth accumulation will act in a regulated environment, which in fact discourages the pursuit of those self-interests. To do so, we describe the consequences of India's use of price ceilings, in which prices are set below their equilibrium level to make products and services affordable to relatively poorer sections of the society.

Figure 1 illustrates how price ceilings can influence a nation's economy. Specifically, when prices are kept artificially low, demand outstrips supply. To alleviate the resulting shortage of products and services, the government can either help to increase the supply or help to decrease demand for those products and services. Considering the supply side options first, the government had the following choices: (1) increase the price of the product; (2) subsidize production of existing suppliers so they will produce and sell more; (3) encourage new businesses to enter the line of production and selling; or (4) permit imports to reduce or eliminate the shortage. In India, none of these options was seen as satisfactory. First, the government certainly did not wish to increase prices, because price ceilings appealed to a majority of the vote bank. Second, although the government did subsidize production in several sectors considered essential, the resulting increased production was not sufficient to eliminate the large shortages. Third, the government decided to restrict rather than increase the entry of new producers under the pretext of directing scarce resources into their efficient uses. Finally, it allowed only limited recourse to imports, in order to protect Indian producers, unless the shortage reached a stage of crisis. The overall result was that inadequate amounts of products and services were supplied to the market.

In contrast to the supply side options just considered, if the government had decided instead to limit demand, it could have done so by increasing taxes or by regulating the level of demand itself, usually by restricting how much an individual or a family could consume. To ensure the availability of the scarce products and services to Indian consumers, albeit at less than desired levels, the Indian government in fact resorted to large-scale rationing. This rationing was undertaken by government agencies themselves or by licensed private retailers. As might be expected, the rationing regulations required those licensed private retailers to follow government stipulations in their sale of the scarce products and services. The policy of price ceilings, along with the quantitative restrictions on production and consumption, led to an economic environment ripe for corruption. Specifically, because of the general scarcity of products and services, individuals competed to receive the privilege of economic rights to produce or consume. The implementing authority responsible for allocating these economic rights – politicians, government officials and businesses – enjoyed monopoly power in this situation and, as might be expected, was susceptible to bribes and other illegal favours. The result was an informal and illegal market in which the desired economic rights could be traded. Also, the lure of higher profits led producers and sellers (1) to have little concern for quality such that many deliberately produced and sold inferior quality products, and (2) to resort to the creation of artificial shortages by not releasing to the market all of the products that were available for selling. Bardhan (1997) defines corruption as the use of

public office for private gain, in which an official entrusted with the responsibility for certain public duties engages in malfeasance for personal enrichment that is not easy to monitor. He says that corruption has multiple effects on economic development. For example, it diminishes the efficiency of economic transactions, because corrupt officials will delay or otherwise obstruct those transactions until they receive their expected favours. Also, the payment of a bribe to receive an investment license tends to reduce the incentive to invest. Honest investors will see the futility of competing with dishonest investors who are guaranteed, through their bribes, to receive the privilege of investment rights. To fully understand the widespread nature of the corruption that existed in India at this time, it is necessary to consider the roles played by the many participants. For example, business people bribed government officials not only for the right to enter a particular line of business, but also to prevent others from entering that same line of business. Government officials made payoffs to politicians to receive the premium government positions that would allow them to easily contact businesses to seek illegal income and wealth. Indeed, as Wade (1985) indicates, those officials could earn far more through bribes and other corrupt behaviour than they could earn in salary. Consumers bribed government officials, politicians, and business people to receive a particular amount of a scarce good or a higher quality version of the good. Even individuals and organizations outside India took part in the corruption. Some bribed both officials and politicians, particularly those connected with the revenue and police departments, to smuggle scarce goods into India at a high profit. The complex system of government controls, including price ceilings, along with the resultant corruption, meant that decision making was arbitrary and the transactions non-transparent. The result was an increase in transaction costs. For example, businesses had to spend more to "stay connected" with appropriate government officials and politicians. And consumers, in addition to waiting in line to purchase needed products and services, also made illegal payments for what they should have received at a reasonable price in the first place. It has already been explained how India's government grew in size as it played an increasing role in controlling the economy. It grew even further in trying to be appropriately vigilant in dealing with the increased corruption among government officials, businesses, and other participants. Price controls were only one example of the regulated economic environment. Another example of a harmful policy was the control of ownership of private capital (both income and wealth) by Indian nationals in India and also by foreign nationals doing business in India. Such policies, coupled with high individual and corporate income tax rates and high customs and excise duties, led to outcomes similar to those resulting from price ceilings namely, increased corruption and higher transaction costs. In conclusion, this section has shown how individuals guided by their self-interests, will act in a regulated environment. Government controls based on arbitrary and ad hoc administrative decisions lead not only to greater concealed income and wealth but also to diminished productivity, particularly due to the resulting higher transaction costs.

ECONOMIC REFORMS: THE MIXED RESULTS FOR INDIA

Due to government intervention, particularly the high levels of government subsidies, it was clear by 1990 that India was living beyond its means. The result was a severe payments crisis in which, for the first time, the government physically transported gold overseas to prevent defaulting on foreign commitments. To meet its immediate balance of payments crisis, India also entered into a structural loan adjustment agreement with the International Monetary Fund (IMF). However, one condition of this loan required India to undertake economic reforms to move from centrally-planned development strategy to one based on market-based resource allocations. As a result, the government of India undertook a package of economic reforms between 1991 and 1993, with the intent of placing the market in place of government controls as the prime mover in the economic development process.

As one might expect, macroeconomic policy played a major role in India's economic progress in the 1990s. For example, Acharya (2001) concludes that India's devaluation of the rupee and its decision to increase the level of allowable foreign investment helped it to make considerable economic progress. Joshi (2001) and Karunaratne (2001) both say that India's policy of selective capital account liberalization helped it to achieve important economic objectives (and still avoided the crises faced by the East Asian countries). Gupta (1999) highlights the important role played by India's prudent management of exchange rate policy and its tight monetary policy. Bhalla (2000) notes both the privatization of the public sector enterprises and the gradual dismantling of the government planning process in favour of market forces. Overall, there can be no doubt that the reforms implemented since 1991 have led to considerable economic progress in India. For example, from 1992-1993 through 2000-2001, economic growth averaged an unprecedented 6.3 per cent per year (Acharya, 2001). Further, as Bhalla (2000) indicates, the rate of inflation and the fiscal deficit have both decreased substantially. He also says that India's improved exchange rate management has restored the confidence of foreign investors, which in turn has led to improved financing of the current account deficit and higher levels of foreign exchange reserves. However, even though India has made substantial economic progress in recent years, it still has several areas in need of major market-based reforms. Below, we identify three examples from India's economy that reveal a restriction of the pursuit of individual self-interest and a diversion of resources away from their most efficient use. The first example concerns the obstacle still presented by the Indian tax system, the second highlights the inefficiencies of the Indian civil service, and the third describes the need for further land reform in India.

In spite of recent tax reforms in India, the present tax system still works against the individual self-interest to survive and accumulate wealth and, as a result, still leads to the hiding of income, wealth and expenditures. Indeed, whereas in the United States and the Republic of Korea, the highest tax rate applies to an income level of \$250,000 and \$66,000, respectively, in India that same tax rate applies to an income of only \$3,400. Simply reforming its tax system to bring it in line with comparable nations should yield several substantial benefits to the Indian economy.

The Indian civil service provides attractive career choices for young job seekers due mainly to the excellent job security, non-monetary compensation, and opportunities for influence available in those careers. For example, despite minimal salaries for individuals holding top-tier positions in such areas as administration, police, revenue and railways, these civil servants are entitled to high job security and heavily subsidized housing, transport, medical services, telephone privileges, and at times domestic help. We believe that the policies underlying compensation to government employees should be reformed such that they are based primarily on market principles. The advantages of doing so include eliminating departments known for corrupt practices, making explicit the true cost of a government employee's performance, and giving government employees a good sense of their market worth.

Finally, considerable reform is needed in the Indian real estate sector. A large proportion of the land is owned by the government, and any land made available for private use is governed by archaic ownership, zoning, tenancy, and rent laws. Further, this government control of land has reduced the amount of land available for trading purposes. The result is that Indian land prices are the highest among all Asian nations relative to average income (Lewis, 2001).

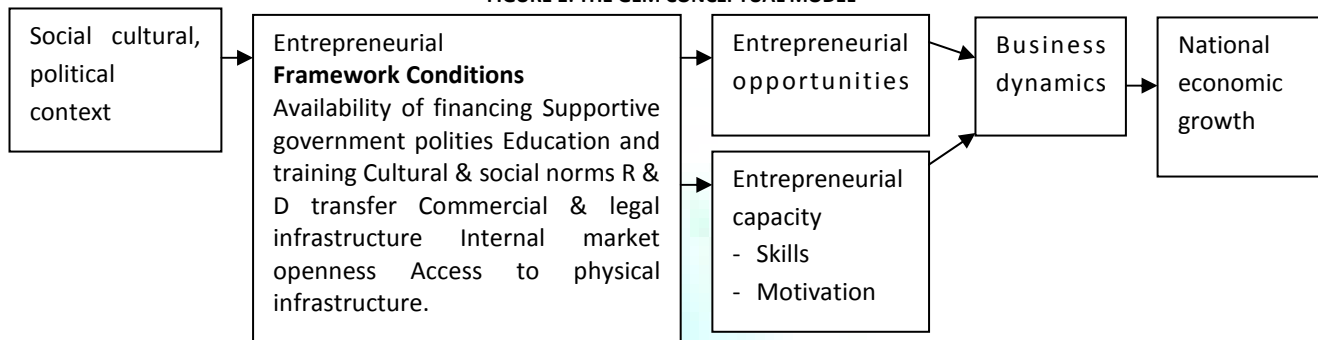
Further, the officially assessed values of real estate are low, while the true market price is very high. This situation leads, among other things, to higher levels of corruption as individuals use real estate as a major hiding place for investments of illegally acquired income (DiLodovico, Lewis, Palmade and Sankhe, 2001). Examples such as these indicate that there are still a large number of areas where the individual self-interests of survival and wealth accumulation are not respected. In the next section, we examine how one fairly new approach to microeconomic policy the encouragement of entrepreneurship can help India to continue its recent economic growth.

THE ROLE OF ENTREPRENEURSHIP IN FUTURE ECONOMIC DEVELOPMENT

The progress of Indian economic development from 1947 to the present provides further evidence that individuals do respond to incentives in their pursuit of self-survival and accumulation of wealth. Further, the nature of this response depends on the economic climate, particularly the role of the government. India's economy struggled as long as it was based in a system of government regulation with little interaction with economic forces outside the country. The economic reforms of the early 1990s set the stage for substantial improvements in the Indian economy. As was stated earlier, India's economy grew at an average of 6.3 percent from 1992-1993 to 2000-2001 (Acharya, 2001). Further, its rate of inflation and fiscal deficit both decreased substantially (Bhalla, 2000). Improved exchange rate management led to improved financing of the current account deficit and higher foreign exchange reserves. Finally, India's GDP and per capita income both increased substantially from 1990-1991 to 1998-1999. India can do more, however, to further advance its economic development. Indeed, one of the more recent microeconomic approaches to economic growth is the promotion of entrepreneurial activities. Entrepreneurial efforts have been found to generate a wide range of economic benefits, including new businesses, new jobs, innovative products and services, and increased wealth for future community investment (Kayne, 1999). The following narrative explains in considerable depth how entrepreneurial activities have succeeded in several countries and how it can now be used to further India's economic development.

Following an extensive study of entrepreneurship in 21 countries, Reynolds, Hay, Bygrave, Camp and Autio (2000) concluded that successful entrepreneurial activity is strongly associated with economic growth. Their research was subsumed under the "Global Entrepreneurship Monitor" (GEM), a joint research initiative conducted by Babson College and London Business School and supported by the Kauffman Center for Entrepreneurial Leadership. Their findings, based on surveys of the adult population of each country, in-depth interviews of experts on entrepreneurship in each country, and the use of standardized national data, supported their conceptual model depicting the role of the entrepreneurial process in a country's economic development.

FIGURE 1: THE GEM CONCEPTUAL MODEL



The GEM Conceptual Model suggests that the social-cultural-political context within a country must foster certain "General National Framework Conditions," which can generate not only the opportunities for entrepreneurship but also the capacity for entrepreneurship – in particular, the skills and motivation necessary to succeed. Together, the entrepreneurship opportunities, on the one hand, and the skills and motivation, on the other, lead to business dynamics that yield creative destruction, a process in which new firms are created and older, less efficient firms are destroyed. The overall result for a country is economic growth. Of the eight "General National Framework Conditions" the three that Reynolds, et al. (2000) highlighted as especially important are the availability of financing for new entrepreneurs, the need for government policies which are supportive of entrepreneurial efforts, and the opportunities for education and training in entrepreneurship.

Given India's economic progress in recent years, the country may now be ready for the implementation of microeconomic policies that will foster entrepreneurial activities. Fortunately, in addition to the macro economic reforms mentioned earlier, India has taken other steps to lay the foundation for the type of economic growth that can be fostered only by entrepreneurial activities and appropriate economic policies that reflect individual rights and responsibilities. For example, in recent years India has made several important structural changes, including the construction of telecommunications networks and the implementation of a nationwide road-construction programme (Solomon, 2003). Further, several thousand "new economy" businesses – the types of businesses especially suited for entrepreneurship efforts–were started in 2000 alone. However, more than just opportunities should lead India to consider entrepreneurial activities as a way to economic growth. At least one major threat, a growing population, also should motivate it to consider entrepreneurial effort as an economic policy. Specifically, the country's population is expected to increase by 110 to 130 million people over the next 10 years, with approximately 80 to 100million of those new citizens seeking jobs that do not currently exist (Gupta, 2001).Entrepreneurial efforts can help to provide those jobs. Recent research on entrepreneurship around the world indicates that the cultural characteristics that can foster successful entrepreneurial activities and its related economic benefits are a strong education base, the necessary financial support, opportunities for networking among entrepreneurs, and a well-defined, minimal role for the government. In the case of India specifically, an emphasis upon entrepreneurial activities in the information technology sector also seems relevant. Consider first the need for a strong education base. The study of 21nations by Reynolds, et al. (2000) found that providing opportunities for education in entrepreneurship was critical to success in new entrepreneurship efforts. For example, experts interviewed in the 21 nations felt strongly that new entrepreneurs needed training in the skills needed to convert a market opportunity into a commercial enterprise. Gupta (2001) says that India now has an extraordinary talent pool suited to entrepreneurship. However, he also says that the government must ensure that new entrepreneurs have access to both the functional and entrepreneurial skills needed for success in business startups. He sees both sets of skills as still somewhat lacking in India. The functional skills include abilities in such areas as marketing, finance and product development. The entrepreneurial skills include managing risk, building an effective team and raising funds. Gupta says that India's educational institutions can play a major role in the development of these skills. For example, the Indian School of Business (ISB) at Hyderabad has already produced a curriculum suited to the development of entrepreneurial leaders. It will soon have a new Entrepreneurship Centre that will be founded, led and managed by several leading Silicon Valley entrepreneurs. Lall (2001) says that the structure of a country's exports affects its prospects for economic growth. He claims that a technology-intensive structure is desirable for a country that has a substantial industrial base. Although India has such an industrial base, its export structure is still dominated by low-technology products. Lall says that a low-technology export structure is based in such products as textiles, garments, simple metal and plastics products, and furniture. However, these types of products are produced by low-skilled labour and are undifferentiated, so they do not yield the competitive advantages necessary for broad economic growth. A high-technology export structure, on the other hand, relies upon such products as complex electronic machinery, precision instruments and fine chemicals. This type of structure, based in complex skills and fast-changing technologies, generally does yield competitive advantages and export-based economic development. Given India's extraordinary talent pool (Gupta, 2001), it would seem that the country is poised to take advantage of a high-technology export structure. Consider next the financial support required to produce successful entrepreneurial efforts. On the one hand, as Solomon (2003) indicates, foreign capital has been pouring into India recently, with one of its aims being to tap the country's emergence as a center for software development and information technology services. However, much remains to be done, and the government can play a major role in this area. Among other things, India must ensure that its new entrepreneurs will have access to venture capital. Gupta (2001) suggests the establishment of a global support network of venture capitalists and other funding sources (also known as "angels") who would be willing to support the new entrepreneurs. He also says that India must create "areas of excellence" breeding grounds where ideas grow into new businesses similar to those created in Silicon Valley in the United States. They can attract the ideas, the venture capital, and the management talent often found to succeed in other entrepreneurial efforts around the world. India can begin to create these areas of excellence by drawing upon the resources of its universities and other educational institutions, including the Indian Institutes of Technology. Providing opportunities for networking among entrepreneurs themselves also can help new businesses get started on the right foot. In particular, Gupta (2001) says that India needs to foster networking and exchange among both new and established entrepreneurs. The obvious reason is that entrepreneurs can learn not only through their own experience but also through that of others. An effective approach to encouraging this type of networking might be to follow the academic model and begin to schedule conferences throughout India at which these individuals could interact. At these conferences, experienced entrepreneurs could present their ideas on what has worked for them (and what has not). Entrepreneurs just getting started could describe what they hope to achieve in their new businesses and get feedback on their plans from other entrepreneurs present. Obviously, newer entrepreneurs will want to be careful not to divulge important company secrets. The Indian government might have to provide small grants to subsidize the travel and lodging expenses of individuals lacking the resources to attend such conferences. However, just as in the academic setting, those grants could be awarded based on the merits of an individual's ideas for a startup business.

The role that the government can play in the encouragement of entrepreneurial efforts has already been noted in the above narrative. Clearly, the government can develop policies concerning educational and financial support. Government policies on taxing and regulation of business also are relevant here, given that such policies can either promote or hamper entrepreneurial efforts and the government can certainly help to provide networking opportunities among new and experienced entrepreneurs.Kayne (1999) identifies additional actions that the Indian government can take to provide a solid foundation for entrepreneurial

efforts. He says that, in any country, the advocates of an entrepreneurial economy must promote and communicate policies that will provide a clear link between entrepreneurial efforts and overall economic prosperity. That is, voters and taxpayers must understand the reasons why their government is investing in anything as new as entrepreneurship. Rodrik (1996) also addressed this issue by concluding that reforms will be resisted if they are seen as being primarily redistributive (i.e., zero-sum) in nature. He further says that, while most economists prefer speedy economic reforms administered from above (i.e. the state), the best approach might be a gradual approach that considers the political economy of the situation (and involves relevant powerful groups). Panagariya (1994) further addressed this issue when he said that, especially in a democratic society like India, the government must mobilize public opinion in favour of new economic policies. He says that one reason for the relative success of the economic reforms beginning in 1991 was that the Rao government moved quickly to announce major economic reforms. Finally, Reynolds, et al. (2000) also found that the perceived social legitimacy of entrepreneurship can be a critical factor in its success. Specifically, they found that respect for individuals starting new firms was an important cultural factor for countries with high levels of entrepreneurial activities. In short, uncertainty within the culture can lead to resistance.

However, as Reynolds et al. (2000) concluded, the role of government beyond laying the foundation for entrepreneurship through tax and regulatory policies, support for education in entrepreneurship, and so forth should be minimized. Specifically, they found that a reduced government role in the economy including a low tax burden on both firms and individuals could yield substantially higher levels of entrepreneurial activity. They also found that, in India, excessive government regulations and related bureaucratic complexities did indeed handicap entrepreneurs. As was reported extensively earlier in this paper, India has for decades been saddled with a government that is far too involved in its economy.

CONCLUSION

The Indian economy provides a revealing contrast between how individuals react under a government-controlled environment and how they respond to a market-based environment. The evidence presented here suggests that recent market reforms encouraging individual enterprise have led to higher economic growth in that country. The reasoning here is not new, although it is refreshing to discover that this "tried-and-true" reasoning applies to developing as well as to developed nations. Specifically, reliance upon a free market, with its emphasis upon individual self-interest in survival and wealth accumulation, can yield a wide range of economic benefits. In India those benefits have included, among other things, increased economic growth, reduced inflation, a smaller fiscal deficit, and higher inflows of the foreign capital needed for investment. We further conclude that India can generate additional economic growth by fostering entrepreneurial activities within its borders, particularly within its burgeoning middle class. Not only has entrepreneurship been found to yield significant economic benefits in a wide variety of nations, but India specifically has reached a point in its development where it can achieve similar results through entrepreneurial efforts. Among other things, India is poised to generate new business startups in the high technology area that can help it become a major competitor in the world economy. For example, it has a strong education base suited to entrepreneurial activities, increased inflows of foreign capital aimed at its growing information technology services sector, and a host of successful new business startups. To pursue further the entrepreneurial approach to economic growth, India must now provide opportunities for (1) education directed specifically at developing entrepreneurial skills, (2) financing of entrepreneurial efforts, and (3) networking among potential entrepreneurs and their experienced counterparts. Obviously, the government can play a substantial role in helping to provide these types of opportunities. It can also provide the appropriate tax and regulatory policies and help the citizens of India to understand the link between entrepreneurial efforts and economic prosperity. However, its role overall must be minimized so that the influence of the free market and individual self-interest can be fully realized. Only time will tell if increased entrepreneurial activities in India will actually yield the economic benefits found in so many other nations of the world. Should India decide to pursue that avenue of economic development, then future research needs to examine the results of India's entrepreneurial programme. Perhaps more important, that research also needs to determine how India's success in entrepreneurial efforts might differ from those pursued in developed nations.

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KEY PERFORMANCE INDICATORS TO EVALUATE SOFTWARE PROFESSIONALS

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ABSTRACT

Performance means the degree or extent with which an employee applies his skill, knowledge and efforts to a job assigned to him and the result of that application. Organizational growth and sustainability highly depend on the quality of performance of the employees. Performance management is an integrated process that sets objectives, appraises employees, translates objectives into organizational key performance areas, helps in compensation design and benefits the organization to achieve business goals and objectives. This article analyzes the performance indicators-KPI which represents the focal point that can make the transition from the development of individual activity to overall organizational performance in the software industry. It gives an overview based on currently used KPIs for measuring the efficiency of various software professionals like developers, testers, quality assurance personnel in software development projects. The most important KPIs are analyzed, and their usage in the process efficiency evaluation is discussed. The outcome of the measurement is used to initiate further process adjustments and improvements, to make correct decisions in other HR functions like training, promotion and to implement performance based compensation successfully.

KEYWORDS

IT industry, Key Performance Indicators, Performance Evaluation, Performance related pay, Software Professionals.

1. INTRODUCTION

The main aim of any business is to earn profits in a specified period of time. In this process of earning profits and taking the business to new heights, there are some methods and concepts to be implemented in the system. One of the most important concept that is adopted in companies nowadays is Key Performance Indicators (KPIs). They are the measurement of the health of business, such as company's total sales or gross profit margin. One can use KPIs to help monitor current performance, indicate when performance falls within alert ranges, and compare current performance to past performance. In most businesses, the employees represent both an organization's biggest expense, and its most valuable asset. This means the company's productivity, and ultimately, its profitability depend on making sure all of its workers perform up to, if not exceed their full potential. To survive and prosper in today's economic times, companies can no longer manage using financial measures alone. Businesses have to track non-financial measures such as speed of response and product quality; externally focused measures, such as customer satisfaction and brand preference; and forward looking measures, such as employee satisfaction, retention and succession planning.

Key Performance Indicators (KPIs) are company's measurable goals, typically tied to an organization's strategy, as revealed through performance management tools such as the Balanced Scorecard. Measuring employee performance can be a challenge for many organizations. Key performance indicators help change the way people do their jobs, approach their day, and deal with daily roadblocks in the following ways:

- Encourage people focus on the big picture
- Help people distinguish the important from the trivial
- Assist in differentiating between the "must be done" from the "could be done"
- Place greater emphasis on strategy and organizational results

All successful software organizations implement measurement as part of their day-to-day management and technical activities. Measurement provides the objective information they need to make informed decisions that positively impact their business and engineering performance. In successful software organizations, measurement-derived information is treated as an important resource and is made available to decision makers throughout all levels of management.

2. KEY PERFORMANCE INDICATORS

Key Performance Indicators (KPIs) are quantitative and qualitative measures used to review an organization's progress against its goals. These are broken down and set as targets for achievement by departments and individuals. The achievement of these targets is reviewed at regular intervals.

These are predetermined factors that are set to assess the performance and success rate of an entity. They are set in order to know how much development is done in a project, how employees are performing, and how much profits the firm is making. Key performance indicators differ from entity to entity, and are to be set considering the nature and type of business or a particular practice. For example, a school might use annual graduation rates as a KPI, whereas a business may consider its KPIs to be percentage of income or level of customer service and satisfaction.

A crucial point to note is that KPIs should have the ability to be measured. Being the most reputed company or generating repeated customers would not be thought of as good KPIs for a firm, since these factors cannot be measured. Instead, good KPIs can be number of new customers over old ones and the ranking or profits of an organization.

2.1 NECESSITY FOR KEY PERFORMANCE INDICATORS

There are many benefits of using key performance indicators in any organization. The very first advantage is that these measurable factors help the company to find out which practices are doing their job well and being effective. They can rule out unnecessary projects and use the resources somewhere else in the business. Another significant benefit for implementing KPIs is that they enable employers to determine if the change in process has really been effective.

KPIs also aid in data collection and recording for future reference. Process-based KPIs can even be used in the procedure of performance appraisal. Similarly, there are many other advantages of adopting KPIs according to the nature and type of entity.

KPIs can also be used in the following ways:

- To develop and monitor industry standards (benchmarks) for the organization.
- To monitor the implementation and ongoing management of strategic business plans.

- To assist with development of performance based payroll remuneration systems.
- To encourage employees to create a sense of 'ownership' over key aspects of the business.

2.2 TYPES OF KEY PERFORMANCE INDICATORS

The first of the types are quantitative indicators that include results which relate to numbers. The second of the types are performance indicators which are measured in terms of performance of an employee, a team, or a practice. Directional indicators help the company to find out if the processes are moving towards organizational goals.

For a marketing process; KPIs can be new leads generated, amount of customer attrition rate, collection of payments, and other aspects. On the other hand, in a manufacturing firm; KPIs can be the overall efficiency of the product and the rate of rejection in the testing process. In Information Technology (IT) or software development firms, a suitable key performance indicator can be the response rate at which deliverables are met before the deadline.

Deciding on KPIs is an essential task that has to be carried out by the management in order to evaluate the performance and success rate of a team, department, or the organization as a whole. Key performance indicators are closely concerned with performance management strategies in a business. Be it a company from any industry, KPIs are absolutely necessary.

2.3 CHARACTERISTICS OF KPIs

KPI characteristics identified in the literature are listed below. A KPI does not need to satisfy all of these characteristics to be useful to the agency and characteristics may overlap. A KPI should be:

- Relevant to and consistent with the specific agency's vision, strategy and objectives
- Focused on agency wide strategic value rather than non-critical local business
- Representative – appropriate to the agency together with its operational performance;
- Realistic – fits into the agency's constraints and cost effective;
- Specific – clear and focused to avoid misinterpretation or ambiguity;
- Attainable – requires targets to be set that are observable, achievable, reasonable and credible under expected conditions as well as independently validated;
- Measurable – can be quantified /measured and may be either quantitative or qualitative;
- Used to identify trends – changes are infrequent, may be compared to other data over a reasonably long time and trends can be identified;
- Timely – achievable within the given timeframe;
- Understood – individuals and groups know how their behaviors and activities contribute to overall agency goals;
- Agreed – all contributors agree and share responsibility within the agency;
- Reported – regular reports are made available to all stakeholders and contributors;
- Governed – accountability and responsibility is defined and understood;
- Resourced – the program is cost effective and adequately resourced throughout its lifetime; and
- Assessed – regular assessment to ensure that they remain relevant

2.4 GROUPING KPIs INTO CATEGORIES

It may be useful to group KPIs into categories based on the agency's vision, strategy and objectives. Grouping into categories may also assist in testing KPI applicability, relevance and potential overlaps or conflicts. However, agencies should note that grouping is discretionary and may not be required or add value at all. Should agencies wish to group KPIs, the example categories listed below may serve as a starting point:

- Performance – services are relevant and appropriate to the organization.
- Reliability – service delivery is consistent, reliable, dependable and trustworthy.
- Responsiveness and timeliness – responses to client requests and delivery of services are within timeframes and other measures.
- Relationships – team members deliver services with tact, recognition, regard, and Thoughtfulness.
- Resources – time, budget and cost measures.
- Secure – protect integrity and privacy of data.

2.5 SMART KPIs

The acronym SMART is often used to describe KPIs.

- Specific
- Measurable
- Achievable
- Relevant
- Timely

SPECIFIC

KPIs need to be specific to the individual job and if possible expressed as statements of actual on-the-job behaviours.

For example, a KPI should:

- explain clearly to the employee what he/she has to do in terms of performance to be successful
- have an impact on successful job performance, that is distinguishing between effective performance and ineffective performance
- focus on the behaviour itself, rather than personality attributes such as 'attitude to customers'.

Terms such as 'work quality', and 'job knowledge' are too vague to be of much use.

MEASURABLE

KPIs must be measurable, that is based on behaviour that can be observed and documented, and which is job-related. They should also provide employees with ongoing feedback on their standard of performance.

ACHIEVABLE

Performance management needs to be an open, collaborative communication process. KPIs must be seen by all that they are achievable. The KPI must be realistically achievable. If it is set too high for the circumstances (such as an ambitious production target), not only will it be irrelevant but it will ensure failure.

RELEVANT

It is essential that employees clearly understand the KPIs, and that they have the same meaning to both parties. Consultation is more likely to result in standards that are relevant and valid.

TIMELY

KPIs should have an appropriate time frame.

It should be possible to collect the relevant information either 'as it happens' or within a short time afterwards, otherwise it will lose its relevance. As outputs of the performance management system, KPIs also need to be in alignment with other HR-related functions, including training and development, recruitment and selection, rewards and recognition, and career planning.

3. KPI FOR SOFTWARE DEVELOPERS

The role of software developer is to define, develop, test, analyze, and maintain new software applications in support of the achievement of business requirements. This includes writing, coding, testing, and analyzing software programs and applications. The few major parameters to evaluate the efficiency of developers are:

3.1 TECHNICAL SKILLS

1. **Basic Computer Science Skills:** Hopefully, any software engineer will have these skills and more. Research skills, reading comprehension, the ability to know how to use library functions, and understanding computing problems, design patterns, and frameworks are other skills that are valuable to have. A great class involves students and helps them to develop skills in logical thinking, creative problem-solving and communication. Classes that incorporate a team approach, requiring clear communication among members as they solve a problem and explain their solution to others, enables graduates to work this way at their jobs.
2. **Passion for Code:** Programming isn't for the uninterested. You must have a passion for code, developing it from a purely scientific skill into a craft or an art. Building code is much like developing a painting, a sculpture, or a symphony. With the popularity of Open Source, you don't have to be alone in code creation — the ability to work with software engineers and developers from around the world is possible through the Internet.
3. **Fearless Refactoring:** Refactoring is the ability to improve code without changing what it does. The ability to realize that no one should be a slave to original code is key here — that old code can become unstable and incompatible over time. Refactoring enables the developer to own the code, instead of the code owning you.
4. **Develops Quality:** In a former era, engineers thought testing was beneath them. Today, experienced engineers know and understand the value of tests, because their goal is to create a working system. Exposing bugs and eliminating them is the best way to develop stellar code. But a good engineer also knows not to waste time writing trivial or redundant tests, instead focusing on testing the essential parts of each component.
5. **Willing to Leverage Existing Code:** Why invent the wheel when it's already working? Life is too short to continuously invent new codes and libraries. Reuse of internal infrastructure, use of third-party libraries, and leveraging web-scale services such as the ones offered by Amazon, are marks of a software genius.
6. **Focus on Usable and Maintainable Code:** Software always works better then it is well designed and user-centric. Good engineers work hard to make the system simple and usable. They think about customers all the time and do not try to invent convoluted stuff that can only be understood and appreciated by geeks. A disciplined engineer thinks about the maintainability and evolution of the code from its first line, as well. Expressive names for methods and variables can make the code self-explanatory.
7. **Can Code in Multiple Languages:** Just like a person who can speak several languages, an engineer who isn't tied to one code language can think outside the box and is a more desirable hire. A willingness to learn new languages, new libraries and new ways of building systems goes a long way to creating a great software engineer.

3.2 PERSONAL TRAITS

8. **Vision:** What is the use in developing code, when it won't be applicable a year or two down the road? Visionaries create code and libraries that are open to refactoring, and easy to use in all code languages. Being able to see the impacts of present-day decisions is paramount to building great software.
9. **Attention to Detail:** If you get angry about misspelled database columns, "uncommented" code, projects that aren't checked into source control, software that's not unit tested, unimplemented features, and so on, then you probably try to avoid those issues yourself. Bad installation packages, sloppy deployments, or a misspelled column name can bring down entire systems. Be obsessive about details, and you'll be on your way to becoming a software star.
10. **Business Acumen:** If you don't understand why your software development is so important to your clients' livelihoods, consider this NASA story. "This software never crashes. It never needs to be re-booted. This software is bug-free. It is perfect, as perfect as human beings have achieved. Consider these stats : the last three versions of the program — each 420,000 lines long-had just one error each. The last 11 versions of this software had a total of 17 errors. Commercial programs of equivalent complexity would have 5,000 errors." The ability to understand why all the coding is done, as it the fruit for any customer or client.
11. **Curiosity:** The best software engineers are curious about why something is done one way or another, yet with the added ability of being objective about the solutions. Many engineers we know got in trouble as kids for taking things apart to see how they worked. Putting together software is just a creative, and many software engineers also have artistic hobbies. This creativity and curiosity is required to think outside the box when designing programs. The thrill you get from making something work is what keeps you going.
12. **Experience:** If you've been tinkering with software programs since you were a kid, your abilities as an adult will be quadrupled. Beyond hands-on experience, you might also be addicted to math and science, and the ability to stay organized. At the same time, great software engineers also realize that they don't know it all...the ability to continue to learn is essential in a field where change is a constant.
13. **Discipline:** Although you may have passion for your job, this love for your work and for the next project doesn't mean that you can be sloppy. Attention to detail is important, but so is an ability to stay organized. So much bad code belongs to developers who don't do what they know should be done.
14. **Patience:** Bugs are natural. Design glitches are normal. Sloppy coding by other engineers occurs often. Patience is a key quality for software engineers who want to work in this field.
15. **Teamwork:** Few projects are small enough or require so few skills that one person can do them well. Learning how to work as a team in college is one way to get over that "hermit" image...and working as a team online or in the office can only produce stellar projects. Successful engineers also become good communicators. They know how to write clear and concise reports and instructions, and know how to convey ideas to clients and customers.

4. KPI FOR SOFTWARE TESTERS

Software testing is not about hunting bugs but delivering great software. However, a vast majority of project managers still consider bug count as the most important measure of a tester's effectiveness. There are a host of metrics which can be used to measure the effectiveness of a tester in delivering the perfect software.

A well designed tester's Key Performance Indicators should show performance in terms of goals for different functional areas, overall performance as a team, and customer's feedbacks. Few of the KPIs which resulted in an improvement in customer satisfaction index are:

1. **Requirement Knowledge:** This metric indicates how effectively a tester understands the requirement. If the tester is not 100% aware of the customer's requirements, a lot of time could be wasted in posting invalid bugs. This can be checked by evaluating the test cases or test plans prepared by a tester with reference to the requirement document. Set a target of 100% conformance to Software Requirement Specification document for the test cases.
2. **Test Coverage:** This metric indicates how many of the requirements are converted into test cases. This metric ensures that there will be continual improvement in the thoroughness of testing with respect to the requirements of the customer. This is measured as the percentage of test cases covered or executed by a tester. This should be analyzed from the results provided by testers in the test case document. Set a target of 95% or above for this metric.
3. **Testing Rework:** This metric indicates how many bugs were reassigned back to the tester due to lack of information. This includes the cases where developers ask for more information regarding a bug. This happens when a tester is unable to provide proper steps to recreate the issue or give proper screenshots, and leads to wasted time where a re-test needs to be done. Target is set as 0 testing rework cases.
4. **Customer Complaints:** This metric will indicate the satisfaction index of the customer. Each bug reported by the customer indicates a test case the tester missed to execute. So keeping a watch on the number of complaints, and resolving the root cause of the complaints will lead to a process which produces great software. Target is set as 0 complaints.
5. **Bug Success Rates:** This metric indicates how many of your bugs resulted in a valid fix. Invalid bugs happen when SRS is not correctly interpreted, or the testing is wrong. Invalid bugs put a strain on the deadlines for a project, and needs to be avoided. Target is to achieve 0 Invalid bugs.
6. **Team performance:** This is a collection of metrics that should set for the team as a whole. eg .milestone delays, start lags, response times, etc. Including the total team metrics in tester KPI is important as the testing team needs to work together with others to make sure the overall targets are achieved. By

including the team targets in the tester's KPI, the testers will do whatever is needed from their part to get the project finished on time. It will encourage the developers to provide testability in their code, and the testers to communicate with developers about possible vulnerabilities.

5. KPI FOR QUALITY ASSURANCE PERSONNEL

Software quality assurance (SQA) consists of a means of monitoring the software engineering processes and methods used to ensure quality.

It is a process that ensures that developed software meets and complies with defined or standardized quality specifications. SQA is an ongoing process within the software development life cycle (SDLC) that routinely checks the developed software to ensure it meets desired quality measures. The key parameters for performance evaluation are:

1. Number of critical bugs compared to the total number of bugs: This will show percentage of critical bugs compared to total number of bugs. This information could be useful in determining in how effective the testing procedures are.
2. Percentage of unit tests covering software code.
3. Percentage of retested bugs that have been fixed when going live: Percentage of total bugs that have been found while testing and are fixed when a new software release is going live
4. Test coverage percentage of software specifications.
5. Percentage of bugs found inhouse: Percentage of bugs found inhouse compared to bugs found by customers.
6. Number of bugs per release: This KPI will show the number of bugs per release. For measurement reasons, a time period should be set. Let's say you measure the amount of bugs a month after each release. This should result in an interesting trend.
7. Percentage of high priority bugs.
8. Number of times (corporate) website shows a 404 page: When a 404 error page of a corporate website is showed more often than a certain target this might indicate navigation issues within the website itself and/or "old" links might still present in the index of search engines and/or web directories.
9. Number of escaped defects.
10. Number of defects found over period of time: During the testing cycle, or even during the post release maintenance and support, the number of defects found/logged over a period of time is a good indicator of how product quality was changing over the Project Cycle or Product lifecycle.
11. Time taken for completing a test of a software application
12. Number of returning bugs: Total number of returning bugs that are reported in a new software version.
13. Number of defects per function point: Number of defects detected in the software divided by the total number of function points (FP).
14. QA personnel as percentage of the number of application developers
15. Number of defects per line of code: Number of defects detected in the software divided by the total lines of code (LOC). The most common definition of LOC seems to count any line that is not a blank or comment line, regardless of the number of statements per line.

6. KPI FOR OUTSOURCING PERSONNEL

Business Process Outsourcing (BPO) has established itself well and is growing at a rapid rate. BPO sector offers handsome initial salary, good growth and many other benefits to its employees. Keeping in mind the attrition rates in the sector, the performance measurement and appraisal processes are of extreme importance in BPO's. It is often used as one of the tools to retain the employees.

BPO employees have the advantage of getting performance based incentives. In most of the BPO organisations, there are well designed schemes for awarding the performance based incentives to the individuals and/or the teams as a whole. An incentive on the completion of the defined targets is a common practice in BPO's.

The general parameters for the measurement of employees' performance are:

- Speed i.e. process performance
- Accuracy
- Productivity of each process
- Average Call Value (the sales made or the revenue collected etc.)
- Time and cost per call
- Average Handling Time (talk time and after call wrap up)
- Adherence to Schedule (availability to take calls etc.)
- Percentage of abandoned calls

According to a recent survey – "The Pay for Performance can be as much as 22% of the salary." Therefore, performance evaluation, reviews and appraisal play a vital role in the performance management in BPO sector and all the above mentioned parameters are used in performance appraisals to evaluate and review the performance of the employees.

7. CONCLUSION

Clearly, having well defined key performance indicators is no longer optional. In fact, it is now recognized as a major key in remaining competitive and understanding how business is performing in an ever changing and increasingly competitive environment. In selecting Key Performance Indicators, it is critical to limit them to those factors that are essential to the organization reaching its goals. It is also important to keep the number of Key Performance Indicators small just to keep everyone's attention focused on achieving the same KPIs. Monitoring and continually improving these matrices will help to deliver great software and result in good brand image. Software project managers can use the assessment techniques to measure the performance of software professionals, so that timely corrective actions can be taken. Because of limited resources like time and money, majority of the software organizations are under pressure of monitoring and controlling the software employees' performance. The systematic ways of measuring performance helps in identifying high performance employees in organizations and useful in rewarding and recognizing their work in IT industries.

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HIGHER EDUCATION AND DEMOCRATIC IDEALS: DISRUPTIONS AND DIRECTIONS

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ABSTRACT

The kind of society one wants entirely depends on the kind of education we have. Education and society are dynamically interactive and interdependent. To reimagine the interconnectedness of democracy and education, one must make an earnest attempt to explore some of the variations played on the theme of an education over time and how these variations affect our debates over the structures and purposes of liberal learning. The Enlightenment age was instrumental in transforming and revolutionizing the idea of higher education by basing it on scientific inquiry, broadly focussing on training the individual in general competence, the thoughtful citizen and the cultivated person. It holds that the highest purpose and goal in life is to enquire, to create, to search the riches and achievements of the past and then try to internalise the part that is significant and relevant to us, and then to carry that quest for understanding further in our own way. It is this idea which is under siege today at the cruel hands of private capital and it is this idea that needs to be protected to ensure a progressive and liberal ethos based on the basic of democracy – freedom, equality and justice.

KEYWORDS

Democracy, Education, Interdependent, Enlightenment, solidarity, civic engagement.

INTRODUCTION

ne must look into the real face of India that has probably gone out of our imagination, before reimagining the concepts like real education or real democracy. The National Census Report 2012 reveals that more than half of India's homes have no toilets and 17.8% of India's population has access to none of the specified assets like house, water facilities, electricity, cooking gas, television, telephone, vehicle and banking facilities. Another study based on a survey across six States has found that almost 50 per cent of our children under-five suffer from moderate to severe malnutrition. On June 09, 2011, our Prime Minister, Dr Manmohan Singh, calls these new findings a 'national shame'. Before that Arjun Sengupta report released in 2007 informs that an overwhelming 836 million people (76%) in India live on less than Rs. 20/ a day. The report also suggests that the gap between the rich and poor has grown even wider since the adoption of neo-liberal policies in 1991. Let me add here that in Europe, nearly 2.7 dollars are spent on a cow every day. Probably poor people of India would prefer to be reborn as American cows in their next birth. Another sad tale is that of the farmers. According to the govt. records, nearly two lakh farmers have committed suicide since 1997 driven by debt and distress. And it took our Prime Minister 10 years to think that he needs to visit Vidharva to see for himself the plight of these farmers, whereas when the sensitive index of Bombay Stock Exchange fell in 2007, it took our Finance Minister just two hours to pick up the flight and land in Bombay to hold the hands of the weeping billionaires and soothe their nerves.

If one watches the debates and discussions on various TV channels; one finds very virtually no discourse on the pressing issues of sanitation, malnutrition, education, poverty alleviation, growing inequality or other welfare schemes. All the discussions just centre around the dichotomy of subsidies versus stimulus - a lamentation for the govt.'s reluctance to reduce the subsidies extended on food, fertilizer, diesel or other social welfare measures, and the failure to extend stimulus to the corporate sector in the forms of cheap loans, easy land acquisitions and environmental clearance. In fact the debates on corporate media start several weeks prior to the presentation of the union budget and the neo-rich, English educated managers and prophets of a Brave New World founded on the ethos of market economy engage in preparing adequate ground for a 'positive directionality' in the policy framework that would favour only the growth of the industry, GDP and Sensex. It is quite obvious from the discourse on TV channels that the whole idea of a genuine democracy – for the people, of the people and by the people – is under silent siege. This is nothing but a complete distortion, abdication and betrayal of all the sacred ideals of democracy by the Nero's in power. The policy makers have completely forgotten even the Father of the nation's politics of wiping the tears of the common person. It is ironical indeed that whereas the recent events in the Arab world and the other parts of the world lend legitimacy to the fact that more and more individuals desire to live in democratic societies than ever before, the democratic societies all over the world are facing a continuous distortion and disruption of the very basic character of democracy.

DISCUSSION

To reimagine a genuinely democratic future for all citizens, one needs to reimagine democratic ideals in the light of the relentless onslaught from neo-liberal ethos. But reimagining is merely the first step in a two-step process. In my view the focus on education, especially on higher education, is precisely the right place to begin the process of reimagining and recreating a truly and genuinely democratic culture of learning and societies. As Noam Chomsky has said, there has been a general assault in the last 25 years on solidarity, democracy, social welfare, anything that interferes with private power, and there are many targets (Chomsky, web). One of the targets is undoubtedly the educational system, besides of course the other sectors like health, energy, transport and even the water. The expansion of neo-liberal capitalism globally suggests a dangerous turn that threatens both the substance of democracy as fundamental to the most basic freedom, equality and justice. When the nation states seem to be in complete grip of these big corporation, as revealed in Radia tapes, politics as an expression of democratic struggle is disrupted and ethical responsibility appears irrelevant. This paper tries to address the fundamental shift in society regarding how we think about the relationship between corporate culture, higher education, and democracy. Specifically, it argues that one of the most important indications of such a change can be seen in the ways in which one is currently being asked to rethink the role of higher education. Underlying this analysis is the assumption that the struggle to reclaim higher education must be seen as part of a broader struggle, and at the heart of such a struggle is the need to challenge the ever-growing discourse and influence of neo-liberal ethos.

The kind of society one wants entirely depends on the kind of education we have. Education and society are dynamically interactive and interdependent. What and how the institutions of higher education teach has enormously complex and far reaching impacts on the entire society in general. In her essay, "The Crisis in Education" (1958), Hannah Arendt wrote: "Education is the point at which we decide whether we love the world enough to assume responsibility for it... whether we love our children enough not to expel them from our world..., but to prepare them in advance for the task of renewing a common world and building a new scientific mind—a mind that consciously reasons and behaves its way into creating a sustained constructive human presence on the earth (196). This presence is not only manifested by "scientific and social literacy, but by ecological integrity, economic vitality and social equity" (UNESCO, 2005). To reimagine the interconnectedness of democracy and education, one must make an earnest attempt to explore some of the variations played on the theme of an education over time. One must also need to understand how these variations have affected and continue to affect our debates over the structures and purposes of liberal learning. Since there can be no finality about such an idea, as it continues to reinvent itself with the changing contexts, the search for an ideal both substantive and unifying still goes on, along with the belief that only such an idea should guide the forms and reforms of our education system.

Historically speaking the foundation and the institutional structures, practices and courses of study legislated for the medieval universities enable us to somehow generalise some conception of a university. This idea of education in these centres was more or less religious in nature. This idea promoted virtue and moral values as it imagined life as a whole, as a community. The individuals were valued only as parts of the whole, with no value or sanctity of their individual self. The students were educated and trained to uphold the various socio-cultural structures constructed to support the principles of the 'greater whole'. It set a

very high value on the life of the mind and made its continuing cultivation throughout life a principal objective of their social and cultural organisation. Its curriculum was predominantly humanistic. One of the distinct features of the medieval education was to define essential knowledge by mastering already existing truths rather than as a process of making new or original. The second feature was the manner of achieving such knowledge through the recovery and understanding of the texts of classical antiquity. Finally each text or subject was interpreted and understood from the same set of values upholding the unified social and cosmic whole. We can find traces of this kind of education in ancient Greek's Classical School of learning and Indian education system. Indian education system, with its monastic orders of education under the supervision of a guru, was a favoured form of education for the nobility and the working class of the Shudras was generally deprived of educational advantages. The important medieval centres of learning in ancient India were Takshila and Nalanda, with their main focus being the study of topics such as *Vedas*, *Upanishads*, Buddhist literature, logic, grammar, etc. The *Manusmriti*, the *Arthashastra*, the *Mahabharata* and the *Ramayana* were among the influential works which reflect the outlook and understanding of the man and nature at the time.

The Enlightenment age completely transformed and reshaped the existing idea of education. It was Francis Bacon who was instrumental in revolutionizing the idea of higher education based on scientific inquiry. It is this idea of education and society that, over a period of time, has come to shape the idea of collegiate university and its functions in training the individual in general competence, the thoughtful citizen and the cultivated person. Despite sharp differences and variations, this has broadly become the most acceptable and authentic interpretation about the purpose and meaning of education. It holds that the highest purpose and goal in life is to enquire, to create, to search the riches and achievements of the past and then try to internalise the part that is significant and relevant to us, and then to carry that quest for understanding further in our own way. The purpose of education from that point of view is just to help people learn on their own since it is the learner who is ultimately going to achieve something in the course of learning. And it is entirely up to him to decide what his goals are and how he goes on to achieve that and produce something new and exciting in the process.

The idea of education, which was in fashion in a way in the medieval period has again gained a central position in the neo liberal mode of education. This is the idea of indoctrination. This idea is based on the premise that young people have to be placed into a framework in which they learn to follow order, accept existing structures and framework and don't challenge them at all. After the student activism of 1960's, there was a great concern across the education circles that the young students are getting into a dangerous frame of too much freedom and becoming undisciplined as a consequence of this liberty. Some people blamed it on too much of democracy whereas the others went to the extent of calling it the crisis of democracy. This set into motion the entire process of measures taken to turn the education system towards more controlled, more indoctrination, more vocational training, more loans and debts which traps young people into conformity and guarantees good social behaviour. This idea is just the opposite of the idea of enlightenment. And there is a constant struggle that goes on between these two ideas of education. In the enlightenment model we train people into pursuing interests which are close to their hearts and producing real research and innovation by the inculcation of the urge to challenge, to question the doctrine, to challenge authority and to use imagination freely at their personal level. All changes and shifts in human and societal evolutions namely scientific revolution, industrial revolution, green revolution, information revolution, French revolution and Russian revolution have happened as a direct consequence of such an idea. That is what precisely education should mean. However, the other model of indoctrination pursued vigorously in the contemporary times teaches one to conform, to be obedient and to fulfil the roles assigned to him. It does not teach him to shake the structures of power and hegemony.

Today education is often discussed in terms of WTO and GATS dictates which describe higher education as a non-merit good, not a worthwhile capital for social purposes. This is absolutely absurd. Education must have value in itself and must not be measured strictly through growth in economic or GDP terms. Only this kind of education can have an impact for ushering in a peaceful, progressive and truly democratic world. If we look it in terms of cost and benefits, there is going to be a huge adverse impact on the basic character of our education and research. Whether it is scientists, engineers or philosophers, all of them were able to create and discover something new and exciting because of the public sector support. A public education system is based on the principle that you care about the 'other'. It also provides a secure and free environment for intellectual activity that creates new possibilities in the form of new technology and new socio-cultural patterns of society based on equality and justice. If there isn't a lively cultural and educational system which is geared towards independence of thought willing to take creative exploration, to challenge accepted beliefs, then there can be no science, no technology and no economic gains. So, cultural enrichment and public education are very essential for the betterment of the existence.

However today there's a huge effort to try to undermine this in the name of privatization. To try to privatize aspirations also means that you're totally controlled. Private power has its own logic and direction, everyone else has to subordinate himself to it. That's one of the reasons for the attack on the public education system, and it goes right up to the universities. In the universities there's a move toward corporatization with a more flexible work force. That means undermining security. It means have cheap temporary labour like part time teachers, guest teachers, contractual staff and teacher assistants who don't have to be paid much and who can be thrown out easily. When public funding gives place to corporate funding, there's a definite shift in the quality of research as well. A corporation is not likely to fund research for public welfare. Corporate funding is an investment intended to make personal profit. That is why there's a striking tendency for corporate funding to institute more secrecy and short-term applied projects for which the corporation has proprietary control on publication and use. As Milton Friedman correctly says that the board of directors of a corporation actually has a legal obligation to be a monster, an ethical monster.... They're not supposed to do nice things.... You don't expect corporations to be benevolent any more than you expect dictatorships to be benevolent (qtd. in Chomsky, web).

If democracy is to remain a defining principle of education and everyday life, it is essential to challenge this unethical encroachment of corporate power. The most important effect of private education is the undermining of the conception of solidarity and cooperation. I think that lies at the heart of the attack on the public education system, the attack on social security, the effort to block any form of national health care, old age pension, secure service conditions which have been going on for years. And, in fact, across the board, and it's understandable. If you want to regiment the minds of men just as an army regiment does, you've got to undermine these subversive notions of mutual support, solidarity, sympathy, caring for other people, and so on and so forth.

Though during the course of my intervention I have completely ignored the decentring impulse of postmodern philosophy in trying to locate a central idea of learning, I cannot resist referring to the great postmodern thinker, Derrida, who also sees the promise of democracy as the proper articulation of a political ethics and, by implication, suggests that when higher education is engaged and articulated through the project of democratic social transformation it can function as a vital public sphere for critical learning, ethical deliberation, and civic engagement. For Derrida, the university should be a place of unconditional dialogue, critique, and critical resistance "to all the power of dogmatic and unjust appropriation (Derrida, web)". It is only under such circumstances that the meaning and purpose of higher education redefines the relationship between knowledge and power on the one hand, and learning and social change on the other. In doing so, higher education represents the possibility of retaining one important democratic public sphere that offers the conditions for resisting the increasing depoliticization of the citizenry, provides a language to challenge the politics of accommodation that connects education to the logic of privatization. At stake is not simply the future of higher education, but the nature of both existing modes of democracy and the promise of a democracy to come when:

A new form of domination is emerging in our times that breaks with the orthodox method of rule-by-engagement and uses deregulation as its major vehicle: 'a mode of domination that is founded on the institution of insecurity – domination by the precariousness of existence.' (Bauman, 68)

CONCLUSION

To conclude I suggest that educators, students, and society at large will have to provide the rationale and mobilize the possibility for creating fresh possibilities of resistance. We all need to come together. We all need to come together to defend institutions of higher education as indispensable to the life of the nation and people. These institutions have to be the sites to engage in the experience of real democracy. In the face of corporate takeovers, the ongoing commodification of the curriculum, and the transformation of students into consumers, bureaucratisation of the higher education, only a collective struggle can re-establish and reassert the crucial importance of higher education in offering students the skills they need for learning how to govern and take risks, while developing the knowledge necessary for reasoned arguments and social action, particularly the idea that as citizens they are 'entitled to public services, decent housing, safety, security, support at hard times, and most importantly, some power over decision making.

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BUYER BEHAVIOUR IN PURCHASING RESIDENTIAL FLATS IN CHENNAI CITY

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ABSTRACT

Housing industry in India has a tremendous growth over the past few years on account of large population, rising income level, changing life styles, increasing demand for housing units and fast changing rural housing landscape. With the entry of corporate houses like DLF, Parsvnath, Omaxe and easy finance options from financial institutions and government support, the the housing industry in India has rapidly grown over the past few years. A new class of realtors known as apartment promoters have emerged, who construct apartments and sell them. With multiple housing finance options available from various lending agencies and interest rates at all time low, the property buyers are sitting pretty to-day to get the best bargain in the market. The spread of apartment culture throughout the country and world over, has opened the floodgates for the research to fill the knowledge gap of those who get engaged in housing market activities such as developers, investors, buyers and sellers. Therefore, the understanding of the buyer behaviour is potentially a significant source of competitive edge especially to promoters. The present paper is an attempt in this direction aiming to analyse the major determinants influencing the purchase decision of buyers of residential flats in the Chennai city.

KEYWORDS

Buyer Behaviour, Housing Industry, Apartment.

INTRODUCTION

Housing industry in India has a tremendous growth over the past few years on account of large population, rising income level, changing life styles, increasing demand for housing units, and fast changing rural housing landscape. In fact, it is the most dynamic segment of the real estate industry compared to commercial and other property development segments. With the entry of corporate houses like DLF, Parsvnath, Omaxe and easy finance options from financial institutions and government support, the housing industry in India has rapidly grown over the past few years. A new class of realtors known as apartment promoters have emerged, who construct the apartments and sell them. With multiple housing finance options available from various lending agencies and interest rates at all time low, the property buyers are sitting pretty today to get the best bargain in the market. If at all environment is not your first love than no worries, purchase a residential apartment in Chennai for your own sake for comfort, luxury, security and status. A single residential apartment can actually win you all of these.

An apartment is a residential unit that forms a division of a building. It can be either owned or rented. It is an arrangement or system through which flats are owned individually or jointly. In condominiums, dwellers generally own the individual apartments and share the public environment.

The spread of apartment culture, throughout the country and world over, has opened the floodgates for the research with the broader objective of aiming to fill the knowledge gap of those who get engaged in housing market activities such as developers, investors, buyers, sellers and scholars. The 'buyers' being the live wire of the industry, more researches focusing over their behaviour are undertaken intensively providing a valuable supplementary to the existing literature of the industry. By considering the available housing market opportunities in Chennai, the knowledge of the buyer behaviour in purchasing residential flats, virtually plays a vital role in the marketing strategy adopted by the promoters in the industry. The questions they try to understand are

- Who buys?
- How do they buy?
- When do they buy?
- Where do they buy?
- Why do they buy?

For a marketing manager, the challenge is to know the answers to these questions and present a suitable mix to the prospective buyers. Therefore, the understanding of various factors influencing the buyer behaviour, is a potentially significant source of competitive edge to the promoters. The present paper is an attempt in this direction aiming to analyse the major determinants influencing the purchase decision of buyers of residential flats in the Chennai City.

REVIEW OF LITERATURE

Hyun-Jeong Lee and Kathleen Parrott (2008) stated that no society is mono- ethnic, and there is clearly a multiplicity of needs, desire and aspiration to be met. Obviously, there are also diverse expectations and needs regarding housing. Mateja Kos Kooklic and Irena Vida (2009) found that all respondents view the house as a part of their personality or the extended self. The house ownership enables them to express their personality and lifestyle. Brandstetter. M.C.G. de.O. (2009) stated that variables influence the residence choice process can be divided into three groups: 1.Socio- economic characteristics of the inhabitants(age, sex, income, family patrimony, occupation, marital status, cycle stage of the family life, residence time, size, family composition and homeownership) 2.Economic circumstances and of the market (residence price, financings, inflation and construction volume) 3.Characteristics of the desired location (location, equipment and standard). According to Abram (2009), housing provides social security and contacts, good image, a sense of belonging and an indicator of social status. The Global Serviced Apartments Industry Report 2011-2012 stated that India was one of the few global serviced apartment markets where supply was expected to exceed demand in most Indian cities by 2013. Ariyavansa (2007) stated that word – of – mouth recommendation might be even more important in a house buyer's information - gathering and evaluation stages than the seller/company's behaviour. Mwfeq Haddad, et al (2010)l., stated that the role of local

public services play a major role on residential location choice. They further stated by quoting another study conducted by Friedman that local public services and other community characteristics played only minor roles in determining the residential location choices, while the quantity of housing services that the household could obtain in a community played a major role. Lee and Parrott (2010) in their study found that the 11 satisfaction features which showed significant correlation with national origin were: 1. Size: size of living room, size of kitchen and overall size of housing. 2. Layout: location of living room, location of bedrooms, location of kitchen, location of bathrooms and overall layout. 3. Interior: number of windows. 4. Others: pre- installed lights, fans and air conditioners. It is also that demographically different set of buyers differ significantly in their attitude towards financial factors and stated that first time buyers give significantly more importance to financial factors like house price, income while they give much lesser importance to builder reputation and status of neighbourhood. According to Bello, (2011) housing as an investment had a significant role to play in the individual, local and national economy. In most cases, it constituted the first major capital investment and life ambition of individuals. The desire to own a house constitutes one of the strongest incentives for savings and capital formation. According to Onibokun (2012), housing is not only a basic human need; it constitutes a vital component of man's welfare, life sustenance and survival. In the hierarchy of man's needs, housing has been ranked second to food. It has a profound influence on the health, efficiency, social behaviour satisfaction and general welfare of the community.

STATEMENT OF THE PROBLEM

In the current scenario, rents are skyrocketing, not to forget the upfront 10 month advance. Along with this, there are problems like the owners dictating unrealistic conditions, relocation of family frequently etc which put extra strain and stress. To avoid this, buying one's own house is the best solution.

The advent of IT and BPO industry in India has transformed the lives of people living in cities. As a results, cities including Chennai is flourishing and even advanced booking of flats and waiting for years have become the order of the day.

This further leads the housing sector to grow leaps and bounds all over India. Sensing the increased demand for housing, wealthy individuals and corporates take the role of 'Avatar' of housing developers and bring the housing industry to an unprecedented level. But the success of builders mainly depends upon how far they understand the behaviour of buyers of houses/flats. Their behavior and the resultant purchase decisions are strongly influenced by cultural, social, personal and psychological factors. They help them to develop product and brand preference. Although many of these factors cannot be directly controlled by marketers, an understanding of their impact is essential as marketing strategies can be modified to suit the preference of target market. Therefore, the significance of scientific insight into the consumer behaviour in housing market has been increasingly recognized.

Based on the first hand information gained through the pilot study, the researcher decided to probe the major factors influencing the purchase decision of residential flats by the buyers.

IMPORTANCE OF THE STUDY

Housing is an important sector with direct connection to the human welfare and economic linkage to the construction industry. In India the housing sector has undergone unprecedented changes over the past five years. The importance of housing industry in India can be judged by the estimate that the every Indian Rupee (INR) invested in construction of houses, Rs 0.78 is added to gross domestic product of the country and the real estate sector is subservient to the development of more than 269 other industries. The housing sector contributes nearly 5 percent to India's GDP. It is expected to rise to 6 percent in the next five years. The real estate sector is also the second largest employment generator in the country.

"Housing is a necessity". With varying options offered by the builders and the increased affordability of the buyers today, the dream of owning a house has become a reality. A majority of middle class and office going people appear to have the money and motivation to make the investment of a lifetime. Chennai has a sustained real estate demand that has largely been a result of amazing business growth related to IT industry, BPO's and MNC's. The emerging trend in Chennai is that large projects with several blocks of apartments having additional facilities coming up in suburbs or on reclaimed land. By focusing over buyer behaviour in purchasing residential flats, the present study is a modest attempt in providing necessary information to those who are engaged in housing market. Therefore it is the earnest belief of the researcher that the present study has every relevant information in helping and guiding the stakeholders of the housing industry in Chennai. By investigating a present – day social problem, the study assumes greater significance and relevance to – day.

OBJECTIVES OF THE STUDY

The major objectives of the study are:

1. To know the profile of buyers of residential flats in Chennai City.
2. To isolate factor – determinants influencing the purchase of residential flats in Chennai City.
3. To study whether the buyers based on marital status, income and occupation vary over the identified determinants.
4. To identify the difficulties of buyers of residential flats in the Chennai city.
5. To offer suggestions based on the findings of the study.

RESEARCH METHODOLOGY

The study is embodied with both primary and secondary data. For the purpose of the study, a sample of 100 respondents who purchased flats after 2008 were selected for the study. Simple random sampling technique was used to select the respondents. Their selection was based on their level of participation. A well – structured interview schedule was prepared and used to elicit required information from the buyers. Likert- type scaling procedure was used to identify the influencing factors in the purchase decision of flats. The scale consists of five parameters indicating priority number for each parameter in a descending order of '5' to 'Strongly Agree', '4' to 'Agree', '3' to 'Neither Agree nor Disagree', '2' to 'Disagree' and '1' to 'Strongly Disagree'.

The following are the statistical tools used for analyzing data:

1. PERCENTAGE ANALYSIS

It is used to ascertain the socio demographic characteristics of the respondents.

2. FACTOR ANALYSIS

It is employed to identify the factor –determinants influencing the buyers' decision of purchasing residential flats.

3. TEST OF FACTORABILITY AND RELIABILITY

The appropriateness of using Factor Analysis is tested with the help of KMO and Bartlett's Test and the reliability of variables used in the Factor Analysis was tested with Cronbach's Alpha Model.

4. KRUSKAL WALLIS ONE-WAY ANOVA TEST OR H TEST

It is used to test the null hypotheses that whether the various sub-groups (k groups) of respondents consider the determinants equally. It is applied when sub-groups are more than two. The following formula was used:

$$H = \frac{12}{N(N+1)} \left[\frac{R_1^2}{n_1} + \frac{R_2^2}{n_2} + \dots + \frac{R_k^2}{n_k} \right] - 3(n+1)$$

Where n_1, n_2, \dots, n_k are the sample size of the group

N = Total sample size

R = Sum of the Ranks

5. MANN –WHITNEY U TEST

The test is used when the numbers of sub-groups of the variable are two. The following formula was used:

$$Z = \frac{U - \frac{n_1 n_2}{n_1 + n_2}}{\sqrt{\frac{n_1 n_2 (n_1 + n_2)}{12}}}$$

Where

n_1 = sample size of first group

n_2 = sample size of second group

$U_1 = n_1 n_2 + n_1 n_2 (n_1 + 1) / 2 - R_1$

$U_2 = n_1 n_2 + n_1 n_2 (n_2 + 1) / 2 - R_2$

6. GARRETT'S RANKING TECHNIQUE

In order to identify the problems faced by the buyers while purchasing residential flats, this Technique was adopted. The following formula was used.

$$= \frac{100}{N_j} (R_{ij} - 0.5)$$

Percent Position

N_j

Where,

R_{ij} = Rank given for the i^{th} reasons by j^{th} respondents

N_j = Number of reasons ranked by j^{th} respondent

By using these tools, meaningful influences were made. The secondary data were collected through books, journals and websites. The study was conducted during January – April 2013.

HYPOTHESES OF THE STUDY

The respondents belonging to the sub-groups of marital status, income and occupation do not consider the identified determinants influencing the purchase decision of residential flats, equally.

LIMITATIONS OF THE STUDY

1. Chennai city alone was considered for the study.
2. The total population was not known and hence only 100 flat owners were selected by following simple random sampling technique.
3. The three variables of respondents namely marital status, income and occupation were considered for the analysis.
4. It is assumed that the responses given by respondents are unbiased.

RESULTS OF DATA ANALYSIS

The Table 1 shows the socio-demographic profile of respondents:

TABLE 1: SOCIO-DEMOGRAPHIC PROFILE OF THE SAMPLE RESPONDENTS

Socio-economic factor	Category	Number of respondents	Percentage
Age	Up to 25	21	21.00
	Between 26 and 45	45	45.00
	Above 45	34	34.00
Gender	Male	76	76.00
	Female	24	24.00
Marital Status	Single	28	28.00
	Married	72	72.00
Occupation	Agriculture	18	18.00
	Business/ industry	38	38.00
	Employed	24	24.00
	Other	20	20.00
Income	Up to Rs 500000	32	32.00
	Between Rs 50000 and Rs 100000	49	49.00
	Above Rs 100000	19	19.00
Educational Qualification	College educated	44	44.00
	Professionals	26	26.00
	Others	30	30.00
Religion	Hindus	57	57.00
	Muslims	18	18.00
	Christians and others	25	25.00
Family background	Agriculture	20	20.00
	Business/ industry	48	48.00
	Others	32	32.00
Range of flat price	Up to Rs 30 lakhs	32	32.00
	Between Rs 30 lakhs and Rs 50 lakhs	46	46.00
	Above 50 lakhs	22	22.00
Reasons for preferring builders	Reputation	51	51.00
	Media/ advertisement	33	33.00
	Recommended by friends and relatives	16	16.00
Choice of location	South	47	47.00
	Central	28	28.00
	West	14	14.00
	North	11	11.00
Period of purchase	2008 -10	38	38.00
	2010 and 2012	47	47.00
	After 2012	15	15.00
Choice of floor	1 st floor	51	51.00
	2 nd floor	34	34.00
	3 rd floor and above	15	15.00
Source of fund	Own fund	13	13.00
	Bank and Own fund	69	69.00
	Others	18	18.00
Previous residency Status	Owned house	26	26.00
	Rented house	67	67.00
	Office and Government quarters	07	07.00

Source: Primary data

Table 2 shows the result of factorability and Reliability.

TABLE 2: RESULT OF FACTORABILITY AND RELIABILITY

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.831
Bartlett's Test of Sphericity	Approx. Chi-Square	2972.362
	Degrees freedom	300
	Sig. (P value)	.000
Cronbach's Alpha	Number of Item Scale	25
	Score	0.931

Source: Computed data

Table 3 shows the determinants influencing the buying decision of residential flats.

TABLE 3: ROTATED COMPONENT MATRIX FOR FACTORS INFLUENCING THE BUYING DECISION OF RESIDENTIAL FLATS

S. No.	Factors	Variables	Factor loading	Reliability coefficients	Eigen value	Percentage of variance
1	Terms and Conditions Factor	Reasonably priced	0.927	0.952	6.547	26.190
		Scope for bargaining	0.824			
		Flexible in advance while booking flats	0.791			
		Easy mode of payment	0.753			
		Low penalty for delayed payments	0.702			
		Accepting conditions suggested	0.689			
		Free/less registration expenses	0.645			
		Help in avail loans	0.642			
		Handing over of flats as promised	0.636			
		No hidden charges	0.630			
		Alteration in layout accepted	0.626			
		Post – purchase complaints met	0.583			
2	Facilities Factor	Metro and bore water facility	0.878	0.825	4.924	19.698
		Arrangement for maintenance and security	0.855			
		Availability of lift and parking facilities	0.835			
		Shopping facilities foe day to day purchase	0.814			
		Hospital, place of worship; etc near by	0.524			
3	Interior design Factor	Perfectly designed rooms	0.911	0.789	3.628	14.510
		Well designed balcony, cupboards, window, doors etc;	0.766			
		As per vastu- sastra	0.686			
		Proper ventilation of air and light	0.572			
4	External influencer Factor	Known friends / relative in same apartment	0.778	0.738	3.572	14.286
		Nearness to railway station and bus stand	0.751			
		Ambience of building	0.741			
5	Reputation Factor	Goodwill and reputation of builders	0.834	-	1.357	5.430
Cumulative Percentage of Variance						80.114

Rotation Method : Varimax with Kaiser Normalization

The influence of identified determinants Vis – a – Vis marital status, income and occupation of respondents were analysed and the results are given in Tables 4, 5 and 6.

TABLE 4: MARITAL STATUS OF RESPONDENTS AND CONSIDERATION OF IDENTIFIED DETERMINANTS

Sl.No.	Category	No. of respondents	Factor – Determinants									
			Terms and conditions		Support Facilities		Interior design		External influencer		Reputation Of Builders	
			Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks	Mean Rank	Sum Of Ranks	Mean Rank	Sum of Ranks
1	Single	28	39.11	1095.00	38.38	1074.00	25.96	727.00	29.89	837.00	40.09	1122.50
2	Married	72	54.93	3955.00*	55.22	3975.00*	60.04	4023.00*	58.51	4213.00*	54.55	3927.50*
Calculated value of Z			-2.488		-2.703		-5.645		-4.703		-2.458	
Null hypothesis			Rejected		Rejected		Rejected		Rejected		Rejected	

Source: Computed data

Note: * Significant at 5 per cent level

TABLE 5: INCOME OF RESPONDENTS AND CONSIDERATION OF IDENTIFIED DETERMINANTS

Sl. No.	Category	No. of respondents	Factor - Determinants				
			Terms and conditions	Support Facilities	Interior design	External Influencer	Reputation of Builder
			Mean Rank	Mean Rank	Mean Rank	Mean Rank	Mean Rank
1	Below Rs 50000	42	29.36	47.85	42.65	46.76	42.39
2	Between Rs 50000 and Rs 100000	39	64.82	44.87	48.35	48.85	60.95*
3	Above Rs 100000	19	67.84*	67.92*	72.26*	62.16	46.97
Calculated value of Chi-square			39.835*	9.324*	16.016*	4.388	10.399*
Null hypothesis			Rejected	Rejected	Rejected	Accepted	Rejected

Source: Computed data

Note: * Significant at 5 per cent level

TABLE 6: OCCUPATION OF RESPONDENTS AND CONSIDERATION OF IDENTIFIED DETERMINANTS

Sl. No.	Category	No. of respondents	Factors - Determinant				
			Terms and conditions	Support Facilities	Interior design	External Influencer	Reputation of Builder
			Mean Rank	Mean Rank	Mean Rank	Mean Rank	Mean Rank
1	Agriculture	18	44.89	46.56	53.86	66.75*	50.33
2	Business / Industry	38	58.61	59.32*	53.13	50.25	51.09
3	Employed	24	50.25	39.25	40.31	39.25	46.77
4	Others	20	40.45	50.80	54.70	49.85	54.00
Calculated value of Chi-square			6.235	8.014*	4.506	10.450*	0.849
Null hypothesis			Accepted	Rejected	Accepted	Rejected	Accepted

Source: Computed data

Note: * Significant at 5 per cent level

Table 7 shows the difficulties of buyers while intending to buy residential flats in Chennai City and the results given in Table – 7.

TABLE 7: DIFFICULTIES OF BUYERS WHILE INTENDING TO BUY RESIDENTIAL FLATS IN CHENNAI CITY

Sl. No.	Difficulty	Mean score	Ranks
1	Too much of builders	73.82	I
2	Confusing advertisements	67.46	II
3	Mixed opinion of 'live in' owners	58.72	III
4	Fear of being debt trapped	48.96	IV
5	Lack of family support	35.48	V
6	Impact of government and bank regulation	32.46	VI

Source: Computed data

FINDINGS AND INTERPRETATION

Table 1 shows the socio – demographic profile of sample respondents. The respondents belonging to the age category of between 26 and 45 (45 percent), the category of male (76 percent), the category of married (72 percent), the category of business and industry (38 percent), the income category of Rs 50000 and Rs 1 lakh (49 percent), the category of college educated (44 percent), the category of Hindus (57 percent), the category of flat price range of between Rs 30 lakhs and 50 lakhs (46 percent), the category of preferring builders based on reputation (51 percent), the category of location of South Chennai (47 percent), the category of choice of preferring 1st floor (51 percent), the category of period of purchase between 2010 and 2012 (47 percent), the category of mobilised funds through banks and own funds (69 percent) and the category of resided in rented houses earlier (67 percent) were dominating the sample.

Table 2 shows that the sample respondents taken for the study seemed to be adequate as KMO measure of sampling adequacy is 0.831 i.e. more than 0.7. Further as the 'P' value is less than 0.001, Barlett's Test of Sphericity indicated the appropriateness of using Factor Analysis. Further it is also known that as the Cronbach Alpha co- efficient is 0.931, the 25 variables used in Factor Analysis had high reliability of internal consistency as it is greater than 0.7.

Table 3 summarises the results of Factor Analysis on the variables influencing the buyers in selecting the residential flats in the study area. It has given five factor solutions and they together explained 80.114 percent of total variation. They are:

- Factor I (F1) Terms and Conditions Factor (explained 26.109 percent). It includes 12 variables as shown in the table.
- Factor II (F2) Facilities Factor (explained 19.698 percent). It includes six variables as shown in the table.
- Factor III (F3) Interior Design Factor (explained 14.510 percent). It includes four variables as shown in the table.
- Factor IV (F4) External Influencer Factor (explained 14.286 percent). It includes three variables as shown in the table.
- Factor V (F5) Reputation Factor (explained 5.430 percent). It includes one variable as shown in the table.

The above 'Five' factors were most considered determinants by the buyers while purchasing residential flats.

The influence of identified determinants Vis – a – Vis the Marital status, the Income and the Occupation of sample respondents were analysed with the help of Kruskal Wallis One- Way ANOVA test / Mann-Whitney 'U' test. This analysis helps to know whether the respondents belonging to each of the subgroups of the selected socio- economic variables consider the identified determinants equally while purchasing flats.

As all the null hypotheses framed for the 'marital Status' were rejected, (Table 4) it is inferred that significant difference existed among the subgroups of respondents in considering the five determinants. As the sum of ranks of married category are higher in all determinants, it is further inferred that the respondents of married category considered the determinants most than the other category of unmarried.

As all the null hypotheses framed for the 'Income' (Table 5) excepting for the factor 'External influencer', got rejected, leading to conclude that significant difference existed among the subgroups of income in considering the remaining four determinants. It is further understood that the mean rank values for the respondents belonging to the income group of above Rs 1,00,000, are higher in respect of factors such as 'Terms and conditions' factor, 'Facilities factor' and 'Interior design factor', it is inferred that this group of respondents considered these factors most than the other groups. In respect of 'Reputation factor', the mean rank values of respondents belonging to the income category of between Rs 50,000 and Rs 1 lakh, are higher and hence it is assumed that this group of respondents considered this factor most than the other groups.

In case of 'Occupation' three hypotheses were accepted and the remaining two were rejected (Table 6). It is leading to conclude that there was no significant difference existed in considering the three determinants, namely, 'Terms and Conditions', 'Interior Design' and 'Reputation of Builder' among the sub – group of respondents of income. Whereas in case of two determinants, namely 'Facilities factor', and 'External Influencer factor', significant difference seemed to be existed in their consideration. Further it is inferred that the respondents belonging to the 'Agriculture' consider the determinant 'External Influencer' most than the other group of respondents as their mean rank values are higher, while the respondents belonging to the 'Business and Industry', considered the determinant 'Facilities factor' most than the other group as it had higher mean rank values.

It is seen from the Table – 7 that out of the seven identified difficulties faced by the buyers while making the purchase decision of residential flats, the most three difficulties ranked by them are – 1. Too much of builders, 2. Confusing advertisement and 3. Mixed opinion of 'live in' owners.

SUGGESTIONS AND CONCLUSION

As housing industry is booming to-day, the government has to interfere in all matters pertaining to the interests of its stakeholders. The skyrocketing prices of flats may be controlled by supplying construction material at subsidized rate to registered builders and those who comply the regulation of the state in this regard. The buyers being conscious over the quality of construction of the flats, builders may be insisted to get 'quality certification' from the Public Works Department or any other agency established for this purpose. To smoothen the buying process, a separate 'Encumbrance Clearance and Certification' wing may be opened in Registration Department, where the builders may be asked to register all the details relating to their apartments. Above all, either a comprehensive law may be enacted or at least on the model of 'Builders Regulatory Authority' functioning in Maharashtra State, may be introduced in Tamil Nadu.

The present study demonstrates that the livability requirements are the major consideration than the facilities fulfilling the luxurious needs of buyers such as ambience, swimming pool etc. Further, the identification of the variables influencing the purchase intentions of buyers of residential flats in a vast area like Chennai, could offer substantial guidelines on adopting effective marketing strategies in the field. It is the earnest belief of the researcher that if the reckless and cheating promoters are checked, the interests of the buyers would be protected on the one side and ensuring the further growth of this emerging sector on the other.

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UNDERSTANDING EURO-CRISIS: HOW DID IT OCCUR?

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ABSTRACT

Using theoretical framework of optimum currency area, the paper has made an attempt to provide the reasons behind emergence of Euro crisis. Interestingly, it appears that the adverse impact of global recession due to US Sub-prime crisis triggered off the Euro zone crisis is a situation when Greece was already living beyond its means. Common factors between the US and European crisis include investment bankers and rating agencies and use of off balance activities to create macro level information asymmetry.

KEYWORDS

Economic Integration, Crisis, Investment Bankers.

JEL CODES

F15, H12, G24.

INTRODUCTION

Crisis is not new to global economy. They occur in different countries at different points of time for different reasons but produce the same impact in terms of disruption of economic activity. This is true of Great Depression of 1930s, Sub-Prime Crisis in US and the Euro zone Crisis. Euro crisis occurred in 2010 and had contributed to rising government indebtedness and endangered the longer-term sustainability of public finances, a prerequisite for smooth functioning of Economic and Monetary Union. The objective of the paper is to understand the underlying reasons behind Euro Crisis.

PLAN OF THE PAPER

Section I develops the theoretical framework of the study. Section II provides the literature review relating to the theme of the paper. Rationale of the study is given in section III. Section IV will analyze the reasons behind occurrence of the crisis. Section V provides the summary and conclusion of the study.

SECTION I: THEORETICAL FRAMEWORK OF ECONOMIC INTEGRATION

Independent states can integrate their economies to varying degrees in order to achieve the benefits of size, such as greater internal efficiency and more robustness to external events. The degrees of economic integration can be divided into six steps of economic integration.

- 1) A preferential trading area (with reduced customs tariffs between certain countries);
- 2) A free trade area (with no internal tariffs on some or all goods between the participating countries);
- 3) A customs union (with the same external customs tariffs for third countries and a common trade policy);
- 4) A common market (with common product regulations and free movement of goods, capital, labour and services);
- 5) Economic and monetary union (a single market with a single currency and monetary policy);
- 6) Complete economic integration (all the above plus harmonised fiscal and other economic policies);

The main objective behind the internationalization of the euro is transaction costs in foreign exchange and securities market. By converting to a single currency, union leaders hope to achieve benefits that include

- Price stability,
- Greater confidence among investors,
- A simpler single market economy,
- A reduction in transaction costs due to the absence of currency exchanges, and
- An integrated banking system.

It is expected that international business and currency transactions will also become simpler and more efficient under the euro. The ultimate goal is a strong and stable Europe that features open markets. However at the same time, "savings glut" in one country with a trade surplus can drive capital into other countries with trade deficits, artificially lowering interest rates and creating asset bubbles. A country with a large trade surplus would generally see the value of its currency appreciate relative to other currencies, which would reduce the imbalance as the relative price of its exports increases. This currency appreciation occurs as the importing country sells its currency to buy the exporting country's currency used to purchase the goods. To reduce trade imbalances a country could encourage domestic saving by restricting or penalizing the flow of capital across borders, or by raising interest rates, although this benefit is likely offset by slowing down the economy and increasing government interest payments. Either way, many of the countries involved in the crisis are on the Euro, so individual interest rates and capital controls are not available. The only solution left to raise a country's level of saving is to reduce budget deficits and to change consumption and savings habits. For example, if a country's citizens saved more instead of consuming imports, this would reduce its trade deficit.

Optimum currency area refers to the geographic area in which a single currency would create the greatest economic benefit. Robert Mundell in the 1960s theorizes that this may not be the most efficient economic arrangement. In particular, countries, which share strong economic ties, may benefit from a common currency. This allows for closer integration of capital markets and facilitates trade. However, a common currency results in a loss of each country's ability to direct fiscal and monetary policy interventions to stabilize their economies. The school of economists who are, broadly, adherents of the post-Keynesian school of the Modern Monetary Theory condemned the introduction of the Euro currency from the beginning, on the basis that the Euro zone does not fulfill the necessary criteria for an optimum currency area, though it is moving in that direction. Let us analyse the scenario Euro in the light of the above description.

SECTION II: LITERATURE REVIEW

Does it matter whether the euro achieves the status of international currency? Policy-makers and academic writers have long regarded currency hegemony as a source of political as well as economic benefits. For instance, Kunz (1995) writes: 'Geopolitical power depends on financial power, each of which supports the other. To ignore the real benefits of controlling the international currency system is [unfortunate] ... The death of the dollar order will drastically increase the price of the American dream while simultaneously shattering American global influence.' Even the recent East Asian currency crises, which led to the demise of dollar pegs, are sometimes interpreted as an alarming example of the impending decline of the 'dollar order' (e.g., Los Angeles Times, 22 July 1997). According to Cohen (1997), monetary supremacy 'confers substantial political benefits on the hegemon. At home, the country should be better insulated from outside influence or coercion in formulating and implementing policy

EURO VS DOLLAR without constraint as well as to exercise a degree of influence or coercion over others. The expansion of its currency's authoritative domain, in principle, translates directly into effective political power.' Frankel (1995) also notes the 'benefits to political power and prestige', which, though 'nebulous', reflect the association between the loss of key currency status and the historical decline of great powers. The economic advantages from currency hegemony include a comparative advantage for markets and institutions of the issuing country, the advantage for trade of having other countries peg their exchange rates to one's own (elimination of exchange rate uncertainty), and the ability to finance balance of payments deficits with liabilities denominated in the international money, which other countries will accept without effective limit. This does weaken a constraint on economic policy, although the possible resulting overhang of liquid liabilities may ultimately pose problems. De Gaulle went too far in claiming that the power of the dollar 'enabled the United States to be indebted to foreign countries free of charge' (quoted by Kunz, 1995) - if only because foreigners hold most of that debt in interest-bearing US Treasury securities - but there was some substance in his basic insight. Still, under Bretton Woods other countries had to accumulate dollars or threaten to break up the system. With a floating dollar (and flexible exchange rates, in general), the nature of the external constraint has changed (see the Introduction to Alogoskoufis et al., 1991). Yet, in the short and medium run, the USA has been able to build up international liabilities in dollars at a lower interest rate than it would otherwise have had to pay (see below and Artus, 1997a). Moreover, it has the option to eliminate some of this debt with surprise inflation. McKinnon (1993) states that 'The "privilege" of going into international debt so heavily in your own currency is one that is open only to the centre ... country.'

Lane, Philip R. (2012) in his article concluded that the origin and propagation of the European sovereign debt crisis can be attributed to the flawed original design of the euro. In particular, there was an incomplete understanding of the fragility of a monetary union under crisis conditions, especially in the absence of banking union and other European-level buffer mechanisms. Moreover, the inherent messiness involved in proposing and implementing incremental multi-country crisis management responses on the fly has been an important destabilizing factor throughout the crisis. The most benign perspective on the European sovereign debt crisis is that it provides an opportunity to implement reforms that are necessary for a stable monetary union but that would not have been politically feasible in its absence. A more modest hope is that the unfolding reform process will deliver a monetary union that can survive, even if it remains vulnerable to recurring crises. However, the alternative scenario in which the single European currency implodes is no longer unthinkable, even if it would unleash the "mother of all financial crises" (Eichengreen 2010). The stakes are high.

From the above extant literature it is quite clear that there are both outcomes (positive as well as negative) of euro as international currency is possible. Therefore, it is required to understand the reasons behind the euro crisis that occurred globally.

SECTION III: RATIONALE OF THE STUDY

As we have seen there are number of papers relating to the issues of euro either as international currency or as case of crisis. There is need to understand first the euro-crisis and later on to know the possible reasons for the occurring of such phenomenon. Therefore, the basic objective of the present study is;

- ✓ To understand the euro crisis
- ✓ To know the reasons behind the occurrences of euro crisis

SECTION IV: ORIGIN OF EURO CRISIS

There are numbers of factor which are responsible for the origin of euro crises

(1) RELAXATION IN THE NORMS FOR ELIGIBILITY

Greece has been living beyond its means since even before it joined the euro, and its rising level of debt has placed a huge strain on the country's economy. This constituted the most controversial point relating to formation of European economic and monetary union, which ultimately led to its disintegration. In the early-mid 2000s, Greece's economy was strong and the government took advantage of running a large deficit. As the world economy cooled in the late 2000s, Greece was hit especially hard because its main industries—shipping and tourism—were especially sensitive to changes in the business cycle. As a result, the country's debt began to pile up rapidly. In early 2010, as concerns about Greece's national debt grew, policy makers suggested that emergency bailouts might be necessary.

(2) BORROWING SURGE BY GREECE AFTER ADOPTING THE EURO

European Union members signed the Maastricht Treaty, under which they pledged to limit their deficit spending and debt levels. The Greek government borrowed heavily and went on something of a spending spree after it adopted the euro. Public spending soared and public sector wages practically doubled in the past decade. It has more than 340bn Euros of debt and for a country of 11 million people, debt per capita works out to be about 31,000 Euros. Surge in government debt led to rise in public expenditure, and *ceteris paribus*, it should lead to income generation a la Keynesian multiplier. However, presence of widespread tax evasion nullified the rise in income resulting from government expenditure financed out of international debt and left the country in an unprecedented mess. Historic enmity to Turkey led to high defense spending, and fuelled public deficits – financed primarily by German and French banks.

(3) USE OF DERIVATIVES TO CREATE MORAL HAZARD AT A MACRO-ECONOMIC LEVEL AND CREATION OF INFORMATION ASYMMETRY AT MACRO LEVEL

However, a number of European Union member states, including Greece and Italy, were able to circumvent rules and mask their deficit and debt levels through the use of complex currency and credit derivatives structures. The structures were designed by prominent U.S. investment banks, who received substantial fees in return for their services and who took on little credit risk themselves. Financial reforms within the U.S. since the financial crisis have only served to reinforce special protections for derivatives—including greater access to government guarantees—while minimizing disclosure to broader financial markets. The revision of Greece's 2009 budget deficit from a forecast of "6–8% of GDP" to 12.7% by the new Pasok Government in late 2009 (a number which, after reclassification of expenses under IMF/EU supervision was further raised to 15.4% in 2010) has been cited as one of the issues that ignited the Greek debt crisis. This added a new dimension in the world financial turmoil, as the issues of "creative accounting" and manipulation of statistics by several nations came into focus, potentially undermining investor confidence. The role of investment banks in US sub-prime crisis is well known and needs no elaboration. It also needs to be added that a number of reports mentioned manipulation of data by EU and other nations aiming, as was the case in Greece, to mask the sizes of public debts and deficits. These have included analyses of examples in several countries or have focused on Italy, the United Kingdom, Spain, the United States, and even Germany.

(4) POLITICAL FACTORS

Investors worked on wrong assumptions while buying Greek bonds, banks made money by underwriting Greek bonds, while EU politicians in Brussels turned a blind eye. In their opinion, economy of was in pink of health. Investors assumed they were implicitly lending to a strong Berlin when they bought Eurobonds from weaker Athens.

(5) CREDIT RATING AGENCIES

The international U.S. based credit rating agencies – Moody's, Standard & Poor's and Fitch- have played a central and controversial role in the current European bond market crisis. As with the housing bubble and the Icelandic crisis, the ratings agencies have been under fire. The agencies have been accused of giving overly generous ratings due to conflicts of interest. Government officials have criticized the ratings agencies. Following downgrades of Greece, Spain and Portugal, Germany's foreign minister Guido Westerwelle said that traders should not take global rating agencies "too seriously" and called for an "independent" European rating agency, which could avoid the conflicts of interest that he claimed US-based agencies faced. European leaders are reportedly studying the

possibility of setting up a European ratings agency in order that the private U.S.-based ratings agencies have less influence on developments in European financial markets in the future. According to German consultant company Roland Berger, setting up a new ratings agency would cost €300 million and could be operating by 2014.

Due to the failures of the ratings agencies, European regulators will be given new powers to supervise ratings agencies. With the creation of the European Supervisory Authority in January 2011 the European Union set up a whole range of new financial regulatory institutions, including the European Securities and Markets Authority (ESMA), which became the EU's single credit-ratings firm regulator. Credit-ratings companies have to comply with the new standards or be denied operation on EU territory, says ESMA Chief Steven Maijor.

But attempts to regulate more strictly credit rating agencies in the wake of the European sovereign debt crisis have been rather unsuccessful. Some European financial law and regulation experts have argued that the hastily drafted, unevenly transposed into national law, and poorly enforced EU rule on rating agencies has had little effect on the way financial analysts and economists interpret data or on the potential for conflicts of interests created by the complex contractual arrangements between credit rating agencies

(6) ROLE OF ENGLISH LANGUAGE PRESS

There has been considerable controversy about the role of the English-language press in the regard to the bond market crisis. The Spanish Prime Minister Jose Luis Rodriguez Zapatero has suggested that the recent financial market crisis in Europe is an attempt to undermine the euro in order that countries, such as the U.K. and the U.S., can continue to fund their large external deficits which are matched by large government deficits. The U.S. and U.K. do not have large domestic savings pools to draw on and therefore are dependent on external savings e.g. from China. This is not the case in the Euro zone, which is self-funding. Zapatero ordered the Centro Nacional de Inteligencia intelligence service (National Intelligence Center, CNI in Spanish) to investigate the role of the "Anglo-Saxon Media" in fomenting the crisis. No results have so far been reported from this investigation.

(7) ROLE OF SPECULATORS

Financial speculators and hedge funds engaged in selling Euros have been accused by both the Spanish and Greek Prime Ministers of worsening the crisis. German chancellor Merkel has stated that "institutions bailed out with public funds are exploiting the budget crisis in Greece and elsewhere. The role of Goldman Sachs in Greek bond yield increases is also under scrutiny. It is not yet clear to what extent this bank has been involved in the unfolding of the crisis or if they have made a profit as a result of the sell-off on the Greek government debt market.

According to The Wall Street Journal hedge-funds managers already launched a concerted attack on the euro in early 2010. On February 8 the boutique research and brokerage firm Monness, Crespi, Hardt & Co. hosted an exclusive "idea dinner" at a private townhouse in Manhattan, where a small group of hedge-fund managers from SAC Capital Advisors LP, Soros Fund Management LLC, Green Light Capital Inc., Brigade Capital Management LLC and others eventually agreed that Greek government bonds represented the weakest link of the euro and that Greek contagion could soon spread to infect all sovereign debt in the world. Three days later the euro was hit with a wave of selling, triggering a decline that brought the currency below \$1.36. On 8 June, exactly four months after the dinner, the Euro hit a four year low at \$1.19 before it started to rise again. Traders estimate that bet for and against the euro account for a huge part of the daily three trillion dollar global currency market. In response to accusations that speculators were worsening the problem, some markets banned naked short selling for a few months.

SECTION V: CONCLUSION

England was the centre of global economy and after the Second World War, the centre of gravity of the global economy shifted to US. Over time, dollar emerged as the global currency. Formation of European Union and emergence of Euro may be seen to be an attempt by European Countries to challenge the dominance of dollar by offering a united front. It is interesting to note that while US emerged as the epic centre of global economic turmoil after establishing hegemony over the world, Europe in its attempt to challenge the hegemony of dollar in the shape of Euro zone generated a crisis, which soon emerged as a global problem. The global financial capitalism seems to be moving from one crisis to another, an inevitable price for global financial integration.

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THE DYNAMICS OF GLOBAL STRATEGY AND STRATEGIC ALLIANCES IN INTERNATIONAL TRADE AND INVESTMENT

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ABSTRACT

Companies in their quest to exploit the economies of scope associated with global trade and investment have made inroads into their nondomestic markets by implementing global strategies. This study, examines the key forces that influence the global strategic choices firms make, and how cooperation among and between firms affect their strategic choices. The study found that the choice of what global strategy firms implement is largely determined by the degree of simultaneous pressures for cost reduction and the demands for local responsiveness. The study also found that firms utilise cooperation as a veritable mechanism to neutralise their resource and capability weaknesses. This study recommends amongst others, that the selected partners for an alliance should have the willingness and ability to help the company achieve its strategic goals, such as gaining access to new markets, sharing the costs and risks of new product development, or gaining access to critical core competencies. In addition, a good partner must share the firm's vision for the purpose of the alliance and be unlikely to expropriate the company's technological competencies or know-how.

KEYWORDS

Global, Strategy, Investment, Alliance.

INTRODUCTION

Economic theorists have advanced several compelling arguments for the promotion of international trade and investments on the basis of free global market forces. The theory of comparative advantage of nations, propounded by Adam Smith (1776) suggests that a nation's wealth will greatly increase if her international exchange of goods and services is based on her endowed resources. Porter's diamond theory (1999) of national competitive advantage prescribed four interrelated attributes (factor endowment, local demand conditions, related and supporting industries, and firm strategy, structure, and rivalry) which should form the global competitive framework of a country and the business enterprises operating within her boundaries. These persuasions have lead to a plethora of multilateral and bilateral trade and investment agreements amongst national governments in recent years, leading to a significant reduction in barriers to international trade and investments. This development has brought about the globalization phenomenon, whereby an unprecedented worldwide market for goods and services has evolved.

STATEMENT OF PROBLEM

In view of the globalization of markets for goods and services, corporate managers necessarily have to evaluate the impact of globalization on the environment in which their company operates and devise appropriate strategies to exploit the unfolding opportunities and counter competitive threats. The production and marketing of goods and services are now globalized and by implication, industries are no more delineated by national boundaries, because many industries have become global in scope. The shift from national to global markets has heightened the tempo of competitive rivalry in many industries. National markets that were once consolidated oligopolies dominated by three or four companies and subjected to relatively little foreign competition, have been transformed into segments of fragmented global industries in which a large number of companies battle each other for market share in countries. This rivalry has threatened to drive down profitability and made it all the more critical for companies to maximise their efficiency, quality, customer responsiveness and innovative capabilities (Hill and Jones, 2009).

STUDY OBJECTIVES

Against this backdrop, this study seeks to examine the rationale for implementing global corporate strategy by globalized firms, their strategic options and the fundamental forces that influence their strategic decisions, as well as to examine how cooperation—strategic alliances—shape the global business model companies implement.

To achieve these objectives, this paper is structured into five sections beginning with the foregoing introduction as section one; a review of literature on the underlying objectives for implementing a global strategy is done in section two; the political risks associated with global strategies are presented in section three; in section four, the paper discusses the key elements that influence the global strategic choices firms make and the rationales for cooperation, while section five presents the summary of findings, conclusion, and recommendations.

LITERATURE REVIEW

Barney and Hesterly (2012), suggests that the rise in the use of global strategies by both large and small firms indicate that the economic opportunities linked with simultaneously operating in numerous geographic markets can be enormous. They argued, however, that for these policy thrusts to be a source of sustained competitive advantage for firms, these strategies must exploit a company's valuable, exceptional, and costly to imitate resources and capabilities. They further argued that for a global strategy to be economically valuable it must satisfy two value criteria; it must exploit real economies of scope and it must be costly for competitors to independently imitate. The foregoing arguments imply that the economies of scope examined hereunder are the underlying motivation for firms pursuing a global strategy.

UNDERLYING ECONOMIES OF SCOPE AS MOTIVATIONS FOR GLOBAL EXPANSION

Evidently, the most vital objective which propels the pursuit of global strategies by companies is a craving to gain potential new customers for a firm's existing products or services. Research by Yoshino, Hall and Malnight (1991); indicate that firms are able to penetrate new foreign markets by distinctively discerning the

tastes and preferences of potential new overseas customers for its current products and services. Thus, the success of a global strategy in attracting new customers is hinged on the ability of those products or services to tackle the needs, wants, and preferences of customers in foreign markets in superior ways in comparison to alternatives. It implies therefore, that global firms may have to employ cost leadership and product differentiation business level strategies. However, empirical studies by Rapoport (1994); Bounds and Davis (1995); World Bank (1999) identified problems of inadequate distribution channels, trade barriers and low purchasing power in potential foreign markets as some of the challenges firms pursuing global strategies may be confronted with. Therefore, they will have to devise appropriate ways of handling them in order to gain new customers in nondomestic markets with current products or services. According to Porter (1986) and Goshal (1987), there are several economic values globalized firms derive from access to nondomestic markets. A firm may derive reduced costs and competitive advantage from increased sales volume gained from new customer in nondomestic and domestic markets, especially in circumstances where its production processes is sensitive to economies of scale.

Globalized firms according to Bradley and Cavanaugh (1984), adopt global strategies to gain new customers in foreign markets with current products or services as a way of elongating the life cycle of their current product or service offerings. Global strategies allow firms to effectively manage their product life cycle in overseas markets by engaging their learning experiences in respect of their current products or services which they developed during a particular phase of their product life cycles in the domestic markets. A firm's economic performance can be greatly enhanced by increased volume resulting from a wider market reach.

In addition, global companies are motivated to pursue global strategies in order to access low cost factors of production, such as raw materials, labour, and technology, which is aimed at exploiting the economies of scope that is associated with it. Trager (1992) is of the view that gaining access to low cost materials is perhaps the foremost reason why firms engage in international operations. Studies have also shown that firms relocate their operations to low labour cost countries like China, Mexico and Vietnam in order to take advantage of low labour cost to enhance their competitive position and economic performance (Kraar, 1992; Reibstein and Levinson, 1991). This notwithstanding, access to low labour cost can only be beneficial to a firm if the workforce of the foreign country of operation is able to produce high quality products efficiently. As globalized firms strive to exploit the economies of scope, they seek to gain low cost access to technology through strategic alliances. Research by Osborn and Baughn (1987), shows that strategic partnerships with non-Japanese firms afforded Japanese companies access to several technological competencies following the quest of these non-Japanese companies to gain access to new customers for their current products or services by operating in Japan.

Fundamentally, firms undertake foreign operations in their quest to strengthen their current core competencies and to develop new ones. Overseas operations enable firms to have a greater insight about the strengths and weaknesses of their core competencies by exposing these competencies to new competitive contexts. Undoubtedly, global firms must allow experiences in nondomestic markets rob off on their core competencies in order to enhance their economic performance. When a firm has been able to learn from its international operations and modify its usual core competencies or develop new ones, it must then leverage these newly acquired competencies across its operations in order to realise the full value. Empirical evidence suggests that a firm's disposition to learn, the transparency of alliance partners and the firm's receptiveness to learning are vital ingredients that enable a firm to learn from its global operations, modify its core competencies and develop brand new distinctive capabilities (Hamel, 1991).

Apart from the foregoing, global operations can also create opportunities for firms to leverage their traditional core competencies in new ways. According to Barney and Hesterly (2012) when firms gain access to new customers for their current products or services, they often leverage their domestic core competencies in new ways; they not only extend operations across country boundaries, but also leverage their competencies across products and services in ways that would not be economically viable in their domestic market.

FINANCIAL AND POLITICAL RISKS ASSOCIATED WITH GLOBAL STRATEGIES

Doubtlessly, global centric firms stand to benefit immensely from exploiting the economies of scope discussed above. This notwithstanding, there are a number of significant risk factors that may hamper the realisation of these benefits associated with the economies of scope. In addition to the problems of implementation, both foreign country financial circumstances and political environments can absolutely undermine the benefits linked with global strategies.

Firstly, exchange rate fluctuation and inflation poses great financial threats to globalized firms. As firms begin to pursue global strategies, they may begin to expose themselves to risks connected with exchange rate fluctuations, which is not the case within domestic markets. The value of a firm's international investments can be significantly altered by fluctuations in exchange rate. The effects of such fluctuations can turn what has been a losing investment into a profitable one. Conversely, a profitable investment can be turned to a losing one due to fluctuation in exchange rate. Apart from this, the diverse rates of inflation across countries can engender very different management approaches, business strategies and accounting practices. The challenges associated with managing financial risks can appear to be overwhelming at the beginning. However, the threats of financial risks for firms pursuing global strategies has been significantly reduced following the development of money and capital markets, coupled with growing experience in undertaking business operations under high inflation economies.

Secondly, the operations of globalized firms can be considerably altered by the political environment of overseas market. A change in government regulations is capable of altering the value of a firm's resources and capabilities as such changes could heighten the strength of some environmental threats and weaken the threats of some others. As a matter of fact, the plethora of national political climates firms pursuing global strategies have to contend with constitute a significant problem for such firms as they strive to craft appropriate strategic responses to the ever changing political climates in their overseas countries of operation. It is the considered view of Rugman and Hodgets (1995), and Glynn (1993), that national political circumstances can affect the effectiveness of a firm's global strategies at the micro and macro levels. At the micro level, the value of a firm's investment can be significantly altered following broad changes in the political situation in a country. Unlike financial risks, the instruments for managing political risks associated with pursuing a global strategy are quite few. One pertinent option would be to take advantage of overseas opportunities only in countries where the political risk is relatively low. It therefore stands to reason that political constraints may hamper a firm's ability to do business in countries where the political risk is relatively high inspite of the valuable business opportunities that exists in such countries.

Table 1 below capture some of the political risk indices for determining a country's viability as a nondomestic market.

TABLE 1: INCREMENTS TO COUNTRY

Risk if Risk Factor Is:	Low	High
The Political economic environment		
1. Stability of the Political system	3	14
2. Imminent internal conflicts	0	14
3. External threats to stability	0	12
4. Degree of control of the economic system	5	9
5. Reliability of country as a trade partner	4	12
6. Constitutional guarantees	2	12
7. Effectiveness of public administration	3	12
8. Labour relations and social peace	3	15
Domestic economic conditions		
1. Size of the population	4	8
2. Per capita income	2	10
3. Economic growth over the past five years	2	7
4. Potential growth over the next three years	3	10
5. Inflation over the past two years	2	10
6. Availability of domestic capital markets to outsiders	3	7
7. Availability of high-quality local labour force	2	8
8. Possibility of employing foreign nationals	2	8
9. Availability of energy resources	2	14
10. Environmental pollution legal requirements	4	8
11. Transportation and communication infrastructure	2	14
External economic relations		
1. Import restrictions	2	10
2. Export restrictions	2	10
3. Restrictions on foreign investments	3	9
4. Freedom to set up or engage in partnerships	3	4
5. Legal protection for brands and products	3	9
6. Restriction on monetary transfers	2	8
7. Revaluation of currency in the past five years	2	7
8. Balance-of-payments situation	2	9
9. Drain on hard currency through energy imports	3	14
10. Financial standing	3	4
11. Restrictions on the exchange of local and foreign currencies	2	8

Source: Adapted from E. Dichtl and H.G. Koeglmayr (1986), *Country Risk Ratings*, *Management Review* 26 (4), pp 2-10. In Barney, J.B and Hesterly, S.W (2012), *Strategic Management and Competitive Strategy; Concepts and Cases, Fourth Edition*, Pearson Education Inc. New Jersey.

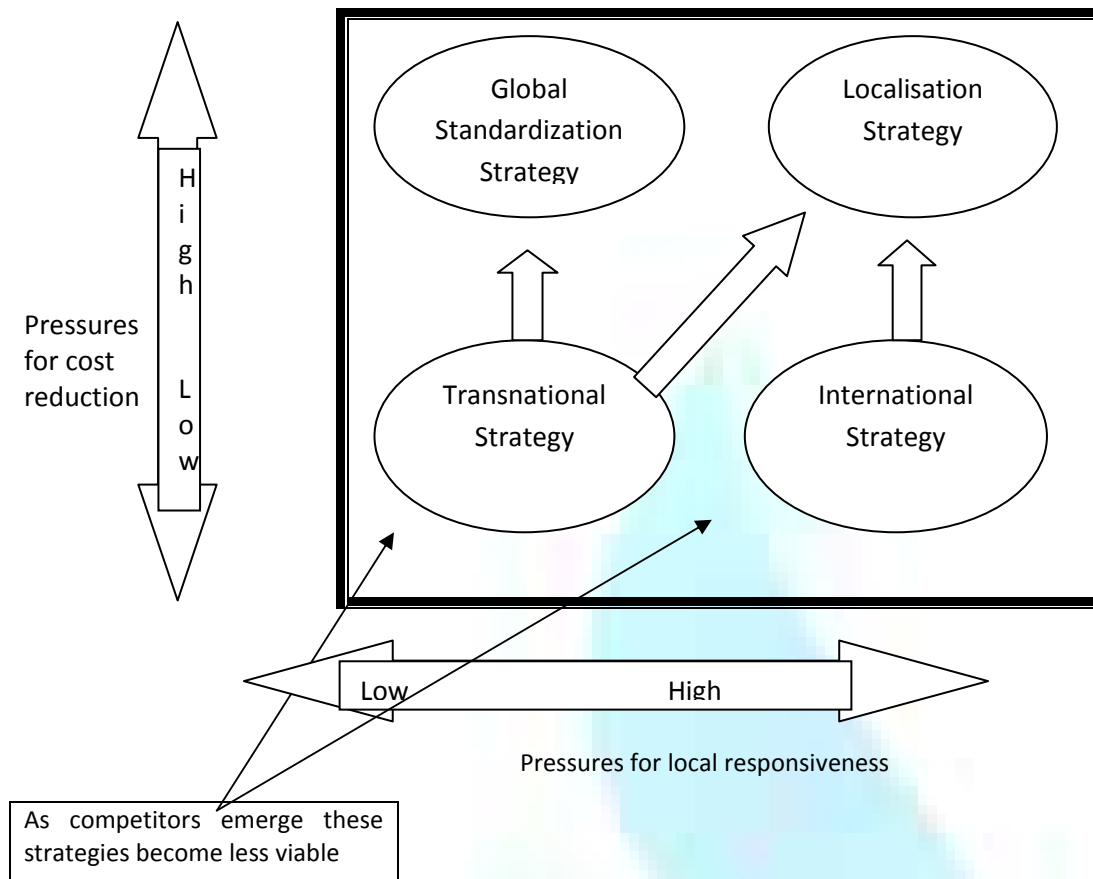
Barney and Hesterly (2012) suggest that another alternative to managing political risk is to consider each of the of political risks determinants as a point to be negotiated when the firm is entering into a new country market. They argued that globally oriented firms can sometimes use this bargaining power to negotiate conditions that reduce, or even neutralize some of the sources of political risk in a country. Nevertheless, a change of government or changes in laws can swiftly quash any negotiated agreements.

THE DYNAMICS OF CHOOSING A GLOBAL STRATEGY—DETERMINING FACTORS

In making global strategic choices, firms need to weigh the demand for local responsiveness against the pressure to exploit economies of scale for survival, growth, and profitability. When firms choose to satisfy local customer preferences it may not be possible for such firms to realise the full benefits from economies of scale and location economies. This is so, because it will not be possible for all national markets to be serviced from a single low-cost location, producing a globally standardized product, and marketing it worldwide to achieve economies of scale (Hill and Jones, 2009). Moreover, the use of differentiation strategies in order to satisfy the need for local responsiveness to the respective national market conditions significantly impairs the ability of firms to leverage on distinctive competencies on a global scale.

In view of the polarised pressures for cost reduction and local responsiveness, how do global firms strike a balance between these conflicting demands in order to make appropriate strategic choices? Bartlett and Ghoshal (1989) prescribe four main strategic postures such firms could choose from in order to achieve economies of scope— a global standardization strategy, a localisation strategy, a transnational strategy, and an international strategy. The appropriateness of each strategy will depend on the degree of pressures for cost reduction and local responsiveness. Figure 1 below shows the four global strategic choices firms can possibly implement and their changes with time.

FIGURE 4.1: FOUR BASIC STRATEGIES AND CHANGES OVER TIME



Source: Adapted from Hill and Jones (2009), *Theory of Strategic Management with Cases*, Eight Edition, Cengage Learning Academic Resource Centre

The four basic strategic choices globalized firms may select from include the following;

GLOBAL STANDARDIZATION STRATEGY

Global standardization strategy enable firms to take advantage of lower cost and location economies in production and marketing operations to improve profitability. Firms who pursue this strategy service their global market network from a few strategically located centres of production, marketing, as well as research and development. These companies strive to avoid duplication of functions and its associated costs as well as the customization of their product offerings. Instead, they prefer to produce and market a standardized product worldwide so that they derive the maximum benefits from economies of scale. And in order to gain competitive advantage, these companies are inclined to use their cost advantage to support aggressive pricing in world markets.

LOCALIZATION STRATEGY

Localization strategy seeks to increase profitability by exploiting differences in consumer tastes and preferences across national markets. This strategy is most beneficial when consumer tastes and preferences across national markets are significantly diverse, it is impracticable to offer globally standardized products, and in market conditions where cost pressures are not too intense. Product customization by companies to suit local conditions enhances the value of that product in the local market and improves profitability. However, customization limits the ability of the company to capture the cost reduction associated with mass producing a standardized product for global consumption, because it involves some duplication of functions and smaller production runs.

But, in situations where firms are able to charge premium prices for the added value and recover its costs, localisation strategy would be most appropriate. Also, localisation strategy would be preferred in circumstances where a firm's local responsiveness leads to substantial increase in local demand, resulting in the ability of the company to reduce costs through the attainment of some scale economies in the local market. Companies pursuing a localisation strategy still need to be efficient and whenever possible, capture some scale economies from their global reach (Hill and Jones, 2009).

As firms seek to achieve the economies of scope and better profitability, they continuously face a trade-off between the advantages of being responsive to local overseas market conditions and the advantages of integrating their global market network. Barney and Hesterly (2012.) is of the view that local responsiveness can help firms to be successful in addressing the local needs of overseas customers, thereby increasing demand for a firm's current products or services. Local responsiveness also provide a firm with a window to expose its traditional core competencies to new competitive situations, which enhances the likelihood that those core competencies will be improved or will be augmented by new core competencies. Nevertheless, it is vital that firms have a detailed knowledge of the local market conditions to be in good stead to leverage their traditional competencies in new ways in their nondomestic markets.

TRANSNATIONAL STRATEGY

Global standardization strategy will be most effective in market conditions where cost pressures are significant and demands for local responsiveness are not severe. Conversely, a localisation strategy will be appropriate when demands for local responsiveness is high, but cost pressures are relatively moderate or low. But in market conditions where a firm is simultaneously under pressures for cost reduction and local responsiveness, researchers have argued that under such situations, firms can simultaneously reap the benefits of both global standardization and localisation strategies by pursuing transnational strategy (Bartlett and Ghoshal, 1989). They opined that in contemporary global market conditions, competitive rivalry very strong. Therefore, to survive, companies must strive to be responsive to market demands for cost reductions and customization simultaneously. It is imperative for firms to achieve location and scale economies from global volume, transfer distinctive competencies and skills within the company and concurrently pay attention to pressures for customization in order to stay afloat.

Bartlett and Ghoshal (1989) further noted that in contemporary global corporations, distinctive competencies and skills is not strictly domiciled at the headquarters, but can evolve from any of the company's worldwide operations. According to Hill and Jones (2009), firms implementing a transnational strategy treat their global operation as an incorporated network of dispersed and interdependent resources and capabilities. In other words, transnational strategy is a business model that strives to simultaneously accomplish low costs, differentiates the product offering across geographic markets and fosters a flow of skills between different subsidiaries in the global network of operations.

INTERNATIONAL STRATEGY

The relative pressures for cost reduction and local responsiveness are the key factors a global firm would consider in deciding what global strategy to implement. However, some business environments are devoid of either market demands. Under such circumstances, implementing international strategy will be most fitting. Companies that implement international strategy offer products that serve universal needs, but because competitive rivalry is not as intense, their cost structure is not pressured for adjustments. Usually, their product development functions, such as R&D is located at the headquarters, but they establish clusters of manufacturing and marketing activities in selected countries or geographic regions to service their global market network.. They may however, undertake little localisation of product offering and marketing strategy. Ultimately, in most companies where international strategy is the business model, the head office retains tight control over marketing and product strategy.

THE DYNAMICS OF CHOOSING GLOBAL EXPANSION ENTRY STRATEGY

Corporate organisations in their bid to achieve economies of scope, location economies, and economies of scale expand their operations into nondomestic markets through several means. These overseas market entry means include; exporting, licensing, franchising, joint ventures, and wholly owned subsidiaries. The choice of entry strategy is determined by a number of strategic issues. Hills and Jones (2009) suggests the following strategic considerations:

THE NATURE OF DISTINCTIVE COMPETENCIES

When companies expand internationally in order to grow the returns from their differentiated product offerings by entering markets where indigenous competitors lack comparable products, the most advantageous entry mode for such companies will depend to some extent on the nature of their distinctive competencies. In general, distinctive competencies may be classified into technological and management know-how respectively. Technological abilities confer distinctive competencies that are susceptible to probable risks of expropriation in licensing or joint venture arrangements as means of accessing overseas markets. It is therefore advisable to set up a wholly-owned subsidiary in circumstances where proprietary technology would be a competitive resource.

However, in situations where the proprietary owner of a technological know-how could negotiate protective clauses to a joint venture agreement or licensing arrangement, these modes of entry may be considered. But, if the life span of a proprietary resource is about to run out, Hill (1992) advised that it is strategically expedient for the proprietary owner to license indigenous companies to deploy its technology as a way of elongating the economic benefits from its proprietary resource. The company may discourage competitors from venturing into developing competitive technologies by licensing its technology to potential competitors. By so doing, the competitive advantage of a firm may be strengthened as its ability to establish its technology as the dominant design in the industry is reinforced.

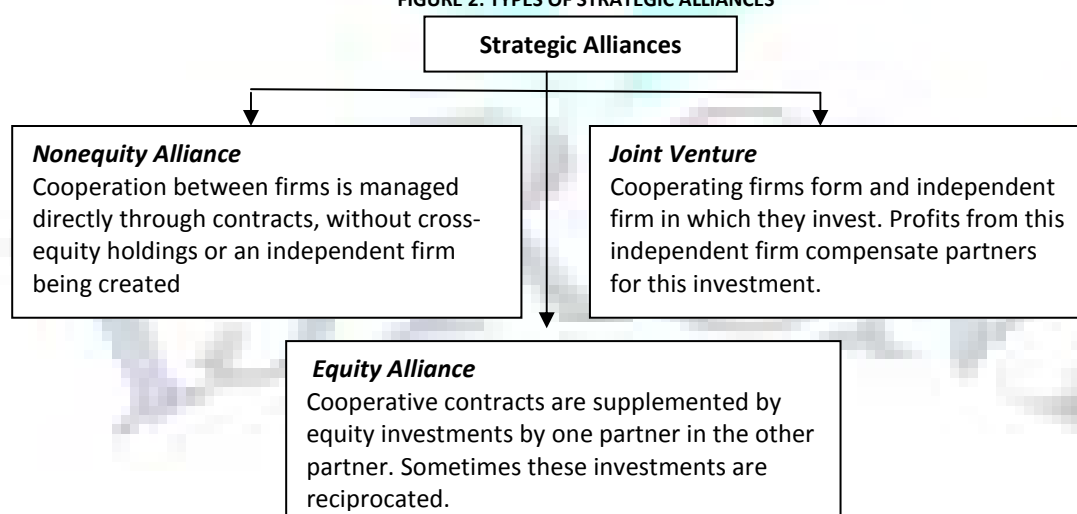
As for service companies, management know-how is the basis of their distinctive competencies. The risk of losing control of their brand name or trade mark to franchisees or joint venture partners is very minimal for these types of companies, because of the protection prevailing international regulations on trademarks offer to franchising firms. As a result, a lot of companies prefer franchising arrangements and to set up wholly owned subsidiaries to control franchisees within a particular country or region. The subsidiary may be by joint venture or wholly owned. However, most service companies prefer joint venture arrangements with local partners in a country or region, because of the ready political acceptance of local partners and the wealth of local knowledge they bring to bear on the business in setting up a controlling subsidiary.

PRESSURES FOR COST REDUCTION

When firms face greater pressure for cost reductions, the most probable strategic option for them is to pursue some combinations of exporting and wholly-owned subsidiaries. A company may be able to achieve substantial location economies by manufacturing in the location where factor conditions are optimal and then exporting to the rest of the world. The company may structure its operation such that it will export the finished product to its global network of marketing subsidiaries. Firms pursuing a combination of exporting and wholly-owned subsidiaries are able to maintain tight control over marketing operations, which may be necessary to coordinate a global dispersed value chain. In addition, tight control over a local operation enables the company to use the profits generated in one market to improve its competitive position in another market. It is for this reason that companies pursuing global standardization or transnational strategies prefer to establish wholly owned subsidiaries.

COOPERATION AND STRATEGY IMPLICATIONS

The last quarter century has experienced significant growth in collaboration or strategic alliances between independent companies. During this period, several large organisations have redefined their corporate borders through outsourcing and divestment of non-core activities and have stepped up alliance with other companies in order to extend their sphere of activities and access resources outside their immediate boundaries. Cooperation or strategic alliances are established whenever two or more independent organisations formally agree to cooperatively develop, manufacture, or sell products or services. In most cases, alliance partners are stakeholders of the same industry, and could be actual or potential competitors. There are several alluring economic reasons for strategic alliances by business organisations, especially at the international level. Barney and Hesterly (2012) broadly classified strategic alliances thus:

FIGURE 2: TYPES OF STRATEGIC ALLIANCES

Source: Barney and Hesterly (2012), *Strategic Management and Competitive Advantage Concepts and Cases*, Fourth Edition, Pearson Education Inc, New Jersey.

Strategically, cooperative agreements provide companies valuable springboards to exploit business opportunities and stretch the sphere of their operations in ways that they ordinarily would have not been able to do, except for the leeway provided by strategic alliance agreements. These alliance agreements also confers on cooperating firms much needed wherewithal to neutralise threats to the survival, growth, and profitability of cooperating companies. The strategic rationales for cooperative agreements include the following:

IT BROADENS CURRENT OPERATIONS SCOPE

Firms in a cooperative alliance are able to improve the span of their current operations by taking advantage of economies of scale. Their capacity to expand their current market with their existing products or service is made possible by cooperative agreements, resulting in reduction in per unit cost and improvement in operational profits. Doubtlessly, the firms in each industry differ in their respective resource capabilities. Therefore, disadvantaged firms in terms of specific resource capabilities could leverage on the resource strengths of alliance partners to improve their current performance. Similarly, firms engaged in strategic alliances could have the fixed costs and risks relating to new product development or processes significantly reduced, because all alliance partners share in the cost and risks involved.

IT FOSTERS A CONDUCIVE INDUSTRY COMPETITIVE CLIMATE

Product standards, which assure consumers of product quality and product integrity, are established by key industry stakeholding firms through cooperative alliances. Evidently, the survival, growth and development of any industry is consumer dependent. Therefore, cooperative agreements help to streamline the boundaries of product quality that will foster industry patronage. This is mostly pertinent in technology industries or network industries where industry prescribed standards stipulate benchmarks for technology-based products in order to engender consumer confidence and sustain patronage. In circumstances where increasing return to scale is vital for competitiveness, strategic alliances provide firms in the industry a round table to evaluate and adopt a technology that can be turned into viable products.

MARKET ENTRY AND EXIT ENHANCEMENT

Entering a new industry is quite an enormous competitive task for business organisations. It requires relevant skills, abilities, and products to make any meaningful inroad into an industry. Strategic alliances provide aspiring firms a leeway to enter a new industry by reducing or avoiding the high costs associated with developing the much needed skills, capabilities, and products to enter into a new industry. Strategic Alliances are also valuable as a means to entering into new industries or markets, even when the requisite skills in these industries are not as complex and difficult to learn. In a bid to be cost effective, firms would prefer strategic cooperation in circumstances where it is relatively cost effective to do so than to develop the vital skills and capabilities to enter a new industry or market.

Also, a strategic alliance with a prospective acquiring company enables a firm to have full economic value for its tangible assets and capabilities when it becomes strategically vital that it exits an industry or segment. An alliance motivated by this reason affords the exiting firm the opportunity to showcase the value of its assets and capabilities, which will result in the appropriate pricing of the assets; thereby facilitating the withdrawal of the firm from the industry or industry segment (Narda & Bartlett, 1990).

UNCERTAINTY MANAGEMENT

Global centric firms occasionally have to contend with managing investment uncertainty. On such occasions, strategic alliances could be used as a tool to investment uncertainty management. In order to exploit economic opportunities, firms implementing global strategy need to have the flexibility to move quickly into a particular market or industry as soon as the consequences of a strategic choice are extensively evaluated. Thus, strategic alliances enable a firm to avoid the cost involved in full scale entry of a particular market or industry by providing a window for a point of entry (Burgers, Hill & Kim, 1993). It therefore follows that firms can use a joint venture as a strategic option under conditions of uncertainty to retain the capacity to gain inroads into a market or industry to exploit available opportunities. Moreover, valuable information to evaluate full scale entry into a market may be sourced by firm through initial joint venture arrangements.

SUMMARY OF FINDINGS

It is evident that when firms expand operations into foreign markets they seek to explore economies of scope and achieve scale economies in order to survive, grow, and improve their profit performance. And to be effective at this, it is imperative that the strategic choices they make strike a balance between the pressures for cost effectiveness and the demands for overseas customer responsiveness. Of course, the intensity of these pressures significantly determines which of the four global strategic options a firm will implement.

Added to this, is that strategic alliances offer significant benefits to the cooperating partners. It offers a leeway for firms to enter and exit foreign markets, broadens their operational scope, fosters a conducive competitive industry atmosphere, as well as the provision of a strategic means for the management of investment uncertainties. Nevertheless, empirical evidences show that the failure rate for international strategic alliances is quite high. Several alliances run into serious managerial and financial troubles within a few years of their formation.

CONCLUSION

The dynamics of pursuing a global strategy involves several strategic options with their respective benefits and drawbacks. Therefore, the exigencies of the pressures for cost reduction and responsiveness to domestic customer expectations becomes the basis for global strategic choices. The strategic options available to global centric companies include global product standardization, localization, transnational, and international strategies. Firms undertake the pursuit of global strategies in order to exploit the economies of scope which the significant reduction in international barriers to trade and investment provides. This development has also provided a leeway for firms to enter into cooperative relationships with companies in their nondomestic markets for a number of strategic reasons, which includes the acquisition of new technological know-how, a means of entering and exiting foreign markets at minimal cost and risks, as well as management of uncertainty. However, studies have indicated that inspite of the tremendous benefits strategic alliances provide companies; the failure rate is quite startling.

RECOMMENDATIONS

In view of the foregoing, a number of prescriptions for strategic alliances to be successful are proffered. The success of a strategic alliance appears to be determined by three main factors—partner selection, alliance structure and the manner of alliance management. In selecting alliance partners, firms should search out for partners who are both willing and able to assist the company achieve its strategic goals, such as gaining access to new markets, sharing the costs and risks of new product development, or gaining access to critical core competencies. In addition, a good partner must align itself with the firm's expectations from the cooperation arrangement and be most unlikely to steal the company's technological competencies or know-how.

To ensure success, the terms and conditions of the alliance should incorporate provisions which ensures that the core competencies of the firm is well protected; by entrenching clauses that will foster ethical adherence to the cooperative agreement, such as provisions that scuttle leakage of classified technological information, agreements to swap skills and technologies coveted by alliance partners, and extracting a significant credible commitment from cooperating partners.

Further to this, alliance partners must be sensitive to the underlying rationale for the management styles of each cooperating partner firm. Since culture is a principal factor that determines management styles, it is expected that cooperating partners must endeavour to appreciate differences in managerial styles with a view to making necessary adjustments. It is equally important that partners build mutual trust and demonstrate commitment to learning from each other. The value of knowledge gained from an alliance will become more beneficial when it permeates all organisational stratum.

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GROWTH OF INDIAN FINANCIAL SECTOR: POLICIES AND PERFORMANCE ANALYSIS

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ABSTRACT

The Indian Financial Sector has witnessed substantial structural transformation due to changes in financial infrastructure, regulatory framework and policy reforms. This study intends to analyze the impact of such a financial liberalization on the banking sector, government securities market and foreign exchange market and ascertain the achievements and shortfalls. The banking sector performance is measured as progress of commercial banking reflected in significant improvement in capital adequacy, asset quality, competition and efficiency. Government securities market performance indicators are taken to be outstanding stock of Central and State government securities and share of market borrowings in financing Fiscal Deficit and its annual turnover. Foreign exchange market efficiency is measured by external value of Rupee and India's foreign exchange reserves. The findings of the present study suggests that despite consistent improvement in competitiveness and efficiency, there are certain areas which have emerged as issues for the future of the financial sector like much needed private ownership in private sector banks, treatment of insolvent banks, inflation and increasing nonperforming assets.

KEYWORDS

Financial liberalization, banking sector, foreign exchange market.

JEL CLASSIFICATION

G1

INTRODUCTION

The growth and development of an economy largely depends on the level of finance pumped into the system so that it supports and activates higher levels of investment. A healthy financial system is crucial to the achievement of a market driven competitive economy. Indian Financial sector broadly comprises of Banking sector, Debt market and Foreign Exchange market. These include scheduled commercial banks (both private and public), cooperative banks, regional rural banks, developmental banks and Non Banking Finance Companies; government securities and corporate debt; foreign exchange currency instruments like currency swaps, options and forward rate agreements. India has witnessed a series of financial sector reforms since 1990s which has marked a drastic transformation in the structure, policies, infrastructure and regulatory framework of the three sub sectors. Prior to financial liberalization, these sub sectors were governed by a quantum of complex regulations and excessive controls which hampered the productivity and efficiency of the whole economy. Therefore, to correct such an inflexible and slackened financial sector and to promote autonomous functionality, two Committees on the Financial System (Narsimham Committee), firstly in 1991 and secondly in 1998 were formed to introduce the reform process.

RESEARCH QUESTIONS

What is the extent of the improvement in the performance of the banking sector, debt market and foreign exchange market in the last decade? How has the reform process changed the structure and working of the financial sector? What are the challenges and the issues faced by the Indian financial system? What are the possible solutions and future course of action required for policy makers to arrest the problems discussed?

SURVEY OF LITERATURE**MEANING AND RATIONALE OF FINANCIAL SECTOR REFORMS**

Financial Sector Reforms refer to the changes in the policies and regulations that govern the working of Banks, Debt market and Foreign exchange market with the objective of making the system flexible, diverse, profitable and competitive. Since the initiation of reform process, India has resolved to achieve standards of international best practices on one hand and underlying institutional and operational excellence on the other hand. (Reddy, 2002) Financial Sector Reforms have been focused on three broad areas – institutions, competition, and regulation. (Reddy, 2000) Although the growth record in 1990s i.e. post reform period has not been much significantly higher than the pre reform period, but 1980s growth was unsustainable due to external debt. Thus growth in the post reform period was stable despite of East Asian crisis. (Ahluwalia, 2002)

Poverty has declined significantly in the post reform period as compared to 1980s. (Ravallion and Datt) The growth process slowed down after accelerating in the second half of 1990s because of the slowdown due to trade policy reforms. (Nambiar, 1999; Chaudhari, 2002) Despite several changes in the government, the financial sector reforms have never been reversed in the past two decades because reforms in India followed a consensus driven pattern of sequenced liberalization across the sectors. (Ahluwalia, 2002). The results of the studies which have tried to analyze the policies and performance have been similar. M.S. Ahluwalia, 2000; Hanson and Kathuria, 1999; R. Mohan, 2004; Rangrajan, 1998; Tarapore, 2002; Y.V.Reddy, 2003; Chaudhari, 2002 have significantly contributed to the reform analysis. The studies show positive aspects of the reform process, but since financial sector are dynamic so there is an urgent need to estimate the shortcomings of the fairly improving financial system.

DATA ANALYSIS**BANKING SECTOR**

There has been considerable improvement in the performance indicators of the banks taken to be progress of commercial banking, capital positioning and asset quality, level of Non Performing Loans and other efficiency indicators like income, profit and expenditure of banks. From the table, it is evident that Indian banking system has grown in terms of expansion of branches, increase in deposits and credit. The population per branch bank has lowered down to around 12,000 which are quite nearer to that of developed countries population per bank, being around 10,000. This has been a step to lower the intermediation costs. There has been a consistent increase in the level of deposits and credit per capita, which is a measure of financial depth in the economy. The rural and semi urban branches have also risen showing the financial inclusion of all the regions of the economy. But the priority sector advances have fallen which calls for an immediate action on the part of supervisory authority since it seems to be a constraint in the expansion of the important sectors like agriculture and small scale industries.

TABLE 1: PROGRESS OF COMMERCIAL BANKING IN INDIA

Indicators	June 1980	March 1991	March 1995	March 2000	March 2005	March 2011	March 2012
1. No. of Commercial Banks	154	272	284	298	284	165	169
2. No. of Bank Offices of which rural & semi urban offices	34,594 23,227	60,570 46,550	64,234 46,602	67,868 47,693	68,355 47,485	90,263 56,526	98,330 62,153
3. Population per office('000s)	16	14	15	15	16	13.4	12.3
4. Per Capita Deposit(Rs.)	738	2,368	4,242	8,542	16,091	43,034	48,732
5. Per Capita Credit (Rs.)	457	1,434	2,320	4,555	10,440	32,574	38,033
6. Priority Sector Advances@ (percent)	37	39	33.7	35.4	38.1	34.5	32.9
7. Deposits(per cent of National Income)	36	48	48	53.5	68.5	82.3	81.1

@: Share of Priority Sector Advances in Total Non Food Credit of Scheduled Commercial Bank.

Source: Reserve Bank of India.

CAPITAL ADEQUACY & ASSET QUALITY

The overall capital position of the commercial banks has shown a great improvement in the last decade since reform process. To maintain CRAR (a ratio of bank's capital to its risk) at 8 percent initially and subsequently 9 percent, prudential norms were initiated to safeguard the position of banks. At the end of March 2012, there was no commercial bank operating at less than 9 percent CRAR. The corresponding figure was 1 in March 2010 and 54 out of 92 banks¹ at the end of March 1996. The risk-weighted assets ratio system as the basis of assessment of capital adequacy takes into account the element of risk in the various types of assets in bank's balance sheet and off balance sheet exposures. Recently, Reserve Bank of India has directed all Regional Rural Banks to follow the minimum 9 per cent capital adequacy rule with effect from March 2014 which is a move to strengthen their capital base.

TABLE 2: DISTRIBUTION OF COMMERCIAL BANKS ACCORDING TO RISK-WEIGHTED CAPITAL ADEQUACY (Number of Banks)

Year	Below 4 p.c.	Between 4-9 p.c.*	Between 9-10 percent@	Above 10 percent	Total
1995-96	8	9	33	42	92
2001-02	1	2	7	81	91
2007-08	0	0	2	77	79
2008-09	0	0	0	80	80
2009-10	1	0	0	80	81
2010-11	0	0	0	81	81
2011-12	0	0	1	86	87

*: Relates to 4-8 per cent before 1999-2000, @: Relates to 8-10 per cent before 1999-2000.

Source: Reserve Bank of India.

In the post reform period, banks have experienced substantial improvement in the asset quality. There has been a consistent decline in Non Performing Loans (NPLs) as ratio of both total advances and assets since 2005-06, but looking at the current figures of 2010-11 and 2011-12, it will not be wrong to say that Scheduled Commercial Banks and Public Sector Banks have shown a gradual rise in both gross and net terms. (Table 3).

TABLE 3: NPL OF SCHEDULED COMMERCIAL BANKS (all figures in per cent)

	Gross NPL/ advances	Gross NPL/ Assets	Net NPL/advances	Net NPL/Assets
Scheduled Commercial Banks				
2005-06	3.3	1.8	1.2	0.7
2006-07	2.5	1.5	1.0	0.6
2007-08	2.3	1.3	1.0	0.6
2008-09	2.3	1.3	1.1	0.6
2009-10	2.4	1.4	1.1	0.6
2010-11	2.5	1.4	1.1	0.6
2011-12	3.1	1.7	1.4	0.8
Public Sector Banks				
2005-06	3.6	2.1	1.3	0.7
2006-07	2.7	1.6	1.1	0.6
2007-08	2.2	1.3	1.0	0.6
2008-09	2.0	1.2	0.9	0.6
2009-10	2.2	1.3	1.1	0.7
2010-11	2.4	1.4	1.2	0.7
2011-12	3.3	1.9	1.7	1.0
Old Private Sector Banks				
2005-06	4.4	2.5	1.7	0.9
2006-07	3.1	1.8	1.0	0.6
2007-08	2.3	1.3	0.7	0.4
2008-09	2.4	1.3	0.9	0.5
2009-10	2.3	1.3	0.8	0.5
2010-11	1.9	1.2	0.5	0.3
2011-12	1.8	1.1	0.6	0.4
New Private Sector Banks				
2005-06	1.7	1.0	0.8	0.4
2006-07	1.9	1.1	1.0	0.5
2007-08	2.5	1.4	1.2	0.7
2008-09	3.1	1.7	1.4	0.8
2009-10	2.9	1.6	1.1	0.6
2010-11	2.7	1.3	0.6	0.3
2011-12	2.2	1.1	0.5	0.2
Foreign banks in India				
2005-06	1.9	1.0	0.8	0.4
2006-07	1.8	0.8	0.7	0.3
2007-08	1.8	0.8	0.8	0.3
2008-09	3.8	1.5	1.8	0.7
2009-10	4.3	1.6	1.8	0.7
2010-11	2.5	1.0	0.6	0.3
2011-12	2.6	1.1	0.6	0.2

Source: Reserve Bank of India

The recovery performance of the private sector banks has been better than the public sector banks in both gross and net NPL terms. However, the best recovery performance and lowest NPL levels has been shown by the Foreign banks among all the bank groups. This raises a question mark on the performance of SCBs and PSBs because the NPL ratios in 2011-12 have been back to what it was in 2005-06.

The Scheduled Commercial Banks have shown consistent increase in the income and net profit levels and this increase has been proportionately higher than that of the expenditure levels, which is an efficiency indicator of the banking sector. There has been a reduction in the operating expenditure of all the banks because of up gradation of technology and resulting lesser need of manpower.

TABLE 4: EFFICIENCY INDICATORS OF BANKS (Amt. in billions)

	2010-11	2011-12
Income	5,712	7,408
Expenditure	5,009	6,591
Operating Profit	1,491	1,732
Net Profit	703	817

Source: Reserve Bank of India

DEBT MARKET

The debt market, which is central to infrastructure financing, broadly comprises of three segments – Government securities market which is the most dominant and oldest; PSU bond market which developed in late 80s; corporate bond market, which is growing fast since liberalization. Fiscal deficit of the central government has risen substantially in the past decade. This is being reflected in the outstanding stocks of both Centre and State Government debt each showing a sharp rise since the reform process (Table 5). A major proportion of Fiscal Deficit is being financed by market borrowings. From around 40 per cent in 2004-05, share of net market borrowings in financing fiscal deficit of the central government has increased to 92 per cent in 2011-12 (Table 6)

TABLE 5: OUTSTANDING STOCK OF CENTRAL AND STATE GOVERNMENT SECURITIES (in crores)

	Centre	States
2003	6,742	1,330
2007	11,474	2,727
2008	13,837	2,988
2009	15,568	4,026
2010	18,342	5,169
2011	21,569	6,058
2012	25,933	7,424

TABLE 6: SHARE OF MARKET BORROWING IN FINANCING OF FISCAL DEFICIT OF CENTRAL GOVERNMENT (Per cent)

	Market Borrowing	Other Sources
2004-05	40.4	9.6
2005-06	72.5	27.5
2006-07	80.5	19.5
2007-08	102.9	-2.9
2008-09	73.2	26.8
2009-10	94.2	5.8
2010-11	87.3	12.7
2011-12	92.7	7.3

Source: Reserve Bank of India

TABLE 7: WEIGHTED AVERAGE YIELD AND MATURITY OF OUTSTANDING STOCK

Years	Weighted Average Yield (Per cent)	Weighted Average Maturity (In Years)	Weighted Average Maturity of Outstanding Stock (In Years)
2003-04	5.71	14.94	9.78
2004-05	6.11	14.13	9.63
2005-06	7.34	16.9	9.92
2006-07	7.89	14.72	9.97
2007-08	8.12	14.9	10.59
2008-09	7.69	13.81	10.45
2009-10	7.23	11.16	9.67
2010-11	7.92	11.62	6.64
2011-12	8.57	12.56	9.66

Source: Reserve Bank of India

The cost of borrowing has been consistently rising in the past years indicating inefficiency of the government securities market. The weighted average yield has sharply increased from 5.71 per cent in 2003-04 to 8.57 per cent in 2011-12. This is in fact a matter of concern for the financing of debt by government securities.

FOREIGN EXCHANGE MARKET

The reform process has led to efficient working of the instruments as well as variety of players in the foreign exchange market. Despite fluctuations, daily average turnover in the Indian Foreign Exchange market has shown a general increase. A recent survey by the Bank of International Settlements on the foreign exchange market turnover in which 53 countries participated reveals that annual turnover of India is 0.5 % of the total forex turnover of 53 countries, being US \$ 31 billion. Full Capital Account Convertibility has enabled transactions in foreign currency and covered up risks faced by corporate houses in such transactions.

There has been bulk of foreign currency inflow which reflects the flexibility of financial sector (Table 8) Large accumulation of foreign exchange reserves is the reflection of the market efficiency. The major sources of accumulation of reserves have been various non debt creating inflows and increase in foreign portfolio investment. Such a reserve accumulation will prove to be self-insurance resource in financial crisis scenario for the economy apart from financing its external debt servicing obligations.

TABLE 8: INDIA'S FOREIGN EXCHANGE RESERVES

Year	Gold	SDRs	Foreign Currency Assets	Total	Reserve Position in IMF
Mar-03	3,534	4	71,890	75,428	672
Mar-04	4,198	2	107,448	111,648	1,131
Mar-05	4,500	5	135,571	140,076	1,438
Mar-06	5,755	3	145,108	150,866	756
Mar-07	6,784	2	191,924	198,710	469
Mar-08	10,039	18	299,230	309,287	436
Mar-09	9,577	1	241,426	251,004	981
Mar-10	17,986	5,006	254,685	277,677	1,380
Mar-11	22,972	4,569	274,330	301,871	2,947
Mar-12	27,023	4,469	260,069	291,561	2,836
Mar-13	25,692	4,328	259,726	289,746	2,301

Source: Reserve Bank of India

FINDINGS AND DISCUSSION

Looking at the past years' performance indicators and comparing them over the years indicates that reform process has undoubtedly enhanced the efficiency and productivity of the financial sector. But still certain areas of concern arise as the challenges which need to be addressed in order to bring Indian Financial Sector at par international best practices. In this section, such issues and due course of action required to arrest the problems is discussed.

BANKING SECTOR

The share of government in Public Sector Banks needs to be brought down in order to promote efficiency and competence among banks as well as reduce the burden on government funds. Currently, the government's ownership in PSBs ranges from 55 per cent to 80 per cent. To ensure expansion of PSBs, they require better quality capital base to the extent of Rs. 4.15 trillion as per Basel III norms. At the current shareholding levels, the government is responsible to inject capital of Rs. 900 million. If the government brings down its share to 51 per cent, then its responsibility reduces to Rs. 660 billion which will supplement government's fiscal consolidation. Further it will induce larger share of private ownership and a considerable share of capital could be raised from market.

There has been large stock of Non Performing Loans piling up year after year in the banking system which is an indicator of operational inefficiency. To arrest this problem, there is a need to introduce appropriate institutional, legal and risk management arrangements. Banks need to exercise pro-active behavior and follow settlements procedure wherever required.

Another concern arising in the present banking system is the treatment of insolvent banks. Whether they should be merged with healthy banks or should be separately sold out is still a matter of debate. Over 70 per cent of bank depositors are small depositors. Thus, it's necessary to safeguard their interests and trust. Advance regulation and supervision is mandatory to prevent insolvency and formulating policy measures must be the concern of regulatory authority to tackle insolvent banks.

Recently, foreign banks have been facing issues in subsidiary operations norms laid down by RBI. It includes requirements of guarantees from the parent and restriction on dividend payout. Foreign banks choosing to set up subsidiaries will have to maintain a net worth of Rs. 500 crores. As on May 31, 2013, there are 43 foreign banks in India operating through a network of 333 branches. The share of foreign banks in the total assets of the banking sector in India is just 7 per cent, much less compared to other jurisdictions.

Although banks have achieved much financial deepening but Indian banks still need to expand their business to important productive sectors of the economy. The domestic credit provided by Indian banks is quite low as compared to other emerging market economies (EMEs) and advanced economies (Table 9).

TABLE 9: DOMESTIC CREDIT PROVIDED BY BANKING SECTOR

Country	2000	2005	2008	2009	2010	2011
Brazil	71.9	74.5	96.9	95.8	95.2	98.3
China	119.7	134.3	120.8	145.1	146.3	145.5
India	51.4	58.4	67.7	70.4	73.0	75
Japan	304.7	317.6	302.4	329.8	329.0	341
Russia	24.9	22.1	23.9	33.7	38.4	39.6
South Africa	152.5	178.5	173.8	184.2	182.4	167
UK	130.2	161.9	213.5	229.2	222.6	213.8
US	198.4	225.4	222.0	234.9	232.9	233.3
World	158.9	162.1	154.7	169.1	167.4	165.3

Source: Reserve Bank of India

The global financial crisis in 2007-08 severely affected the Indian economy. It is reflected in lower levels of Savings and Investment levels and high domestic inflation. The world average inflation of years 2008 to 2012 was 4.2 per cent; while in India the corresponding figure was much higher being 7.6 per cent (Table 10). This is an evidence of failure of monetary management in the economy.

TABLE 10: INDIA'S INFLATION RATE COMPARED TO WORLD

Region	2008	2009	2010	2011	2012	Average (2008 to 2012)
World	6	2.4	3.7	4.9	4.0	4.2
EDEs	9.3	5.1	6.1	7.2	6.1	6.8
India	8.1	3.8	9.6	8.9	7.6	7.6

Source: Reserve Bank of India

DEBT MARKET

Indian debt market consists of government debt, private debt issues and corporate bond market. Although primary issues of private sector are quite large, but still government continues to be the large borrower. One of the major issues facing debt market is the pressing need of liquidity deepening to enable smooth functioning of the debt market. The G-sec market needs to raise debt from non bank participants such as insurance companies, pension and provident funds. Therefore second major issue is to develop efficient risk management systems. Trading volume in government bonds have decreased to almost half of its volume in 2013 due to uncertain outlook on yields as the US Federal Reserve tapering, higher government borrowing and a possible interest rate increase by the RBI weighs down investor sentiments.

While India as an advanced G-sec market, its corporate debt market is relatively under developed. The size of the Indian corporate bond market at 11.8 per cent of GDP is lower than the average for Emerging East Asia and for Japan at 17.2 per cent and 19.8 per cent respectively. A well developed infrastructure is essential for economy's growth prospects. India's infrastructure funding requires around 10 per cent of GDP annually. For this a robust corporate bond market is required which diversifies risk, enhances financial stability and matches risk return preferences of the borrowers. Since the infrastructure funding is long term and large gestation periods, insurance, provident funds (PFs) and pension companies are best suited for such kind of investments. But the existing mandate of most of these institutions doesn't permit large investments in corporate bonds which needs a correction. Apart from these, lack of transparency and suitable framework for market making are the issues faced by debt market. Another challenge is opening up of infrastructure debt segment to Foreign Institutional Investors. In this

regard, obstacles faced in developing deep and liquid market are limited investor base, limited number of issuers, and preference of bank finance over bond finance etc.

FOREIGN EXCHANGE MARKET

The last decade saw unprecedented expansion of the forex market in terms of both innovative new products as well as the scale of activity. But the onset of global financial crisis post Lehman episode caused large capital outflows leading to all time low for the Indian rupee. Since then Indian forex market is in a state of turmoil with risk aversion and uncertainties like other global financial markets.

The exchange rate dynamics with foreign currencies is mainly driven by capital flows. The economy is driven by Savings-Investment gap and persistent Current Account Deficits. Thus capital inflows are crucial for the financial health of economy. In addition to this, risk-bearing capacity of the global investors and global liquidity conditions drive the magnitude and direction of capital flows. Due to these factors, the Indian rupee has been showing high volatility which emerges to be a major challenge faced by forex market. Reserve Bank of India needs to intervene from time to time to manage excess volatility and restore orderly conditions.

Second issue in the working of forex market is lack of competent trading and settlement infrastructure. The inadequacies include various practical issues like standardization, central clearing, exchange or electronic platform trading. To stimulate participation of foreign investors in forex product transactions, RBI needs to arrest this problem by initiating better prudential regulatory norms.

Internalization of the Indian National Rupee (INR) has emerged as a recent issue in forex market. As economy is vastly integrating with the global economy, both in terms of trade as well as capital A/C and the growth prospects, the Indian economy is capturing instruments world-wide. The global investor wants to take share in the growth story of India either by direct investment in forex market or equity/debt market. But INR is yet to catch the fancy of market participants on the sustained basis.

FINANCIAL SYSTEM AS A WHOLE

For the overall growth and development of the economy, lack of Financial Inclusion has emerged to be a major obstacle. Without being inclusive, financial and economic stability cannot be sustainable. Financial inclusion means vulnerable groups like weaker sections and low income people could have easy access to required financial products and services at an affordable cost and in a transparent manner. The knowledge about risk and return is vital for market participation on the part of customers. Financial literacy involves dissemination of such knowledge of financial products to the users and suppliers of the products. Thus it would help in controlling risk and systemic stability. A huge portion of population relies on the informal channels of credit and investment. Such people are unaware of formal channels of finance and get easily exploited. Chit fund scam is an example of such a fraud which fools poor people of their hard earned savings. Such reliance indicates failure of formal financial system to reach out to such groups and provide them service and satisfaction. Hence there is a need of a structural transition so as to meet the objectives of financial inclusion and financial literacy.

Issue of risk management continues to be at the central place while formulating policies. There is a need to develop risk management acumen that calls for higher levels of transparency, structural integrity and operational control. Effective tools to arrest internal fraud and protect clients and accounts are lacking. The operational structure needs to be redefined in such a way that it addresses systemic and customer oriented risks, potential conflicts of interest, financial valuation and market volatility. In the support of this argument, strict adherence to KYC norms should be the focus so as to prevent system from fragility. As it's well known that customer is the king, so to survive in the market customer needs to be satisfied and protected against information and transaction security.

The most serious challenge faced by the present financial system is regulation. India has over 60 Acts and multiple rules or regulations that govern the financial system. Many laws have an emphasis on banning certain activities rather than providing a regulatory structure for it. Today the financial system is very different than what it used to be half a century back. For example, The RBI Act, the Insurance Act and the Securities Contract Regulation Act were legislated long back and there is serious need of revising its legal foundations in order to keep pace with the dynamic scenario. There is due to lack of good corporate governance and strong control in the hands of authority. The regulation and supervision is carried out by different regulating authorities in India. The Reserve Bank of India regulates the major part of the financial system. The supervision of Commercial Banks, Urban Cooperative Banks and Non Banking Finance Companies is carried out by RBI. While the supervision of Regional Rural Banks and Cooperative Banks is carried out by National Bank of Agriculture and Rural Development (NABARD). Whereas RBI and NABARD are concerned with banking functions of the cooperatives, management control rests with State or Central Government. This dual control adversely affects the supervision of cooperative banks. Multiple regulators offer different standards of regulation which leads to conflicts between them and severely affects market developments. In addition to this, there is no regulatory authority for chit funds and other such schemes. Due to these issues, the present financial regulatory architecture needs immediate correction.

Another issue faced by Indian financial system is the compliance of International Financial Reporting Standards to be implemented in the near future. Globalization of financial markets demands introduction of globally accepted high quality international standards. Financial statements prepared in different countries according to different set of rules, each with its own interpretation for the same transaction, make it difficult to compare and analyze across nations. Banks need to upgrade their infrastructure (IT and human resources) to face the complexities of IFRS. The major technical issues would include changes in classification and measurement of financial assets, business model followed by banks, application of fair values for transactions etc.

CONCLUSION

India has managed to stand the effects of global financial crisis due to robust prudential norms and supervisory framework, but to fight against such vulnerabilities and other issues discussed, India needs to adhere to second generation financial sector reforms whose major components should be :

1. Adherence to international standards, especially implementing G-20 commitments.
2. Developmental measures.
3. Stability measures

Regulation is instrumental in addressing market failures and related incompetence. It comprises of nine tasks: consumer protection, micro prudential regulation, resolution, capital controls, systemic risk, development and distribution, monetary policy, public debt management and foundations of contract and property. Therefore to tame such problems, there is a need to simplify the numerous laws governing the financial sector and solve the problem of multiple regulatory set ups across the sector. Against this backdrop, the Financial Sector Legislative Reform Commission (FSLRC), headed by Justice B.N. Srikrishna, was set up by Ministry of Finance in March 2011. FSLRC presented its Report to the Finance Minister in March 2013. The important Recommendations of FSLRC are:

1. All banking and payment system to be regulated by Reserve Bank of India (RBI).
2. The roles of the Securities & Exchange Board of India (SEBI), Forward Markets Commission (FMC), Insurance Regulatory and Development Authority (IRDA) and Pension Fund Regulatory and Development Authority (PFRDA) to be merged into a single regulator called the " Unified Financial Agency " (UFA).
3. The continuation of the Financial Stability Development Council (FSDC) with the mandate to monitor and address systemic risk.

To sum up, there is a need to focus on developmental measures which are:

1. Clarifying and strengthening the monetary policy framework.
2. Strengthening banking structure through new entry, branch expansion, encouraging new varieties of banks, and moving foreign banks into better regulated organizational forms.
3. Broadening and deepening financial markets and increasing their liquidity and resilience so that they can help allocate and absorb the risks entailed in financing India's growth.
4. Expanding access to finance for small and medium enterprises, the unorganized sector, the poor, and remote and underserved areas of the country through technology, new business practices, and new organizational structures; that is, we need financial inclusion.
5. Improving the system's ability to deal with corporate distress and financial institution distress by strengthening real and financial restructuring as well as debt recovery.

Although these changes will take some years to come into action but such a regulatory architecture will facilitate fast recovery and better financial system serving India well in coming years.

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A STUDY ON HRD PRACTICES IN BANKING SECTOR

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ABSTRACT

Banks have to understand that the capital and technology-considered to be the most important pillars of banking are replicable, but not human capital, which needs to be viewed as a valuable resource for the achievement of competitive advantage. India's banking system is to transform itself from being a domestic one to the global level. The most important need in this service industry is naturally the HRD. During the early phase of banking development in India after independence, opportunities for employment of the educated man-power were relatively limited.

KEYWORDS

staff meetings, training and development, brain storming, quality circles.

INTRODUCTION

The primary apprehension of the bank should be to bring in proper integration of human resource management strategies with the business strategies. It should foster cohesive team work and create commitment to improve the efficiency of its human capital. More than operational skills today are banking call for these 'soft skills' to attend the needs and requirement of the customers at the counter.

Banks have to understand that the capital and technology-considered to be the most important pillars of banking are replicable, but not human capital, which needs to be viewed as a valuable resource for the achievement of competitive advantage. India's banking system is to transform itself from being a domestic one to the global level. To take up this industry to the heights of international excellence requires combination of new technologies, better processes of credit and risk appraisal, treasury management, product diversification, internal control, external regulations and human resources at the most.

The main challenges faced by Banks in our country are the role played by financial instrumentation in different phases of business cycle, the emerging compulsions of the new prudential norms and benchmarking the Indian financial system against international standards and best practices. There is a need for introduction of new technology, skill building and intellectual capital formation.

The most important need in this service industry is naturally the HRD. During the early phase of banking development in India after independence, opportunities for employment of the educated man-power were relatively limited. This sector was the preferred employer for the educated persons in the country in addition to civil services. In recent years, this position has changed dramatically.

STRUCTURE OF INDIAN BANKING INDUSTRY

Banking Industry in India functions under the sunshade of Reserve Bank of India - the regulatory, central bank. Banking Industry mainly consists of:

- Commercial Banks
- Co-operative Banks

The commercial banking structure in India consists of: Scheduled Commercial Banks and Unscheduled Bank. Scheduled commercial Banks constitute those banks which have been included in the Second Schedule of Reserve Bank of India (RBI) Act, 1934.

RBI in turn includes only those banks in this schedule which satisfy the criteria laid down vide section 42 (60) of the Act. Some co-operative banks are scheduled commercial banks although not all co-operative banks are. Being a part of the second schedule confers some benefits to the bank in terms of access to accommodation by RBI during the times of liquidity constraints.

At the same time, however, this status also subjects the bank certain conditions and obligation towards the reserve regulations of RBI. For the purpose of assessment of performance of banks, the Reserve Bank of India categorizes them as public sector banks, old private sector banks, new private sector banks and foreign banks.

STATEMENT OF THE PROBLEM

Various problems are facing employees especially in HRD practices in various levels.

HRD PRACTICES IN BANK**STAFF MEETINGS**

- Staff Meeting aims at team building, open culture, family feeling and talent recognition which individually and cumulatively benefit the organizations. Bank is discussed in the monthly Staff Meetings conducted at all branches/units and action plan is drawn in achieving them.

BRAIN STORMING SESSIONS

- This is a technique for generating ideas and suggestions on topics of relevance and also to provide alternate solutions to problems by simulative thinking and imaginative power of cross section of employees.

STUDY CIRCLE

- Concept of Study Circle aims at self development of employees by kindling the desire to acquire/update knowledge, information and experience. Guest lectures/ Power Point Presentation / Group Discussions, etc are arranged on topics of general interest by inviting experts in the field.

METHODOLOGY OF THE STUDY

The following methodology is adopted to achieve the above objectives. Both primary and secondary data sources of information and data are used to carry out the present study. Primary data will be collected by interacting with the employees of Andhra bank. A questionnaire is prepared and administered to the employees to ascertain their perceptions.

COLLECTION OF DATA

Collection of data sources mainly consists of two kinds of data has been used they are given below

- Primary Data
- Secondary Data

PRIMARY DATA COLLECTION

Primary data is collected by a survey by designing a structured questionnaire which is distributed to the all of level employees. Design of the Questionnaire mainly includes two types of questions:

MULTIPLE CHOICE QUESTIONS: Here the choices are provided to the respondent and they were supposed to choose the best suitable option.

OPEN ENDED QUESTIONS: The respondents were asked simple questions with no fixed alternatives to their answers.

This questionnaire was prepared to gather the information pertaining to the existing HRD Programs.

SAMPLE TECHNIQUE

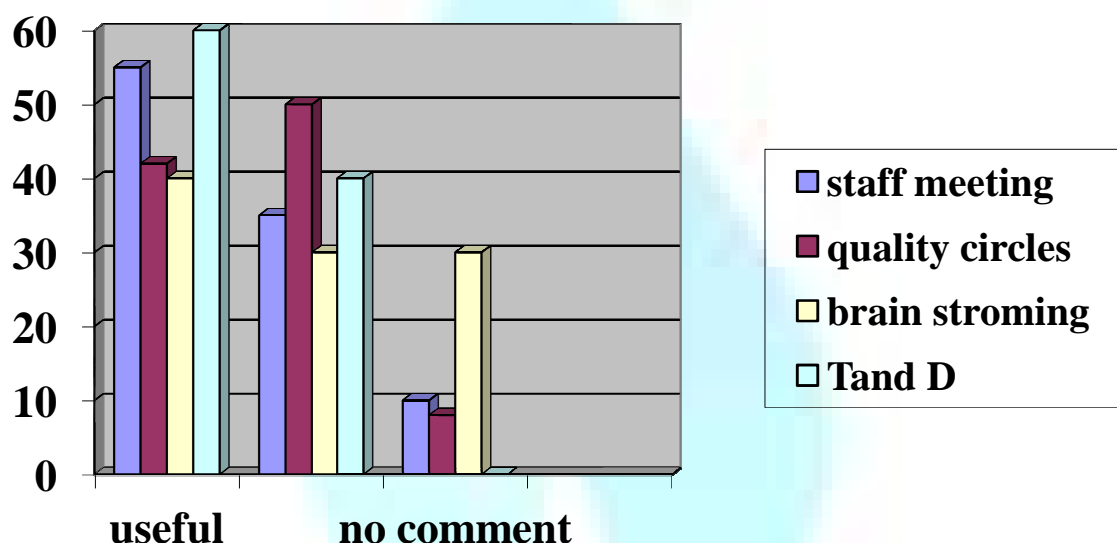
Samples will take by employees through stratified sampling.

SECONDARY DATA COLLECTION

The secondary data is collected from the organization website, journals, Textbooks etc., Most of the data is collected from books and some of the data is gathered from the websites.

DATA ANALYSIS

SL. No :	Useful	Some times necessary	No comment	Performance of HRD practices
Staff meetings	55%	35%	10%	Moderate
Quality circles	42	50	8	Average
Brain storming	40	30	30	Moderate
Training and development	60	40	0	good

**SUGGESTIONS**

Following suggestions are very essential to adhere for effective Banking Administration:

- HR functions to be linked to corporate goals. Team work is another important and essential soft skill that is necessary in this industry.
- As people are primary asset, it is essential not only to invest in them, but also to ensure that the supporting elements for this asset are such that it can provide the maximum value on a sustainable basis.
- HRD is to be regularly reviewed against business outcomes as part of strategic and operational planning.

RECOMMENDATIONS

- This calls for greater transparency more effective communication, and a high degree of professionalism in the bank's staff, are the need of the hour.
- Continuous up gradations of human resources management strategies with a view to enhancing the level of knowledge, sharpening skills are and also to important the necessary and work culture must be installed.
- Incentive structures need to be conceived, supported by appropriate training and motivations, which aligns the employee's goals and orientations with the core competencies and strategic advantages of the institution

CONCLUSION

In a nutshell, it is felt that, the changing environment, the forces of globalization and liberalization and the advances in information and communication technology have major HR implications for the RBI as well. Financial products are becoming increasingly complex and diverse, while the markets in which they trade get progressively deregulated. It also possesses both opportunities & threats particularly for this public sector banks. HRD practices become integral part of the human resource management.

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TO STUDY OCCUPATIONAL STRESS: AS A RELATIONAL STUDY ON SCHOOL TEACHERS

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ABSTRACT

For centuries stressful events have been recognized as important components in development of a variety of adverse conditions and of illnesses. Today's high-pressure lifestyles can take a heavy toll in decreased productivity, frustrations, disease and even early mortality. Right from the time of birth till the last breath drawn, an individual is invariably exposed to various stressful situations. The reactions of individuals to stressors represent a major psychological and medical problem. This study helps to find out the different causes of stress and ways to distress to enhance work efficiency by decreasing Burnout Stress Syndrome.

KEYWORDS

occupational stress, school teachers.

INTRODUCTION

The human body responds to stressors by activating the nervous system and specific hormones that speed up heart bit rate, breathing rate, blood pressure, and metabolism. Blood vessels open wider to let more blood flow to large muscle groups, putting our muscles on alert. Pupils dilate to improve vision. The liver releases some of its stored glucose to increase the body's energy. And sweat is produced to cool the body. All of these physical changes prepare a person to react quickly and effectively to handle the pressure of the moment. This natural reaction is known as the stress response. The phenomenon of burnout is highlighted because of the increasing attention in the organization. Burnout appears to be a response to interpersonal stressors on the job in which an overload of contact with people results in changes in attitudes and behaviors towards them. Paine (1982) has observed: Burnout Stress Syndrome (BOSS), the consequences of high levels of job stress, personal frustration and inadequate coping skills, have major personal, organizations and social costs.

REVIEW OF LITERATURE

McGrath (in Tung & Koch (1980) this study states that there are six possible classes of stressors in an organizational setting.

Warshaw (1982) this study states that the work stressors can only be fully comprehended if the importance of work to the employee is understood.

Iwanicki (1983) this study found that role-related stress was a function of the teacher's personality and teaching preparation.

NEED/IMPORTANCE OF THE STUDY

The result of the study help to protect and promotes primary and secondary school teacher health. In order to mitigate that the work pressure and to improve the quality of education are important task in the area of occupational health.

OBJECTIVES

- To find out the causes of occupational stress
- To find out the ranking of the different stress level factors

RESEARCH METHODOLOGY

Research Type: Descriptive

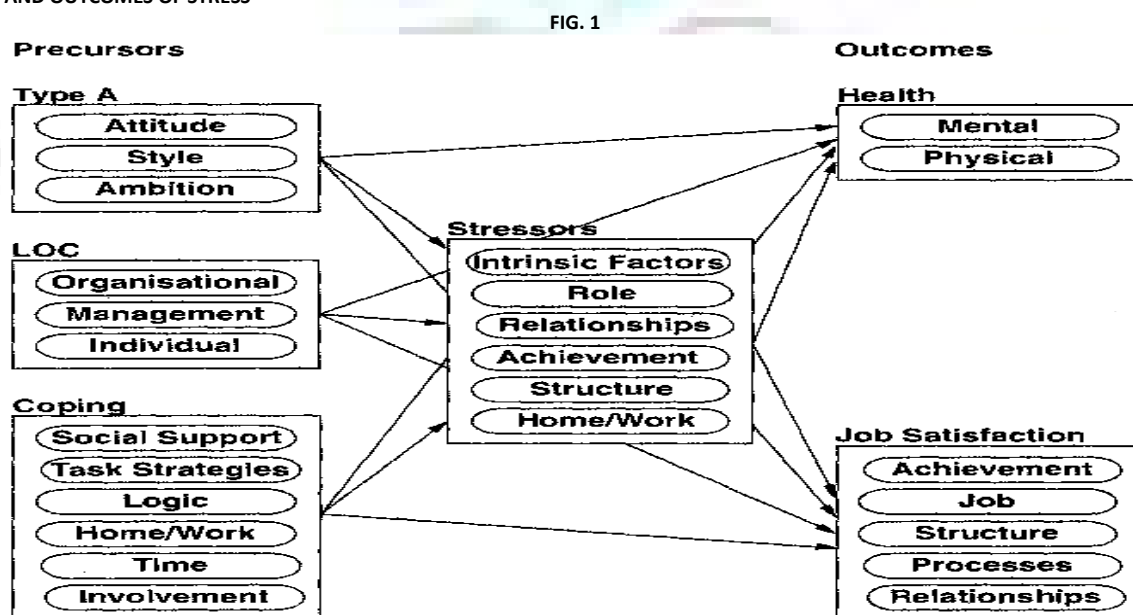
Sampling Technique: Convenience Sampling

Sampling Size: 80

Scope of the study: The scope of the project lies within the schools of Jalandhar to study occupational stress and burnout syndrome and ways to distress.

RESULTS & DISCUSSION

PRECURSORS AND OUTCOMES OF STRESS



It is only since the 1920s, following the systematic investigation of the eminent Harvard Physiologist Walter B. Cannon, and other physiologists, that the importance of hormones and chemical mediators in the body's response to stressors has been recognized. As the body prepares to defend itself against a threat or to avoid the threat three systems are most directly involved: the cardiovascular, the digestive and the muscular. But, Stress can also affect the individual at three levels: the physiological level, behavioral level and cognitive level.

Four types of **consequence** can arise from stress and burnout:

- Depletion of energy reserves,
- Lowered resistance to illness,
- Increased dissatisfaction and pessimism, and
- Increased absenteeism and inefficiency at work.

TABLE 1.1: EFFECTS OF STRESS AT PHYSIOLOGICAL, BEHAVIOURAL AND COGNITIVE LEVEL

S.No	Level	Effects
1.	Physiological	<ul style="list-style-type: none"> ❖ Increased Heart rate ❖ Muscular tensions, Slow down of digestive system ❖ Backache ❖ Tense muscles
2.	Behavioural	<ul style="list-style-type: none"> ❖ Decreased performance level ❖ Avoidance of stressful situations ❖ Passivity/ inertia
3.	Cognitive	<ul style="list-style-type: none"> ❖ Distortion of thinking ❖ Lowered intellectual functioning ❖ Unproductive, ruminative, ❖ Indecisiveness

In view of potentially serious consequences of prolonged stress reactions, ideally the stressors should be removed or modified wherever possible. However, in many cases the individual may ameliorate or eliminate the harmful effects of stress by using certain measures. Let us now move further to discuss the measures to distress.

COPING STRATEGIES FOR ROLE STRESSORS

Pareek (1993) distinguished between effective and ineffective coping strategies. The two contrasting approaches ('avoidance' or dysfunctional and 'approach' or functional) for some role stresses as illustrated in Table 1.2

TABLE 1.2: COPING STRATEGIES FOR ROLE STRESSORS

Role Stresses	Dysfunctional Strategies	Functional Strategies
Self-Role Distance (SRD)	Role Rejection (RR), Self Rejection (SR)	Role integration (RIG)
Inter-Role Distance (IRD)	Role Partition (RP), Role Elimination (REL)	Role negotiation (RN)
Role Stagnation (RS)	Role fixation (RF)	Role transition (RTS)
Role Isolation (RI)	Role boundness (RB)	Role linkage (RL)
Role Ambiguity (RA)	Role prescription (RP)	Role clarification (RC)
Role Expectation Conflicts (REC)	Role taking (RT)	Role making (RM)
Role Overload (RO)	Role reduction (RRD)	Role slimming (RSL)
Role Erosion (RE)	Role visibility (RV)	Role development/ Enrichment (RD/E)
Resource Inadequacy (RI)	Role atrophy (RAT)	Resource generation (RG)
Personal Inadequacy (PI)	Role shrinkage (RSH)	Role linkage (RL)

DEMOGRAPHIC AGGREGATE ANALYSIS

The level of Stress and locus of control can be studied with respect to one's personal profile. For example, a person feels more stress when s/he is young (20 to 35) and inexperienced, but when the person becomes middle aged (35 to 50) and experienced, s/he is less likely to feel stress. Therefore, the questionnaire was designed in a way to collect the demographic data relating to age, sex, gender and qualifications of the respondents.

The following tables and cross tables show the demographic profile of the respondents.

TABLE 1.3: CROSS TABULATION OF AGE, GENDER & HIGH/LOW STRESS



100 > HIGH STRESS

100 < LOW STRESS

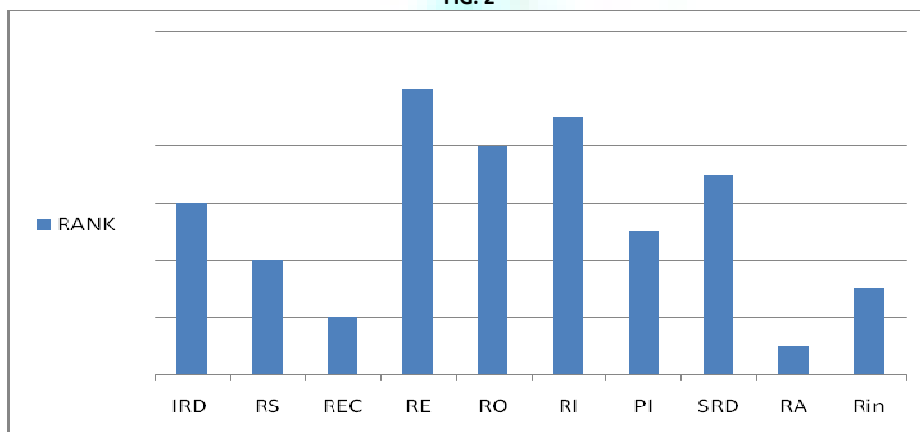
Gender↓	Total Number Of Males/Females	Stress→ Age Groups↓	Individual Number (Age Wise)	No. Of Respondents in High Stress	No. Of Respondents in Low Stress	Total	High Stress (%)	Low Stress (%)
Male	32	20 – 24.9	1	1	0	1	100	0
		25-29.9	11	3	8	11	27.27	72.72
		30-34.9	10	6	4	10	60	40
		35 – 39.9	3	1	2	3	33.33	66.66
		40- 44.9	5	0	5	5	0	100
		45- 59.9	3	1	2	3	33.33	66.66
		Total	33	12	21	33		
Female	48	20 – 24.9	3	0	3	3	0	100
		25-29.9	13	6	7	13	46.15	53.84
		30-34.9	12	3	9	12	25	75
		35 – 39.9	8	4	4	8	50	50
		40- 44.9	9	1	8	9	11.11	88.88
		45- 59.9	3	1	2	3	33.33	66.66
		Total	48	15	33	48		
Total	80	*****						

RANKING OF VARIOUS STRESS FACTORS

The following table shows the ranking of the various factors responsible for the stress among teachers:

TABLE.1.4: GRAPHICAL REPRESENTATION OF THE RANKING OF ROLE STRESSORS

S.NO.	STRESS FACTORS	RANKS
1.	Inter-role distance	5
2.	Role stagnation	7
3.	Role expectation conflict	9
4.	Role erosion	1
5.	Role overload	3
6.	Role isolation	2
7.	Personal inadequacy	6
8.	Self role distance	4
9.	Role ambiguity	10
10.	Resource inadequacy	8

FIG. 2**ANALYSIS**

According to the data analysis, the above is the graphical representation of the data received after calculation. This represents 10 different factors of stress. Inter-role distance (IRD), Role stagnation (RS), Role expectation conflicts (REC), Role erosion (RE), Role overload (RO), Role isolation (RI), Personal inadequacy (PI), Self-role distance (SRD), Role ambiguity (RA), Resource inadequacy (Rin).

CORRELATION BETWEEN ROLE STRESSORS**TABLE.1.5**

Role Stressors	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	Rin
IRD	1	0.289	0.347	0.116	0.408	0.407	0.256	0.422	0.315	0.441
RS	0.289	1	0.595	0.252	0.443	0.425	0.438	0.555	0.533	0.566
REC	0.347	0.595	1	0.442	0.444	0.583	0.597	0.711	0.618	0.633
RE	0.116	0.252	0.442	1	0.037	0.419	0.296	0.545	0.359	0.374
RO	0.408	0.443	0.444	0.037	1	0.475	0.411	0.449	0.377	0.44
RI	0.407	0.425	0.583	0.419	0.475	1	0.437	0.679	0.571	0.63
PI	0.256	0.438	0.597	0.296	0.411	0.437	1	0.608	0.565	0.597
SRD	0.422	0.555	0.711	0.545	0.449	0.679	0.608	1	0.692	0.691
RA	0.315	0.533	0.618	0.359	0.377	0.571	0.565	0.692	1	0.647
Rin	0.441	0.566	0.633	0.374	0.44	0.63	0.597	0.691	0.647	1

CONCLUSIONS

The major stress factors recognized are Role Erosion (RE) and Role Isolation (RI), as they are ranked highest among 10 stress factors, whereas Role Ambiguity (RA) is ranked the least for causing stress. Role Erosion and Inter Role Distance problems should be handled, as most of the respondents possess these role stressors. Role Erosion should be handled by Role Enrichment where the employee should try to see the various strengths and challenges in the role which might not be apparent earlier.

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DEVELOPMENT OF POWER SECTOR IN INDIA: A BIRD'S EYE-VIEW

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ABSTRACT

The electricity is one of the most vital infrastructure for national economic development particularly for a developing country like India. The pace of growth and development of our economy depends very much on the development of electricity generation. The demand for electricity in our country has been enormous and it is increasing year after year. The growth of our economy and the living standards of our people are ultimately measured by the quantum of electricity consumed. It is an important index of the economic development of our country as various sectors such as agriculture, industry, service, health, transportation, education etc. heavily depend upon it. Therefore, the government has to do its best constantly to improve the supply system of electricity, as in turn it would decide the future growth of our country. The production of Electricity is a basic indicator of a country's size and level of development in all spheres. Some countries are exporting electricity on a massive scale and others are importing it on a large scale. People's standard of living depends on their use of energy in general and access to electricity in particular. It is a major factor on which the policy-makers have to seriously focus their attention and direct their efforts. Compared with several other countries of the world, India is lagging behind many in terms of production as well as per capita consumption of energy. The present paper reveals that, the development and capacity addition of power sector plan wise from independence to till date.

KEYWORDS

living standards, economic development, agricultural sector, electricity generation.

INTRODUCTION

The Development status of power sector in India is presented briefly in the present article. It covers the power generation system in the country, its installed capacity, additions to the installed capacity, generation of power, the supply demand gap and the strategies for the development of power in our country. Accelerating economic growth to achieve higher standards of living depends, among other things, upon the availability of adequate power and its supply at an affordable price. Unlike other commodities, electricity cannot be stored and preserved for future use. In other words, its generation and consumption have to be simultaneous and instantaneous. It is noteworthy that within the fraction of a second of clicking the power-switch, the consumer puts into motion an intricate transaction involving a power generation company (like the NTPC), a power transmission company (like the POWERGRID), and a bulk power-purchaser and retail distributor (like the DVB). The unique features of power as a commodity or service make the dynamics of its supply and demand difficult to manage. Installing, power generation, transmission and distribution, together form a complex, time consuming and expensive process.

Power is among the most capital-intensive of infrastructure sectors. It is an essential input for economic as well as human development. We cannot imagine the development of any economy or its economic prosperity today without power. It has become indispensable to our everyday life. The Government of India has been assiduously trying to foster its development by realising the paramount importance of the power sector in the present day complex world. Several measures have been taken up in that direction during the last 6 decades since dawn of independence to our country. Greater care has been taken to provide policy as well as financial support to the power sector development. It falls much short of the demand for it, which has ever been increasing though power generation has been considerably augmented with lot of investment year after year. Increasing the installed power capacity from 1362MW at the time of independence to over 1,00,000 MW and electrification of more than 5,00,000 villages is certainly an impressive performance, but much less than what is required. It is a matter of some concern that the annual per capita consumption of power in India is about 350 KW, which is among the lowest in the world.

A large number of villages still remain without the power facility even after 60 years of independence. Those who have the facilities of electricity, they face a lot of problems. The problems are because of the following factors:

1. Inadequate power generation capacity;
2. Failure in optimum utilization of the generation capacity;
3. Lack of inter-regional transmission linkages;
4. Age-old substations and inadequate transmission and distribution network;
5. Outdated power storage and supply systems, which cause frequent power cuts and failures;
6. Indiscriminate and irrational tariff structure;
7. Widespread theft of power and leakages in its distribution;
8. Crawling rural electrification;
9. Lack of proper grid discipline and,
10. Irrational use of electricity by the consumers of all categories.

All the above factors are widespread in our country crippling the economy. These Problems have persisted despite the several measures by the government to improve the existing system. No doubt the government of India has developed appropriate strategies to mitigate the problem as much as possible and eliminate them altogether.

PLAN-WISE ELECTRICITY INSTALLED CAPACITY

The electricity installed capacity in India plan-wise is presented in Table No 1.1. The table reveals that during the pre plan period the major share of the installed capacity were held by the Thermal power sector accounting for 67.37 per cent followed by the Hydro 32.65 per cent. In the fourth plan end the Thermal sector accounted for 54.36 per cent followed by the hydro 41.80 per cent and Nuclear 3.84 per cent. It is clear from the below table that the installed capacity of the Thermal is increasing during the period.

TABLE NO 1.1: ELECTRICITY INSTALLED CAPACITY IN INDIA PLAN-WISE (in MW)

Plan	Thermal	Nuclear	Hydro	Total	Growth Rate
31.12.50	1153(67.35)	0	559(32.65)	1712	-
1 st Plan End	1825(63.23)	0	1061(36.77)	2886	68.57
2 nd Plan End	2736(58.80)	0	1917(41.20)	4653	61.22
3 rd Plan End	4903(54.31)	0	4124(45.69)	9027	94.00
4 th Plan End	9058(54.36)	640(3.84)	6965(41.80)	16663	84.59
5 th Plan End	15207(56.99)	640(2.41)	10833(40.60)	26680	60.11
6 th Plan End	27030(63.47)	1095(2.57)	14460(33.96)	42585	59.61
7 th Plan End	43764(68.77)	1565(2.46)	18308(28.77)	63637	49.43
8 th Plan End	61912(72.16)	2225(2.59)	21658(25.25)	85795	34.82
9 th Plan End	76057(72.39)	2720(2.58)	26269(25.03)	105046	22.44
10 th Plan End	83266(71.57)	2720(2.33)	30335(26.10)	116321	10.73
11 th Plan End(MTA)	50757(81.37)	3380(5.42)	8237(13.20)	62374	53.36

Source: Ministry of Power, Govt. of India

TRENDS IN ELECTRICITY CONSUMPTION

PER CAPITA CONSUMPTION

The per capita utilization of power in KWH. (Kilo Watt Hours, popularly known as Units) is one of the important measures of development of a country. Higher level of per capita consumption of power not only indicates higher growth rate but also higher production and consequently, prosperity. India with a per capita consumption of 300 ranks ninth among the zones in the capita consumption. The zones above India with per capita consumption of power (mentioned within brackets) are North American (12,800), Western Europe (5,400), Eastern Europe (4,200), Latin America (1,500), Far East (1,400), South-East Asia and Pacific (1,200), Africa (500), Middle East and South Asia (500). The Per capita consumption of developed and developing countries in units/KWH is presented in Table 1.2 given below.

TABLE NO.1.2: PER CAPITAL CONSUMPTION OF POWER IN DIFFERENT COUNTRIES

Developed Countries	K.W.H	Developing Countries	K.W.H
Canada	15666	Brazil	1,783
Sweden	15679	South Korea	1,649
United States	12878	Mexico	1,486
Luxemburg	10,880	Egypt	787
Australia	9643	China	719
Japan	7432	Algeria	680
France	7,126	Pakistan	636
Germany	6,513	India	599
England	5,843	Kenya	189

Source: Ministry of Power

It can be observed from the Table that developed countries have a per capita consumption of above 5,000 KWH. Just as India is way behind the developed countries in per capita income, in per capita consumption of electricity is also behind them. The Per Capita consumption of power in the different States of India is presented in Table No. 1.3. In per capita consumption, Andhra Pradesh has taken the 8th place in the country. This level is just above the national average of 567 units. It goes without saying that there is needed to improve the per capita consumption further to achieve a better place of progress in the state.

TABLE 1.3: PER CAPITA CONSUMPTION - STATE WISE AS ON 31-3-2003 (in KWh)

Rank	State	Per Capita Consumption KWh
01	Delhi	1426
02	Punjab	1227
03	Gujarat	1193
04	Haryana	997
05	Maharashtra	848
06	Tamil Nadu	815
07	Chandigarh	676
08	Andhra Pradesh	673
09	Karnataka	611
10	Himachal Pradesh	559
11	Jammu & Kashmir	592
12	Rajasthan	566
13	Madhya Pradesh	520
14	Orissa	470
15	Jarkhand	468
16	Uttaranchal	464
17	Kerala	378
18	West Bengal	367
19	Meghalaya	336
20	Utter Pradesh	316
21	Mizoram	300
22	Sikkim	247
23	Tripura	227
24	Manipur	206
25	Assam	160
26	Nagaland	139
27	Arunachal Pradesh	132
28	Bihar	82
	All India Average	567

Source : Ministry of Power.

TABLE 1.4: PATTERN OF ELECTRICITY CONSUMPTION – ALL INDIA (%) (1960 to 2004)

Year	Domestic	Commercial	Agricultural(L.T+H.T)	Industry	Others
1960-61	10.80	5.16	9.08	72.76	2.20
1970-71	8.17	5.83	18.44	65.44	2.12
1980-81	10.70	4.23	18.44	63.07	2.59
1990-91	12.79	3.16	38.62	39.03	4.22
2000-01	21.71	4.54	40.78	22.84	6.74
2001-02	22.89	4.78	41.53	20.94	6.57
2002-03	22.06	4.85	39.42	21.39	8.43
2003-04	21.12	4.87	37.07	25.90	8.30
2005-06	24.30	8.70	21.90	36.80	8.30
2006-07	24.40	8.80	21.70	37.60	7.50
2007-08	24.00	9.20	20.60	37.50	8.70
2008-09	24.70	10.20	20.40	37.10	7.60
2009-10	24.90	10.40	21.00	36.70	7.00

Source: Ministry of Power

The electricity consumption pattern in India is presented in Table No. 1.4 given above. It gives a clear picture of the consumption pattern of power among various categories of consumers in the state. During the year 1960-61 the lion's share of power was consumed by the industry, accounting for 72.76 per cent followed by the agricultural sector 9.08 per cent, Domestic 10.80 per cent, commercial 5.16 per cent and the others 2.20 per cent. During these 40 years of existence of the power sector, there is a lot of change in the pattern of power consumption. During the year 2003-04 the lion's share went to the agricultural sector accounting for 37.07 per cent, followed by domestic 21.12 per cent, industry 25.90 per cent etc. Though the major share of power was consumed by the agriculture sector, it brought little revenue as power supplied to it was subsidised. Arrears are pending from the consumers, despite the concession shown.

POWER SUPPLY MECHANISM

The electricity is distributed to consumers through High Tension and Low Tension power lines just as water is distributed by local bodies from water tanks and reservoirs to consumers through pipelines and taps. The water can be stored and supplied at one's convenience, where as the power generated has to be consumed simultaneously and there can be no storage of power. Distance between the generation station and distribution point should not be more than 600kms to minimise transmission losses. Hence, power plants have to be located at different geographical areas, and near to load centres.

CAPACITY ADDITIONS

The table No. 1.5 reveals that the target fixed for capacity addition during April 2011-15th January 2012 period and the actual achievement during the same period. The target fixed for the hydro sector was 1990.00 MW and its achievement was only 1181.00 MW. The target fixed for the thermal sector was 13611.00 MW, but it reached 11026.70 MW. The total capacity addition for all the sectors together was fixed at 17601.00 MW, but they could reach only 12207.70 MW. Very obviously, the target actually reached was just 69.4% a little above half of the target fixed, discouraging all concerned.

TABLE NO. 1.5: ALL INDIA CAPACITY ADDITION (TARGET AND ACHIEVEMENT) DURING APRIL 2011-15TH JANUARY 2012

Sector	Thermal		Hydro		Nuclear		Total		% to target
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	
Central	3070.0	2820.0	655.0	0.0	2000.0	0.0	5725.0	2820.0	49.3
State	4101.0	1537.2	165.0	81.0	0.0	0.0	4266.0	1618.2	37.9
Private	6440.0	6669.5	1170.0	1100.0	0.0	0.0	7610.0	7769.5	102.1
Total	13611.0	11026.7	1990.0	1181.0	2000.0	0.0	17601.0	12207.7	69.4

Source: Annual Reports of Ministry of Power, Govt. of India.

POWER GENERATION CAPACITY

Table No. 1.6 presented below gives detailed information about the electricity generating capacity of thermal, hydro, and nuclear sectors during 2008-09 to 2011-12 (April-December).

TABLE 1.6: ELECTRICITY GENERATING CAPACITY IN INDIA (Billion KWh)

Category	2008-09	2009-10	2010-11 (April-Dec)	2011-12 (April-Dec)	Growth (Per cent)
Power generation	771.551	811.143	598.244	653.446	9.23
Hydroelectric#	106.680	114.257	90.169	107.513	19.23
Thermal	640.876	665.008	484.860	517.116	6.65
Nuclear	18.636	26.266	17.854	23.790	33.24
Bhutan Import	5.358	5.610	5.360	5.028	-6.19

Source: Annual Reports of Ministry of Power, Govt. of India.

Excludes generation from hydro stations up to 25 Mega Watt (MW)

As the table shows, the generating capacity of the thermal sector shot up from 640.86 Billion KWh in 2008-09 to 598.244 Billion KWh in 2011-12. The hydro sector went up to 107.513 Billion KWh in 2011-12 from 106.680 Billion KWh in 2008-09, and the nuclear sector was slight declined 5.028 Billion KWh in 2011-12, starting from 5.358 Billion KWh 2008-09.

ALL INDIA PLANT LOAD FACTOR (PLF) AND T&D LOSS LEVELS

All India plant load factor and T&D loss levels in percentages is presented in Table No.1.7 covering from 2001-02 to 2009-10. It is observed that PLF as well as T&D loss level remained at unacceptable levels over the entire time period. The utilities were able to bill only one third of the energy purchased from various sources. It may be noted that T&D loss figures are taken from what was reported by the respective utilities, though the actual losses are much higher, as observed by many ERCs. Moreover, low recovery of des was also reported as a serious problem.

TABLE NO. 1.7: ALL INDIA PLANT LOAD FACTOR AND T&D LOSS LEVELS (%)

Year	Plant Load Factor (in per cent)	T&D Loss Level (in per cent)
2001-02	70.00	34.00
2005-06	73.60	30.00
2006-07	76.80	29.00
2007-08	78.60	27.00
2008-09	77.20	25.00
2009-10	77.48	25.00

Source: Ministry of Power

The efforts of the Government of India are clearly visible when a close look is taken at the various parameters of power development in our country. It has already been noted more than once that accelerating economic growth and achieving higher standards of living depend upon the availability of adequate power at an affordable price and its reliable supply. Unfortunately, unlike other commodities, electricity cannot be stored to be used at a later date. Its generation and

consumption, as pointed already, have to take place simultaneously and instantaneously. Once the consumer switches on, he puts into motion an intricate transaction involving at the same time the power generation company, the power transmission company, and the bulk power purchaser and the retail distributor. Because of its unique features the dynamics of power supply and demand is anything but easy to manage.

The entire process of installing power generation, transmission and distribution is a complex exercise, time-consuming and expensive. Power has been placed in the list of concurrent subjects under the Indian Constitution with the Centre and the States both having jurisdiction over it. In the early years of independence, State Electricity Boards (SEBs)/State Electricity Departments were the sole utilities (except a few licensees in the private sector) responsible for generation, transmission and distribution of electricity. To supplement the efforts of the states in bridging the yawning gap between demand and supply of power, it was decided, in the mid-seventies, to set up generating stations and associated high/extra high voltage transmission lines in the Central Sector. Today, the states control about 60 per cent of the country's generation capacity, 70 per cent of the transmission network, and almost 100 per cent of the distribution system through well linked distribution network.

PROBLEMS CONFRONTING THE POWER SECTOR

Despite several measures taken by the Government, the Power sector continues to have its pressing problems. Though it has increased to installed power capacity from 1362 MW to over 100,000 MW since independence, and electrification of more than 500,000 villages, it is a matter of concern that the annual per capita consumption is at about 350 KW, which is among the lowest in the world. There are many households and a large number of villages even now which have no access to electricity as yet. The end users of electricity like households, farmers, commercial establishments, and industries etc, experience frequent power cuts, both scheduled and unscheduled. Power cuts, erratic voltage levels and wide fluctuations in the frequency of supply are among the several 'power woes' of consumers. They are resorting to captive power supply arrangements of various types ranging from 300 Mega Watts (industry) to 250 Watts (households). Almost every shop in an urban marketplace has a generator set. Most establishments have battery-operated inverters and diesel generation sets. Most urban households have voltage stabilizers for different appliances. In fact, the money spent by the domestic consumer on these standby power supply (DG sets/inverters) and power-conditioning (stabilizers) arrangements could be among the highest in the world. The same money could be more gainfully invested through corporate investments in power generation, transmission and distribution with assured returns on investments.

The major reasons for inadequate, erratic and unreliable power supply in the country are the following:

1. Inadequate power generation capacity;
2. Lack of optimum utilization of the existing generation capacity;
3. Inadequate inter-regional transmission links;
4. Inadequate and ageing sum-transmission & distribution network leading to power cuts and local failures/faults;
5. Large-scale theft of power and skewed tariff structure;
6. Slow pace of rural electrification; and
7. Inefficient use of electricity by the end consumer.

Notwithstanding these inadequacies and shortcomings, the power sector has certain positive aspects, which have to be fully utilised. The following are the strengths and opportunities in the sector, which deserve to be given, serious attention:

- Abundant coal reserves in the country (enough to last at least another 200 years), to generate thermal power;
- Vast hydroelectric potential (150,000 MW);
- Large pool of highly skilled technical personnel;
- Impressive power development in absolute terms (comparable in size to those of Germany and UK).
- Expertise in integrated and coordinated planning (CEA and Planning Commission);
- Emergence of strong and globally comparable central utilities (NTPC, POWERGRID);
- Wide outreach of state utilities;
- Enabling framework for private investors;
- Well laid out mechanisms for dispute resolution;
- Political consensus on reforms; and
- Potentially, one of the largest power markets in the world.

The Central Government which has been endeavoring against odds to meet all the power needs of the country has set for itself the following objectives:

- To provide 'Power on Demand by 2012';
- To make the sector commercially sound and self-sustaining;
- To provide reliable and quality power at an economic price;
- To achieve environmentally sustainable power development; and
- To promote general awareness to achieve consensus on the need for reforms.

STRATEGIES

In order to achieve the above mentioned objectives, and also to tone up the performance of the power sector as it is at present, the Centre has designed and initiated certain viable strategies which have been evolved after a comprehensive, integrated and realistic assessment of the strengths of the sector and of all the challenges confronting it. The process has led to a range of mutually interdependent and complementary strategies to counter the challenges and exploit the strengths/opportunities available.

The strategies integrate the imperatives of supply with those of managing demand, short and medium term measures with long-term action plans, operational measures within situational and structural changes. The objectives laid down can be realized only if all stakeholders in the power sector effectively implement the plan. Power is a concurrent subject under Indian Constitution. The States have the greater share of generation and transmission assets and almost the entire distribution under their control. They would need to play a very proactive role in effecting institutional and result oriented changes. Many strategies outlined in the document are inter-linked and are mutually supportive in terms of addressing the problems faced. However, they are classified subject-wise for the purpose of this document.

GENERATING AFFORDABLE POWER

With increasing prices of fuels and cost of installations, the cost of power generation has significantly increased. While attending to the stupendous task of doubling the country's generation capacity by 2012, high priority is to be given to reduce the cost of power to enable the different segments of population and the economy to effectively utilize power as an input. In order to recommend suitable strategies to reduce the cost of power, an Inter-Disciplinary Group of Experts was constituted. The Group has submitted its Report. The implementation of a number of strategies outlined in the Report would help in cost reduction efforts and provide affordable power to the consumer. Benchmarking in project costs, adoption of best practices, and choosing least cost options in capacity addition are going to be promoted. Competitive bidding will be adopted as a transparent and cost reducing approach. Already the Ministry has ensured that its PSUs post all their tenders on websites. Some State power utilities have also done so.

SUSTAINABLE POWER DEVELOPMENT

Concern felt regarding pollution and the none-too-easy disposal of the large amount of ash from coal-based power stations, which are the mainstay of the country's power generation, are being addressed through strategies to promote environmentally sustainable power development. The useful recommendations of the Fly Ash Mission of the TIFAC are to be implemented. The Ministry is taking steps for making the use of fly ash mandatory for road and bridge construction, as well as for construction of Government buildings. Fiscal incentives to supplement the market mechanism for taking up production and promotion of fly ash products are also envisaged. All Central utilities have been advised to adopt ISO 14001 standards. Afforestation is being given major

emphasis and a Special Purpose Vehicle (SPV) is being set up for afforestation. Introduction of super critical technology and clean coal technologies is also planned to generate power with maximum efficiency and minimal pollution. The Ministry is taking environmental initiatives in keeping with global developments and mechanisms. Thus, the Ministry is striking a fine balance between power development imperatives and the emerging concern for environment.

UPGRADING TECHNICAL EFFICIENCY

To make the power sector truly efficient and competitive in the changing scenario, steps have already been taken to impart greater thrust to research and development, the training of human resources in the power sector and adoption of progressive management practices and tools (including IT). The Personnel in the sector are also being educated about their changed roles in the power reform setup. Commercialisation of the sector is also being emphasised.

A Standing Committee on Research and Development has been constituted to draw up a Perspective Research and Development Plan to ensure optimum utilisation of the infrastructure and provide a standing forum for R&D activities in the power sector. Another Committee has been set up to formulate a 'National Training Policy for Power Sector' and to develop a national level action plan for training of the power professionals to align their skills and mindset to the changing requirements. Integration of training facilities available in the sector is also planned to optimize their utilization. The Ministry is planning to recast the role of the Central Electricity Authority (CEA) to enable it to effectively perform the role expected of it in the new environment.

CONCLUSION

The pace of growth and development of our economy depends very much on the development of electricity generation. In India most of the power consumption is by the agriculture sector, where the rate of revenue is very low. Expanding the supply of electricity to meet the growing demand of ever increasing urbanized Indian economy without incurring unacceptable costs, is a major challenge to it. After independence, the government operated the power supply industry in India. Given the essential nature of service and its applicability to all sections of society, political groups took active interest in the sector and influenced the policy and decision-making process. It was noted that the utilities lacked professionalism and a commercial outlook. Though government allocated adequate budget to increase installed capacity however, no adequate attention was rendered to increase operational efficiency in the pre-reform period. High T&D losses, low recovery of dues, highly subsidized consumer tariff resulted into huge revenue losses and ultimately led to financial. Regular supply of power with required quality would in fact gain the confidence of consumers and facilitates overall economic development of the country in various dimensions.

The power sector reforms were initiated to overcome the technical and financial problems.

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DEVELOPING A PARSER FOR SIMPLE PUNJABI SENTENCES

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ABSTRACT

The system has been developed for parsing of simple Punjabi sentences. Parsing is the first step in natural language processing. Given a sentence, what is needed is a procedure that recognizes the sentence and also discovers how it is built. Rule based approach of parsing is used. Prolog language is been used for the implementation purpose. The accuracy is calculated for system and for very simple Punjabi sentences, the accuracy is about 55%.

KEYWORDS

Parser, Natural language processing, Inflectional language, SVO(Subject-Verb-Object) order, SOV(Subject-Object-Verb) order.

INTRODUCTION

Parsing is a procedure that recognizes a sentence and discovers how it is built i.e. it gives its grammatical structure. Recognition involves finding out whether the sentence under consideration belongs to the particular language or not i.e. whether it follows all the rules of well formedness that the language prescribes. Discovering the structure involves identifying and marking the various components of the sentence- the phrases and individual parts of speech such as noun, verb, preposition etc. Parsing is one of the most widely used tools within language engineering. Parsing systems for various foreign languages are commercially or non- commercially available. However such a system is rarely available for Punjabi language. So there is great need to develop such systems for Punjabi language.

COMPONENTS OF A PARSER

A typical parser consists of the following components:

1. Database of words
2. Principles for joining words into phrases
3. Principles for checking the grammatical corrections of a phrase.

A database of words (i.e. vocabulary) is required for any parser so that the parser is able to recognize the words in the sentence that it has to parse. The database can be regarded as a kind of memory, whose chief characteristics are the items in it, the structure imposed on them, and the way they are accessed. Hence, the database of any parser would essentially consist of the words, along with all the different ways in which they are used in the language or part of the language that is to be parsed.

A phrase can consist of words, phrases or both necessitating the presence of some principles which can differentiate any grammatically correct phrase from a mere cluster of words. These principles constitute grammar.

Parsing with computers is fundamentally a search process, where one grammatical rule after another is tried on the input string until a set of rules is found that is completely satisfied by the string under consideration. Usually, no unique set is found and the parser has to output all the different breakdowns that it has obtained, not all of which may be correct. Of the numerous correct interpretations that may be obtained, which one is correct will depend upon other factors such as the context of the utterance.

STRUCTURE OF PUNJABI LANGUAGE

Punjabi is the official language of the state of Punjab in India and is spoken by a large number of people around the world. Some of the main grammatical features of Punjabi language are:

- Punjabi is mainly an inflectional language unlike English.
- Writing complex sentences is not in accordance with the general idiom of Punjabi.
- In Punjabi, the postpositions occur immediately after their nouns/pronouns.
- Punjabi make extensive use of gender and number in sentence formation.
- A typical Punjabi word can have only one prefix but the number of suffixes can be two or three.
- A grammar checking system for Punjabi language must pay careful attention to these unique grammatical features of the language.

The major difference between foreign languages like English and Punjabi language is that English language have SVO(Subject-Verb-Object) order for sentence generation. But Punjabi language have SOV(Subject-Object-Verb) order in sentences.

For example:

Ram eats fruit – English sentence having SVO order

Ram phal khanda hai – Punjabi sentence having SOV order

Another difference between English and Punjabi language is that the former has a rich derivational morphology and the latter has a rich inflectional morphology.

APPROACH USED

The various types of errors that can be there in a sentence written in Punjabi language include spelling errors, grammar errors, style errors and semantic errors. In the present research work, only grammar errors are covered like word order errors, subject and verb agreement errors in terms of gender, number and person etc. Bottom-up parsing approach is being used. In Bottom-up parsing approach, we begin from the words in the utterance and move towards the grammatical sentence. In this process, we first replace the words with their grammatical equivalents. Then we try to bind these grammatical entities to give parse and try to build bigger and bigger pieces of structure using various grammar rules. Eventually we hope to put all these pieces of structure together in a way that shows that we have found a sentence. Putting it another up other entities higher up in the hierarchy, finally reaching the sentence. Thus the basic idea of Bottom-up parsing approach is to begin with concrete data provided by the input string i.e. the words we have to way, Bottom-up parsing approach is about moving from concrete low level information to more abstract high level information.

CONCLUSION

Parsing is the mandatory part of natural language processing applications. A beginning has made for development of Punjabi parser, still a lot of work needs to be done before an efficient Punjab parser can be developed. Some of the major limitations of the grammar rules that I have covered for sentence generation in Punjabi are as follows:

1. Only active sentences having SOV(Subject-Object-Verb) order and formed by combination of noun-phrase and verb-phrase have been covered.

2. Exclamatory and interrogative sentences have not been covered.
3. Compound and complex sentences have not been covered.
4. Gender and number should also be included in the database for different Punjabi words and rules should be framed for their checking also.

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GREEN MARKETING: CONSUMERS' ATTITUDES TOWARDS ECO-FRIENDLY PRODUCTS AND PURCHASE INTENTION IN PUNE

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ABSTRACT

The research study is on the green marketing but specifically on consumers' attitudes and purchase intention of eco-friendly products. It has been the global concern for the purpose of the preservation of the polluting and degradation of environment. Many studies have been done on the green marketing exploring the importance of the topic and relationship to the attitude and purchasing behavior of the consumers of eco-friendly products. Through the vital information provided by the expertise, competent and experience researchers, companies have understood the importance of green marketing in order to produce eco-friendly products and these provided much rich information for the literature studies of the thesis. The results of this research are expected to be of great help to companies looking to launch green products.

KEYWORDS

Green marketing, marketing-mix, word of mouth, satisfaction, attitude, consumer intention.

INTRODUCTION

Today's consumers are more aware and concerned about the environment like never before. They want to buy products that will not harm the environment. As a result all companies that wish to survive will have to go for green products. Large number of researchers are doing research on Consumer behaviour with respect to Green Products, however very little research is being done in Indian scenario especially Maharashtra. This study will try to gain insight into consumer's attitudes towards, and willingness to pay more for 'green products' in Pune area.

Pune, Oxford of the East (as a result of its many colleges and universities), The IT Hub, Detroit of the East, also has the sixth largest metropolitan economy and is second highest in terms of per capita income in the country and now also is one of the fastest growing cities in the world has become a lucrative market for organizations to sell their products and services. Hence for the purpose of this research Pune has been aptly selected.

REVIEW OF LITERATURE

Green marketing has rose attention due to the environmental deterioration and it becomes a global problem (Kumar, 2011, p. 59). Nowadays, the American Marketing Association (AMA) divides the definition of green marketing in three aspects (marketingpower.com): as "the marketing of products that are presumed to be environmentally safe" (retailing definition) as "the development and marketing of products designed to minimize negative effects on the physical environment or to improve its quality" (social marketing definition) and finally as "the efforts by organizations to produce, promote, package, and reclaim products in a manner that is sensitive or responsive to ecological concerns" (environments definition).

Companies have using green marketing for many reasons such as green policies are profit-making; the business world is more and more implicated in the social responsibilities. Furthermore consumers have been changing of attitudes and due to the government and the competitive pressures it is essential for firms to consider the "green" adjective to marketing strategies (Ghosh, 2010, p.83).

An eco-friendly product is supposed to reduce the impact of its consumption on the environment thanks to the use of making-processes, components and recycling techniques which are less harm for the natural environment than those of conventional products (nationalgeographic.com). According to a survey made by the Gallup organization in 2009, around one of fifth of European interviewees think that the action which has the greatest impact on solving environmental problems was "to buy products produced by eco-friendly production" just after "minimizing waste and recycling" action (Flash Eurobarometer 256 – The Gallup Organisation, 2009, p. 7). Furthermore for example in the CPG sector between January 2009 and April 2009 "458 new products hit the market with claims of being eco-friendly" in the United States, compared to 2008, this market is "three times higher in 2009" (corporate-eye.com). Another example in the United States showed that "between 2005 and 2009 green cleaners grew 229%" (marketwire.com). The market of green products is more and more increasing. In this thesis "eco-friendly" as well as "green" products will be used to mention environmental products.

The effective and efficient use of the natural resources and preservation of it has led to consumers' segments to form green consumerism (Solomon, 2010, p. 401). Vernekar and Wadhwa define the green consumer as a person "who adopts environmentally-friendly behaviors and/or who purchases green products over the standard alternatives" (2011, p. 65).

Consumer behavior trends toward eco-friendly attitudes have been increasing. According to a survey made by the Co-operative Bank in the UK, in 1999, 17% of respondents "felt guilty about unethical purchase" and in 2005 there were 44% (Grant, 2007, p. 35). Consumers who have positive attitude towards the environment are more willing to purchase green products (Balderjahn, 1988, p.53). As previously said, however it is also true that even if consumers are concerned about environmental issues; they will not necessarily purchase green products (Mc Eachern and Carrigan, 2010, cited in Solomon et al., 2010, p. 229) as the following studies show it.

In 2007, Chitra made a survey on 60 respondents in India and showed that he could classify respondents in four categories the "aspirants", "the addicts", the "adjusters" and the "avoiders". This survey showed that the majority of the respondents can be categorized as "aspirants"; that means those individuals are aware of environmental issues and want to develop green purchase behaviors (Chitra, 2007, p. 181).

A survey made in 2008 on a convenience sample of 887 Portuguese individuals concluded that we could identify three segments of green consumers (Finisterra do Paço et al., 2009, p.23). "The uncommitted" was the most important segment (36%) mainly composed of young people (18-34 years) having knowledge about environmental issues but with negative positions towards green purchase behaviors. "The green activists" composed of 35% of the sample who are between 25-34 years and 45-54 years have an education level higher than the first segment and high incomes. They buy green products but they are more skeptical concerning the green advertisements' campaigns. Finally the third group identified was composed of 29% of the sample. The age of this sample is higher than the other two segments, they have a lower educational level compared to the others and even if they have negative position towards environmental issues they are activists; that point is paradoxical (Finisterra do Paço et al., 2009, p 23).

IMPORTANCE OF THE STUDY

The growing public awareness of environmental issues has brought with it a corresponding change in the buying decisions of consumers and hence it has become imperative for companies to have green products and practice green marketing. This study will help the companies to develop guidelines for marketing of green products. To realize the green market's true potential, businesses will be required to help consumers change their behavior by removing the hurdles between intentions and actions. And this is possible if only they understand Consumer behaviour and this is the objective of this research. This research also intends to be of great help to the general society at large as it will help in improving the overall environment on this planet.

STATEMENT OF THE PROBLEM

The deterioration of the environment led to the adoption and the development of consciousness of consumers' attitude towards eco-friendly products in order to preserve the planet (Luck et al., 2009, p. 2). They therefore, deem it expedient to take measures towards protecting the environment which has become their personal attitude towards eco-friendly foods (Solomon, 2010, p. 209). Consumers patronize the products and their aims are to make sure the contribution is supporting sustainable environment and contribution the guiding of the climate change (Hartmann & Apaolaza-Ibáñez, 2006, p. 676).

However, it has become global struggling to achieve the purpose of the environmental protection so companies are using various means to persuade the consumers' segments who are environmentally conscious to change their attitudes from the conventional products towards green products and also satisfy their needs (Kumar, 2011, p. 59).

Some of the previous researchers have emphasized on the four concepts on the "demographics, green lifestyle (Solomon et al 2010, p. 401) green attitudes and green behavioral intentions in the context of the low involvement product category" (Florenthal and Arling, 2011, p.35).

There are many studies about the consumer behavior concerning the environment but most of them are concentrated on one or two marketing-mix elements and they do not make a link with the factors that companies use to make consumers buy green products and their attitudes towards these products. Furthermore, previous findings concerning consumers' attitudes towards eco-friendly products are conflicting e.g. some studies found that consumers think conventional products have high quality compared to eco-friendly ones but in other studies results show the opposite (Vernekar and Wadhwa, 2011, p.67). In some studies we can find that consumers are willing to pay more for green products and in other studies it is not the case or the extra price has to be low (De Pelsmacker et al., 2009; Pirani and Secondi, 2011; Purohit, 2011; Vernekar et al., 2011).

Many companies are in the process of launching/ developing green products for the customers. But they are not sure if the customers are ready for such products. This research paper will try to provide indicators for this problem faced by the companies.

OBJECTIVES

The following are the objectives for the purpose of study: To study the awareness about the green products? And To study customer's willingness to pay more to offset any additional costs associated with green products and to what extent?

HYPOTHESES

H1: Customer awareness is maximum for paper bags as a green product.

H2: Majority of people believe price is high for green products.

H3 : Majority of people are ready to pay more for green products.

H4 : Majority of people are ready to pay more to an extent of 10-20% for green products.

RESEARCH METHODOLOGY

SAMPLING

CHOICE OF NON-PROBABILITY SAMPLE

The sampling method used is a key point in the research process (Bryman & Bell, 2011, p. 175). There exist two types of sampling methods: probability and non-probability samples. The first one is the most appropriate in quantitative research because respondents are selected randomly. Thus researchers have a heterogeneous sample more representative than a non-random sample; and the findings from the sample can be generalized to the population (Bryman & Bell, 2011, p. 185). However due to lack of time and as this method costs a lot, a non-probability sample, where the respondents are not selected randomly and have not the same chance to be selected, is for our study the most appropriate sampling method (Bryman & Bell, 2011, p. 190, 716).

POPULATION

First step in sampling method is to select the sample in a group of units that is called population (Bryman & Bell, 2011, p 176). As all the people who live in Maharashtra cannot be interviewed, residents in the city of Pune have been chosen as the population.

CONVENIENCE SAMPLE

There are "three main types of non-probability samples: the convenience sample; the snowball sample; and the quota sample" (Bryman and Bell, 2011, p. 190). The snowball sampling permits researchers to contact few people, after that they use the most relevant participants to obtain contacts with other potential participants like a snowball effect (Bryman and Bell, 2011, p. 719). The quota sampling is the selection of a proportionate number of people according to categories selected by researchers (Bryman and Bell, 2011, p. 717).

Shiu et al. (2009, p. 480, p. 726) defined the convenience sampling as a "sampling technique which samples are drawn to the convenience of the researcher" and which is "often used in the early stages of research because it allows a large number of respondents to be interviewed in a short period of time".

SAMPLE SIZE AND COMPOSITION OF SAMPLE

To reduce the sampling error, the largest the sample is the more the data can be generalized and representative of the population (Bryman & Bell, 2011, p. 187). As a non-probability sample is used, the sample size is "a more or less subjective judgment made by the researcher" (Shiu et al., 2009, p. 462). For this study it will be relevant to be able to obtain a sample of around 100 respondents.

CHOICE OF SURVEY METHOD

SELF-COMPLETION QUESTIONNAIRE

At the opposite of a structured interview, the self-completion questionnaire is "a questionnaire that the respondent answers without the aid of an interviewer" (Bryman and Bell, 2011, p. 718). Thus the respondents cannot be influenced by the interviewer; their answers should be more objective.

QUESTIONNAIRE DESIGN

A questionnaire is "a formalized framework consisting of a set of questions and scales designed to generate primary data" (Shiu et al., 2009, p. 329).

TYPES OF QUESTIONS

As Ian Brace (Research Director at TNS UK) said "A poorly written questionnaire will not provide the data that are required or, worse, will provide data that are incorrect" (Shiu et al., p. 2009, p. 327). For this reason we spent much time on the elaboration of the questionnaire and moreover concerning the design of questions. Indeed a clear and relevant questionnaire permits to obtain more relevant data. All the questions used are closed; indeed closed questions are easily analyzable, comparable with other answers and permit to save time for the respondent and the interviewer (Bryman & Bell, 2011, p. 250). There are also disadvantages such as lack of spontaneity in the answers' choice; they can be irrelevant for some respondents who should not know how to classify in a forced-choice question etc. (Bryman and Bell, 2011, p. 252).

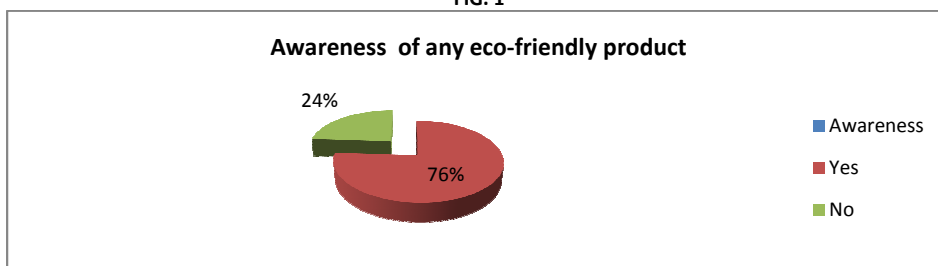
RESULTS & DISCUSSION

Que.1. Are you aware of any eco-friendly product?

TABLE NO. 1: AWARENESS OF ANY ECO-FRIENDLY PRODUCT

Yes	76%
No	24%

FIG. 1



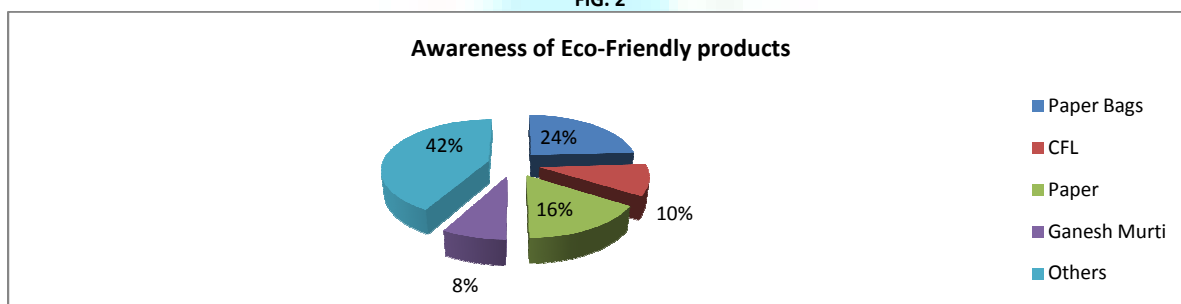
Source: Primary Data

Que.2. Name any the eco-friendly product that comes to your mind first?

TABLE NO. 2: AWARENESS OF ECO-FRIENDLY PRODUCTS

Eco-Friendly products	
Paper Bags	24%
CFL	10%
Paper	16%
Ganesh Murti	8%
Others	42%

FIG. 2



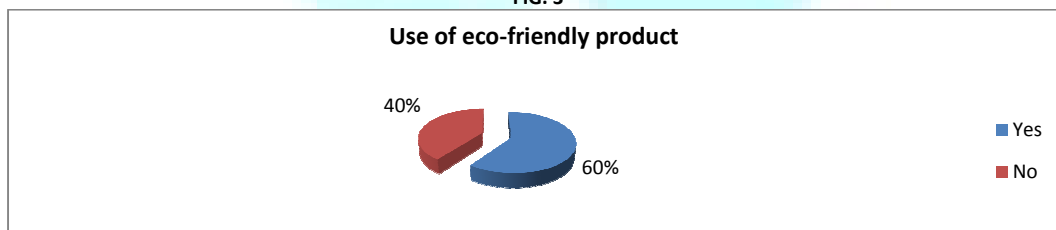
Source: Primary Data

Que.3. Do you use any eco-friendly product?

TABLE NO. 3: USE OF ECO-FRIENDLY PRODUCT

Use of eco- friendly product	
Yes	60%
No	40%

FIG. 3



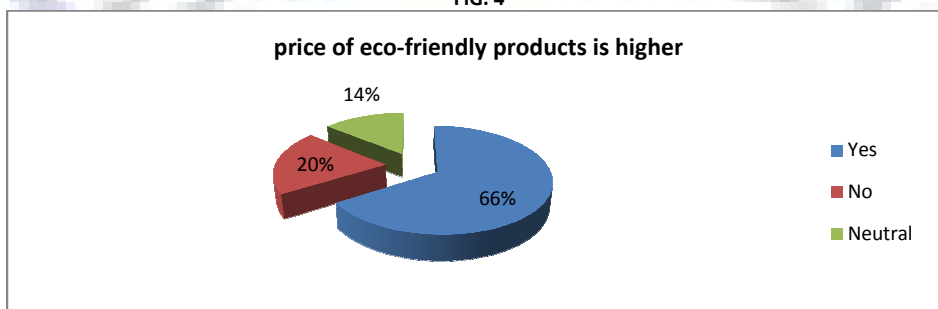
Source: Primary Data

Que.4. Do you agree that the price of eco-friendly products is higher?

TABLE NO. 4: PRICE OF ECO-FRIENDLY PRODUCTS IS HIGHER

price of eco-friendly products is higher	
Yes	66%
No	20%
Neutral	14%

FIG. 4



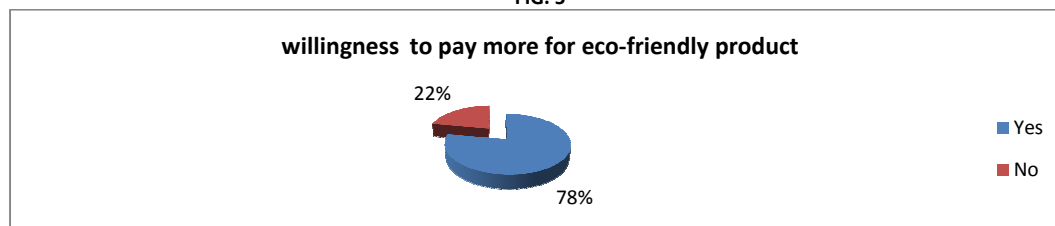
Source: Primary Data

Que.5. Are you willing to pay more for eco-friendly product?

TABLE NO. 5: WILLINGNESS TO PAY MORE FOR ECO-FRIENDLY PRODUCT

Willing To Pay more	
Yes	78%
No	22%

FIG. 5



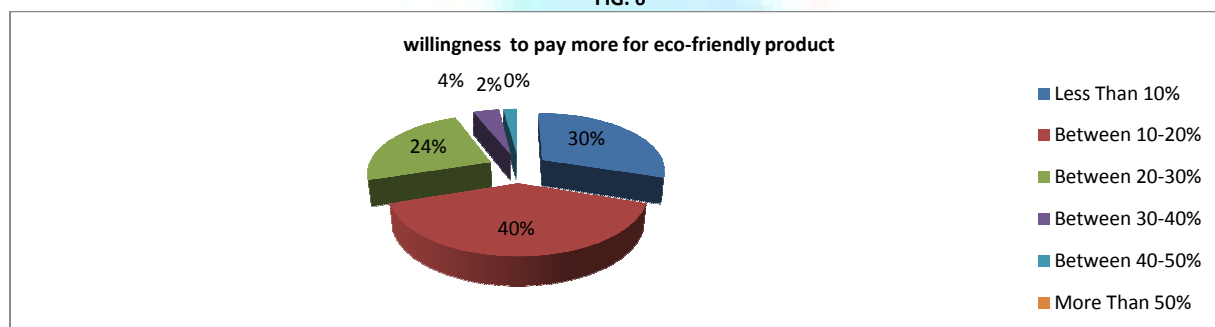
Source: Primary Data

Que.6. How much more are you willing to pay for eco-friendly product as compared to the traditional product ?

TABLE NO. 6: WILLINGNESS TO PAY MORE FOR ECO-FRIENDLY PRODUCT

willingness to pay more for eco-friendly product	
Less Than 10%	30%
Between 10-20%	40%
Between 20-30%	24%
Between 30-40%	4%
Between 40-50%	2%
More Than 50%	0%

FIG. 6



Source: Primary Data

FINDINGS

As per the data analysis, 24% of the respondents are not aware about the green products.

When asked to name a green product that comes to their mind first, most respondents named paper bag (24%).

40% of the respondents don't use any green product.

66% of the respondents agreed that the price of eco-friendly products is higher as compared to the traditional products. And 78% of the respondents are willing to pay more for eco-friendly product.

When respondents were asked how much more are you willing to pay for eco-friendly product, the answers are very encouraging. 30% of the respondents are ready to pay more upto 10%. 40% of the respondents are ready to pay more between 10-20 %. 24% of the respondents are ready to pay more between 20-30%.

RECOMMENDATIONS/SUGGESTIONS

24% of the respondents are not aware about the green products. This shows that there is scope for marketers with respect to increasing awareness about green products. The companies should develop new methods and strategies for increasing the awareness about green products.

40% of the respondents don't use any green product, hence showing tremendous potential for green products. The companies should develop new methods and strategies to make sure that people are buying more of the green products. This can be done by making people aware about how green products can help to save the environment and hence the human race.

CONCLUSIONS

This research paper is an attempt to find out whether people are aware about the green products; are they buying green products; are they ready to pay more for green products. Primary data was collected from the residents of Pune and analysis of the same shows that people have positive attitude towards green products. This research paper provides encouraging analysis to the companies that want to join the Green Bandwagon.

LIMITATIONS

The scope of this research was limited to Pune city. This is the limitation.

SCOPE FOR FURTHER RESEARCH

It should be checked whether the people of other cities in India are also positive towards green products. This provides scope for further research. Similar research should be carried out in the various cities of India.

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A STUDY ON CONSUMER BEHAVIOUR TOWARDS CELL PHONES

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ABSTRACT

Communication has become the life blood of human being and business life. Various modes of communication are available in present era. Cell phone is one of the faster growing and very popular mean of communication. Cell phone has become the necessity of life. Cell phone help the people to remain in the contact with their near and dear. . Now there is very stiff competition among cell phone play like Nokia, Samsung , micromax ,sony and other, etc. Each company is offering and launching various new models to attract the new customers. Now the features of cell phone have gone into major improvement. I phone used to be heavy without any attractive design, features etc, but with the growing awareness among the consumers and growing competition cell phone are offered with a variety of features such as MMS, SMS, internet system and memory. We can say that cell phone have become a thing of necessity and pride.

KEYWORDS

consumer behaviour, cell phones.

INTRODUCTION

Consumer behaviour may be defined as " Those acts of individuals directly involved in obtaining and using economic goods and services, including the decision processes that proceed and determine these acts." "The behaviour that consumers display in searching for purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs."

Thus conclusively, it may be stated that consumer behaviour implies the purchase and other consumption related activities of the individual. There are some important questions that are of potential interest to marketing men in respect of consumer behavior.

INFORMATION ABOUT VARIOUS CELL PHONES COMPANIES

1. NOKIA

The roots of Nokia go back to the year 1865 with the establishment of a forest industry enterprise in South-Western Finland by mining engineer Fredrik Idestam. Elsewhere, the year 1898 witnessed the foundation of Finnish Rubber Works Ltd, and in 1912 Finnish Cable. At the beginning of the 1980s, Nokia strengthened its position in the telecommunications and consumer electronics markets through the acquisitions of Mobira, Salora, Televa and Luxor of Sweden. In 1989, Nokia conducted a significant expansion of its cable industry into Continental Europe by acquiring the Dutch cable company NKF.

Since the beginning of the 1990's Nokia has concentrated on its core business, telecommunications, by divesting its information technology and basic industry operations. On 9 August 2012, Nokia launched for the Indian market two new Asha range of handsets equipped with cloud accelerated Nokia browser, helping users browse the Internet faster and lower their spend on data charges.

On 26 July 2012, it was announced that Nokia had abandoned the Meltemi project as a cost-cutting measure.

NOKIA LUMIA



UNIQUE DESIGN FEATURES, CUSTOMISABLE LIVE TILES AND MORE – THIS IS LUMIA

Symbian was the main operating system of Nokia smartphones by 2012, Nokia 808 PureView, launched in February 2012 was the last Symbian smartphone. Nokia launched its Nokia 1100 handset in 2003, with over 200 million units shipped, was the best-selling mobile phone of all time and the world's top-selling consumer electronics product.

The Nokia 808 PureView has a 41-megapixel camera, more than any other smartphone on the market. It was released in February 2012 and contains a 1.3 GHz processor. On 25 January 2013, Nokia announced this was the last Symbian smartphone the company would make.

Nokia 6600 from 2003 with a VGA camera, Bluetooth and expandable memory. It was the first Nokia and Symbian device to sell over a million. (Series 60 2nd) Nokia N73 released in August 2006, with 3G and a front camera. (S60 3rd)

The Nokia N95 released in March 2007, with a 5-megapixel camera and sliding multimedia keys. Often considered Nokia's hero smartphone. (S60 3rd)

Nokia E71 with a QWERTY keyboard, released in July 2008. (S60 3rd)

The Nokia 5800 XpressMusic, Nokia's first full-touch smartphone. (S60 5th)

The Nokia N97 released in June 2009 contains a sliding QWERTY and has on-board 32 GB of storage. (S60 5th)

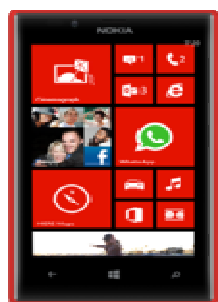
The Nokia N8 released in September 2010 is the first Symbian^3 device, and the first to feature a 12-megapixel autofocus lens. (Symbian^3/Anna/Belle)

The Nokia 808 PureView, released in February 2012 as the last Symbian smartphone, features a 41-megapixel camera and a 1.3 GHz CPU. (Belle)

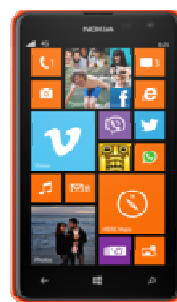
NOKIA ASHA



Surfing, socialising, sharing – our Asha handsets are ready for anything.



Lumia 625



Lumia 720



Nokia Lumia 1020



NOKIA LUMIA 925

2. SAMSUNG

Samsung means "three stars" in Korean. Lee Byung-Chull founded Samsung in 1938. Headquarters is located in Suwon, South Korea.

The company did fairly well until the Communist invasion in 1950 which caused great damage to his inventories. He was forced to leave and start over in Suwon in 1951. In 1953, Lee created a sugar refinery- the South Korea's first manufacturing facility after the Korean War. Samsung Group later formed several electronics-related divisions, such as Samsung Electronics Co., Samsung Electro-Mechanics Co., Samsung Corning Co., and Samsung Semiconductor & Telecommunication Co., and grouped them together under Samsung Electronics Co., Ltd. in 1980s. Its first product was a black-and-white television set (Samsung Electronics).

In the late 1980s and early 1990s, Samsung Electronics invested heavily in research and development, constructing the company as a leader in the global electronics industry. Samsung became the largest producer of memory chips in the world in 1992. In 2002 (Lee Kun-hee). Samsung is very involved in the Asian Games, contributing Samsung Nations Cup Riding Competition, Samsung Running Festival, Samsung World Championship, and still many more around the globe (Samsung Electronics). In 2007 Samsung Telecommunication Business reported over 40% growth and became the second largest mobile device manufacturer in the world. Its market share was 14% in Q4 2007, growing up from 11.3% in Q4 2006. At the end of November 2011, Samsung sold more than 300 million mobile devices which was a close second after Nokia with 300.6 million mobile devices sold in the first three quarters of 2011. As of Q3 2012, Samsung is the largest manufacturer of devices running Google Android with a 46% market share.

3. MICROMAX

Micromax is an Indian consumer electronics company located in Gurgaon, Haryana, India. It has 23 offices in India and an international office in Hong Kong. In 2008, it entered mobile handset business and by 2010 it became one of the largest Indian domestic mobile handset companies operating in low cost feature phone segments. This transformation was steered by four friends who divided responsibilities on functional lines, which haven't changed since: Rajesh Agarwal, Rahul Sharma, Vikas Jain, and Sumeet Arora. Micromax is the 12th largest handset manufacturer in the world (According to Global Handset Vendor Market share report from Strategy Analytics). The Indian brand is reaching out to the global frontiers with innovative products that challenge the status quo that Innovation comes with a price. With an in-depth understanding of rapidly changing consumer preferences coupled with the use of advanced technologies, Micromax has been able to differentiate itself from the competitors through innovation and design.

We understand the pulse of the consumer and hence constantly invest into strengthening the product portfolio through R&D and innovative marketing strategies.

Our product portfolio embraces more than 60 models today, ranging from feature rich, dual-SIM phones to QWERTY, touch-enabled smart-feature phones and 3G Android Smartphone's. We also lay special focus on the products to enhance the customer's overall experience with the device. Most of our products come with innovative packaging and bundled accessories.

Globally, Micromax caters to a varied target audience having their focus majorly on the youth. Our overseas product portfolio is tailor-made to suit the needs and aspirations of our growing consumer base in the international markets.

MOBILE PHONES

INNOVATIONS

- 30 day battery standby phone-X1i

MICROMAX X1i Xtra

- 1-Gravity GC700
- 2.- Universal Remote Control Phone-X235 .
- 3.- Gamolution- G4
- 4.- Bling Q55
- 5- Van Gogh X450
- 6- Gesture control phone – A85
- 7- ModuT
- 8- MTV Music phone X360
- 9- QWERTY Keypad
- 10 - Funbook- P300
- 11--Micromax Canvas A250 Turbo

Source: Micromaxinfo.com

3. SONY

Sony Mobile Communications (formerly **Sony Ericsson Mobile Communications AB**) is a multinational mobile phone manufacturing company headquartered in Tokyo, Japan, and a wholly owned subsidiary of Sony Corporation. It was founded on October 1, 2001 as a joint venture between Sony and the Swedish telecommunications equipment company Ericsson, under the name **Sony Ericsson**. Sony acquired Ericsson's share in the venture on February 15, 2012.

Sony Mobile Communications has research and development facilities in Tokyo, Japan; Lund, Sweden and Beijing, China. Sony Mobile is the fourth-largest smartphone manufacturer by market share in the fourth quarter of 2012. The current flagship device of Sony is the Sony Xperia Z1, a waterproof and dust-resistant premium smartphone featuring a 20.7MP camera.

On October 27, 2011, Sony announced that it would acquire Ericsson's stake in Sony Ericsson for €1.05 billion (\$1.47 billion), making the mobile handset business a wholly owned subsidiary of Sony. The transaction's completion was expected to occur in January 2012. At their keynote at the 2012 Consumer Electronics Show, Sony's Kaz Hirai announced that Sony Ericsson would be known simply as Sony Mobile Communications pending completion of the transaction. On January 26, 2012, the European Union approved the buyout. On February 16, 2012, Sony announced it had completed the full acquisition of Sony Ericsson. On January 7, 2013, Sony Mobile completed moving its headquarters from Lund, Sweden to Tokyo, Japan in order to fully integrate with its parent company. The first Sony-only mobile was the Sony Xperia S along with launch of Sony Xperia U and Sony Xperia P at the 2012 Consumer Electronics Show. Sony Mobile Communications has decided to phase out all the feature (non-smart) phones by September 2012 and focus on smartphones segment. On July 2, 2012, Sony announced it is buying Gaikai, a cloud service to support its expansion into the cloud gaming realm. Sony is paying a reported \$380 million to acquire Gaikai. The Sony Ericsson Liquid Energy Logo which was the hallmark logo used on Sony Mobile products up until the 2012 series of phones was replaced with a new signature power button design as the new design signature hallmark to easily identify a Sony phone which debuted with the 2013 series of Xperia mobile phones. At the 2013 Consumer Electronics Show the Sony Xperia Z and Sony Xperia ZL were announced.

Parent: Sony Corporation

Website: www.sonymobile.com

OBJECTIVES OF THE STUDY

- To find out the major player of cellular phone in Chandigarh (UT), Panchkula (HR) And Mohali (Panjab)
- Evaluating consumer perception about services provided by the cellular phone companies.
- To find out the problem and prospect of cellular phone.

HYPOTHESIS OF THE STUDY

HYPOTHESIS : Null Hypothesis: People choice towards cellular phone are indifferent for various cellular (GSM & CDMA) companies and schemes.

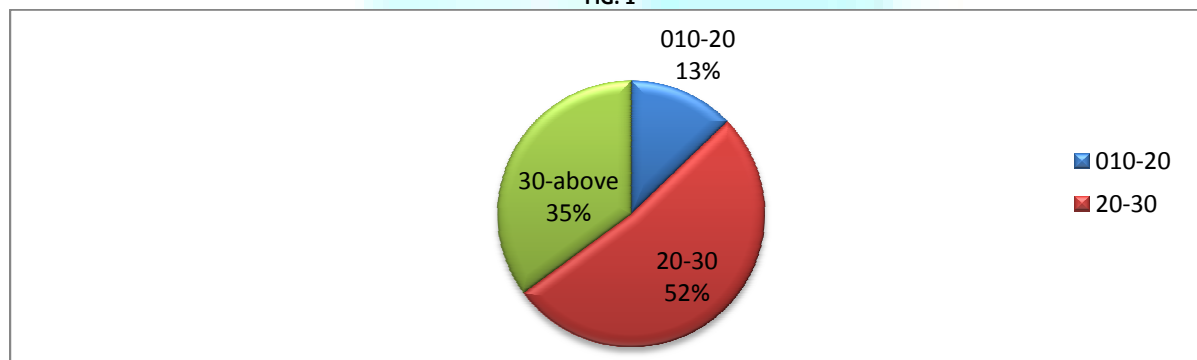
RESEARCH METHODOLOGY

Research design	:	Convenience sampling
Universe & survey population	:	Chandigarh (UT), Panchkula (HR) And Mohali (Panjab)
Sample Size	:	100 consumers
Collection of Data	:	primary (questionnaire) and secondary
Tools & Technique	:	Pie chart

DATA ANALYSIS AND INTERPRETATION

CHARACTERISTIC OF SAMPLE TAKEN ON THE BASIS OF AGE GROUP

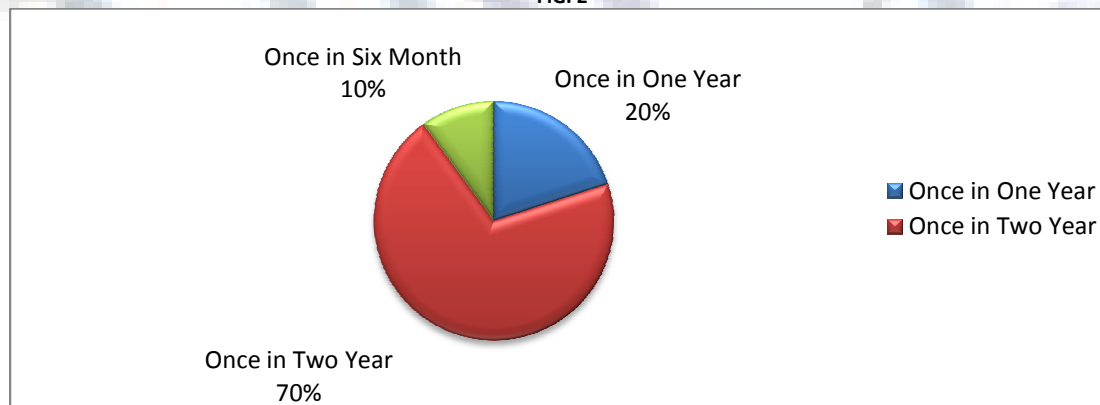
FIG. 1



Interpret - Finding of Survey shows that 52% respondents belongs to age group 20-30, 33% respondents belongs to 30-above and 13% from the age group 10-20.

TIME PERIOD IN WHICH THE RESPONDENT CHANGE HIS/HER CELLULAR PHONE

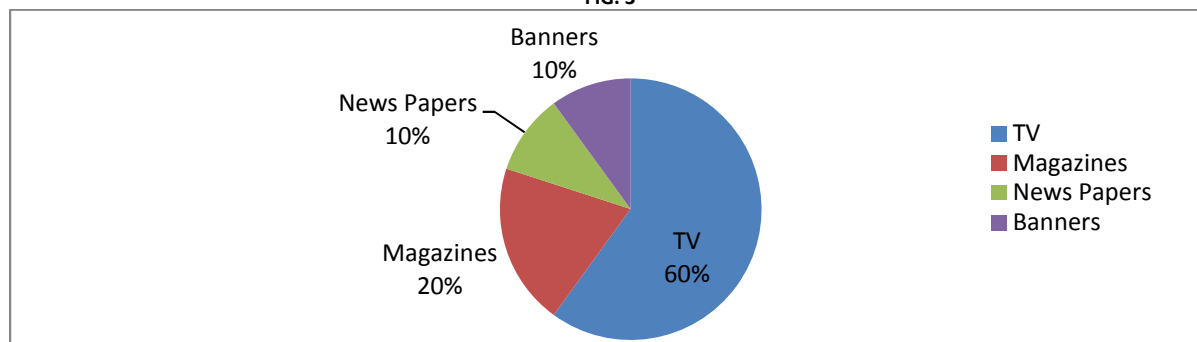
FIG. 2



Interpret - Finding of Survey shows that 70% respondents changes there cellular phone in two years, 20% changes their cell phone once in one year and 10% once in six month.

MOST EFFECTIVE MEDIUM OF ADVERTISEMENT FOR CELLULAR PHONE

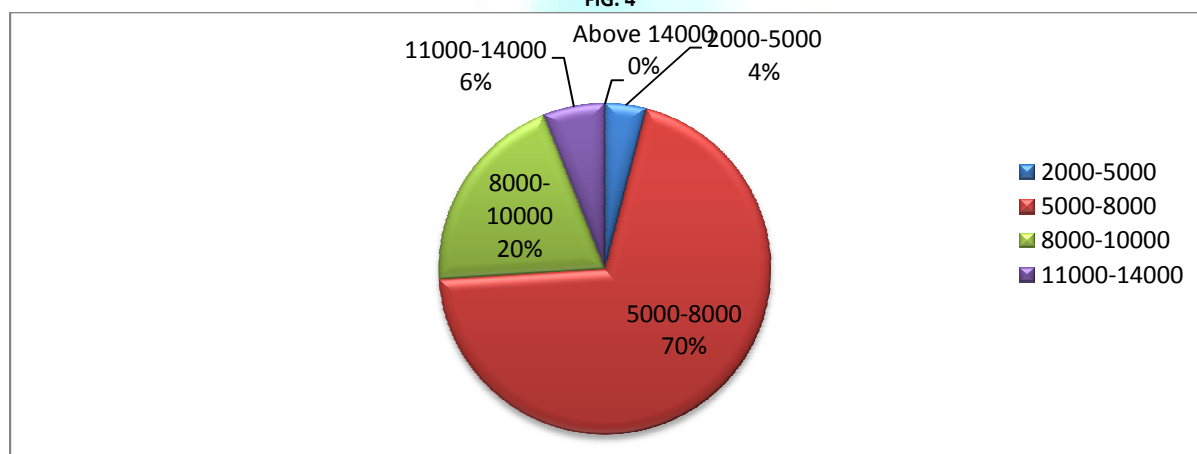
FIG. 3



Interpret - Finding of Survey shows that 60% respondents says TV is most effective medium of advertisement, 20% says magazines, 10% says banners and 10% says newspapers.

PRICE (Rs.) WHICH THE RESPONDENTS ARE READY TO PAY FOR NEW HANDSET CONTAINING THEIR SPECIFIC FEATURES

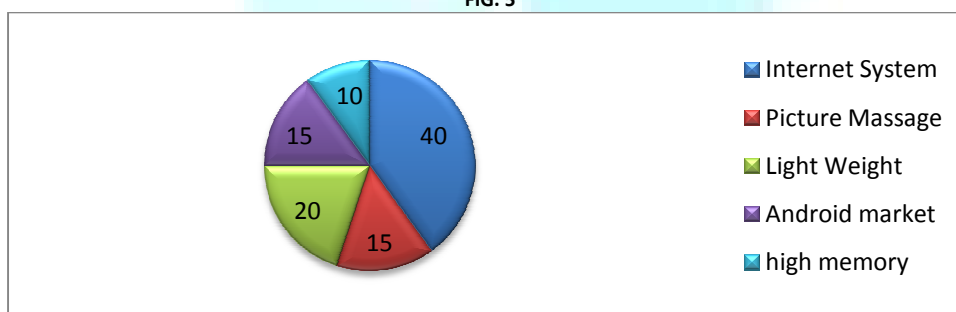
FIG. 4



Interpret - Finding of Survey shows that 70% respondents belongs to income group 5000-8000, 20% from 8000-10000, 6% from 11000-14000 and 4% from 2000-5000.

ADDITIONAL FEATURES LIKED BY THE RESPONDENTS IN CELLULAR PHONE

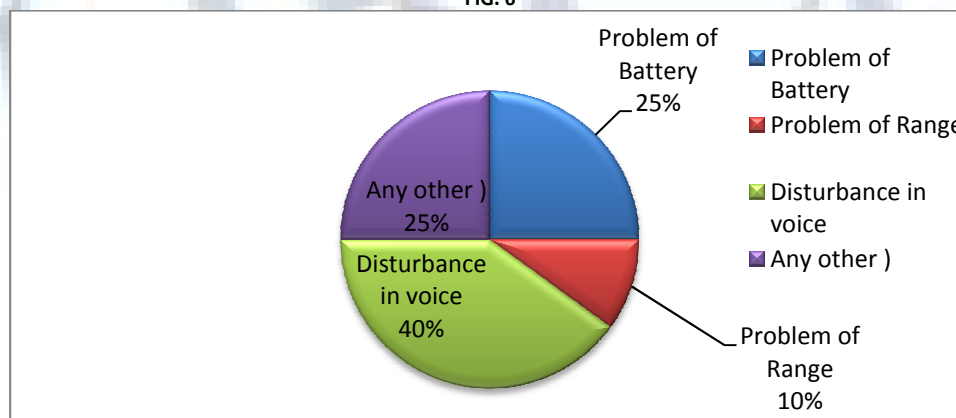
FIG. 5



Interpret - Finding of Survey shows that 40% respondents was Internet facilities in their cellular phone, 20% want light weight of cellular phone, 15% wants pictures Message, 15% wants Android market and 10% wants high memory.

PROBLEM FACE BY THE RESPONDENTS WHILE USING CELLULAR PHONE

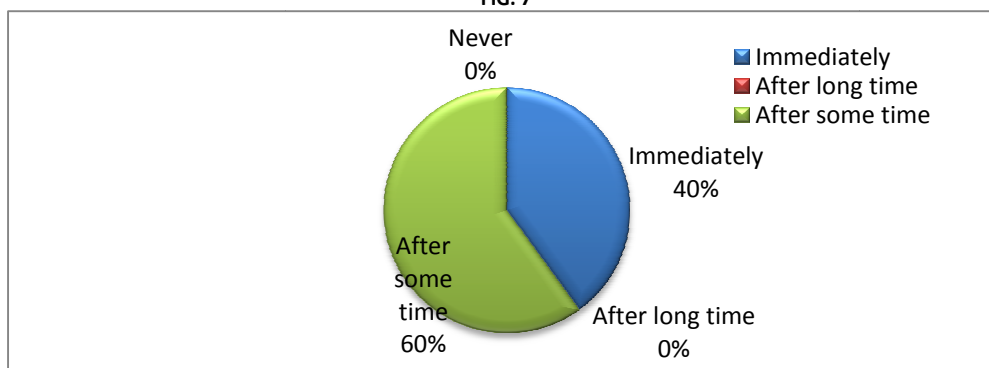
FIG. 6



Interpret- Finding of Survey shows that 40% respondents faces problems of disturbance in voice, 25% face problem of battery, 10% face problem of range and 25% face problem of any other.

PROBLEM OF RESPONDENTS ABOUT THE SERVICES PROVIDED BY CELLULAR PHONE COMPANIES IN CASE OF ANY PROBLEM

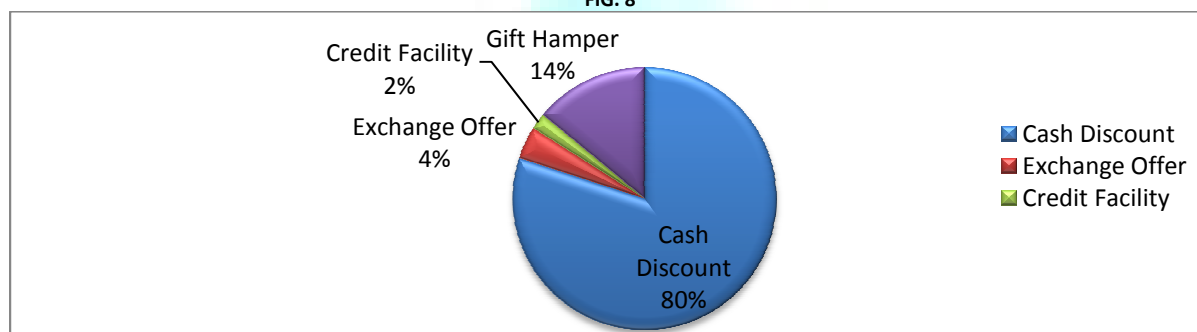
FIG. 7



Interpret - Finding of Survey shows that 60% respondents says cellular phone company act after some time in case of any problem, 40% says immediately.

TYPES OF INCENTIVE PREFERRED BY THE RESPONDENT OF CELLULAR PHONE

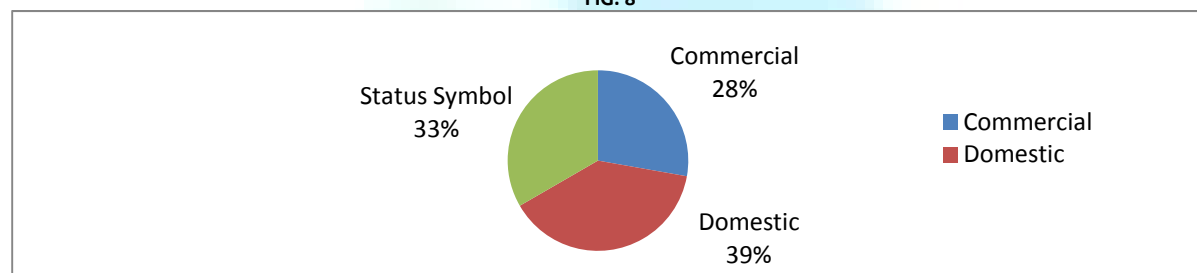
FIG. 8



Interpret - Finding of Survey shows that 80% respondents wants cash discount, 14% wants gift hamper, 4% wants exchange offer and 2% wants credits facilities.

PURPOSE OF PURCHASING CELLULAR PHONE OF THE RESPONDENTS

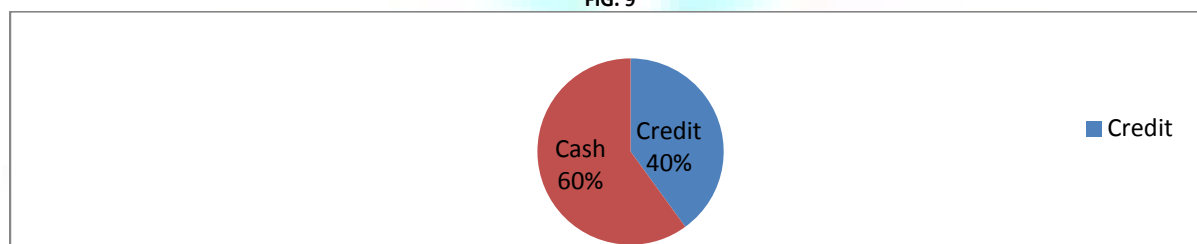
FIG. 8



Interpret - Finding of Survey shows that 39% respondents purchased the cellular phone for domestic purpose, 33% for status symbol purpose and 28% for commercial purpose .

PAYMENT PLAN OF RESPONDENT FOR CELLULAR PHONE

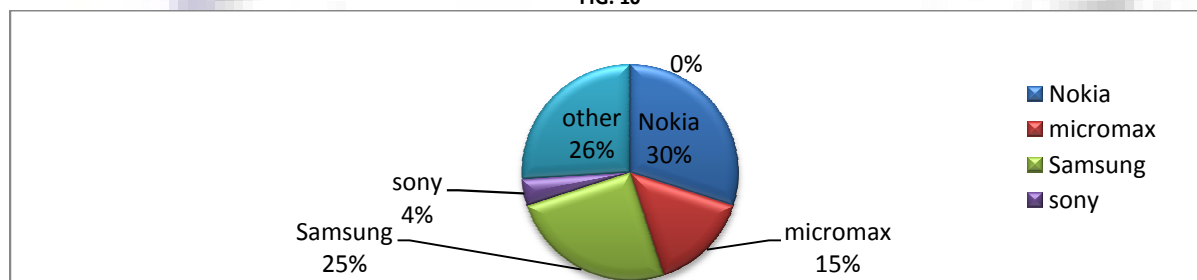
FIG. 9



Interpret - After survey 1 found that 60% respondents are in the favour of cash payment and 40% are in favour of credit payment.

BRAND OF CELLULAR PHONE WHICH THE RESPONDENTS PREFER TO HAVE

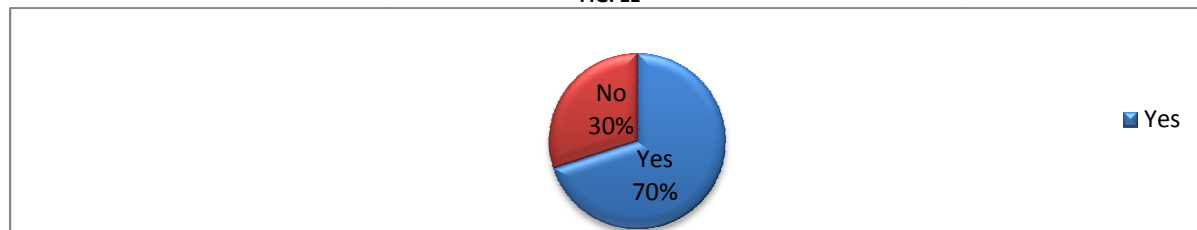
FIG. 10



Interpret - Finding of Survey shows that 30% consumers preferred to have to cell phone of Nokia, 25% of Samsung, 15% respondents to have cell phone of Micromax, 4% respondents to have cell phone of sony, 26% respondents to have cell phone of other

NUMBER OF RESPONDENT WHO FEEL NEED FOR CELLULAR PHONE

FIG. 11



Interpret - After survey 1 found that 70% of the respondent have the need for cellular phone and 30% do not have need for cellular phone.

LIMITATION OF THE STUDY

- Biasness may be entered in the sampling or data collection at some places.
- Information collected may have some distance from the actual information due to lack of some respondent interest
- The time available for the survey was very short, in this short period it was very difficult to get the entire data whole of the organization.
- Lacking of money was also a limiting factor for a researcher.

FOCUS OF THE STUDY

Competition among the cellular phone companies increasing day by day. Various companies are coming with there different-different facilities and discount rate. Every day we sees the new competitor of the cellular phone, major player of cellular phone in **Chandigarh (UT)**, **Panchkula (HR)** And **Mohali (Panjab)**, problem and prospect of cellular phone and perception of consumer about the services.

SIGNIFICATION OF THE STUDY

Cellular phone business is growing at very rapid rate. In metropolitan cities the cellular phone has become the necessity of life. People of small cities are also purchasing the cellular phone. Now the markets of cellular have pared every where in the world. Now Competition among the companies increasing day by day, each and every company is trying to be come market leader. So present study tries to find out the market potential of cellular phone and consumer perception about the services provided by the cellular phone companies.

TO FIND OUT THE MAJOR PLAYERS OF CELLULAR PHONE IN CHANDIGARH (UT), PANCHKULA (HR) AND MOHALI (PANJAB)

- With the help of survey I got Nokia, Samsung and Micromax are the major player of cellular phone in Chandigarh (UT), Panchkula (HR) And Mohali (Panjab). The respondents who have the cell phone,
- 30% are using Nokia cell phone, 25% are using Samsung cell phone, 15% are using Micromax are using cell phones.
- Respondents who want to purchase the cell phone, 30% wants to purchase the Nokia, 25% Samsung, 15% MICROMAX,, 4% Sony, 26% Other cell phones.

EVALUATING THE CONSUMER PERCEPTION ABOUT THE SERVICES PROVIDING BY THE CELLULAR PHONE COMPANIES

- From the response of respondents it is come to know, 60% respondents are saying cellular phone companies act after some time in case of any problem in cell phone while 40% are saying companies gives immediate services. 80% respondents wants case discount and 14% wants gift hamper, 40% wants exchange offers from the cellular phone companies.
- Specific problems which the consumer facing is disturbance in voice and signal problem while using the cell phone so cell phone company should try to remove this problem.

CONCLUSION

Characteristic of sample taken on the basis of age group :-Finding of Survey shows that 52% respondents belongs to age group 20-30, 33% respondents belongs to 30-and-above and 13% from the age group 10-20.

Time Period in which the respondents change his/her cellular phone: Finding of Survey shows that 70% respondents changes there cellular phone in two years, 20% changes their cell phone once in one year and 10% once in six month.

Most effective medium of advertisement for cellular phone: Finding of Survey shows that 60% respondents says TV is most effective medium of advertisement, 20% says magazines, 10% says banners and 10% says newspapers.

Price (Rs.) which the respondents are ready to pay for new handset containing their specific features : Finding of Survey shows that 70% respondents belongs to income group 5000-8000, 20% from 8000-11000, 6% from 11000-14000 and 2% from 2000-5000.

Additional features liked by the respondents in cellular phone : . Finding of Survey shows that 40% respondents was Internet facilities in their cellular phone, 20% want light weight of cellular phone, 15% wants pictures Message, 15% wants Android market and 10% wants high memory.

Problem face by the respondents while using cellular phone: Finding of Survey shows that 40% respondents faces problems of disturbance in voice, 25% face problem of battery, 10% face problem of range and 25% face problem of any other..

Problem of respondents about the services provided by cellular phone companies in case of any problem: Finding of Survey shows that 60% respondents says cellular phone company act after some time in case of any problem, 40% says immediately.

Types of incentive preferred by the respondent of cellular phone: Finding of Survey shows that 80% respondents wants cash discount, 14% wants gift hamper, 4% wants exchange offer and 2% wants credits facility.

Purpose of purchasing cellular phone of the respondents : Finding of Survey shows that 39% respondents purchased the cellular phone for domestic purpose, 33% for status symbol purpose and 28% for commercial purpose .

Brand of Cellular phone which the respondents prefer to have:- Finding of Survey shows that 30% consumers preferred to have to cell phone of Nokia, 25% of Samsung, 15% respondents to have cell phone of Micromax, 4% respondents to have cell phone of sony, 26% respondents to have cell phone of other.

Payment plan of respondent for cellular phone: After survey 1 found that 60% respondents are in the favour of cash payment and 40% are in favour of credit payment.

Number of respondent who feel need for cellular phone: After Survey 1 found that 70% of the respondent have the need for cellular phone and 30% do not have need for cellular phone.

Most frequently cellular phone used by respondent: Finding of Survey shows that Nokia, Micromax, Samsung are the major players of cellular phone in Chandigarh (UT), Panchkula (HR) And Mohali (Panjab)

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GROWTH MOVEMENT OF DEPOSITS IN OMKAR MAHILA SAHKARI CO-OPERATIVE SOCIETY LTD, PUNE

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ABSTRACT

Banking business has done wonders for the world economy. The simple looking method of accepting money deposits from savers and then lending the same money to borrowers, banking activity encourages the flow of money to productive use and investments. A co-operative combines the small fortunes of its members into a large capital and their a big business is formed. The basic question in this research is how co-operatives societies can respond to current challenges and changes for better survival and save cooperative identity. The paper is a descriptive survey, which involves the collection of data for the purpose of describing the role of co-operative societies in economic development. Mobilisation of savings through intensive deposit collection has been regarded as the major task of banking in India today. The index of growth of deposits may be regarded as the index of growth of banking business. Co-operative societies are an important constituent of the Indian Financial System. Present paper is an attempt made to analyze the growth rate of deposits of Omkar Mahila Sahkari cooperative society Ltd., Dist-Pune, State-Maharashtra as an empirical case study.

KEYWORDS

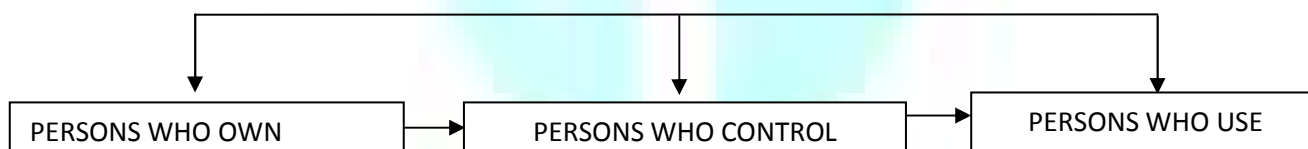
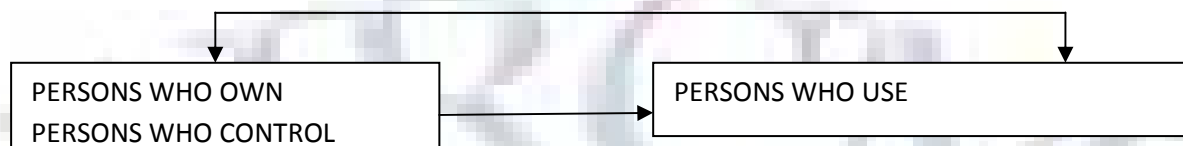
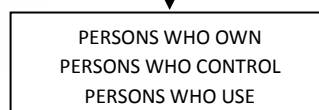
Co-operative Society, savings, deposit, productive use.

INTRODUCTION

The co-operative sector has been playing a distinct and significant role in the country's process of socio-economic development. The motto of co-operation, each for all and all for each, signifies faithfulness.

Co-operative Banks in India are registered under the Co-operative Societies Act. The Cooperative Banks are governed by Reserve Bank of India i.e. RBI and through Banking Regulation Act 1949 and Cooperative Societies Act 1965. In 1991, India has accepted Liberalization/free trade policy which also covered the objective of decentralization of the banking sector. As a result of it, many new co-operative banks were established and competition has been generated in this field. To examine all aspects relating to structure of organization, functions and procedure of financial system, Govt. of India appointed a committee under chairmanship of Shri M. Narsinham. RBI started implementing prudential guidelines on asset classification and provisioning on loan assets based on recommendation of this committee for commercial banks initially which later were made applicable to co-operative banking sector. Because of these new policy changes, cooperative sector banks are also now required to keep in mind professional approach along with social service approach. The co-operative banks mainly provide finance to rural sector and farming sector. However due to slow recovery, „NPA“ problem becomes worrisome factor, hence they have to go for financing areas giving scope for higher income.

These societies provide most services such as savings and current accounts, safe deposit lockers, loan or mortgages to private and business customers. For middle class users, for whom a bank is where they can save their money, facilities like Internet banking or phone banking is not very important. Although they are not better than private banks in terms of facilities provided, their interest rates are definitely competitive. However, unlike private banks, the documentation process is lengthy if not stringent and getting a loan approved quickly is rather difficult. The criteria for getting a loan from a UCB are less stringent than for a loan from a commercial bank.

UNIQUENESS OF CO-OPERATIVE SOCIETY**1. Large Business/Multinational****2. Small Private Business****3. Co-operatives****TYPES OF DEPOSITS**

Omkar Mahila Sahkari cooperative society Ltd. offers following types of deposits to general public-

1. SAVING ACCOUNT

This type of account is normally opened by individuals for the purpose of savings. Groups of individuals forming eq associations for non-profit purpose are also entitled to open savings bank account. The savings bank accounts bear a nominal rate of interest and, hence, come under a low cost category. The depositors are entitled to withdraw funds by issuing cheques supplied by the banks, while keeping a minimum balance.

2. FIXED DEPOSITS

These deposits are not repayable on demand and bear a higher rate of interest. A term deposit is repayable on the expiry of a particular term for which it was deposited. Though the banks are legally required to honor the claim to repay the term deposits before maturity, generally the bank oblige the customer by

giving payment in the event of their request for pre-mature payment. For breaking the deposit before its maturity date, sometimes the bank impose a nominal penalty by way of deduction of a small amount from the relative interest payable to the depositor.

ONE TIME INVESTMENT (Valid for 36 months)

Investment (Rs)	Returns(Rs)
702/-	1,001/-
3507/-	5,000/-
7014/-	10,000/-
17,535/-	25,001/-
35070/-	50,001/-
52,605/-	75,002/-
70734/-	1,00,000/-

INTEREST RATE ON FIXED DEPOSIT

Period	Rate of Interest
31 days to 90 days	6.00%
91 days to 180 days	7.50%
181 days to 270 days	9.00%
271 days to 365 days	10.00%
12 months to 18 months	11.00%
36 months beyond	11.50%
74 months amount double	
Senior citizen and institution additional interest percentage rate is provided	
71 months amount double	

3. RECURRING DEPOSITS

For small depositor, the banks offer a scheme called Recurring Deposits, where a depositor can deposit a fixed amount on monthly basis for a specified period. On expiry of the said period, the recurring deposit matures and the customer gets the aggregate amount of deposit and interest earned thereon. This scheme is popular among the poor and middle class people who cannot afford to deposit large amount of money at a time.



RECURRING SCHEME (Valid for 36 Months)

Monthly Deposit (RS)	Collected Amount(RS)	Return Amount(Rs)
24/-	864/-	1024/-
118/-	4,248/-	5034/-
587/-	21,132/-	25041/-
1,173/-	42,228/-	50040/-
1,760/-	63,360/-	75082/-
2,345/-	84420/-	100038/-

OMKAR MAHILA SAHKARI COOPERATIVE SOCIETY LTD.

Omkar Mahila Sahkari Cooperative Society Ltd., is one of the renowned & emerging Co-operative society in Pune District. It was registered with registration no. PNA/RSR/(CR)/218/2007. On 19/04/2007, Omkar Mahila was founded under Sakhar Sankul, Pune, by President Smt Padmini Deepak Kirad with the vision of involving more common people for providing benefits of the Co-operative society. It has 2 branches, one in 203, Nana Peth, opp. To Oswal Panchayat, Pune & one in 637, Guruwar Peth, opp. pushpam jewellers, Pune & registered under Sakhar Sankul, near agriculture college, Shivajinagar, Pune, 411005. It has total 18 managerial and non managerial staff working for the bank. It is now fully computerized and started accepting payments of telephone bills, MSEB bill. It is observed that the Co-operative Society has achieved this success with the dynamic leadership of board of directors and with the loyalty of staff, which made the society "customer friendly". It caters to the needs of sole traders and self employed etc. They provide loans to working class people & for marriage purpose also. These Co-operative Society is continuously implementing and practicing new technologies for its customers.

FEATURES/SPECIFICATION

1. Entire Pune District is Covered for working.
2. From the first day, computerized system was provided to customers.
3. No N.P.A Zero%.
4. FDI percentage is more than Nationalized Bank.
5. Interest is provided quarterly as well as monthly as per the specification of customers.
6. Account holder are provided Demand Draft, pay slip facilities.
7. Loan is granted against gold by taking gold from customers as a securities i.e. Gold loan.

ORGANISATION STRUCTURE

- CHAIRMAN : Padmini Deepak Kirad
- VICE-CHAIRMAN : Shaila Ramchandra Shinde
- SECRETARY : Ashwini Sanjay Chilka
- Managing Director : Sanjay Chilka
- Advisor : Deepak Chandidas Kirad

FINANCIAL POSITION OF OMKAR MAHILA SAHKARI COOPERATIVE SOCIETY LTD. (From 2007-08 to 2011-12)

	2007-08	2008-09	2009-10	2010-11	2011-12
Numbers of Share Holders	777	826	860	924	1041
Share Capital	9.92	11.87	13.98	18.19	24.33
Provision Fund	0.18	0.47	0.75	1.07	1.49
Building Fund	0.10	0.30	0.45	0.65	1.00
Self-Fund	0.10	0.55	1.00	2.00	4.00
FDR	52.19	111.23	171.76	258.90	369.17
Investment	7.05	18.60	34.71	63.63	63.25
Loans	49.37	99.35	144.90	210.24	324.50
Working Capital	63.22	126.54	192.54	287.19	417.20
Profit	0.61	1.11	1.14	1.65	2.74
Audit Classification	A	A	A	A	A
Dividend	5%	6%	7%	8%	9%

REVIEW OF LITERATURE

Several research studies have been conducted to examine the issues relating to functioning of co-operative banks, challenges before co-operative banks. Many researchers have studied cases of financial performance of different types of banks. Masthan and Narayanasamy in their study analyzed financial performance of Chittor Co-op. Town Bank. In 5 years study, they have studied growth of the bank on the basis of membership, share capital, deposits, working capital, loans etc. Kuvalekar, Shrivastava and Kaveri have explained corporate governance in co-operative banking. Rajiv Kumar and Balbir Kumar have studied financial appraisal of Patiala Central Co-operative Bank. In that research, they concluded that deposits, working capital and overall business are showing good condition of the bank. Jain (2001) has done a comparative performance analysis of District Central Cooperative Banks (DCCBs) of Western India, namely Maharashtra, Gujarat and Rajasthan and found that DCCBs of Rajasthan have performed better in profitability and liquidity as compared to Gujarat and Maharashtra. Singh and Singh (2006) studied the funds management in the District Central Cooperative Banks (DCCBs) of Punjab with specific reference to the analysis of financial margin. It noted that a higher proportion of own funds and the recovery concerns have resulted in the increased margin of the Central Co-operative Banks and thus had a larger provision for non-performing assets. Campbell (2007) focused on the relationship between nonperforming loans (NPLs) and bank failure and argued for an effective bank insolvency law for the prevention and control of NPLs for developing and transitional economies as these have been suffering severe problems due to NPLs. Singla (2008) emphasized on financial management and examined the financial position of sixteen banks by considering profitability, capital adequacy, debt-equity and NPA. Chander and Chandel (2010) analyzed the financial efficiency and viability of HARCO Bank and found poor performance of the bank on capital adequacy, liquidity, earning quality and the management efficiency parameters.

OBJECTIVES OF THE STUDY

The following are the main objectives of the study

- To analyze the growth rate of deposits.
- To study the deposit movement of Omkar Mahila Sahkari cooperative Society Ltd.
- To offer suggestions, for improving the performance of the Society.

RESEARCH METHODOLOGY

This study has examined the growth movement of deposits of Omkar Mahila Sahkari Society Pvt from 2007-2008 to 2012-2013.

SOURCES OF DATA

To accomplish the objectives of the study, primary data were used. It has been collected from bank records, published and unpublished financial reports, journals, magazines, and newspapers. Data Analysis The growth movement of deposits of Omkar Mahila Sahkari Society Pvt. Were analyzed for the period of six years from 2007-2008 to 2012-2013.

With the help of following tools.

- Growth rate
- Trend analysis
- Chi – Square Test

ANALYSIS & INTERPRETATION OF ENLARGEMENT OF DEPOSITS IN JOB

This part of the study is analysis & interpretation of growth movements of deposits in Omkar Mahila Sahkari Society Ltd. The purpose of analyzing the data is to dig out the information, which is useful for making decisions. The methods used in analyzing the data are presented in tabular form. The last stage in statistical investigation is interpretation i.e. drawing conclusions from the data collected and analyzed. Correct interpretation will lead to a valid conclusion of the study and this can be useful in taking suitable decisions.

TABLE 1: CALCULATION OF GROWTH RATE OF SAVINGS DEPOSIT

Year	Saving Deposit (Rs.in lakhs)	Growth Rate %
2007-2008	5	100
2008-2009	10	200
2009-2010	12	240
2010-2011	15	300
2011-2012	18	360
2012-2013	25	500

Table 1 indicates that the amount of savings deposit & its growth rate for the period of six years from 2007-2008 to 2012-2013 is found to be increasing. The growth rates given in the table are calculated by taking 2008 as the base year. The highest growth rate is recorded in the year 2012-2013 i.e. 500%.

CHART NO. 1: SAVING DEPOSITS –GROWTH RATE

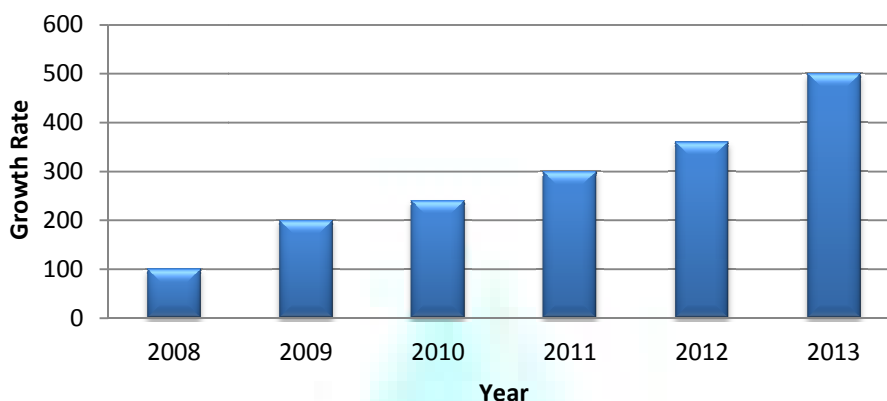
SAVING DEPOSIT

TABLE 2:FIXED DEPOSIT

Year	Fixed Deposit (Rs.in lakhs)	Growth Rate %
2007-2008	74.71	100
2008-2009	105.72	142
2009-2010	177.34	237
2010-2011	271.2	363
2011-2012	348.09	466
2012-2013	405.61	543

Table 2 reveals that the amount of fixed deposit & its growth rate for the period of six years from 2007-2008 to 2012-2013 is found to be increasing. The growth rates given in the table are calculated by taking 2008 as the base year. The highest growth rate is recorded in the year 2012-2013 i.e 543%.

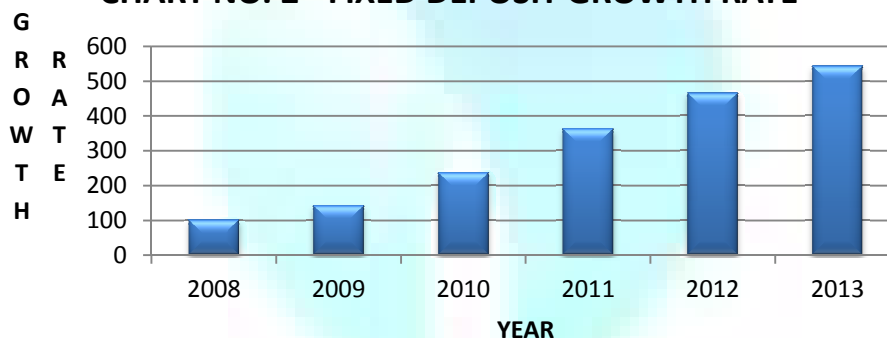
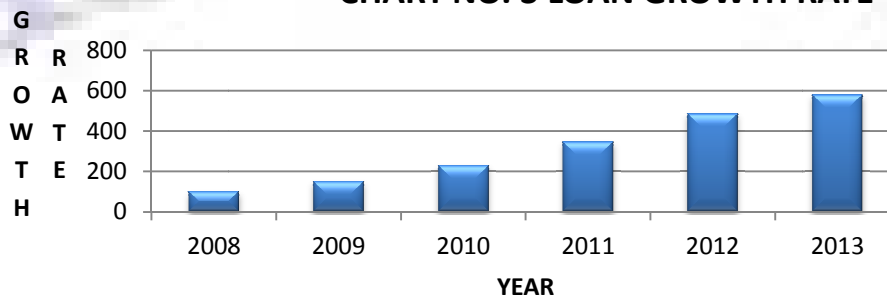
CHART NO. 2 - FIXED DEPOSIT GROWTH RATE

TABLE 3: CALCULATION OF GROWTH RATE OF LOANS

Year	Loans (Rs.in lakhs)	Growth Rate
2007-2008	70.13	100
2008-2009	105.26	150
2009-2010	160.37	229
2010-2011	243.21	347
2011-2012	340.99	486
2012-2013	406.77	580

Table 3 indicates that the amount of loans & its growth rate for the period of six years from 2007-2008 to 2012-2013 is found to be increasing. The growth rates given in the table are calculated by taking 2008 as the base year. The highest growth rate is recorded in the year 2012-2013 i.e 580%.

CHART NO. 3 LOAN GROWTH RATE

II CALCULATION OF TREND VALUE

TABLE : 4 SAVING DEPOSIT

Year	Saving Deposit(Rs.in lakhs)	Trend Value
2008	5	5.10
2009	10	8.72
2010	12	12.35
2011	15	15.98
2012	18	19.61
2013	25	23.24
2014	Estimated Value	26.87

Table 4 shows that the trend values obtained are increasing & accordingly it is found that the saving deposits for the year 2014 is estimated to be Rs 26.87 lakhs.

CHART NO 4: SAVING DEPOSIT – TREND VALUE

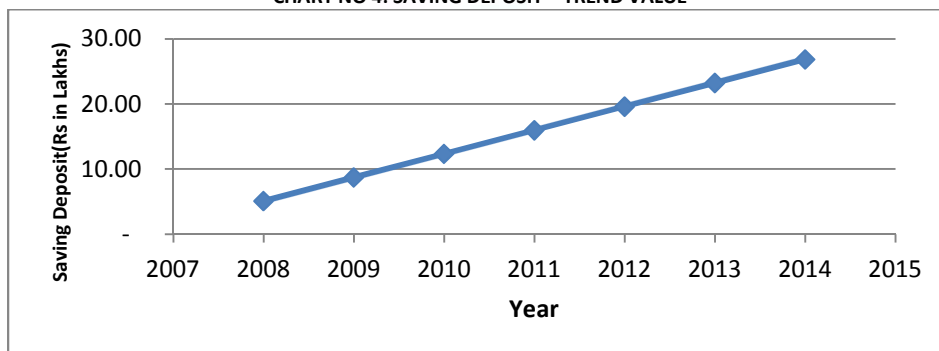


TABLE 5: FIXED DEPOSIT

Year	Fixed Deposit(Rs.in lakhs)	Trend Value
2008	74.71	53.63
2009	105.72	124.35
2010	177.34	195.08
2011	271.2	265.81
2012	348.09	336.54
2013	405.61	407.26
2014	Estimated Value	477.99

Table 5 shows that the trend values obtained are increasing & accordingly it is found that the fixed deposits for the year 2014 is estimated to be Rs 477.99 lakhs.

CHART NO 5: FIXED DEPOSIT – TREND VALUE

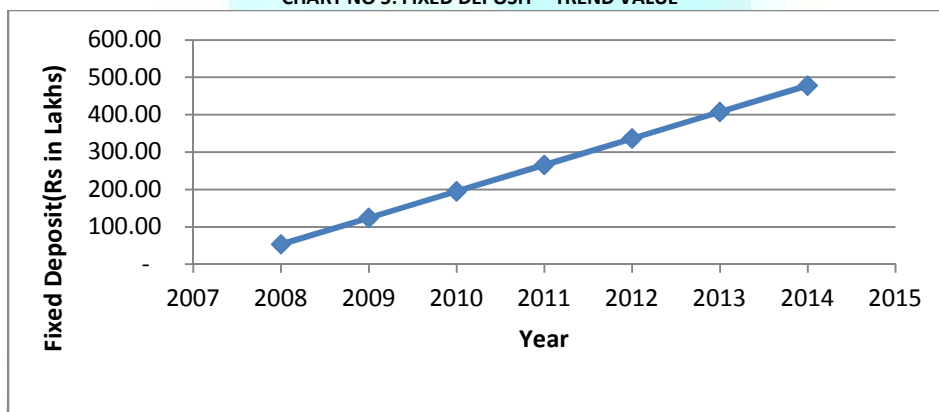
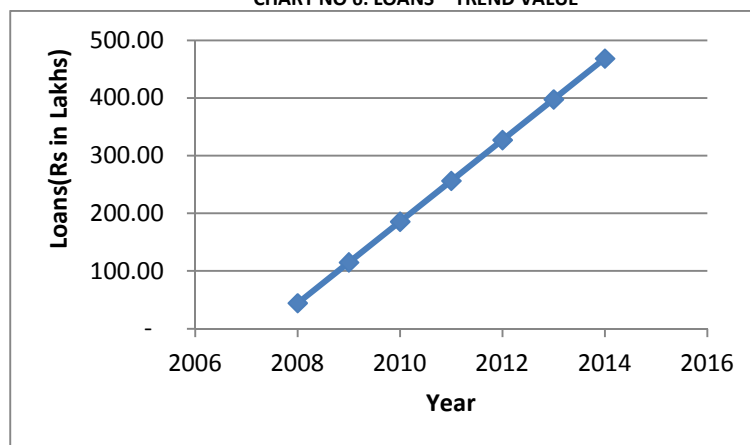


TABLE 6: LOANS

Year	Loans (Rs.in lakhs)	Trend Value
2008	70.13	44.46
2009	105.26	115.13
2010	160.37	185.79
2011	243.21	256.45
2012	340.99	327.12
2013	406.77	397.78
2014	Estimated Value	468.44

Table 6 shows that the trend values obtained are increasing & accordingly it is found that the loans for the year 2014 is estimated to be Rs 468.44 lakhs.

CHART NO 6: LOANS – TREND VALUE

**III CHI SQUARE TEST**

Null Hypothesis: The Saving deposit has no significance increase in the study period.

TABLE 7 - SAVING DEPOSIT

S.NO	Observed Frequency (Rs in Lakhs)	Expected Frequency (Rs in Lakhs)	(O-E)	(O-E) ²	(O-E) ² /E
1	5	14	-9	81	5.785714
2	10	14	-4	16	1.142857
3	12	14	-2	4	0.285714
4	15	14	1	1	0.071429
5	18	14	4	16	1.142857
6	25	14	11	121	8.642857
	85				17.07143

Chi – square value = 17.07143

Table Value = 11.070

DF = 5

Interpretation

The above table 7 indicates that value of chi square for a degree of freedom at 5% level of significance is 11.070. Comparing calculated and table values of chi square we find that calculated value is higher than the table value. There is a significant increase in the saving deposit.

Result

It can be concluded that the saving deposit is increased in study period.

Null Hypothesis: The Fixed deposit has no significance increase in the study period.

TABLE -8 FIXED DEPOSIT

S.NO	Observed Frequency (Rs in Lakhs)	Expected Frequency (Rs in Lakhs)	(O-E)	(O-E) ²	(O-E) ² /E
1	74.71	230	-155	24115	104.8478
2	105.72	230	-124	15446	67.15443
3	177.34	230	-52.7	2773	12.05685
4	271.2	230	41.2	1697	7.380174
5	348.09	230	118.1	13945	60.63151
6	405.61	230	175.6	30839	134.0821
	1382.67				386.1528

Chi – square value = 386.1528

Table Value = 11.070

DF = 5

Interpretation

The above table 8 reveals that value of chi square for a degree of freedom at 5% level of significance is 11.070. Comparing calculated and table values of chi square we find that calculated value is higher than the table value. There is a significant increase in the fixed deposit.

Result

It can be concluded that the fixed deposit is increased in study period.

Null Hypothesis: The loans has no significance increase in the study period.

TABLE 9 LOANS

S.NO	Observed Frequency (Rs in Lakhs)	Expected Frequency (Rs in Lakhs)	(O-E)	(O-E) ²	(O-E) ² /E
1	70.13	221	-150.87	22761.7569	102.9943751
2	105.26	221	-115.74	13395.7476	60.61424253
3	160.37	221	-60.63	3675.9969	16.63347014
4	243.21	221	22.21	493.2841	2.232054751
5	340.99	221	119.99	14397.6001	65.14751176
6	406.77	221	185.77	34510.4929	156.1560765
	1326.73				403.7777308

Chi – square value = 403.7777308

Table Value = 11.070

DF = 5

Interpretation

The above table 7 indicates that value of chi square for a degree of freedom at 5% level of significance is 11.070. Comparing calculated and table values of chi square we find that calculated value is higher than the table value. There is a significant increase in the loans.

Result

It can be concluded that the loans is increased in study period.

FINDINGS**ANALYSIS OF DEVELOPMENT OF DEPOSITS**

Analysis of growth movement of deposits of shri Omkar Mahila Nagri Cooperative Society Ltd. in terms of type of deposits revealed the following:

1. Average growth rate of saving deposit and fixed deposit had been continuously increased during the study period.
2. The calculated value is higher than the table value .There is a significant increase in the Saving deposit .
3. The calculated value is higher than the table value .There is a significant increase in the Fixed deposit .
4. The calculated value is higher than the table value .There is a significant increase in the Loans .
5. They are offering attractive rate of return on Fixed deposits rather than nationalized Bank.
6. Cheque clearing is also fast as compared to any other bank.

LIMITATION OF THE STUDY

Following are the problems faced by Omkar Mahila Sahkari CO-OPERATIVE SOCIETY Ltd.-

- Higher rate of return is required to provide on fixed deposit.
- Restrictions from government for taking deposits from the customers and maintain upto date record of the customers and disptach report to the government from time to time.
- Daily collection agents commision rate is decided by the goverment which is very low.
- The society have to provide more and more services to the customers in the way of agent so the society passes the resolution in the annual general meeting and submit it to the government office.
- Share holders also disturbs the working process of the bank.
- The time period of the research was limited.
- The data for study mainly based on a single cooperative society

SUGGESTIONS

The suggestions may differ from bank to bank. Hence the following suggestions are given with the intention of increasing the performance of Shri Omkar Mahila Nagri Cooperative Society Ltd.

- The Society must concentrates to get more deposits from customers & public.
- Attractive interest rate should be provided for the various types of deposits in order to attract the investors both members & non members.
- The official of the society may contact directly the local bodies,clubs,educational institutions,trust & other voluntary organization for additional deposits.
- The society should plan for expansion of branches

CONCLUSION

The performance in growth movements of deposits in Shri Omkar Mahila Nagri Cooperative Society Ltd is satisfactory during the study period. The analysis is highlighted the good performance of the bank.A few suggestions are given to improve the financial performance of the bank.If these suggestions are taken care by the management than bank can retain its position as a best Society.

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A STUDY OF AWARENESS OF TAX PLANNING AMONGST SALARIED ASSESSEES

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ABSTRACT

The term income means regular source of monetary returns. The total income of a person is computed under the following five heads namely Salaries, income from house property, profits and gains from business and profession, capital gains and income from other sources. The objective of tax planning is to reduce the tax liability to the minimum. It is futuristic in approach. It is a wide concept and includes tax management. The benefits of tax planning are substantial in the long run. However many times the assessee do not seek professional advice, when they are salaried employees. Professional advice is sought by business entities and business men especially when they are subjected to tax audit. However individual assesseees do not seek such help. This results in tax planning done in a haphazard manner. This in turn affects their investment management. The paper tries to trace the awareness of income tax provisions and tax planning amongst salaried assesseees.

KEYWORDS

Tax Planning, Salaried Assesseees.

INTRODUCTION

The meaning of Income Tax as per the Shorter Oxford English Dictionary is "that amount which comes in as the periodical product of one's work, business, lands or investments (commonly expressed in the terms of money); annual or periodical receipts accruing to a person or a corporation". The term income means regular source of monetary returns. Anything which can be properly described as income is taxable under the income tax act, unless it is expressly exempt. Income tax is an annual tax on the income. Income of the previous year is chargeable in the next following assessment year at the rates applicable for the assessment year. The tax rates are fixed by finance act. The tax is levied on the total income of every assesseees computed in accordance with the provisions of the income tax act.

The total income of a person is computed under the following five heads namely Salaries, income from house property, profits and gains from business and profession, capital gains and income from other sources. There are certain exemptions and deductions allowed under the income tax act. Assesseees is any person by whom tax or any other sum of money is payable under income tax act. Income under the head salary covers all remuneration due or paid to a person in respect of services rendered by him under express or implied contract of employment. Salaried assesseees also derive income from capital gains, house property and other sources. Tax Planning can be defined as an arrangement of one's financial and economic affairs by taking complete legitimate benefit of all deductions, exemptions, allowances and rebates so that tax liability reduces to minimum.

The objective of tax planning is to reduce the tax liability to the minimum. It is futuristic in approach. It is a wide concept and includes tax management. The benefits of tax planning are substantial in the long run. Tax avoidance is tax hedging within the framework of law. Any planning of tax which aims at reducing tax burden in legitimate way is tax avoidance. On the other hand tax evasion is illegal. Hence reducing tax liability by illegal ways is tax evasion. Tax evasion is tax omission. Tax management deals with filing of returns, drafting appeals. It has limited scope. However effective tax management can lead to avoidance of penalty, penal interest and prosecution.

Essential Features of tax Planning are:

1. It comprises arrangements by which tax laws are fully complied.
2. All legal obligations and transactions are met.
3. Transactions do not take the form of colorable devices.
4. There is no intention to deceit the legal spirit behind tax laws,

LITERATURE REVIEW

Most of the individual tax payers are not awareness of the e-filing and e-payment procedures so sufficient steps are required to create more awareness in the minds of tax payers regarding e-filing of income tax. (Geeta R and Sekar M, 2012). On analyzing the response 48% of the respondents take their financial decisions independently while only 11% of the respondents take investment decisions from financial advisors as per the report published by the Indian Institute of planning and management. Salaried people often falsely believe that they do not need any financial planning as their income and expenses are regular and they do not make simple efforts to understand and take control of their personal finances including income tax issues. (Sudhir Kaushik, Ankur Sharma).

Participants in a study were asked about their level of knowledge, regarding financial plan, where they might seek assistance in such a process and the criteria for selecting a financial planner. In addition, participants were asked to indicate their level of confidence in a financial plan's capacity to help them meet their long-term needs and the likelihood that they would implement such a plan. Most respondents feel that financial planning is important and that they are interested in developing a financial plan, less than 13 percent have prepared a comprehensive personal financial plan. (David S. Murphy, Scott Yetmar, 2010).

The level of education and majors influence financial product awareness among young people. Also, males were found to have higher levels of financial awareness compared to females. (Joyce K.H. Nga, Lisa H.L. Yong, Rathakrishnan D. Sellappan, 2010). A study showed that individuals who are more financially literate focused more on personal financial planning to pre-empt adverse impacts that poor financial planning might have on their lives, vice versa. The study also confirms that financial literacy is a useful indicator of an individual's financial planning decision. Individuals wishing financial wellbeing should be aware of financial planning. (Tan Boon Hui et al, 2011).

The lack of active involvement in personal financial planning by individuals indicates that there is a great need of awareness of well-planned and sophisticated financial planning. The demand of personal financial planning professional has opened an additional avenue for financial practitioners. (Ming-Ming Lai, Wei-Khong Tan, 2009). Keeping the literature review in mind the objectives and hypothesis were framed.

RESEARCH METHODOLOGY

A questionnaire comprising of twenty one questions was prepared. Salaried employees were selected on random sampling basis. 50 samples were collected. The salaried employees were based in the city of Pune.

HYPOTHESIS

1. Salaried assesseees have a basic knowledge of income tax provision.
2. Tax Planning is not done with the help of professional tax consultant.

LIMITATION

1. The Study covers salaried assesseees

2. The study covers assesseees who are tax payers.

STATISTICAL TOOLS

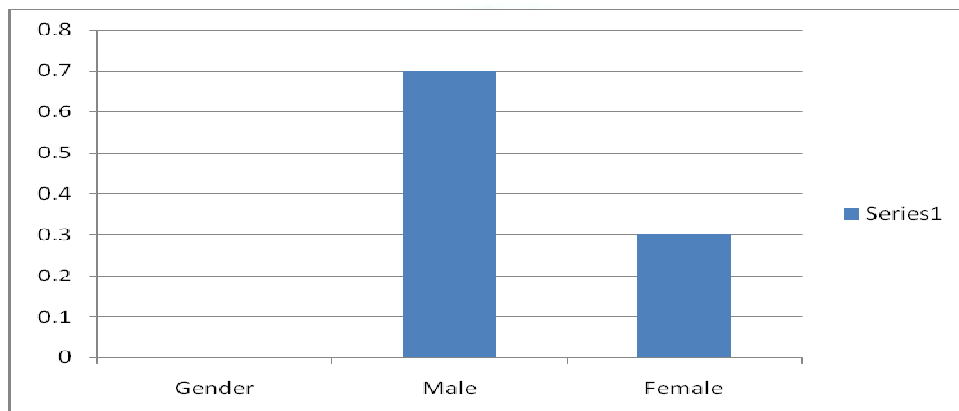
For the purpose of analysis percentages were used.

ANALYSIS

There were 50 respondents who were interviewed by administering a questionnaire comprising of 21 questions. Assesseees between the age group of 25 years and 60 years were interviewed. These were all working professionals' .i.e. salaried employees.

However they were earning income from a variety of sources such as rent, dividend, interest, royalty on books written, share trading. One respondent was also running a part time business. 30% of the respondents were female assesseees. And the remaining 70% were male assesseees.

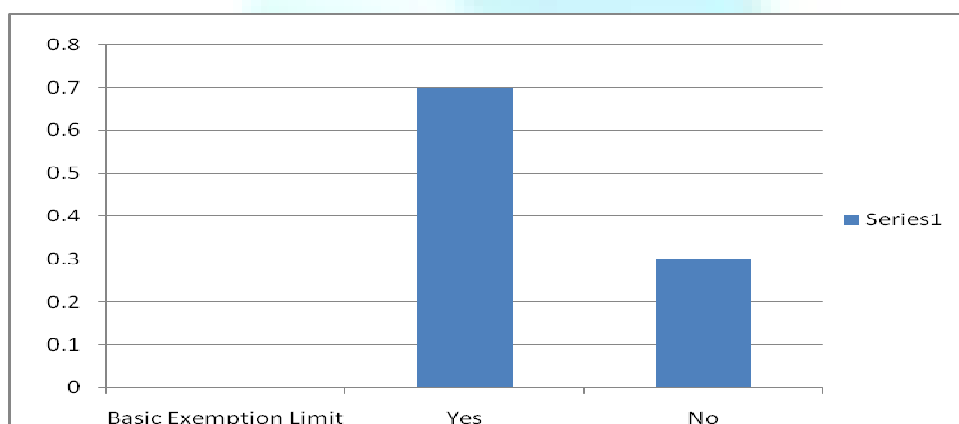
Gender	
Male	70%
Female	30%



70% of the respondents were aware of the basic exemption limit applicable to them.

They even identified the exemption limit which was applicable to them.

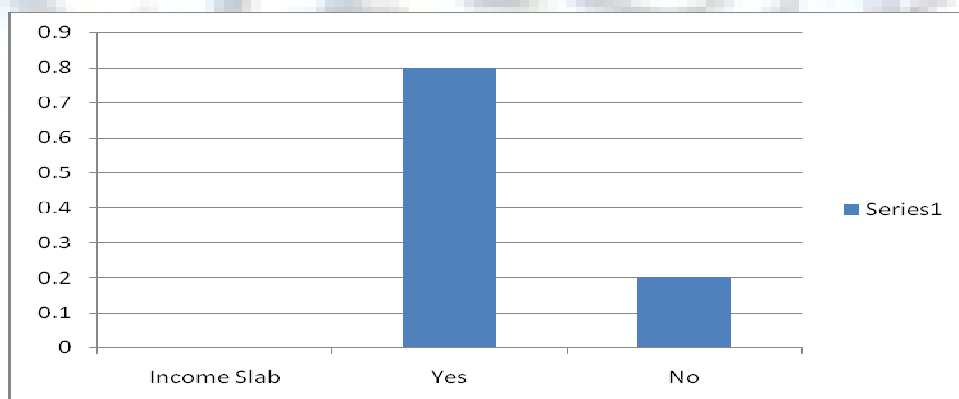
Basic Exemption Limit	
Yes	70%
No	30%



Whereas 30% of the respondents could not identify the basic exemption limit applicable to them.

80% of the respondents knew the income slab they belonged to and 20% were those who could not identify the slab.

Income Slab	
Yes	80%
No	20%



All the respondents were investing according to section 80 of the income tax act. They were investing into investment options such as Life Insurance, PPF, National Saving Certificates, and Unit Linked Insurance Policy. Some even pointed out that they invest in Land and fixed deposit. Almost 90% of the respondents identified life insurance as the preferred investment option, followed by Public Provident Fund. Respondents also identified ELSS as the investment schemes. Insurance and Public Provident Fund were preferred because these are government backed and are safe to invest. Insurance serves the purpose of risk coverage as well.

The respondents obtained information from a large number of sources such as friends and relatives, agents for insurance and Postal Schemes, tax consultants and media. Media implies that they got information about insurance and other schemes from newspapers and television advertisement. 90% of the times information was obtained from friends and relatives, whereas only 20% said that the information about tax saving investment is obtained from Tax consultants. The respondents also relied on agents and media for information. 60% of the respondents file their returns themselves and 40% of the respondents file through a tax consultant. 80% said that they are doing tax planning. 20% of which take professional help, the rest either take advice from friends and relatives or do a self-study for tax Planning. Those not taking any help from professionals believed that they are meant for large businesses and business men. Many of the respondents were not really satisfied with their tax planning. Almost 60% of the respondents said that tax planning could be done in a more effective way.

FINDINGS AND OBSERVATIONS

Majority of the respondents knew the basic tax provisions such as tax rates, basic exemption limit, the concepts of previous year and assessment year but most of them were doing tax planning by self-study or with the help of friends and relatives. And only a few were taking professional help. The assessee said that going to the tax consultant would cost them more. And felt that it was not necessary for them i.e. salaried persons to consult a tax consultant.

Assessee is aware about the basic knowledge but many of them do not take professional advice as many of the salaried employees do not find it necessary to consult tax consultant. Many salaried assessee say that hiring a tax consultant for the purpose of tax planning is done large scale companies. Some assessee believe those tax consultants only are useful in filing tax returns.

CONCLUSION

Hence the hypothesis that assessee has basic knowledge of tax provisions is proved. And the hypothesis that majority of them do not seek professional help is also proved. Hence it can be concluded that tax payers have basic knowledge about the income tax provision, but tax planning is done without any professional help. Investments can be made in options which give tax benefit or in those which do not give any tax benefits, but give good returns. If proper tax planning is done then the money can be utilized other investment avenues. Assessee should be encouraged to avail services of professionals like Chartered Accountant.

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DATA PROTECTION IN CLOUD COMPUTING**CHENNA LAKSHMI****ASST. PROFESSOR****DEPARTMENT COMPUTER SCIENCE & ENGINEERING****RGM COLLEGE OF ENGINEERING & TECHNOLOGY****NANDYAL****ABSTRACT**

The data-protection-as-a-service cloud platform architecture dramatically reduces the per-application development effort required to offer data protection while still allowing rapid development and maintenance. Cloud computing enables highly scalable services to be easily consumed over the Internet on an as-needed basis. A major feature of the cloud services is that users' data are usually processed remotely in unknown machines that users do not own or operate. Offering strong data protection to cloud users while enabling rich applications is a challenging task. We explore a new cloud platform architecture called Data Protection as a Service, which dramatically reduces the per-application development effort required to offer data protection, while still allowing rapid development and maintenance. A recent Microsoft survey found that "58 percent of the public and 86 percent of business leaders are excited about the possibilities of cloud computing. But more than 90 percent of them are worried about security, availability, and privacy of their data as it rests in the cloud." Protecting user data while enabling rich computation requires both specialized expertise and resources, which might not be readily available to most application developers.

KEYWORDS

cloud computing, DPaaS, security.

INTRODUCTION

Offering strong data protection to cloud users while enabling rich applications is a challenging task. Researchers explore a new cloud platform architecture called Data Protection as a Service, which dramatically reduces the per-application development effort required to offer data protection, while still allowing rapid development and maintenance.

Although cloud computing promises lower costs, rapid scaling, easier maintenance, and service availability anywhere, anytime, a key challenge is how to ensure and build confidence that the cloud can handle user data securely. A recent Microsoft survey found that "58 percent of the public and 86 percent of business leaders are excited about the possibilities of cloud computing. But more than 90 percent of them are worried about security, availability, and privacy of their data as it rests in the cloud."¹ This tension makes sense: users want to maintain control of their data, but they also want to benefit from the rich services that application developers can provide using that data. So far, the cloud offers little platform-level support or standardization for user data protection beyond data encryption at rest, most likely because doing so is nontrivial. Protecting user data while enabling rich computation requires both specialized expertise and resources that might not be readily available to most application developers. Building in data-protection solutions at the platform layer is an attractive option: the platform can achieve economies of scale by amortizing expertise costs and distributing sophisticated security solutions across different applications and their developers.

We propose a new cloud computing paradigm, data protection as a service (www.mydatacontrol.com). DPaaS is a suite of security primitives offered by a cloud platform, which enforces data security and privacy and offers evidence of privacy to data owners, even in the presence of potentially compromised or malicious applications.

SECURITY AND PRIVACY CHALLENGES

It's impossible to develop a single data-protection solution for the cloud because the term means too many different things. Any progress must first occur in a particular domain accordingly, our work focuses on an important class of widely used applications that includes e-mail, personal financial management, social networks, and business tools such as word processors and spreadsheets. The following criteria define this class of applications:

- provide services to a large number of distinct end users, as opposed to bulk data processing or workflow management for a single entity;
- Use a data model consisting mostly of sharable units, where all data objects have access control lists (ACLs) with one or more users; and
- Developers could run the applications on a separate computing platform that encompasses the physical infrastructure, job scheduling, user authentication, and the base software environment, rather than implementing the platform themselves.

INTRODUCING DPAAS

Building in data-protection solutions at the platform layer is an attractive option. Data Protection as a Service (DPaaS):

- Can achieve economies of scale by amortizing expertise costs and distributing sophisticated security solutions across different applications and their developers
- Enforces fine-grained access control policies on data units through application confinement and information flow checking
- Employs cryptographic protections at rest and offers robust logging and auditing to provide accountability
- Addresses the issues of rapid development and maintenance.

DPaaS, if offered by cloud platform providers in addition to their existing hosting environment, could be especially beneficial for small companies who don't have much in-house security expertise.

ENCRYPTION: HOW DPAAS SCORES OVER OTHER TECHNIQUES

In terms of encryption, the two prominent techniques - full-disk encryption (FDE) and fully homomorphic encryption (FHE) - fail to provide a practical solution in a cloud computing setup.

PARAMETER	FDE	FHE
Key management	Ideal for physical attacks; does not prevent leakage of data on account of online attacks	Users own the FHE encryption keys; does not address the challenge of storing the keys securely
Sharing	Key granularity does not line up with access control granularity; sharing is, therefore, not foolproof	With users holding and managing the keys, access control is a challenge
Aggregation	Users fully trust the cloud; this makes aggregation easier	Does not readily allow computing on data encrypted under different keys; aggregation is, therefore, a challenge
Performance	When implemented on disk firmware, can avoid slowdown	Not yet efficient enough for deploying on scale
Ease of development	No impact on application development	Developers cannot look at the data, making debugging, testing and improvements difficult

The DPaaS approach is better suited for the target cloud applications because it falls between the two. It keeps the "natural" granularity of FHE by keying on units of sharable data and maintains the performance of FDE by using symmetric encryption. It moves key management and access control to a middle tier—the computing platform—to balance rapid development and easy maintenance with user-side verifiability.

MAINTAINING DATA INTEGRITY ON THE CLOUD

Access controls, authorization, and auditing capability are common challenges for application developers. Incorporating these features within the platform is a significant improvement in terms of ease of use. DPaaS uses a combination of encryption at rest, application confinement, information flow checking and auditing to ensure the security and privacy of users' data.

AUTHENTICATION AND AUTHORIZATION

DPaaS can guarantee the integrity of the data at rest via cryptographic authentication of the data in storage and by auditing the application code at runtime. DPaaS can accomplish user authentication either with a proprietary approach or using open standards such as OpenID and OAuth.

AUDITING

The DPaaS approach provides logging and auditing at the platform level, sharing the benefits with all applications running on top. Because the platform mediates all data access, authenticates users and runs binaries, it knows what data is accessed by what user and with which application. It can generate meaningful audit logs containing all these parameters and optionally incorporate additional information from the application layer.

Given its ability to perform different types of audit, DPaaS can also support third-party auditing services, thus helping users understand how their data has been accessed and manipulated, and which services to trust.

THE WAY FORWARD

As private data moves online, the need to secure it properly becomes increasingly urgent. The good news is that the same forces concentrating data in enormous datacenters will also aid in using collective security expertise more effectively. Adding protections to a single cloud platform can immediately benefit hundreds of thousands of applications and, by extension, hundreds of millions of users.

DATA PROTECTION AS A SERVICE

Currently, users must rely primarily on legal agreements and implied economic and reputational harm as a proxy for application trustworthiness. As an alternative, a cloud platform could help achieve a robust technical solution by

- Making it easy for developers to write maintainable applications that protect user data in the cloud, thereby providing the same economies of scale for security and privacy as for computation and storage; and
- Enabling independent verification both of the platform's operation and the runtime state of applications on it, so users can gain confidence that their data is being handled properly. Much as an operating system provides isolation between processes but allows substantial freedom inside a process, cloud platforms could offer transparently verifiable partitions for applications that compute on data units, while still allowing broad computational latitude within those partitions.
- DPaaS enforces fine-grained access control policies on data units through application confinement and information flow checking. It employs cryptographic protections at rest and offers robust logging and auditing to provide accountability. Crucially, DPaaS also directly addresses the issues of rapid development and maintenance. To truly support this vision, cloud platform providers would have to offer DPaaS in addition to their existing hosting environment, which could be especially beneficial for small companies or developers who don't have much in-house security expertise, helping them build user confidence much more quickly than they otherwise might.

MODULE DESCRIPTION

1. CLOUD COMPUTING

Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model promotes availability and is composed of five essential characteristics, three service models, and four deployment models.

Cloud computing is the provision of dynamically scalable and often virtualized resources as a services over the internet. Users need not have knowledge of, expertise in, or control over the technology infrastructure in the "cloud" that supports them. Cloud computing represents a major change in how we store information and run applications. Instead of hosting apps and data on an individual desktop computer, everything is hosted in the "cloud"—an assemblage of computer and servers accessed via the Internet.

Cloud computing exhibits the following key characteristics:

1. **Agility** improves with users' ability to re-provision technological infrastructure resources.
2. **Multi tenancy** enables sharing of resources and costs across a large pool of users thus allowing for:
3. **Utilization and efficiency** improvements for systems that are often only 10–20% utilized.
4. **Reliability** is improved if multiple redundant sites are used, which makes well-designed cloud computing suitable for business continuity and disaster recovery.
5. **Performance** is monitored and consistent and loosely coupled architectures are constructed using web services as the system interface.
6. **Security** could improve due to centralization of data, increased security-focused resources, etc., but concerns can persist about loss of control over certain sensitive data, and the lack of security for stored kernels. Security is often as good as or better than other traditional systems, in part because providers are able to devote resources to solving security issues that many customers cannot afford. However, the complexity of security is greatly increased when data is distributed over a wider area or greater number of devices and in multi-tenant systems that are being shared by unrelated users. In addition, user access to security audit logs may be difficult or impossible. Private cloud installations are in part motivated by users' desire to retain control over the infrastructure and avoid losing control of information security.
7. **Maintenance** of cloud computing applications is easier, because they do not need to be installed on each user's computer and can be accessed from different places.

2. TRUSTED PLATFORM MODULE

Trusted Platform Module (TPM) is both the name of a published specification detailing a secure crypto processor that can store cryptographic keys that protect information, as well as the general name of implementations of that specification, often called the "TPM chip" or "TPM Security Device". The TPM specification is the work of the Trusted Computing Group.

Disk encryption is a technology which protects information by converting it into unreadable code that cannot be deciphered easily by unauthorized people. **Disk encryption** uses disk encryption software or hardware to encrypt every bit of data that goes on a disk or disk volume. Disk encryption prevents unauthorized access to data storage. The term "full disk encryption"[5] (or **whole disk encryption**) is often used to signify that everything on a disk is encrypted, including the programs that can encrypt bootable operating system partitions. But they must still leave the master boot record (MBR)[6], and thus part of the disk, unencrypted. There are, however, hardware-based full disk encryption systems that can truly encrypt the entire boot disk, including the MBR.

3. THIRD PARTY AUDITOR

In this module, Auditor views the all user data and verifying data and also changed data. Auditor directly views all user data without key. Admin provided the permission to Auditor. After auditing data, store to the cloud.

4. USER MODULE

User store large amount of data to clouds and access data using secure key. Secure key provided admin after encrypting data. Encrypt the data using TPM. User store data after auditor, view and verifying data and also changed data. User again views data at that time admin provided the message to user only changes data.

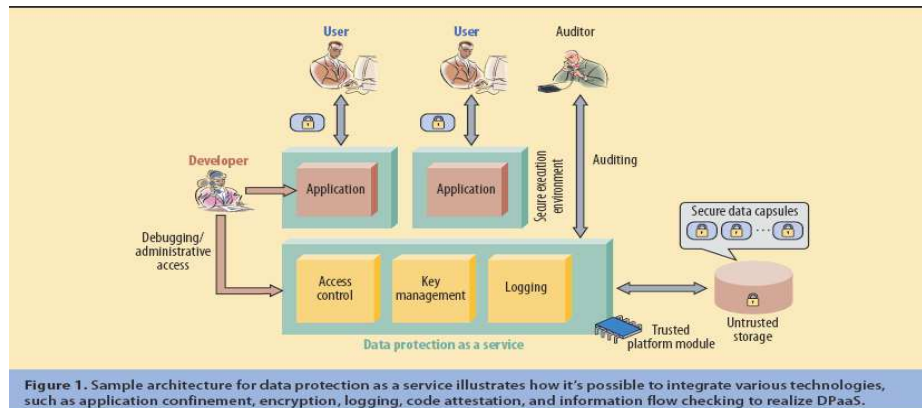


Figure 1. Sample architecture for data protection as a service illustrates how it's possible to integrate various technologies, such as application confinement, encryption, logging, code attestation, and information flow checking to realize DPaaS.

WAY FORWARD

In an OS, processes and files are the primary units of access control, and the OS provides suitable isolation for them. Applications can do what they like within these boundaries. In a cloud setting, the unit of access control is typically a sharable piece of user data—for example, a document in a collaborative editor. Ideally, the system offers some analogous confinement of that data, restricting its visibility only to authorized users and applications while allowing broad latitude for what operations are done on it. This can make writing secure systems easier for programmers because confinement makes it more difficult for buggy code to leak data or for compromised code to grant unauthorized access to data. A malicious program might find different ways to exfiltrate data, such as employing a side channel or covert channel, but the priority here is to support benign developers, while making all applications and their actions on users' sensitive data more easily auditable to catch improper usage.

One of the main concerns people and organizations have about putting data in the cloud is that they don't know what happens to it. Having a clear audit trail of when data is accessed—and by whom or what—bolsters confidence that data is being handled appropriately. Confinement can be effective for most normal user accesses, but administrative access that's outside the normal flow of user access and involves human administrators (for example, for debugging and analysis) can especially benefit from auditing.

VERIFIABLE PLATFORM SUPPORT

Bugs need to be fixed. Data needs to be updated and migrated as schemas change. Offline computation is valuable for data aggregation across users or for pre computation of expensive functions. To reduce the risk of unaudited backdoor access, all these functions should be subject to the same authorization flows and platformlevel checks as normal requests, albeit with a separate, appropriate policy. Platform providers should build support for confinement and auditing into the platform in a verifiable way. This approval has many advantages:

- Application developers don't have to reinvent the wheel;
- Application code is independent of ACL enforcement;
- Third-party auditing and standards compliance are easier; and
- The verifiable platform extends to virtualized environments built atop it.

Finally, the cost of examining the platform is amortized across all its users, which means significant economies of scale for a large-scale platform provider.

DESIGN SPACE AND A SAMPLE ARCHITECTURE

Figure 1 illustrates an example architecture for exploring the DPaaS design space.⁵ Here, each server contains a *trusted platform module* (TPM) to provide secure and verifiable boot and dynamic root of trust. This example architecture demonstrates at a high level how it's potentially possible to combine various technologies such as application confinement, encryption, logging, code attestation, and information flow checking to realize DPaaS.

A *secure data capsule* (SDC) is an encrypted data unit packaged with its security policy. For example, an SDC might encompass a sharable document or a photo album along with its ACL. The platform can use confinement and information-flow controls to enforce capsules' ACLs. To avoid unauthorized leakage of user data in the presence of potentially buggy or compromised applications, DPaaS confines the execution of applications to mutually isolated *secure execution environments* (SEEs). Inter-SEE isolation has different levels, but stronger isolation generally exacts a greater performance cost due to context switching and data marshaling. At one end, a SEE could be a virtual machine with an output channel back to the requesting user. For performance reasons, it's possible to have a pool of VMs or containers in which the data state is reset before being loaded with a new data unit—similar to how a thread pool works in a traditional server.

A more lightweight approach would be to use OS process isolation; an even lighter-weight approach would be to use language-based features such as information-flow controls or capabilities.⁷ We can use mechanisms such as Caja for JavaScript to confine user data on the client side as well, although we don't include that option as part of the platform. In some cases, applications need to call outside services or APIs provided by third-party websites—for example, the Google Maps API. An application might need to export users' data to outside services in this process. Users can explicitly define privacy policies to allow or disallow exporting SDCs to such third-party services, and DPaaS can enforce these policies. Additionally, DPaaS can log all instances where data is exported, and an auditor can later inspect these logs and detect any misuse a posteriori. Because our target applications have a basic requirement of sharable data units, DPaaS supports ACLs on SDCs. The key to enforcing those ACLs is to control the I/O channels available to the SEEs. To confine data, the platform decrypts the SDC's data only in a SEE in compliance with the SDC's security policy.

A SEE can funnel the output either directly to the user or to another SEE that provides a service; in either case, the platform mediates the channel. A buggy SEE only exposes a single SDC, an improvement over systems in which malicious input triggers a bug that allows access to all data. The platform also mediates ACL modifications, otherwise known as sharing or unsharing. A simple policy that the platform can enforce without having to know too much about the application is transitive: only currently authorized users can modify the ACL. For example, the creator is the first owner of a data unit, and at any time, any user with the owner status can add or revoke other authorized users. The support of anonymous sharing, in which possession of, say, a secret URL grants access to data, is also straightforward.

The platform itself doesn't need to understand granular, application-specific permissions; a simple, binary access-versus-no-access distinction goes a long way. The application can, of course, enforce any additional restrictions it requires on top of those the platform provides. There are no particular requirements for the data unit's underlying storage service.

The DPaaS approach places two additional requirements on the platform:

- It must be able to perform user authentication, or at least have a trusted way to know who's logged in and accessing the service; and
- It must rely on encryption and authenticated data store techniques to remove the need to trust the storage service.

DPaaS can accomplish user authentication either with a proprietary approach or using open standards such as OpenID and OAuth. Because the platform mediates all interactions, symmetric encryption suffices. With AES hardware units in commodity CPUs exceeding throughput of 1 Gbyte/second/core, performance is unlikely to be a bottleneck for all but the most I/O-intensive applications. Once the system loads the data into the SEE, it doesn't need to be encrypted or decrypted again until storage. In this model, the application can offload much of the basic work for identity and ACL enforcement to the platform and get certain user-level guarantees for free. This alone makes it much easier for developers to reason about system security because, by default (without any authorized user present), the data is simply unavailable.

The ACL governs ordinary user access, but administrative access requires its own separate policy, which in turn can be audited to hold developers and administrators accountable. Because each specific invocation of the administrative policy might entail human access to data, it should be logged and made available for auditing. The same kind of mechanism could handle batch access, perhaps with different logging granularity. To prevent misuse, the platform can restrict batch processes to only an approved set of programs, for example, requiring the programs to have controlled or quantifiable information release, such as differential privacy⁸ or quantitative information flow.⁹

PLATFORM VERIFIABILITY

The DPaaS approach provides logging and auditing at the platform level, sharing the benefits with all applications running on top. Offline, the auditor can verify that the platform implements each data protection feature as promised. At runtime, the platform provider can use *trusted computing* (TC) technologies to attest to the particular software that's running. TC uses the tamperproof TPM as well as the virtualization and isolation features of modern processors, such as Intel VT or AMDV. TC also allows for a dynamic root of trust—while the system runs, the CPU can enter a clean state, and the TPM can verify, load, and execute a *trusted computing base* (TCB), which is responsible for security-critical functionalities such as isolation enforcement, key management, access control, and logging.

Moreover, a third-party auditor can verify the code of the TCB that has been loaded onto the cloud platform. In this way, users and developers can gain confidence that the applications are indeed running on the correct TCB, and consequently trust the security guarantees and the audit logs the TCB provides. One challenge in code attestation is how to establish a set of acceptable binaries in the presence of rapid software updates such as bug fixes and new features. One potential way is to log the history of software updates and perform verification a posteriori. For the application itself, getting from verifiable to verified isn't easy; in a system with a lot of users, doing allpairs verification is prohibitively expensive.

ACHIEVING DATA PROTECTION GOALS

We assume in the analysis that the platform behaves correctly with respect to code loading, authorization, and key management, and that the TPM facilitates a runtime attestation to this effect.

DPaaS uses a combination of encryption at rest, application confinement, information flow checking, and auditing to ensure the security and privacy of users' data. Application confinement isolates faults and compromises within each SEE, while information flow checking ensures that any information flowing among SEEs, data capsules, and users satisfies access-control policies. Controlling and auditing administrative accesses to data provides accountability.

DPaaS can guarantee the integrity of the data at rest via cryptographic authentication of the data in storage and by auditing the application code at runtime. Access controls, authorization, and auditing capability are common challenges for application developers. Incorporating these features within the platform is a significant improvement in terms of ease of use, and it doesn't constrain the types of computation that can be performed within a SEE. The platform logs common maintenance and batch processing tasks to provide accountability. These tasks too often require one-off work in the development process and can benefit from standardization.

As private data moves online, the need to secure it properly becomes increasingly urgent. The good news is that the same forces concentrating data in enormous datacenters will also aid in using collective security expertise more effectively. Adding protections to a single cloud platform can immediately benefit hundreds of thousands of applications and, by extension, hundreds of millions of users. While we have focused here on a particular, albeit popular and privacy-sensitive, class of applications, many other applications also need solutions, and many practical questions still remain open:

- Can we standardize technology across platforms to facilitate switching among providers?
- How can we make migration to the DPaaS cloud as easy as possible for existing applications?
- How can we minimize the cost of application audits?
- What kinds of audits are most important for building user confidence?
- Can technologies such as TC and code attestation be made scalable in the presence of constantly evolving software?
- How can we generalize the ideas presented here to other classes of applications?

In posing these questions, we hope to provoke thought and inspire future research and development in this important direction.

CONCLUSION

As private data moves online, the need to secure it properly becomes increasingly urgent. The good news is that the same forces concentrating data in enormous data centers will also aid in using collective security expertise more effectively. Adding protections to a single cloud platform can immediately benefit hundreds of thousands of applications and, by extension, hundreds of millions of users. While we have focused here on a particular, albeit popular and privacy-sensitive, class of applications, many other applications also need solutions.

FUTURE ENHANCEMENT

In our system we are uploading the data files and protecting the files by encrypting the data. In future not only uploading the data file but also we can enhance the number of users by providing download option also.

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AN OUTLOOK OF STRUCTURAL UNORGANISED UNEMPLOYMENT IN INDIA

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VAISH COLLEGE
BHIWANI

ABSTRACT

To attain and maintain the level of full employment is one of the chief objectives of the present day economies. But in under-developed countries like India, is the deficiency of the stock of capital in relation to the needs of the growing labour force. Hence there is always some unemployment. Indian economy is characterised by the existence of high level of organised and unorganised unemployment. The unorganised sector refers to those enterprises whose activities and/or collection of data are not regulated under any legal provision or where any regular accounts are not maintained. The 12th five year plan has special schemes to encourage the unorganised sector to employ more labour and simultaneously, to improve labour productivity in the sector. It also aims at making employment generation, as an integral part of the growth process.

KEYWORDS

unorganised unemployment, human capital.

INTRODUCTION

Employment is the major source of incomes for a great majority of people, a fall in employment signifies a fall in their incomes also. Full employment is a situation when there is no involuntary unemployment, though there may be voluntary, casual, seasonal, structural, technological, and frictional unemployment. By unemployment, economist means a situation in which people are willing to work, at the existing rate of wage, but they do not get the work. In the words of Pigou, "A man is unemployed only when he is both without a job or not employed and also desires to be unemployed". Thus, while calculating unemployment, only those persons are taken into account who are able to work and are willing to work at existing wage rate. Under this concept, labourer is taken as an individual unit and employment in India is measured in terms of Standard Person Year (SPY). One Standard Person Year means a person working 8 hours per day for 273 days in a year. It means if a person gets work for minimum eight hours per day for minimum 273 days in a year he is not unemployed. Our country is set to be progressing by leaps and bounds in the matter of economy but there is sharp increase in the number of unemployed persons also. Today, we have over 1.15 billion people in our country and so is the increasing unemployment rate.

OBJECTIVES OF THE STUDY

1. To evaluate the structure and nature of unorganised unemployment in India.
2. To review the existing trends of unorganised sector of unemployment.
3. To analyse the policy framework of unemployed people in the unorganised sector.

RESEARCH METHODOLOGY

The present paper is explanatory and descriptive in nature and based on secondary data collected from authenticated sources.

NATURE OF UNORGANISED UNEMPLOYMENT SECTOR

Unemployment scenario in India has always been quite acute. With a large population and slower growth in job opportunities, unemployment is widespread in India. We have both educated and uneducated unemployed people. We have skilled and unskilled unemployed youths both in the urban and the rural areas. Even degree holders are unemployed. Large scale unemployment has led to several socio-economic problems like poverty, malnutrition, antisocial and criminal activities, drug and substance abuse etc. Unemployment and disguised unemployment are the normal features of Indian economy. There is heavy dependency on unorganised sector of the labour force for their employment, income and livelihood. Indian economy is characterised by the existence of high level of informal or unorganized labour unemployment. The workers in the organised sector constitute less than 20 per cent of the country's total work force and the rest comprises of subsistence farmers, agricultural workers, fisherfolk, dairy workers and those working in traditional manufacturing like handlooms, are grouped under unorganised sector. The share of workers in the unorganized sector fell only marginally from 86.3 per cent in 2004-5 to 84.3 per cent in 2009-10 and to 82.2 per cent in 2011-12.

The first Indian National Commission on Labour (1966-69) defined the 'unorganised sector work-force' as "those workers who have not been able to organise themselves in pursuit of their common interest due to certain constraints like casual nature of employment, ignorance and illiteracy, small and scattered size of establishments". On the other hand, the unorganised sector refers to those enterprises whose activities and/or collection of data are not regulated under any legal provision or where any regular accounts are not maintained. The unorganised sector has low productivity and offers lower wages. India's economy has been adding about 8 million new jobs every year predominantly in low paying, unorganised sector. The other important facts concerning this sector are given below--

- India's labour force is growing at a rate of 2.5 per cent annually, but employment is growing at only 2.3 per cent. More than 90 per cent of the labour force is employed in the "unorganised sector", i.e. sectors which don't provide with the social security and other benefits of employment in the "organised sector."
- In the rural areas, agricultural workers form the bulk of the unorganised sector. In urban India, contract and sub-contract as well as migratory agricultural labourers make up most of the unorganised labour force.
- Unorganised sector is made up of jobs in which the Minimum Wage Act is either not, or only marginally, implemented. The absence of unions in the unorganised sector does not provide any opportunity for collective bargaining.

CATEGORIES OF UNORGANISED UNEMPLOYED

Unorganised sector, also known as informal sector or own account enterprises refers to all unlicensed, self-employed or unregistered economic activity such as owner manned general stores, handicrafts and handloom workers, rural traders, farmers, etc. The Ministry of Labour has categorised the unorganised labour force under four groups in terms of occupation, nature of employment, specially distressed categories and service categories. In terms of occupation, it included small and marginal farmers, landless agricultural labourers, share croppers, fishermen and those engaged in animal husbandry, beedi rolling, labeling and packing, building and construction workers, leather workers, weavers, artisans, salt workers, workers in brick kilns and stone quarries, workers in saw mills, oil mills etc. In terms of nature of employment, they are attached agricultural labourers, bonded labourers, migrant workers, contract and casual labourers. Toddy tappers, scavengers, carriers of head loads, drivers of animal driven vehicles, loaders and unloaders, belong to the specially distressed category while midwives, domestic workers, fishermen and women, barbers, vegetable and fruit vendors, newspaper vendors etc. come under the service category. In addition to the above categories, there exists a large section of unorganised labour force such as cobblers, handicraftsmen, artisans, handloom weavers, lady tailors, physically

handicapped self-employed persons, rickshaw pullers/ auto drivers, sericulture workers, carpenters, leather and tannery workers, powerloom workers and urban poor.

The extent of unorganised unemployed workers is significantly high among agricultural workers, building and other construction workers, and among home based workers. In general, these workers are observed to be large in numbers, suffering from cycles of excessive seasonality of employment, scattered and fragmented work place, poor in working conditions, and lack of attention from the trade unions. India needs a labour intensive technology at least in the unorganised sector to accommodate the job-seeking labour force. Although the process of globalisation and liberalisation sets on a shift towards capital-intensive technology. Thus, it is needless to say that in order to meet competition and to increase productive efficiency, firms are forced to modernize their operations involving machineries, capital and high technologies. The choice of labour intensive technology becomes obsolete. The immediate and direct consequence of the shift in the industrial technology is the replacement of unskilled personnel with skilled people (Rao and Rao:1994, Wood:1997).

TRENDS OF UNORGANISED UNEMPLOYMENT SECTOR

There has been an alarming rise in the rate of unemployment in India and this was because the working age population grew faster than the total population and labour force participation rates increased, particularly among young women. As per the findings from the 68th round (2011-12) of the NSS Employment and Unemployment Survey, women's employment has increased in urban areas and declined in rural areas. The Indian Government is committed to generate employment opportunities in both- organized and unorganized sector. The unemployment rate in India is estimated at 9.4 percent or 94 persons out of 1000 persons in the labour force for the fixed reference period of financial year 2009-10. The rural unemployment rate is 10.1% and the urban unemployment rate stands at 7.3%. The unemployment rate is calculated as a percentage of labor force, and not the total population. So, this means that 9.4% of that part of population which is interested in working is unemployed, and not 9.4% of the entire population is unemployed. So, out of an estimated population of 1,182 million – 424 million persons are either employed or are interested in working. The unemployment rate of 9.4% means that out of those 359 persons per thousand, or 424 million people – there are 9.4% or about 40 million who were unemployed. During 2011 to 2012, the unemployment rate for males stood 22%, whereas for females the unemployment rate was 25%.

According to a survey by the Labour Bureau under the Labour and Employment Ministry, the unemployment rates are estimated at 101 persons and 73 persons out of 1000 persons in the labour force in the rural sector and urban areas, respectively. At overall level out of 1000 employed persons, 455 are employed in agriculture, forestry and fishing group. In the manufacturing and construction sectors 89 and 75 persons out of 1000 persons respectively are found to be employed. According to the survey, the worker population ratio is estimated at 325 persons per 1000 population at the overall level. In the working age population, the worker population ratio is 465. In the rural sector, 457 persons and 435 persons out of 1000 persons are in the categories of self employed and casual labour respectively. Rest 108 employed persons belong to regular wage or salaried class in the rural areas. In the rural areas, the worker population ratio is estimated at 329 persons per 1000 population. Within the employed population, self employment is the dominant category. Out of 1000 persons employed, 439 persons are self employed, 168 persons are regular wage/salaried and the rest 393 persons are employed as casual labour at the overall level.

In the urban sector, a maximum 173 persons out of 1000 persons are employed in the wholesale and retail trade group followed by 154 persons in the manufacturing and 146 in the community services group. In the urban sector, out of 1000 self employed persons, 299 persons are employed in wholesale retail trade group followed by 173 persons in the manufacturing group at overall level. In case of regular wage or salaried persons, 227 persons per 1000 persons in this category are employed in the community services group followed by 153 persons in the manufacturing group at the overall level. The survey was conducted in 300 districts of 28 States and Union Territories.

ROLE OF THE MINISTRY OF LABOUR & EMPLOYMENT

The Ministry of Labour & Employment has made serious efforts to implement various provisions mandated relating to enhancement of the welfare and well-being of farmers, farm labour and workers particularly those in the unorganized sector, ensuring the fullest implementation of minimum wage laws for farm labour, striving for elimination of child labour and examination of labour laws. The main highlights of their sincere efforts are given below.

- The National Employment Policy is being formulated. Unorganized sector is emphasized more with various schemes.
- Vocational Training with a view to creating a world-class skilled labour force is being given maximum importance. To help the youth in building their career, training courses are offered through a network of 2178 Industrial Training Institutes (ITIs) and 6464 Industrial Training Centres (ITCs) located all over the country. About 1.19 million training seats are available in these Institutes.
- Upgradation of 100 ITIs with domestic resources, 400 ITIs with World Bank assistance and 1,396 ITIs under Public Private Partnership (PPP) mode was undertaken to create Centres of Excellence for producing multi-skilled workforce of world standard.
- 'Skill Development Initiative' (SDI) Scheme was started in 2006-07 for training school drop-outs and existing workers especially in the informal sector under Modular Employable Skills (MES) framework was implemented. A special scheme to train youth of J&K region under SDI scheme is being launched. Under the scheme, 8,000 youths are proposed to be trained in 2010-11 and 8,000 in 2011-12 of which 25% will be trained within J & K itself and 75% will be trained outside the State. Training cost would be fully borne by the Central government. Trainees would be provided boarding, lodging & travel expenses, if they are required to stay away from their home. To facilitate an accelerated and sustainable transformation and for expansion of outreach of the vocational training, a scheme has been prepared to set up 1,500 ITIs and 5,000 Skill Development Centres (SDCs) in PPP mode under a project 'Kaushal Vikas Yojana'.
- Kaushal Vikas Yojana to set up new 1,500 ITIs and 5,000 Skill Development Centres. Skill Development Plan for Youth, supplementing infrastructure deficiencies in ITIs in NE states and Sikkim and modernization of all 969 Employment Exchanges in the country under e-governance plan, are being taken up.
- Labour Bureau has conducted eight quarterly quick employment surveys to assess the impact of economic slowdown on employment in India. It covered units pertaining to important sectors like textiles, leather, metals, automobiles, gems and jewellery, transport, IT/BPO and handloom / powerloom etc. The overall estimated employment in the selected sectors has experienced a net addition of 12.96 lakh in September, 2010 over September, 2009.
- The Prime Minister's National Council on Skill Development has set a target of training 500 million individuals by 2022, followed by the 2009 National Policy on Skill Development (NPSD).
- The 12th Plan aims at extending labour protection for women in the informal economy, strengthening the implementation of the Equal Remuneration Act 1976, Maternity Protection Act 1961 and other related legislations, and envisages special efforts for scaling-up of efforts for skills development of women.

The Government constituted the National Commission for Enterprises in the Unorganised Sector (NCEUS) under the Chairmanship of Dr. Arjun Sengupta on 20.09.2004. The Commission completed its term on 30.04.2009 and submitted its Report on Social Security for Unorganized Workers. The salient features of the proposed legislation includes social security benefits, employment injury benefits, housing schemes, educational schemes for children of workers, skill upgradation and any other schemes to enhance the socio-economic security of unorganized workers; etc. The 'Unorganised Workers' Social Security Act, 2008 provides benefits determined by the Government for unorganised workers. The National Board recommends to the Central Government, suitable schemes for different sections of unorganised workers; monitor the implementation of schemes and advise the Central Government on matters arising out of the administration of the Act. The National Social Security Board was constituted on 18.08.2009 to consider extension of social security schemes for these workers. The Board has recommended that social security schemes viz Rashtriya Swasthya Bima Yojana (RSBY) providing health and maternity benefits, Janshree Bima Yojana (JBY) providing death and disability cover and Indira Gandhi National Old Age Pension (IGNOAP) providing old age pension may be extended to certain categories of unorganized workers. It has been decided to set up a National Social Security Fund for unorganised sector workers with an initial allocation of Rs 1000 crore. This fund will support schemes for weavers, toddy tappers, rickshaw pullers, beedi workers etc. The Government of India drafted the National Policy for Domestic Workers during 2011, to enhance protection and rights of this growing segment of workers.

Various government schemes have been undertaken in India to tackle the problem of unemployment. Government of India has implemented various employment generation and poverty alleviation programmes in both rural and urban areas to increase employment opportunities, such as, Swarnjayanti Gram Swarozgar Yojana (SGSY); Swarna Jayanti Shahari Rozgar Yojana (SJSRY); Prime Minister's Employment Generation Programme (PMEGP) & Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). SGSY has been restructured as the National Rural Livelihood Mission to make it universal in application, focused in approach and time bound for poverty eradication by 2014-2015. For promoting inclusive growth in line with the 12th Plan, International Labour Organisation (ILO), enhancing employment outcomes for youth; promoting women's labour force participation; sectoral policies; improved effectiveness of GOI flagship programmes, and emphasis on the employment impact of infrastructural schemes.

CONCLUSION

Unemployment scenario in India has always been quite acute. Indian economy is characterised by the existence of high level of organised and unorganised unemployment. The unorganised sector refers to those enterprises whose activities and/or collection of data are not regulated under any legal provision or where any regular accounts are not maintained. The objective of the paper is to evaluate and analyse the policy framework of unorganised unemployment in the country. With a large population and slower growth in job opportunities, unemployment is widespread in India. We have both educated and uneducated unemployed people. We have skilled and unskilled unemployed youths both in the urban and the rural areas. Even degree holders are unemployed.

The unorganised sector has low productivity and offers low wages. More than 90 per cent of the labour force is employed in the "unorganised sector", which doesn't provide with the social security and other benefits of employment in the "organised sector." Unorganised sector is made up of jobs in which the Minimum Wage Act is either not, or only marginally, implemented. The absence of unions in the unorganised sector does not provide any opportunity for collective bargaining. The extent of unorganised unemployed workers is significantly high among agricultural workers, building and other construction workers, and among home based workers. In general, these workers are observed to be large in numbers, suffering from seasonal employment, scattered and fragmented work place, poor working conditions, and lack of attention from the trade unions. India needs a labour intensive technology at least in the unorganised sector to accommodate the job-seeking labour force. But in order to meet competition and to increase productive efficiency, capital intensive technology is also required.

There has been an alarming increase in the rate of unemployment in India and this is because the working age population is growing faster than the total population growth rate and labour force participation rate. The Indian Government is committed to generate employment opportunities in both- organised and unorganised sector. The Ministry of Labour & Employment has made serious efforts in implementing various provisions for workers in unorganised sectors such as The National Employment Policy, Vocational Training Centres and Skill Development Initiative, under the 'Kaushal Vikas Yojana' project etc. The Government constituted the National Commission for Enterprises in the Unorganised Sector (NCEUS) under the Chairmanship of Dr. Arjun Sengupta. The Report includes the proposal of social security benefits, employment injury benefits, housing schemes, educational schemes for children of workers, skill upgradation and many other schemes to enhance the socio-economic security of unorganized workers, etc. The 12th Plan recognizes the role of industry and enterprises as key drivers of inclusive growth and job creation.

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DATA HIDING TECHNIQUE FOR E-TENDERING USING STEGANOGRAPHY

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ABSTRACT

Tenders are filed for any contractual work to choose the vendor who satisfies all the terms and conditions. The criteria for selection also include the minimum proposed bid to deliver the desired services. Tendering is the best method to get all the services with minimum cost. Unfortunately, in India many tenders are forged or forcefully changed. Leaking the tender amount by some person in tender management, forcefully asking the persons to withdraw tenders are the major problems in making this process secure and genuine. We propose a secure tender filing system which may be connected to an online system where the vendor needs not to present himself before the tender authority. The tender can only be opened by the vendor. Even the higher authorities cannot break this digital seal. The secure information like amount, etc. about the tender is embedded into a vendor selected video. Vendor is not going to enter the amount physically anywhere. This info will be digitally secured in this video. Every time to see the tender amount the vendor has to enter a secret key. He also has to select some personalized images through PII method. The digital seal also has information of the time of tender filing. No updates are allowed after a fixed time. The seed for embedding of the secret information has dependence on both the vendor and the tendering organization. None of them can forge on their side.

KEYWORDS

Digital seal, online tendering, Personal image identification, video steganography, watermarking.

1. INTRODUCTION

The information to be hidden is called the secret message, which can be copyright information or confidential data, and public information can be named as carriers of message such as audio or video clips and more. Key controls the information hiding process [10]. Secret information is hidden into carriers and the carriers having secret information are then passed through the communication channel. A detector is then used to recover secret information from the carrier with the help of key. So, information hiding technique may be divided into two parts:

1. **Information embedding algorithm**—It uses the key to achieve the secret information hidden.
2. **Hidden information detection /extraction method** – It uses the host key from the hidden to detect/ recover the secret information. In the key premise of the unknown, third party host is difficult to get hidden or deleted, and even find secret information.

Steganography deals with studying the collection of techniques aimed to embed sensitive information into another file. This file is known as "container file" or "cover file" (graphs, documents, executable programs, etc.). By doing this, information is passed to third parties without being noticed and can only be retrieved by a legitimate user who knows a specific algorithm to extract it. This science has aroused great interest in recent years since it has been used by crime and terrorist organizations. However, this is not a new invention, but has been employed since ancient times. This topic is intended to introduce the concept of steganography, and differentiating it from cryptography. Steganography has its roots in our civilization from an immemorial time and has been traditionally used by military and intelligence agencies, criminals and police, as well as by civilians who want to disobey government restrictions. However traditional steganography was only based on ignoring the covert channel used, digital channels (image, video, audio, communication protocols, etc.) are nowadays used to achieve that target. In many cases, the container object is known, what is ignored is the algorithm to insert information into that object. Steganography provides a solution to the prisoner's problem: two prisoner of a high-security prison, A and B, who are in separate cells, want to communicate with each other to prepare a plan to escape. However, all information exchanged between them is examined by a security guard who, in view of any suspicion of covert communication, isolates them from one another. By means of steganography the guard analyses seemingly innocuous messages which contain a subliminal channel really useful to the prisoners.

As we know in the transmission and sharing of digital data internet plays an important role. Due to worldwide or publicized medium some confidential data may be stolen, copied, edited or deleted by an unauthorized user. So security must be providing to transmission data. Encryption is the well-known technique to provide security for data transmission using various methods. Encryption technique makes data to unreadable and meaningless or unnatural. Sometime meaningless message may be attracted by unauthorized user, so new technique must be used for secure data transmission known as "steganography".

In steganography technique data, which sender want to keep confidential is known as secret message can be text, audio, video, image and other types of data which can be represented by a stream of bits. Cover is the medium in which secret message is embedded and show as the original with hiding the presence of secret message. Message embedding technique is mainly dependent on the structure of cover and using digital images provides more security for hide the secret message. Cover image embedding with secret message is known as "stego image". Stego image look similar to cover image, no one can differentiate between stego image and cover image. To provide higher security before embedding the secret message into cover image message should be encrypted. For this process, sender use stego key for ensuring that only receiver who knows the respective decoding key to extract the message from stego image. For this method cover image is separated from stego image and that separated area works as a key at decoding side for improved security.

There are mainly following two points that must be considered during designing of the steganographic system:

- i) Invisibility: It cannot be seen by human eyes the difference between original cover image and stego image.
- ii) Capacity: For more security the cover image can carry more data.

There has been a rapid growth of interest in steganography for two main reasons [8]:

- The publishing and broadcasting industries have become interested in techniques for hiding encrypted copyright marks and serial numbers in digital films, audio recordings, books and multimedia products.

- Restrictions on the availability of encryption services have motivated people to study methods by which private messages can be embedded in seemingly innocuous cover messages.

The basic model of steganography comprises of the following factors:

- Cover object (container object): It is the object used to carry the hidden message.
- Stego-object: It is the cover object together with the hidden message
- Adversary: These are all those entities from whom the covert information is being hidden. The adversary can be passive or active. A passive adversary suspects that covert communication may be taken place and tries to discover the algorithm extracted from the stego-object, but does not attempt to alter that object. An active adversary, apart from trying to find out the covert communication algorithm, modifies the stego-object with the aim to corrupt any attempt of subliminal messaging.
- Steganalysis: Science that studies the detection (passive attacks) and/or cancellation (active attacks) of information hidden behind different covers, as well as the possibility of finding the useful information inside them (existence size).

There are several suitable carriers below to be the cover-object [9]:

- (a) Network Protocols such as TCP, IP and UDP.
- (b) Audio that using digital audio formats such as wav, midi, avi, mpeg, mpi and voc.
- (c) File and Disk that can hides and append files by using the slack space.
- (d) Images file such as bmp, gif and jpg, where they can be both color and gray-scale.

There are many limitations are available in usual tender processing system, such as delay in processing, human being interfacing during processing, insufficient transparency and unavailability of security etc. Due to this tenders are copied or changed forcefully. Causes this tender is going in to the wrong hand and work done by them is not good and other tender cannot take this tender. So it is a big challenge for government or organization to provide security, reduce time of processing and make a fair competition for this type of tender. For this government or organization provide web based online E-Tendering process.

Internet is using for communication of different vendors and organization. Due to this internet communication third person not only access the confidential data, but also modify the data. So it must be necessary for vendors to provide high security for online tendering process.

The fair and successfully implementation of online tendering system must satisfy following criteria:-

1. Reducing cost of tender
2. Reducing time for tender processing
3. Data can be accessed anytime and anywhere only by authorized vendor.
4. Fairness and liability in the process.
5. improved efficiency and productivity
6. High level security

The tendering process in Government organizations lacks the transparency due to non-involvement of the bidder in the bid opening process. Some of the bidders are illegally benefitted to change their amount even after last date of tender submission. These changes are done to beat the lowest bid by illegally opening the tender envelopes without all the bidders being present. So a system is obviously needed to submit tenders online in an authenticated envelope such that the bidding information cannot be leaked without the customized information given by the bidder. Also the time of tender filing should be there inside the envelope so that no one can change this information after the last date of filing tender. The available steganography techniques are very costly in terms of space and time. Complexity of the process can be decreased by adding some user dependent random secret keys. The original message should not be hidden to the video; instead user dependent keys should be used. The localization of the secret message in the video should not depend on single secret key. Third party involvement should be there to authorize the process.

2. LITERATURE SURVEY

This paper describes the main proposal of information hiding technology, analyses the information hiding principle and Information hiding system model and information hiding system characteristics [10, 25], discusses the current main branch of information hiding technology and applications and information hiding problems and prospects for the future development direction.

In now days Information hiding technology is going into new research directions such as multimedia communication and multimedia signal processing, because it provides a new idea of information security [25], our research for information security provides a new direction, from the different application purposes can be studied, with the knowledge economy and information age, information hiding technology will be more perfect on the theoretical system, it will obtain great commercial value.

2.1 DATA HIDING WAVELETS

A new image data hiding technique is proposed in this paper, which is based on Discrete Wavelet Transform (DWT). This new technique is useful for obtain Stego image by hiding a secret message into cover image using two secret keys. This technique has many high stronger image processing operations such as image compression, cropping, blurring, sharpening, median filter and addition of noise to the Stego image [1, 8]. With extraction of Stego image the embedded secret data can be identified with high visual quality. Stego image is look like as an original cover image. Here does not require the original cover image to extract embedded secret data in this technique. The comparison with the other existing techniques, the proposed technique is superior to others.

Discrete wavelets transform (DWT) based image data hiding technique has been proposed in this paper. The Stego image has high peak signal to noise ratio (PSNR) value. So, existence of the secret-image is not noticed by the unauthorized person. The extracted secret image and original secret image look like as same [1]. If applied the some image processing operations such as JPEG compression, blurring, cropping, median filter, sharpen, and addition of noise to the Stego-image. It is noticed that in the proposed technique, to extract the embedded secret image, it does not require the original cover image. With comparison to other existing techniques proposed technique is superior.

2.2 VIDEO STEGANOGRAPHY

Protect the video copyright with an effective method known as "digital watermarking for video". This paper summarizes the theories, features, model and classic algorithms of video watermarking techniques [25], and then discusses the algorithms' advantages and disadvantages. The key techniques and the development tendency of the video watermarking are discussed finally.

Video watermarking technology develops the second generation from the first generation with the development of video compression standards. In the first generation of video watermarking technology algorithms nothing to do with video content, but in second generation algorithm is based on video content [10, 25]. Watermark energy is extending to all the pixels in the frame, focuses on the discussion of computation and watermark strength, regardless of content by mostly first-generation watermarking scheme. Take more concentration to the combination of the watermark and the synchronization of the watermark by the second generation of video watermarking scheme. From all above, major development direction of video watermarking is watermarking scheme based on video content or video object attributes.

2.3 DATA TRANSMISSION ENVELOPE

It must be necessary to secure transmission of important information like banking and military. The process of hiding secret data inside a video is known as Video Steganography. Changes in the pixel colors is negligible, so human eyes cannot recognize the addition of information to the video [9]. To provide an efficient and a secure method for video Steganography is the main aim of this paper.

An index is created for the secret information using the proposed method and this index is located in the frame of the video itself. This frame containing the location of secret information with the help of placed index. So due to this method at the receiving end, with the help of index only secret data, which are containing by the frames, are analyzed rather than analyzing the entire video during the extraction process [9, 12]. With compared to the normal method of

hiding information frame-by-frame in a sequential manner, in this method less chances of finding the hidden information by an attacker. Computational time taken during the extraction process is also reduced by this method.

So, a feasible solution for video steganography is provided by this paper. Video is considered as a set of frames or images and changes in the output images after addition of hidden information is not recognizable by human eyes in this method [9]. Computational time taken is very less due to using simple mathematical calculation in this method. This method is simple and very effective for video steganography. Beside the simplicity in the implementation, security is also provided in this method to hidden information during transmission.

2.4 IMPORTANCE OF VIDEO ENVELOPES

Digital watermarking is a technique, which embedding the secret information into multimedia data. So in now days, it gained large attention to all over world. For resolving copyright ownership and verifying the integrity of content the watermark of digital images, audio, video, and other media products in general has been proposed. The definition and basic framework of watermark techniques is introduced first in this paper [14], after that the basic theoretical and evaluation criteria are explained. Finally, described the application area and possible research direction of digital watermark technology.

Recently, with the large development of new technologies and communication network, it's easier to enter into the world of digital multimedia and also easier to unauthorized copying and illegal spread of multimedia information as like audio, video and image. There is a difficulty in the provide protection against the various types of attacks in the present watermark technology [21]. Copyright protection, access and copy control, digital fingerprints, and other aspects of the application are limited in digital watermark technology. So trying to solve these issues many researchers are working.

In addition, the lack from the general framework of watermarking algorithm design is informative, put forward the reasonable has guiding significance for the strength of the watermarking model framework if can, will give watermarking algorithm design big convenience [14]. It can forecast that protect the multimedia information by using a digital watermark will become a more and more popular in the world.

2.5 LIFE CYCLE OF SECRET INFORMATION

Process of embedding information into a digital signal such that it is difficult to eliminate is known as "Digital watermarking". This digital signal may be audio, images or video etc. information is also carried with the signal if it is copied. Different watermarks are carried by a signal at the same time [12]. Use of watermarking in copyright protection systems is described in this paper, which are usable to prevent unauthorized copying of digital media. In this by using a copy device watermark is retrieving from the signal before making a copy; it's depending on the contents of the watermark to make a decision by the device to copy or not.

It is of course impossible to provide a complete list for application of digital watermarking. However, it is interesting to note the rising interest in easily broken watermarking technologies. Applications related to copy protection of printed media are the main promise [24]. Protection of bills with digital watermarks is an Example of it. Many companies have working for projects in this direction and expected to completely functioning solutions will be available soon.

2.6 SELECTION OF ENVELOPES

With the increase of media sharing by using the advancement of internet services and various storage technologies video piracy has become an increasing problem [21, 24]. So, copyright protection mechanisms includes digital watermarking become an interesting area of research for scientists, mainly in designing a seamless algorithm for effective implementation. Mainly within video data, digital watermarking involves embedding secret symbols used for copyright detection purposes. The state of the art in video watermarking techniques is describing in this paper.

An important review on various available techniques is provides by it and also provides the main key performance indicators include the strength, speed, capacity, reliability, imperceptibility and computational complexity.

It is shown from the Comparisons between the above mentioned different schemes that spatial domain approaches are performs out by frequency domain schemes [24]. Comparison with the lossy compression, noise addition and geometrical attacks such as rotating and cropping frequency domain schemes are stronger. As the embedding is done in the middle frequencies, among the frequency domain, DCT based scheme is the strongest against lossy compression, whereas DWT based schemes is strongest against the noise addition.

Against pixel removal, shearing and the rotating, the DFT-based watermarking schemes have better resistance. Artificial Intelligence (AI) algorithms is likely to be use by researchers in various operations while for authentication feature based watermarks are used, such as in making decision for appropriate embedding location, the feasible payload and recognition of the extracted watermark. In the area of video watermark, some of still open areas of research are [24, 26]:

- Against some of especially attacks which are designed for videos such as frame dropping, averaging and statistical analysis; many of existing watermarking schemes are not strong.
- The capacity of watermarking payload.
- Focused by the existing algorithm is very rarely on watermarking in audio signal of a video, yet videos consist of sequence of images and audio often.
- No algorithm is designed for protection against all types of attacks; each of them is designed for protection against some specific attacks.
- It shown that focuses of most researchers for their proposed algorithms are on strength and imperceptibility, but in real-time applications, there is not a good attention for computational complexities and time of extracting algorithms.

With the study on the existing techniques for video watermarking, in the future this research area may guide to use of more feature-based techniques and for decision making in different parts of watermarking process, also applying more Artificial Intelligence (AI) algorithms.

2.7 MOTION ENVELOPES FOR VIDEO STEGANOGRAPHY

In this paper, a new video steganography algorithm is proposed and realized which is based on the H.264/AVC Video coding standard. To control embedding and the secret transporter, a motion vector component feature is designed by this algorithm [26]. Visual invisibility and statistical invisibility of video sequence will not be affected by the information embedded. It is shown by the experiments that the algorithm with a large capacity of embedding and high transportation use can be implemented fast and effectively.

A motion vector components based video steganography algorithm is proposed in this paper. P, B macro block (or sub-block) motion vector are selected as steganography carriers. For control embedded operation characteristics of motion vector components is designed. The qualities of higher transporter use, Efficiency of embedding and capacity of large embedding with good visual invisibility and statistical invisibility are obtained by this algorithm. Finally, due to its fast and effective implementation, it can be described that the operation of algorithm is simple and practically it can be meet with the requirements of secret communication.

3. PROPOSED METHOD

3.1 INFORMATION INPUT

3.1.1 User id (uid)

This is a unique id assigned to each bidder. All the bidders need to register once and set a secret password. This ID is merged with the bidding amount in the digitally sealed envelope. The name of the envelope stored is also kept as this ID, so a bid corresponding to a bidder is searched using this ID as primary key.

3.1.2 Secret Password (PWD)

This password is known to the bidder only. This password will be added to the other information to generate the seed localization key.

3.1.3 Bidding Amount (BAMT)

This is the amount of tender. This is a lump sum amount which is to be paid to the bidder if the work proposed in the tender is done successfully. A minimum and maximum limit on this amount is generally mentioned by the tenderer. The bidder keeps this amount as minimum as possible to get the tender. This bid is submitted in a sealed envelope and this is the primary criterion to issue the tender to a particular bidder on minimum bidding amount. Our whole algorithm is to make this amount secure using a digital envelope. Since this amount can be leaked to some other bidder who can change his bid to minimum after comparison to other bidders.

3.1.4 Bidding Time (TIME)

The seal for the bidding amount should be created in such a manner that it can be opened only in presence of the bidder on the bid opening day. No tampering with this amount can be done. A time is given by which the tender filing and quotation submission is to be done. After this time no updates are allowed. So it is quite necessary to enter bidding time information also inside the tender envelope. This information will indicate when the envelope was sealed. The bidding amount can only be extracted if this time is matched during the extraction. No change in the tenders could be done after last date of tendering. If some changes are done in the tender then after the last date then it would record the time also. So the illegal tampering will be detected.

3.2 ENTERPRISE DEPENDENT KEY

This is an innovative key that will be chosen by the enterprise which is issuing tender. This information is required to authenticate each envelope that it is certified from the tenderer. It can be compared to a tender process where bidder has to send a bid in the prescribed format and in the envelope provided by the tenderer. The bid amount can only be extracted properly if this value is same as given by the tenderer. The main benefit of this key is that no bidder can claim a false bid since all the bids are certified from this key. If the bid has been filed in time then the amount can only be extracted successfully if EDK has been used during embedding, this authenticated embedding procedure from tenderer side.

3.3 SEED LOCALIZATION KEY

The indexes in the PII images from where the intensities will be selected are determined using this key. This is known as seed localization key. SLK is generated as string concatenation of EDK, PWD and TIME.

SLK=concat (EDK, PWD, TIME);

Conversion of this SLK to the indexes for localization of indexes in the PII images is done through summation of all the digits in this key. That summation is the row index of PII image and column index is calculated by subtraction of a predefined value from row index.

% Conversion of PWD, EDK and Time combination to index number of the PII images

sum1=0;

n = 0;

While (SLK/10^n) >= 1

n = n+1;

end

for i = 1: n

k = SLK - floor (SLK/10^i)*10^i;

SLK = SLK - k;

m (i) = floor (k/10^(i-1));

end

Index=sum (m);

Index=index-30;

3.4 PERSONAL IMAGE IDENTIFICATION(PII)

This is an innovative process to add one more tier for security. The bidder will be identified when he enters correct login password. In addition to this classical method for security some images are also presented in front of him and he has to select three images one after other in same order from those images. During bid opening the same images in same order are to be selected by the bidder to open the bid. Any person knowing the password will not be able to get the bid since he will never know which images were selected by the bidder. The passwords have to be stored somewhere in database but there is common set of images for all the bidders and only choice is to be made. No indication regarding the choice is stored anywhere.

3.5 PSEUDORANDOM SEED

Pseudorandom number generator is used to generate the random sequences. These sequences are not completely random. The same PN sequences can be regenerate if the seed given to the PN generator function is same. This seed is created using the selected intensities value from the PII images. The random number generator is reset using this seed. The random values generated in an order are always same whenever the generator is reset with the same seed. This brings a dependence of the random values on the bidder selection during Personal image identification.

3.6 USER DEPENDENT KEY

These are the values that are decided from the user information. The user selects images through PII method. The seed for the PN generator is created by selection of specific intensities. This is one of the random values generated from random number generator using PII intensity selection as seed.

% Generation of user dependent keys to embed the binary of the bidding amount this are the values to be substituted in place of the current intensity value

UDK0=randi (128, 1);

UDK1=randi (128, 1) +127;

3.7 INSERTION GUIDANCE SEQUENCE

This is a pseudorandom sequence which guides the embedding of the secret information inside the video frame. It is used to locate the pixel for embedding of the UDK0 and UDK1 in the video frame selected by the incremental sequence. Any pixel in the range of maximum row and column number can be selected.

% Insertion Guidance sequence generation which will be used for insertion at different frames

for i=1: nframes

IGS (i, 1) =randi (row,1);

end

for i=1: nframes

IGS (i, 2) =randi (col, 1);

End

3.8 INCREMENTAL FRAME SEQUENCE

This is the sequence which is created using the seed and used to select the proper frame for the insertion of the secret information. It will have values 1, 2 or 3 which will be used as increment for the frame number. If the current frame of insertion is 11 and IFS value is 2 at that index, then next insertion frame will be 11+2=13.

incr = randi (3, 1, secretinflen);

3.9 VIDEO STEGANOGRAPHY

Steganography deals with studying the collection of techniques aimed to embed sensitive information into another file. By doing this, information is passed in ordinance of third parties without being noticed and can only be retrieved by a legitimate user who knows a specific algorithm to extract it. We are using an adaptive yet user dependent novel algorithm for video steganography that will embed the secret bidding information inside the video frames. The algorithm replaces the intensity values at the locations determined by the insertion guidance sequence (IGS). The IGS gives the row and column values for inserting the user dependent keys (UDK). The secret key is scanned bit by bit and the frame to insert that bit is selected through incremental frame sequence (IFS). In the selected frame the embedding locations are decided by IGS. At those locations UDK1 or UDK0 are replaced according to the bit value of the secret information. Mathematical details of this algorithm are given in algorithm section.

3.10 TAMPER PROTECTION SEAL

The tendering process cannot be completed without proper sealing of the quotation envelope. Digital method for tendering should also have a digital seal procedure. This is done through cyclic redundancy check of the video frames. If any tampering of the video file is done it must be rejected and its backup copy from the central server should be used then. The CRC process is very time consuming and mathematically complex. So CRC of whole frame is not done to save time. The new information added in the frame is dependent on IGS and IFS. So CRC of only those pixels is done which have been updated due to embedding.

This saves much time with the needed security. If any tampering with the pixels that were having info is done the CRC fails and the video rejected. If any other part of the video is modified then there is no problem. So the CRC method proposed is accurate and efficient.

for mm=1: secretinflen

if embed (mm) == '1'

crcseq1(mm)=mov(jj).cdata(IGS(mm,1),IGS(mm,2),1);

else

crcseq1(mm)=mov(jj).cdata(IGS(mm,1),IGS(mm,2),1);

end

jj=jj+incr (mm);

if jj>nframes

jj=1;

end

end

% Generating Cyclic redundancy check sequence

bincrc1=de2bi (crcseq1, 8,'left-msb');

ID=str2double (answer1 (1, :));

hexid=dec2hex (ID, 8);

hexid = strcat ('0x', hexid);

% Create a CRC-16 CRC generator, then use it to generate a checksum for the binary vector represented by the ASCII sequence '123456789'.

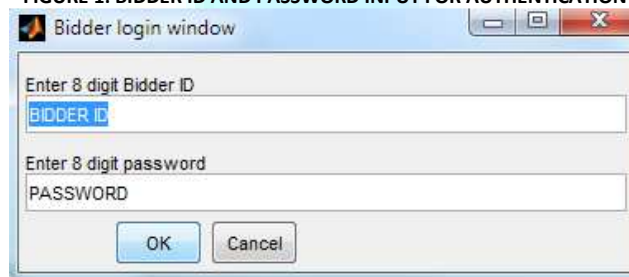
gen = crc.generator ('Polynomial', hexid,'ReflectInput', true, 'ReflectRemainder', true);

4. SIMULATION RESULTS

4.1 BIDDER ID AND PASSWORD INPUT

Following figure gives an input dialog where two values bidder id and password can be entered both during filing and opening of tender.

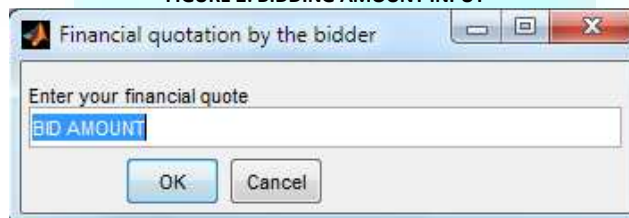
FIGURE 1: BIDDER ID AND PASSWORD INPUT FOR AUTHENTICATION



4.2 BIDDING AMOUNT INPUT

This input window will appear during tender filing process only. There is no requirement during tender opening process. The bidding amount can be entered here.

FIGURE 2: BIDDING AMOUNT INPUT



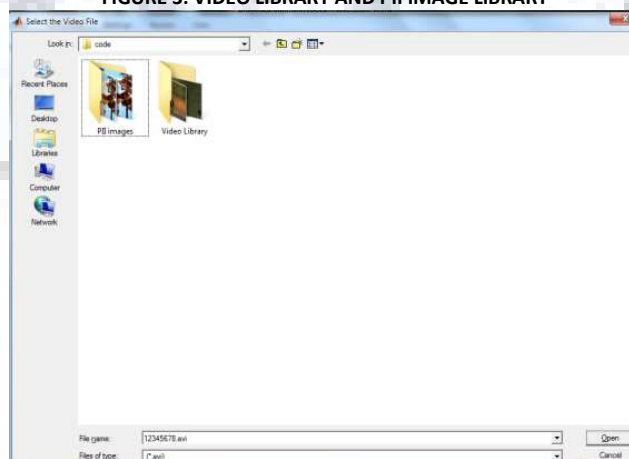
There is no minimum or maximum limit over this amount, but this limit can be decided by the tenderer.

4.3 TENDERING PROCESS

4.3.1 Digital envelope selection

Video selection is done using this window that will be an envelope for the secret data. There is a rich library of the videos and can be changed regularly for new tenders. A bidder will select one of the video from these and the entered amount will be embedded into this video using the proposed algorithm.

FIGURE 3: VIDEO LIBRARY AND PII IMAGE LIBRARY



When the main folder is opened there are several videos, one of the video is selected from these. The videos should not have any significance from the tender point of view. They should not have any relevance to the field of tendering. They can be shared through a public sharing medium like YOUTUBE etc.

FIGURE 4: VIDEOS IN THE VIDEO LIBRARY



4.3.2 PII Image Selection

In this step the bidder has to select some images from the available PII images. The images are selected one by one. The same image can be selected any number of times. But the order of the images is to be remembered during registration since the same order is to be followed during tender opening process. So the bidder has to remember which images were selected and also the order in which the images were selected to extract the bid amount from the video envelope.

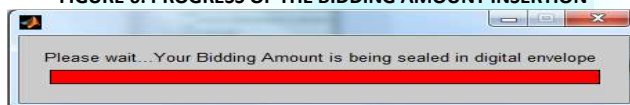
FIGURE 5: PERSONAL IMAGE SELECTION



4.4 DIGITAL SEAL GENERATION

The following figure shows the progress of the embedding process of the bidding amount in the digital envelope.

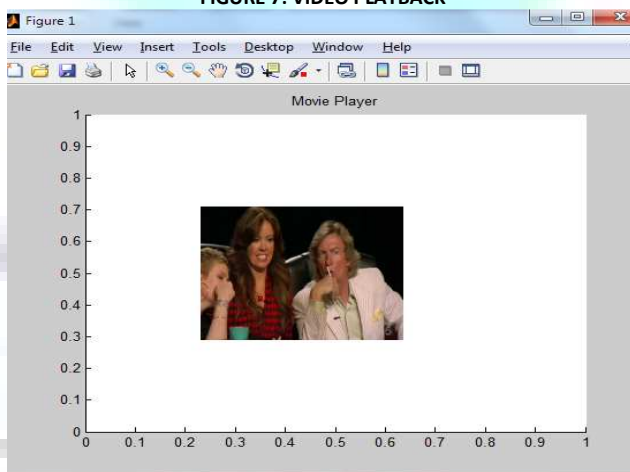
FIGURE 6: PROGRESS OF THE BIDDING AMOUNT INSERTION



4.5 VIDEO PLAYBACK

Once the secret information has been embedded in the video, the video can be displayed. The video can be seen to have no changes due to embedding.

FIGURE 7: VIDEO PLAYBACK



4.6 QUALITY CONTROL

The quality of the video embedded should not have enough visible noise. The noise level can be measured by PSNR and histogram comparison between the original and embedded frame.

4.6.1 PSNR

Since very small number of pixels has been disturbed it does not lead to any visible difference in the video. This disturbance can be quantified using the PSNR metric which measures the embedded noise in one signal with respect to the original signal. Here embedded signal is our stego video and original signal is the video in which the embedding has been done.

We calculate the average PSNR of all the embedded frames with their respective original frames. This average values for different videos have been checked and infinite value suggests that there is no visual noise in these two frames.

Peak Signal-to-Noise Ratio (PSNR) measures the quality of two images, the watermarked image and the original host image. The value of PSNR usually ranges from 20 dB (low quality) to 40 dB (high quality). PSNR is used to evaluate the difference between the watermarked image and the original image. The NC is applied to determine the degree of similarity between the original watermark and the extracted watermark. The PSNR and the NC are calculated as follows:

$$\text{PSNR} = 10 \log_{10} \left(\frac{255^2}{\text{MSE}} \right) \text{dB}$$

$$\text{where MSE} = \frac{1}{A_p \times B_p} \sum_{i=0}^{A_p-1} \sum_{j=0}^{B_p-1} (X(i,j) - X_w(i,j))^2$$

Where, X and X_w are the original and watermarked images respectively of size $A_p \times B_p$ represent the height and width of the images. X'_w represents the extracted watermark.

The value of the PSNR between the original and the embedded video frames has been calculated and its value is coming Infinite. This means there is no visible difference in the video before and after embedding.

4.6.2 Histogram Comparison

Following histograms represents the frequencies of the various intensities in a randomly chosen frame before and after the embedding. There is no difference in the histograms. The peaks are same in both so a histogram comparison cannot predict that the data is contained in the video and our secret message is safe.

FIGURE 8: HISTOGRAM OF ONE ORIGINAL VIDEO FRAME

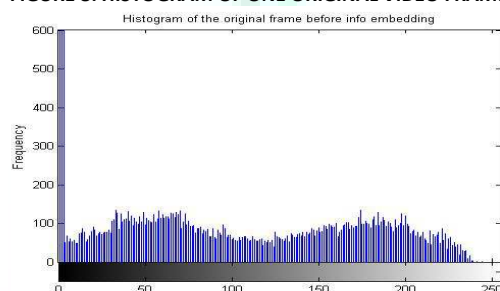
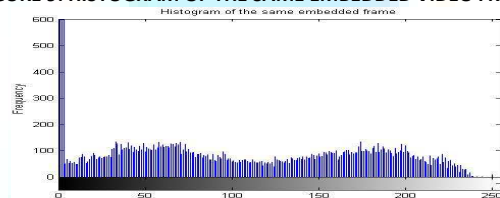


FIGURE 9: HISTOGRAM OF THE SAME EMBEDDED VIDEO FRAME



4.7 TENDER OPENING

Tender opening is reverse procedure of the tender filing process. In this process the bid amount is disclosed in presence of the bidder.

4.7.1 Envelope Input

The Bidding envelope is selected by the bidder which is identified by bidder ID.

FIGURE 10: ENVELOPE INPUT



4.7.2 Personal image verification

The images from the selection pane are selected for personal image verification. The same images in same order are to be selected to extract the bidding information successfully.

FIGURE 11: PII IMAGES SELECTION FOR VERIFICATION



4.8 DIGITALLY SEALED ENVELOPE VERIFICATION

4.8.1 Successful Bidding Amount Display

If the PII images, password and EDK are same then the amount is successfully extracted from the sealed envelope. If the tampering protection is intact then only the bid amount is extracted from the video.

FIGURE 12: SUCCESSFUL EXTRACTION OF BID AMOUNT FROM THE ENVELOPE

Envelope is found digitally sealed and it is authentic bid

bidamt =

36925814|

4.8.2 Tampered

If tampering of the video files has been done then the tampering protection seal will be broken and CRC verification will fail. In this case the tender opening process will not progress and reject the video file, giving the error presented in following figure.

FIGURE 13: ERROR GENERATED DUE TO TAMPER PROTECTION SEAL FAILURE

Error using tenderopening (line 201)

CRC Check Failed cannot proceed further, envelope tempering has been done

5 CONCLUSION

This scheme is novel in this area and has no algorithmic comparisons. The concept of digital video envelope, EDK, UDK and other secret keys is completely novel. We are also using framed video data hiding method so we have compared our results reported by some papers in this area. The results are very good as there is no visual change in the Stego video and the PSNR values are also coming infinite. The main idea to check the hidden bidding information i.e. histogram checking is also not able to detect the presence of the data. Extra involvement of tampering protection seal avoids any tampering of this video. This approach is successful landmark for data hiding in the videos for online tendering. We are planning in future to include some frequency domain transforms to make it comparable with other techniques in the frequency domain.

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ANALYSIS ON AUDITING PRACTICES AND THEIR EFFECTS ON HUMAN RESOURCES: A CASE STUDY OF SELECTED FIRMS IN NAIROBI COUNTY

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ABSTRACT

Auditing is a global practice that is exercised both in public and private companies. Increasingly, businesses, governments and various profit making organizations are engaging in integrating social and professional objectives. This is done in an endeavor to ensure an independent examination and expression of an opinion on the financial statements and the human resource capacity of their organizations by an appointed auditor. The purpose of appointment may not necessarily be to comply with any relevant statutory obligation. Human resources is one main part of any organization that calls out for auditing as accountability is required among employees. Such auditing may be done on two fronts. At the onset, it may be done by an internal auditor and another one conducted by an external auditor. Their practice modes are bound to have an effect on human resources hence this research.

KEYWORDS

auditing practices, human resources.

ABBREVIATIONS USED

ICAI	–	Institute of Chartered Accountants of India
HR	–	Human Resource
HRA	–	Human Resource Audit
HRM	–	Human Resource Management
PCAOB	–	Public Company Oversight Board

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Auditing can be defined as an evaluation of a person, organization, system, process or a product. The term most commonly refers to audits in accounting but similar concepts also exists in project management and human resource management (Hira, 1998).

Human resources can be defined as a set of individuals who make up the workforce of an organization, business sector or an economy. 'Human capital' is sometimes used synonymously with human resources, although human capital typically refers to a narrow view, i.e. the knowledge of individuals embodies and can contribute to an organization. Likewise, other terms sometimes used include manpower, talent, labor, or simply people. From the corporate vision, human resources are viewed as assets to the enterprise and must be audited if the firm is to remain competitive (Aswathappa, 2006).

According to Cleland and Bruno (1996), a human resource audit is a compressive method (or means) to review current human resource policies, procedures, documentation and systems to identify needs for improvement and enhancement of the HR function as well as to ensure compliance with the ever-changing rules and regulations. An audit involves systematically reviewing all aspects of HR, usually in a checklist fashion.

HR audits in private companies are more than an audit activity that solely covers and presents evidence of compliance. They are increasingly expected to look behind and beyond the organizations assertions of sound and proper HR management practices and to assess the assumptions being made, to benchmark the organization's process and practices and to provide the necessary consultative services that help the organization achieve its business goals and objectives (Werther and Keith, 1996). The auditors always present and submit an audit report to authority of the organization, which may be clean or qualified. The clean report indicates the appreciative of departments function, but the latter one represents the gaps in performance and therefore contains remarks and remedial measures. HR audit is very much helpful to face the challenges and to increase the potentiality of the HR personnel in the organization.

2.0 REVIEW OF LITERATURE

This review summarizes information on auditing practices and aspects of human resources. It covers the works by various scholars. It takes into cognizance the theoretical review, empirical review and research gaps.

2.1 THEORETICAL REVIEW

The goal of an audit is to express an opinion of the person, organization or system in question, under evaluation based on work done on test basis (Millicamp, 2002). According to Hubbard (2003), auditing involves the use of processes which are sets of questions asked or directions given by the auditor. When the specific objective of any one process is achieved, the process is ended and another can be used. By doing this, the subject are said to be able to free themselves from unwanted barriers that inhibit their natural abilities.

An audit must adhere to generally accepted standards established by governing bodies (Kumar, 2009). These standards assure third parties or external users that they can rely upon the auditor's opinion on the fairness of financial statements on which the auditor expresses the opinion, including human resources. Though internal auditors are not considered independent of the company they perform audit procedures for, internal auditors of publicly traded companies which include most private companies are required to report directly to the board of directors or sub-committee of the board of directors and not to management, so to reduce the risk that internal auditors will be pressured to produce favorable assessments.

2.2 EMPIRICAL REVIEW

Human resource audits ensure that policies and procedures are fair and consistent across the organization and strengthen employee satisfaction. By maintaining a satisfied and productive workforce, an employer lessens the expense associated with costly turnover of staff. Losing one employee is estimated to cost a company 50-150% of the lost employee's salary in time and money spent to replace the employee (Hittinger, 2007).

Auditing, specifically the internal auditing, has become an indispensable control mechanism in both public and private organizations (Cohen and Sayag, 2004). Yet very few academic studies have been conducted on the effectiveness of IA. The current exploration study aims to build a conceptual understanding of the effectiveness of IA in organizations.

2.3 CRITIQUE OF THE EXISTING LITERATURE

he premise on which the human resources audit is based is that opportunities are being missed by staying with the current approaches. It considers the HR process as dynamic and that it must continually be redirected and revitalized to be responsive to the ever-changing needs. Aswathapa (2006), has failed to recognize this.

In their work, Werther and Keith (1996), failed to consider the criticality involved in the analysis of the existing HR within the organization during HRA. They failed to realize that for effective analysis and assessment of HR, the audit will have to be served with the data that is quantitative, qualitative, as well as comprehensive.

3.0 IMPORTANCE OF THE STUDY

The findings of this research are expected to benefit a number of stakeholders. The managers of various private companies can use the research findings and recommendations to formulate better strategies and procedures to improve on auditing, especially on human resources in order to reap the right benefit from it. Although the study has been done on the framework of private firms, public firms will also benefit from it as private and public companies share a lot when it comes to functions like auditing and human resource management. Auditors will also benefit from the study as will researchers and academicians.

4.0 STATEMENT OF THE PROBLEM

Over years, there has been a major concern globally for organizations to develop the professional image of all the departments of the organization. This has led to managers trying many techniques and formulating various strategies and policies to help enhance the same, and one of the practices that eventually came forward to help bring out and maintain this professional image was auditing (Kamau, 2012).

This study involved analysis of all the factors surrounding human resource audit function, a very crucial function in any firm's operations. Private firms particularly embrace this function to ensure better human resource departments. Effective human resource audit can in turn be enhanced through careful analysis on various auditing practices and how they affect human resources in private firms hence the basis of this research.

5.0 OBJECTIVES OF THE STUDY

5.1 GENERAL OBJECTIVE

The general objective of this research was to analyze the various auditing practices that take place in private firms and find out how they affect matters relating to the management and the development of human resources.

5.2 SPECIFIC OBJECTIVES

The specific objectives of this study were:

1. To analyse the various duties of auditors in private firms.
2. To analyse the importance of auditing on human resources in private firms.
3. To investigate the role of both internal and external auditing in ensuring effective human resources, and find out how they relate.
4. To identify the procedures and strategies used by auditors in planning and executing their duties in effecting accountability among employees.

6.0 RESEARCH METHODOLOGY

6.1 INTRODUCTION

This highlights the methodology used in this research. It covers the research design, study population, data collection methods and procedures; data analysis methods; and research ethical issues.

6.2 RESEARCH DESIGN

The research was descriptive. A descriptive research is that which includes surveys and fact finding enquiries of different kinds (Neuman, 1994).

6.3 TARGET POPULATION

The target population comprised of both top and middle level managers. Ten auditors, both internal and external and 24 operational employees in each of the 3 selected private firms in the county were chosen randomly for study.

TABLE 6.1: TARGET POPULATION

Respondent	No.	Percentage (%)
Managers	6	15
Auditors	10	25
Employees	24	60
Total	40	100

Source; Nairobi Bottlers Ltd, Lolwe Autioneers Ltd, Ongata works Ltd (2013)

6.4 SAMPLING DESIGN AND SAMPLE STUDY

The sample size was selected to represent the various business units. The sample size selected was 3 private firms where the questionnaires were administered to the employees, reflecting 60% of the total target population. The selected samples were representative of the target population.

6.5 DATA COLLECTION

The data for this research work was obtained essentially from primary and secondary sources. Primary sources are those that give data having been collected afresh and for the first time. Secondary sources on the other hand are those whose data has been collected and passed through the statistical process (Ojany and Ogendo, 2011).

7.0 RESULTS AND DISCUSSION

7.1 RESPONSE RATE

Table 7.1 below shows that there was a relative return rate of 88% compared to that 12% who failed to return the questionnaires. This is within the pre-determined response rate required for the study to be valid and effective. It further shows that the respondents were positive giving their views on the topic under study.

TABLE 7.1: RESPONSE AND NON-RESPONSE OF ISSUED NUMBER OF QUESTIONNAIRES

Response	questionnaires	Percentage
Issued	25	100
Returned	22	88
Not returned	3	12

Source: Research Data, 2013

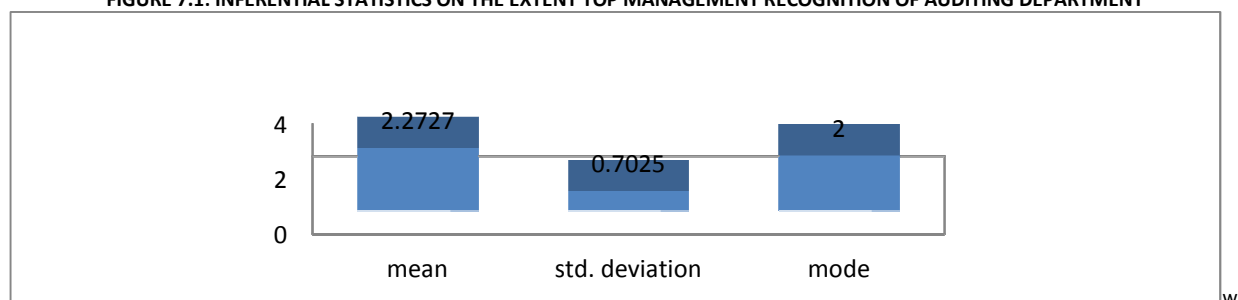
7.2 AUDITING PRACTICES AND PROCEDURES

7.2.1 Top Management Recognition of Auditing Department

The research sought to establish the level of recognition of the auditing department by the top management. This was necessary in finding the importance laid upon auditing in private companies by the management of those companies. Thirteen point six percent of the respondents said that the top management recognizes auditing department to a small extent. Forty five point five percent said that the recognition of the auditing department by the top management is

moderate and 40.9% (9) said the extent of recognition was big. The mode was 2.00 and the mean was 2.2727 and with a standard deviation of 0.7025 which shows that most respondents were clustered around the mean as there was no significant deviation from the mean. This means that most respondents were of the opinion that auditing department recognition by the top management is moderate although a good number also rated the recognition to be high.

FIGURE 7.1: INFERENCE STATISTICS ON THE EXTENT TOP MANAGEMENT RECOGNITION OF AUDITING DEPARTMENT

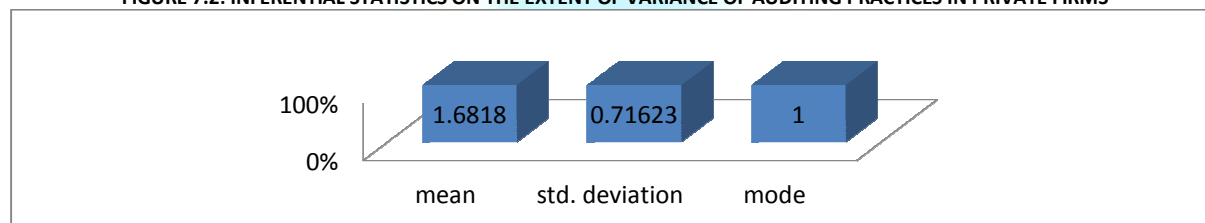


Source: Research Data (2013)

7.2.2: Variance of Auditing Practices and Procedures

The research sought to know the extent to which various auditing practices and procedures varied from one private firm to another. This would help determine the extent of uniformity of these practices in private firms. Forty five point five percent said that the practices and procedures varied to a low extent, 40.9% (9) said that the practices were moderate in variance and 13.6% (3) said that the extent to which the auditing practices and procedures varied was high. The mode was 1.00 and a mean of 1.6818 with a standard deviation of 0.71623. This shows that most respondents clustered around the mean and were of the opinion that the extent to which the auditing practices and procedures varied among private firms was low.

FIGURE 7.2: INFERENCE STATISTICS ON THE EXTENT OF VARIANCE OF AUDITING PRACTICES IN PRIVATE FIRMS

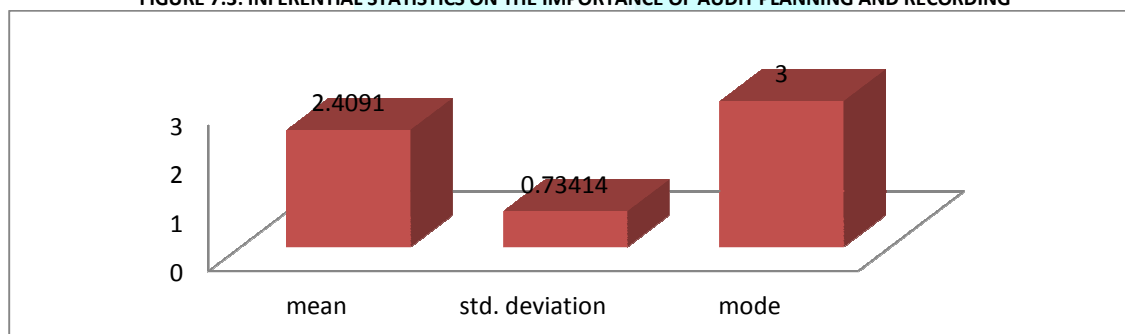


Source: Research Data (2013)

7.2.3: Importance of audit planning and recording

The research enquired about the importance of audit planning and recording in executing the audit function. This would help determine the emphasis needed to be put in this audit planning and recording. Thirteen point six percent of the respondents said that the importance of audit planning and recording in executing audit function was to a low extent. Thirty one point eight percent said that importance was moderate and 54.5% (12) said that audit planning and recording were of much importance in executing the audit function. The mode was 3.00, a mean of 2.4091 with a standard deviation 0.73414. These statistics show that most people rated the importance of audit planning and recording to be of a high extent. Most people were clustered around the mean as there was no significant deviation from the mean.

FIGURE 7.3: INFERENCE STATISTICS ON THE IMPORTANCE OF AUDIT PLANNING AND RECORDING



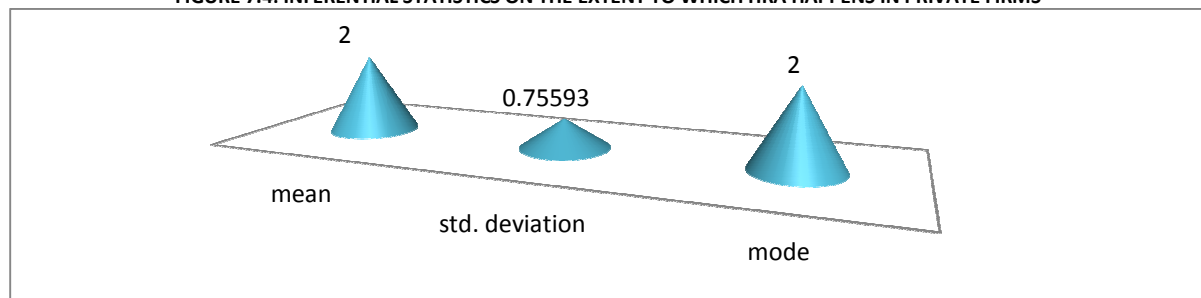
Source: Research Data (2013)

7.3 HUMAN RESOURCE AND AUDITING

7.3.1: Frequency of Special HR Auditing

The research wanted to establish from the respondents if special auditing for HR department happens in their firm and if it does the frequency and extent of its happening. Knowledge of this would help the research know the importance laid upon HR auditing in private firms. Forty five point five percent of the respondents answered that the extent of special auditing happening in their firm was moderate. Twenty seven point three percent rated the extent of HR auditing as low and the other 27.3 (6) rated it as high. The mode was 2.00 and also the mean was 2.00 and with a standard deviation of 0.75593. This clearly shows that majority of the respondents were of the opinion that the extent of special HR auditing is moderate as the deviation was not significant enough to show otherwise. Majority of the respondents clustered around the mean.

FIGURE 7.4: INFERRENTIAL STATISTICS ON THE EXTENT TO WHICH HRA HAPPENS IN PRIVATE FIRMS

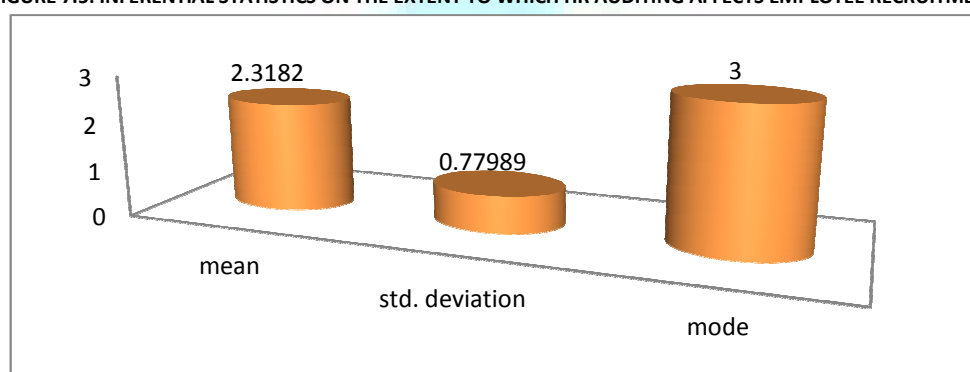


Source: Research Data (2013)

7.3.2: Impact of HR Auditing on Employee Recruitment

The researcher sought to know from the respondents the extent to which HR auditing affects recruitment of employees in their firms. This would certainly help establish the importance of HR auditing to employees. Eighteen point two percent of the respondents answered that HR auditing had small impact on recruitment of employees in their firms. Thirty one point eight percent said that the impact was moderate and 50% (11) said that HR auditing has big impact on recruitment of employees. The mode was 3.00, the mean was 2.3182 and the standard deviation was 0.77989. This shows that most of the respondents clustered around the mean with the opinion that HR auditing has significant impact on recruitment of employees. The deviation from the mean was not significant enough to indicate otherwise.

FIGURE 7.5: INFERRENTIAL STATISTICS ON THE EXTENT TO WHICH HR AUDITING AFFECTS EMPLOYEE RECRUITMENT



Source: Research Data (2013)

8.0 FINDINGS

8.1 SUMMARY

Of all the respondents that played role in completing the study, 40.9% said that the auditing department received much recognition from the top management while 45.5% said that the recognition was moderate. Another 13.6% said that the recognition of the auditing department by the top management was small. Asked the extent to which the auditing practices and procedures in their firms vary from those of other private firms, a majority of 45.5% said that there is little variance, 40.9% said the variance is moderate and 13.6% said that auditing practices and procedures in their firms highly varied from those in other firms.

9.0 RECOMMENDATIONS

- Private firms should hire the services of both internal and external auditors for better and more reliable results in determining the truthfulness and fairness of financial statements.
- HR auditing should be carried in all private firms as it serves to ensure fairness and professionalism in employee recruitment and the fact that it also ensures effectiveness and regulatory compliance.
- Organizational status should be kept at its best as according to the study, it affects auditing practices which in return ensure truthfulness and fairness of financial statements and accountability and professionalism.
- Audit planning and recording should be encouraged in private firms as it ensures smooth audits and future references.
- Auditing and specifically human resources auditing should have significant recognition and support from the top management as smooth running of the organization and profitability will be ensured by enabled auditing department free from constraints.
- Auditing and specifically human resources auditing should have significant recognition and support from the top management as smooth running of the organization and profitability will be ensured by enabled auditing department free from constraints.

10.0 CONCLUSION

From the study the researcher concludes that auditing is indeed vital in general running of private firms. Most respondents agreed to the fact that auditing brings a significant effect on management of their firms. Audit planning and recording is vital if the audit function has to be successful and effective. The top management should give support to the auditing department just like it does to finance, accounting, HR and other organizational departments.

11.0 LIMITATIONS

The following limitations were faced during the study.

1. As the study needed enough funds to be properly executed, financial problems invited setbacks that were a threat to good completion of the research. The researcher therefore sought aid from family and friends and economized the available funds for successful completion of the research.
2. Some of the firms were sparsely located. This brought about logistic challenges in collecting questionnaires.

12.0 SCOPE FOR FURTHER RESEARCH

Suggestions for further research ought to be to establish the effects of auditing practices on other organizational departments other than human resources.

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APPENDIX

QUESTIONNAIRE

Instructions: Kindly tick appropriately in the box or fill the space provided.

PART I: RESPONDENT'S PROFILE

1. What your gender
 - a. Male
 - b. Female
2. What your age group?
 - a. 21- 30
 - b. 31 - 40
 - c. 41 –50
 - d. 51 – 60
3. What is your level of management?
 - a. Top level
 - b. Middle level
 - c. Operational level

PART II: APPROACHES TO AUDITING PRACTICES AND THEIR EFFECTS ON HUMAN RESOURCES

For each question below, tick the appropriate box to indicate your opinion relevant to each of the questions in this section and write your opinion in the gaps provided where necessary

A. Auditing practices and procedures To what extent does your organization's top management recognize the auditing department as compared to the other departments? Big Moderate Small

1. Give a brief explanation
2. How does auditing in your firm compare to that in public firms?
3. To what extent does the auditing practices and procedures in your company vary from the ones in other private firms? High Moderate Low
4. If yes, what in your opinion is the main difference?.....
5. To what extent does the organizational status affect the auditing practices and procedures in your firm? High Moderate Low
6. Give a brief explanation
7. To what extent is audit planning and recording vital in executing the audit function? High Moderate Low
8. To what extent does auditing affect the general management in your firm? High Moderate Low
9. Specify some affected departments.....

B. Human resource and auditing

1. To what extent does special auditing for the human resource department happen in your organization? High Moderate Low
2. If high, at what frequency does it happen in one financial year? Specify Varying
3. In your opinion, do you find human resource auditing as important to your firm? Yes No
4. If yes, why do you think so?
5. Do you consider anything that comes with human resource auditing as negative? Yes No
6. If yes, what and why?
7. To what extent does human resource auditing have an impact on recruitment of employees? Big Moderate Small
8. In your opinion, does practice of auditing on the human resource department of your firm ensure effectiveness and regulatory compliance? Strongly agree Agree Disagree
9. How do the general auditing practices in your firm affect the HR department in your opinion?

C. Internal and external auditor

1. What kind of an auditor serves your firm? 1. Internal 2. External 3. Both
2. If an external auditor serves your firm, at what frequency does he visit the firm in a year to perform his duties? 1. Once 2. Twice 3. Others
3. Does the auditor audit all the departments in your organization? Yes No
4. If not all, can you specify some of the departments he carries his audit on
5. To what extent does the outcome of the internal and external auditors often differ? Great Moderate Small Don't differ
6. If there is a difference, what do you think makes the outcomes differ?
7. In case of an internal auditor, at what frequency does he give report on his audits? Weekly Monthly Others
8. How complicated are the procedures used by your firm in auditor appointment? Little Fair Much

THANK YOU FOR YOUR PARTICIPATION

CORE BASED COMMUNICATION IN MULTICASTING

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ABSTRACT

Multicast is the ability of a communication network to deliver multiple copies of message to group of receiver in distributed. With the proliferation of internet, multicast is widely applied in all kinds of multimedia real-time application, teleconferencing, distributed parallel processing, video conferencing, distance education etc. It is demanding more and more quality of service in broadband group communication to support huge access of internet service and multimedia application. It is also a challenge and hard problem for the next generation Internet and high performance networks. The core based solution is able to full fill this demand a lot. In this paper effort has been put to make it more flexible in comparison to SPAN/COST through a new approach for solving the constrained of a singular multi-core solution. It facilitate of taking the as many number of edge cost in random which is an alternate solution for SPAN/ADJUST.

KEYWORDS

Multicasting, QoS, Core selection, asymmetric.

1. INTRODUCTION

Data communication for internet uses TCP/IP and UDP protocol for reliability and scalability. It uses so many methods like unicast, multicast, any cast and broadcast for audio-video broadcasting, video conferencing, multimedia communication, computer-supported cooperative work, distributed interactive simulation, distributed operating system, software upgrading, resource location, shared workspaces, virtual collaboration application. The importance of multicast communication in computer network is demonstrated by the development and widespread use of the IP multicast by the inclusion of multicast service in standards for the ATM, MPLS networks [11]. A multipoint connection is known as a virtual topology that supports the delivery of multicast data among multiple computers. The topology of a multipoint connection is usually a tree, whose edges represent communication links. The information of routing table entries, are used to forward the traffic destined for group along branches of the tree. A multicast protocol defines how the multipoint connection is established and maintained. The main objective of multicast tree is to optimize the delay and cost. Multicast routing with delay constraint is a research difficulty in routing problem. The difference between multicasting and unicasting is well understood by host group model which is a common identifying multicast address, all receiving data by sources that may or may not be the member of the same group. A number of multicast protocols have been proposed for use in the internet include the DVMRP, MOSPF, CBT and PIM. It refers to simultaneous delivery of data from multiple sources to multiple receivers of different groups. Group communication create multiple paths from a tree structure. In the beginning the source is considered as a root of the multicast tree. A multicast tree is incrementally constructed as members leave and join a multicast group [13,14]. When an existing member leaves the group, it sends a control message up the tree to prune the branch which has no members attached. The multicasting is used when a lot of information is transmitted to a subset of hosts. Later on a core based tree was introduced in which an intermediate node communicate to remaining down-stream nodes where the core node may also be a source node. The core based multicast tree construct the shortest path between the core and remaining nodes. A minimum average path delay tree can be constructed in $O(n^2)$ time using Dijkstra's shortest path algorithm [15]. The ultimate least cost tree is known to be NP complete. The core based protocols are most suitable for group communication and flexible for large network. Regardless of the number of senders participating in a multicast group only one multicast tree rooted at a single core (Router) is used. Routing with a single core may not satisfy QoS requirements of many distributed group members [12, 13]. In section 2, we outline the literature review. In section 3, we outline about multicast communication. In section 4 we introduce SPAN/COST [6] algorithm and cost estimation. In section 5, we evaluate performance of simulation result. We conclude the paper in section 6.

2. RELATED WORK

Many multicast routing protocols algorithm have been developing such as CBT (Core-Based Tree) [19], PIM (Protocol Independent Multicast) [20], MOSPF (Multicast Open Shortest Path First) [21], DVMRP (Distance Vector Multicast Routing Protocol) [22] and others [23, 24]. In routing for group communication usually sender transmits a stream of data to a set of receivers. Storing of destination address was making more and more congested and overloaded in the source node. An alternative node has chosen to treat as core node to share the same overload partially to make the group communication more flexible. That make a core rooted trees for the delivery of their stream. It signify "core" as an intermediate node between sources and receivers including source node in some cases. The core based models, CBT [1] and PIM [5] uses only single core for their purpose. The motivation behind core based tree is to make scalability and to reduce overhead. A source willing to deliver its stream of data to the core from whereon, its transmits packet to multiple receivers. Core-based routing provides a scalable multicast delivery to multi-sender multicast applications since only one multicast data delivery tree rooted at a single core is constructed per group regardless of the number of senders. Data destined to the multicast group routed towards the single core. The core, then distributes the data to all the group members via the multicast tree. Existing core-based routing with QoS support has two major drawbacks. First, it may be difficult for users who are group members to specify exact values of the desired service quality as in the existing work. Second, routing with a single core may not satisfy QoS requirement of many distributed group members. Single core based routing may not satisfy QoS requirements for many distributed group members [12]. The ubiquitous use of internet leads to use of multiple cores in a network. The first multi core tree is OCBT [2]. Multi-core tree extend the single-core approach to trees of higher access point or cores to non-group nodes, while maintaining the advantages of single-core trees. Usually multi-cores have better fault tolerance in case of a core failure compared to single-core trees. The core is the single point of failure in a single-core based tree. A back-up core list is maintained within the bootstrap mechanism in both [9,17] CBT and PIM. Since different senders are likely to multicast through different cores, it is less chances that the entire traffic will be concentrated around one particular core in the multi-core approach. In multi-core architectures, the traffic concentration decreases as the number of cores increases as cores are randomly distributed around the domain [16,18]. All multi-core trees operate similarly to CBT in protocol specifics other than their tree structures. The CBT, PIM, OCBT tried to implement core selection procedure to improve the quality of service. The other core based trees are Greedy, NAÏVE, DDVCA, QCSA, SPAN [6, 7] contributed a lot [fig. 8]. Zappala, Fabbri and Lo's results [16] shows that multi-core trees with effective sub-optimal core placement mechanisms result in less delay than single-core based trees with optimum placement of the unique core, since the multi-core case allows trees which are likely to be distributed adequately to be more closer to group of sender(s) than a single core. Similarly, multi-core trees gives less total cost of delivering the multicast

stream in terms of bandwidth utilization than a single core tree since a new node to join the tree is likely to locate a core among the alternatives, which is potentially closer to it than the only core alternative which is the tree root in the single-core based tree.

3. MULTICAST COMMUNICATIONS

The data communication in multicast group handled the intermediate nodes in routing from sender(s) to receiver(s). The demand of different types of applications using multicast encourage for the development of various improved algorithms and protocols in group communication. It takes care to minimize the network load to optimal value and avoid loops with traffic. Multicast communication support reliable transmission. The routing algorithm tries to select optimal routes and the cost function of available resources, bandwidth, number of links, end-to-end delay. The host sends data to a multicast group using local network multicast capability. Multicast router use IGMP (Internet Group Management Protocol) to collect information for the multicast group. Multicasting facilitates efficient transmission and increases performance in distributed application. The optimal multicast path is select from a group of trees in a domain in account of low delay, low cost and light traffic concentration. The bandwidth used by multicast tree is distributed to various receivers. The overall efficiency of a particular tree is determined by height, breadth and number of receivers present in a tree. The multicast group members are chosen uniformly out of total number of nodes. The protocols collect and maintain state information that can be used by the routing algorithms for selecting best path to the receivers and to select the most appropriate path among the various paths available using a path selection procedure.

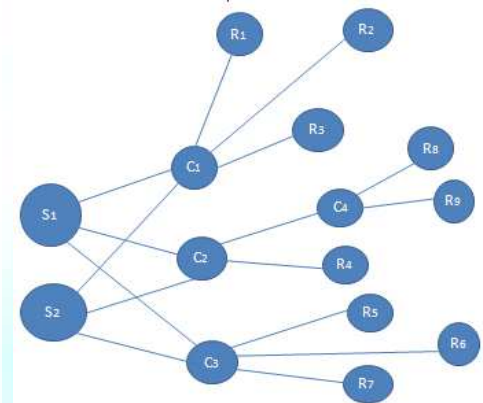
4. SPAN FRAMEWORK

SPAN [6, 8] is a prominent core selection algorithm which is distributed and asymmetric frame work operates both in singular and non singular solution space. SPAN supports multiple metrics and first distributed QoS model to provide constrained core-based solutions in asymmetric network. It incorporate the core selection and tree construction components into a routing framework in which each component can be further elaborated separately achieving QoS-efficiency of the solutions [fig.7]. SPAN initially identifies some intermediate nodes having multiple paths between source and receiver and considered as candidate cores. The ultimate cores can be selected based on the optimized cost of the network basing on that core and multipoint path.

Singular Multi-Core: Each core serves all sources in the group and uniquely defines a shared tree[8].

Non-singular Multi-core: It is not compulsory for a core to serve all sources and each receiver can be dominated by multiple cores varying across sources in the group.

FIG. 1: MULTIPOINT COMMUNICATION PROBLEM



Suppose a receiver r is dependent by a core c serving a particular source s within the delay bound between s to r through c , then we can say that core c serves r_s .

In notation we can write $T(c,s)$ be core tree rooted at core c for all receivers in $D(c,s)$. Similarly $D(c,S')$ can be use for different source set where $S' \subseteq S$ for all receivers in group and $T(c,s)$ "totally" serves s . Let's analyze an example from the figure1. S is the source set and $S=\{s_1, s_2\}$. R is the receiver set and $R=\{r_1, r_2, r_3, r_4, r_5, r_6, r_7, r_8, r_9\}$. C is the core set and $C=\{c_1, c_2, c_3, c_4\}$. Then we can get dependent sets as $D(c_1,S)=\{r_1, r_2, r_3\}$, $D(c_2,S)=\{r_4, r_8, r_9\}$, $D(c_3,S)=\{r_5, r_6, r_7\}$, $D(c_4,S)=\{r_8, r_9\}$.

4.1 COST ESTIMATION

The cost of a network depends on number of core present in a network[25]. It divides network into number of trees like core to dependent receivers as **Rtree** and sources to core as **Stree**. It uses a metric i.e. domination count. Let there is a delay distance path from node i to node j through core c then cost of the tree, **Cst** is sum of average cost of **Rtree**, average cost of **Stree** and average cost **Dm**. **Dm** is Residual ratio of dominated to un-dominated nodes at the concerned core c .

Domination Count

For a tree $T(c,s)$ rooted at core c serving the source s for all receivers we can express

$$\text{Domination Count}(c,s) = \sum_{s' \in S} |D(c,s) \cap D(c,s')|$$

Where $T(c,s)$ serves a source $s' \in S$.

The Proposed Algorithm:

Input: S, R, C // No. of Source, Receiver and Core

Output: Cu //Ultimate core

1. Consider the edges Cost for all receivers in random from & through cores in a particular range.
2. Consider the edges Cost for all sources from each cores if there.
3. $Cu = \emptyset$
4. Take the $D(c,s)$ for all cores.
5. Take the Cost of the Network, $Cnw = Cst$ for all the cores.
6. Take the total cost for core $C_i = Cnw$
7. C_2 is increment from C_1
8. if the value of Cnw for $C_1 >$ value of Cnw for C_2
9. $Cu = C_2$
10. Else
11. $Cu = C_1$
12. The value of $C_i = C_2 + i = 1$

5. SIMULATION ANALYSIS

Simulation has been carried out in MATLAB version 9 in a system having CPU N435 @1.33GHz, 1GB of RAM. It created a difference from what resulted in SPAN/COST algorithm [6]. In the simulation of SPAN/COST algorithm, input of source nodes, receiver nodes, candidates cores and edges cost required to enter

which may be too difficult for a network of node sizes more than hundred or thousand. Here a large number of source nodes, receiver nodes and core nodes can take as an input to get optimized cost. The edges cost are taken randomly giving flexible to run the program in few second [10]. The main advantage is that the cost of each edge can be taken randomly by the system. Analysis from different combination of sources, receivers with cores are taken and found the following assumption.

1. If number of source increases w.r t number of receiver and cost of the network increases.
2. The Cost of the network changes w.r.t to no. of cores and inversely to no. of receivers.
3. If the number of sources and cores are constant, raising the number of receiver it decreases the cost of the network.
4. If all source, receiver and core together increases in constant rate the cost of the network decreases in constant rate.

FIG. 2.1

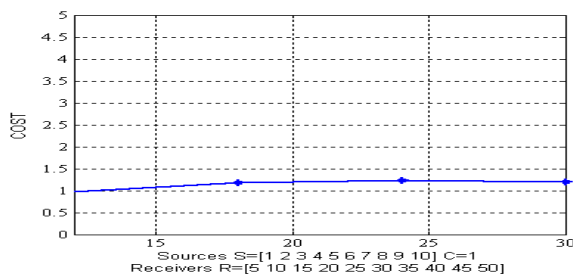


FIG. 2.2

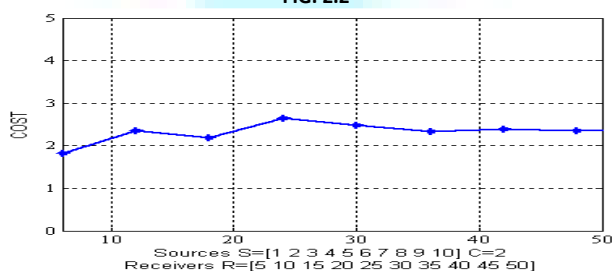


FIG. 2.3

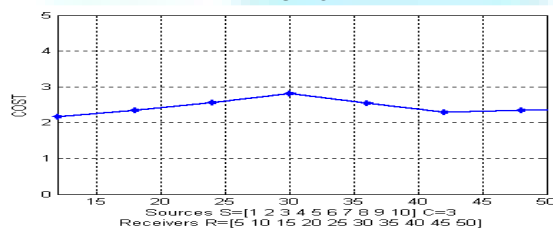


FIG. 2.4

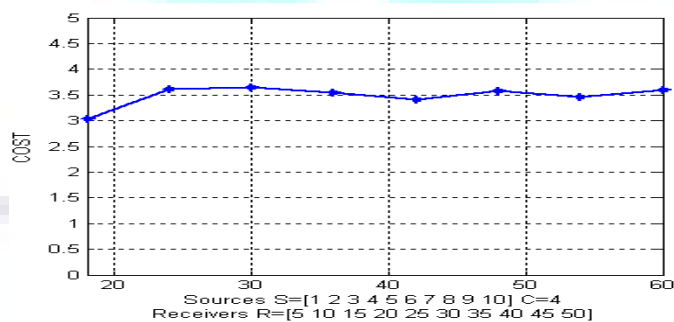


FIG. 2.5

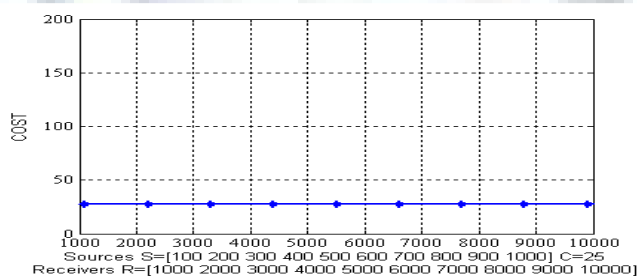


FIG.2.6

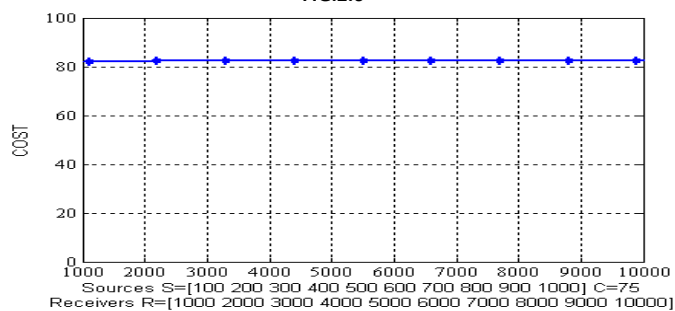


FIG. 2.7

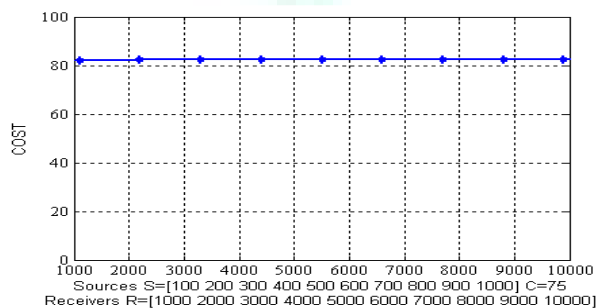


FIG. 2.8

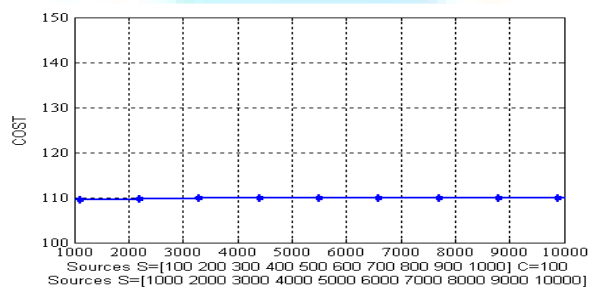


FIG 3.1

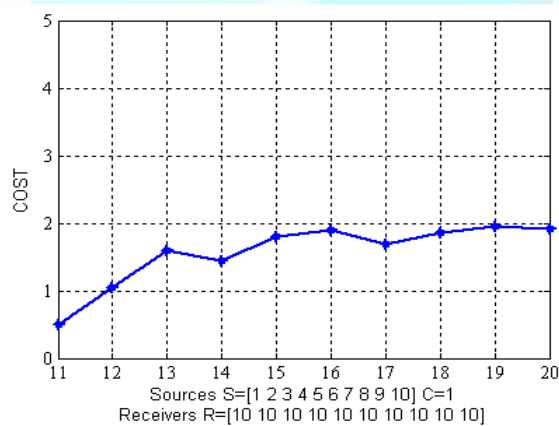
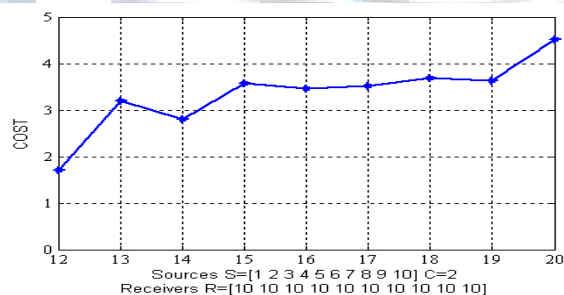


FIG. 3.2



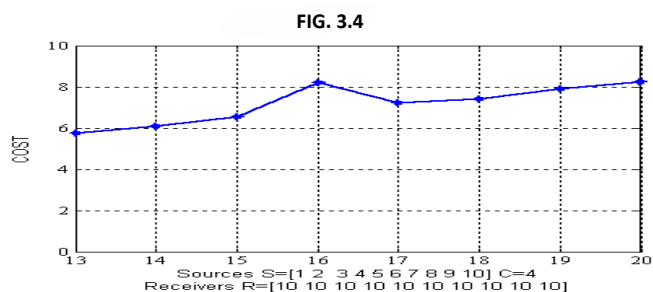
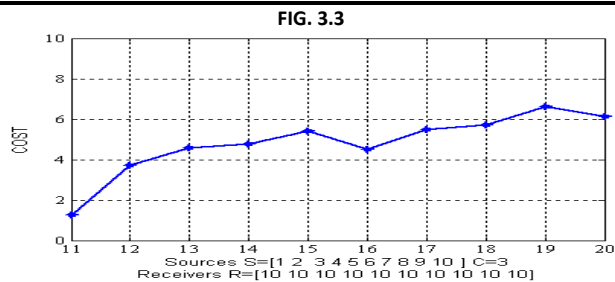


Fig.[3.1, 3.2, 3.3, 3.4] Says Cost of the network increases with respect to increase number of Sources.

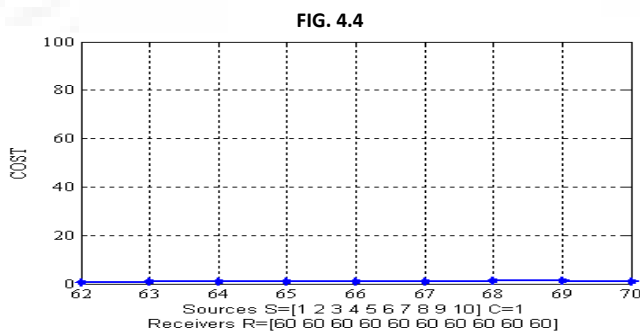
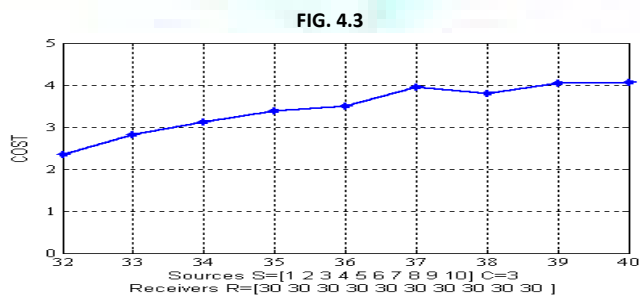
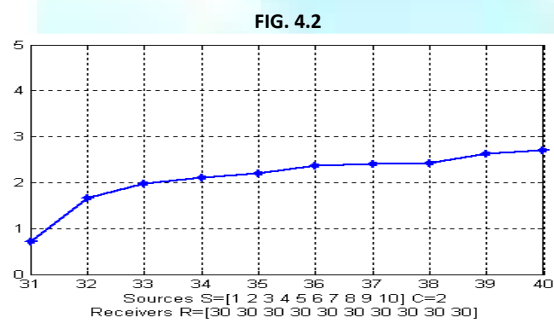
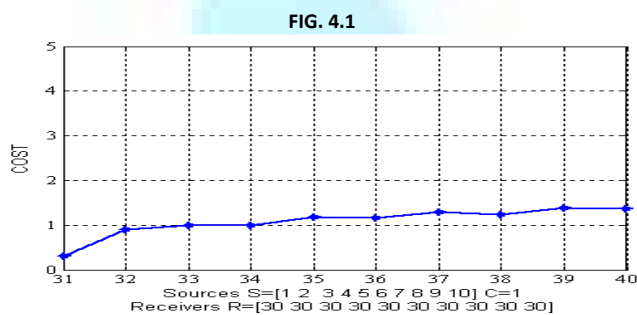


FIG. 4.5

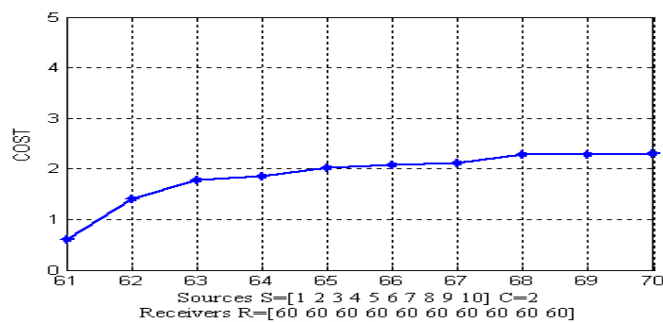


FIG. 4.6

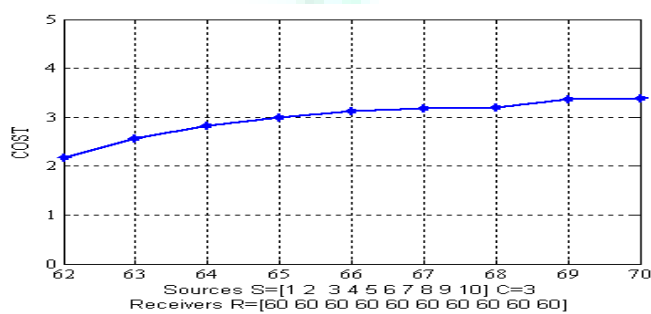


FIG. 4.7

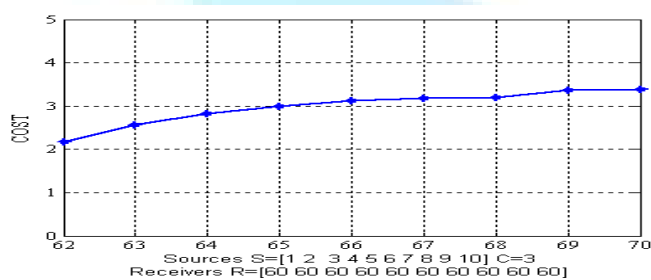


FIG. 4.8

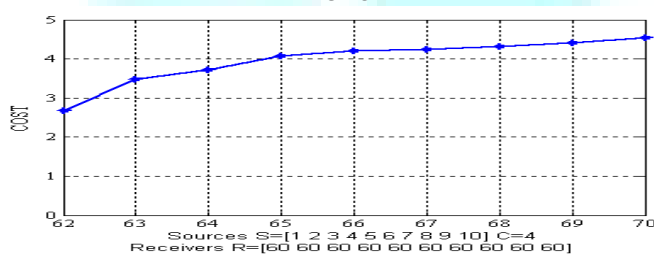


FIG. 4.9

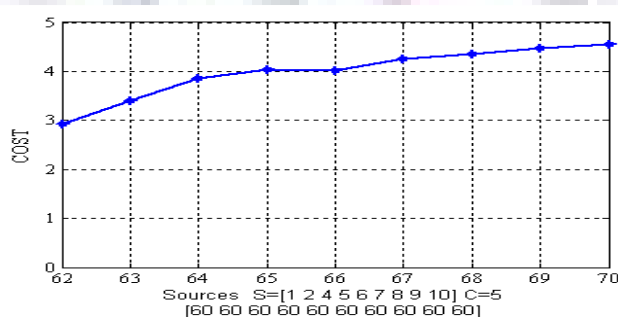


Fig.[4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9] Says , The cost of the Netwrk decreases with decrease in number of receivers.

FIG. 5.1

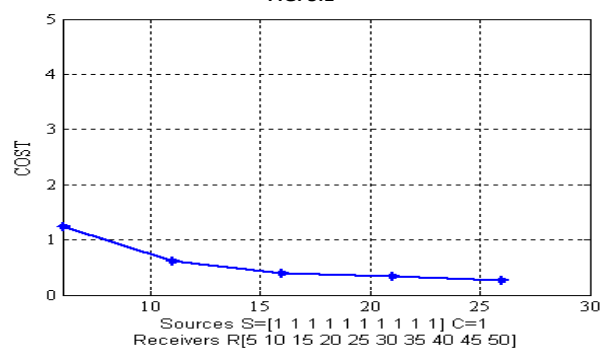


FIG.5.2

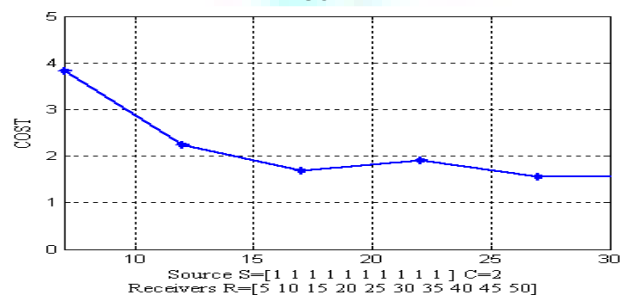


FIG.5.3

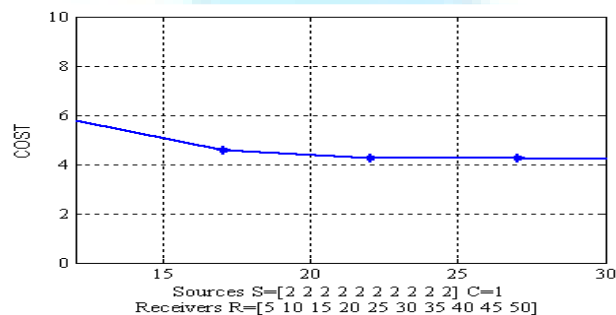


FIG.5.4

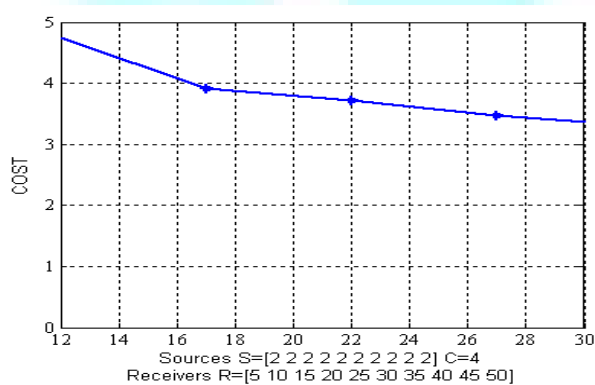


FIG.5.5

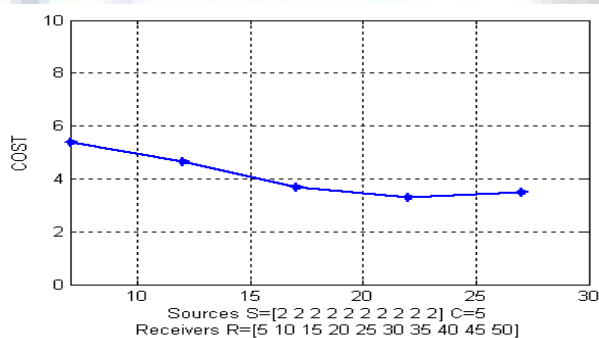


FIG.5.6

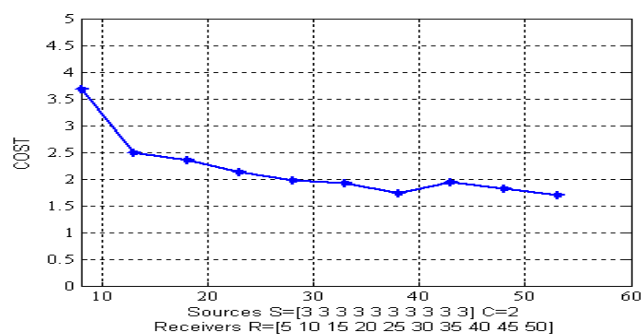


FIG. 5.7

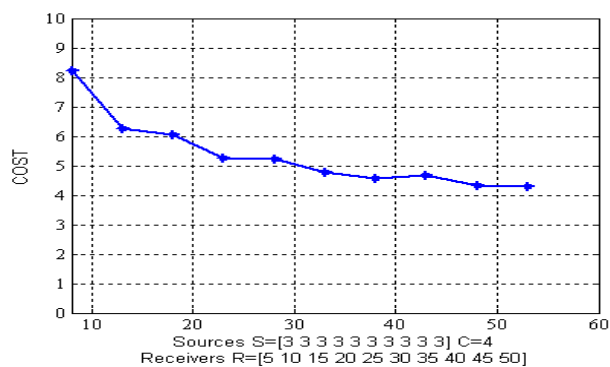


FIG. 5.8

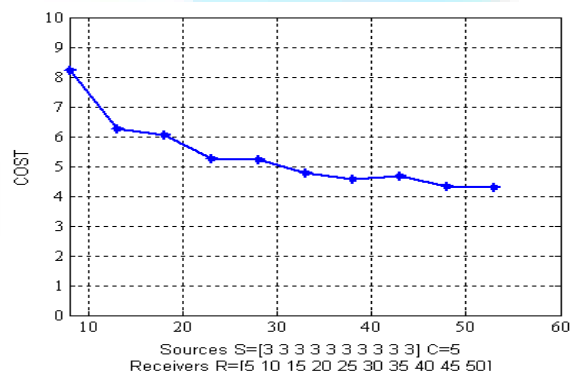


FIG. 5.9

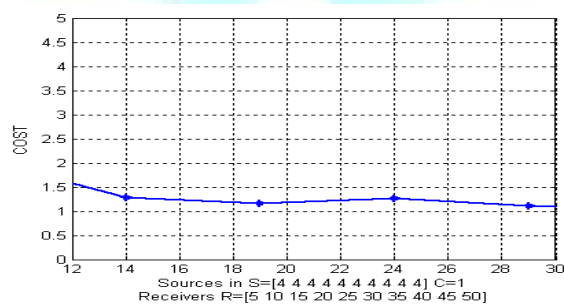


FIG.6.0

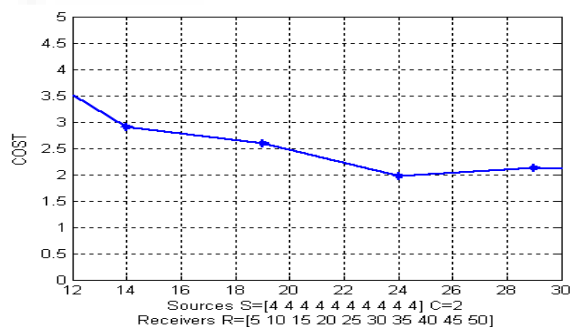


FIG.6.1

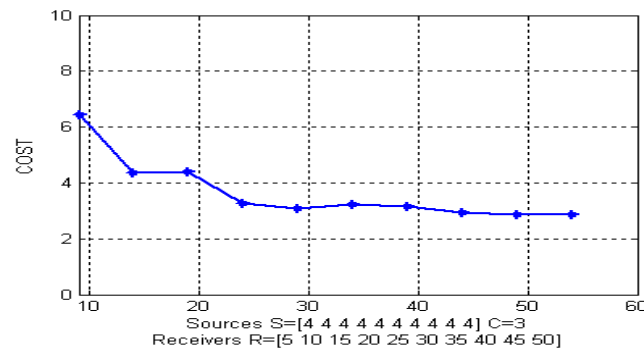


FIG.6.2

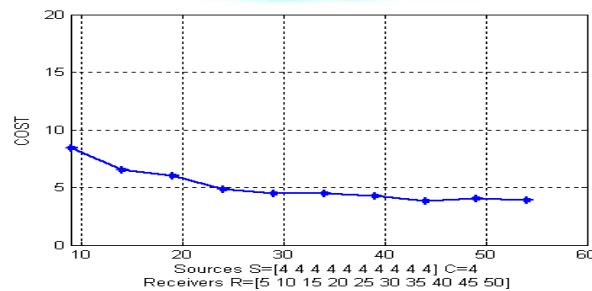


Fig.[5.1, 5.2, 5.3, 5.4, 5.5, 5.6,5.7, 5.8,5.9, 6.0,6.1,6.2]

Says, The increase in number of receivers keeping the sources number constant , decreases the Cost of the Network and increase in Core number increases the Cost of the Network. The Cost of the network varies directly with the rate of increase in receivers

6. CONCLUSION

The design of the multicast routing protocols are mainly applied for distributed domain. The development and maintenance of the multicast tree is mainly dependent on protocol performance. In this paper it has been analyzed and examined core selection to manage the multicast path for its placement in domain and its construction in multi-core environment. It is also concluded that ultimate core is not limited to number of source but instead load of the network. It can calculate the cost of a network having nodes even more than thousand and more which is difficult in existing SPAN/COST algorithm. This technique can be improved through increasing the labels of cores within source to receiver satisfying delay bound.

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E-WASTE: A LATENT ECONOMIC POTENTIAL

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ABSTRACT

This paper firstly identifies and qualifies the problem of burgeoning e wastes in our cities. In the present scenario this issue is being looked upon as a challenge and as an economic cost to the society whereas this paper highlights the potential that this sector holds in form of economics and business opportunity, like a latent resource waiting to be identified and exploited. We move ahead in this paper by offering one such business and economic model which could transform the urban nightmare into a dividend.

KEYWORDS

E-waste, WEEE, Stakeholders, Venture capitalists, Extended Producer Responsibility.

INTRODUCTION

Like hazardous waste, the problem of e-waste has become an immediate and long term concern as its unregulated accumulation and recycling can lead to major environmental problems endangering human health. The rapid growth of technology, up gradation of technical innovations and a high rate of obsolescence in the electronics industry have led to one of the fastest growing waste streams in the world which consist of end of life electrical and electronic equipment products. It comprises a whole range of electrical and electronic items such as refrigerators, washing machines, computers and printers, televisions, mobiles, i-pods, etc., many of which contain toxic materials.

WHAT IS E-WASTE?

E-waste or waste electrical and electronic equipment (WEEE) refers to consumer and business electronic equipment that is near or at the end of its useful life irrespective of whether they have been sold, donated, or discarded by their original owner. E-waste includes common electronic products such as computers, monitors, cell phones, VCR's, fax machines, stereos which can be reused, refurbished, or recycled but unfortunately makes its way to the nation's growing waste stream.

E-WASTE GENERATION IN INDIA

All over the world, the quantity of electrical and electronic waste generated each year, especially computers and televisions, has assumed alarming proportions. In 2006, the International Association of Electronics Recyclers (IAER) projected that 3 billion electronic and electrical appliances would become WEEE or e-waste by 2010. That would tantamount to an average e-waste generation rate of 400 million units a year till 2010. Globally, about 20-50 MT (million tonnes) of e-wastes is disposed off each year, which accounts for 5% of all municipal solid waste. Although no definite official data exist on how much waste is generated in India or how much is disposed of, there are estimations based on independent studies conducted by the NGOs or government agencies. According to the Comptroller and Auditor- General's (CAG) report, over 7.2 MT of industrial hazardous waste, 4 lakh tonnes of electronic waste, 1.5 MT of plastic waste, 1.7 MT of medical waste, 48 MT of municipal waste are generated in the country annually.¹⁰ In 2005, the Central Pollution Control Board (CPCB) estimated India's e-waste at 1.47 lakh tonnes or 0.573 MT per day.¹¹ A study released by the Electronics Industry Association of India (ELCINA) at the electronics industry expo – "Componex Nepcon 2009" had estimated the total e-waste generation in India at a whopping 4.34 lakh tonnes by end 2009.¹² The CPCB has estimated that it will exceed the 8 lakh tonnes or 0.8 MT mark by 2012.¹³ There are 10 States that contribute to 70 per cent of the total e-waste generated in the country, while 65 cities generate more than 60 per cent of the total e-waste in India. Among the 10 largest e-wastes generating States, Maharashtra ranks first followed by Tamil Nadu, Andhra Pradesh, Uttar Pradesh, West Bengal, Delhi, Karnataka, Gujarat, Madhya Pradesh and Punjab. Among the top ten cities generating e-waste, Mumbai ranks first followed by Delhi, Bengaluru, Chennai, Kolkata, Ahmedabad, Hyderabad, Pune, Surat and Nagpur.

CASE STUDY OF DELHI

Due to the lack of governmental legislations on e-waste, poor standards for disposal and improper mechanism for handling these toxic hi-tech products, e-waste mostly ends up in landfills or partly recycled in unhygienic conditions and partly thrown into waste streams.

Delhi alone gets 20% of the E-waste generated in the developed world which comes through cheaper imports as there is a ready market for glass and plastic here. Over 2,000 trucks ferry e-waste into the capital and dump it in the city's scrap yards. E-waste in Delhi weighs between 10,000 and 12,000 metric tonnes per year which currently employs nearly 30,000 workers in city's scrap yards and various unauthorised recycling units.

With the steadily increasing purchasing power of the middle class, demand for new electronic devices has sky rocketed as people prefer purchasing new machines rather than spending time and money on the refurbishment of old ones. Added to this, there is very little awareness among people about the adverse effects of e-waste on the environment. A combination of these factors could lead to rapid snowballing of the problem; in fact this process has already begun. Therefore there is a need for urgent action on this issue.

ADVERSE EFFECTS OF E-WASTE**HEALTH EFFECTS**

A report by Greenpeace International published in 2005 confirmed that all stages in e-waste processing could release substantial quantities of toxic heavy metals (like lead, zinc, mercury, chromium etc) into environment which can cause damage to the central and peripheral nervous systems, blood system and kidneys as well as serious negative effects on the endocrine system and children's brain development.

CHILD LABOUR

Another dismal outcome of this e-waste is employment of around 5,000 child labourers in the age group of 10 to 15 years in Delhi who work in poorly-ventilated enclosed areas without masks and technical expertise.

EFFECT ON GROUND WATER

Improperly disposed e-waste dumped into landfills leaks harmful chemicals such as lead and cadmium. These leaked chemicals pollute ground water and create septic tanks which jeopardise the health of many poor households apart from being of environmental concern.

HANDLING E-WASTE- PROBLEMS AND SUGGESTIONS**1. STORAGE**

The average lifetime of a computer is decreasing, which means that there are more and more computers that are replaced. The potential value for second use decreases with the time of storage, as the equipment becomes increasingly obsolete. The equipment in Delhi is partly kept by consumers for future use, but one of the main reasons is that there is no proper take-back system. Along with a proper take back system the consumers must be given proper incentives to give their computers to a reselling/recycling company. The lack of an appropriate take-back and collection system and also a lack of appropriate incentive structure, causes the loss of control on recycling activities, allowing informal recycling and illegal dumping.

2. REUSE

From an environmental perspective, it is important to encourage the practice of reuse before that of recycling, because reuse allows more material and energy savings. The manufacturing of one desktop computer requires 240 kilograms of fossil fuels, 22 kilograms of chemicals and at least 1,500 litres of water. One should encourage: reuse the first and only then recycle. To achieve this, the government needs to act as a regulatory body overseeing and assisting the operation of any company in this field.

3. STANDARDS OF RECYCLING

Safety standards and work conditions need to be improved. It is important to bring recycling activities from the informal to the formal sector.

4. AMOUNT RECYCLED

The quantity of e-waste recycled is low and some components such as the plastic and the monitors are seldom recycled. In order to increase the quantity recycled, recycling should be promoted as an attractive and profitable field for existing companies and venture capitalists.

5. INFORMAL PROCESSING

Most of the informal collectors and processors do "cherry picking", selling the valuable parts and dumping the rest. In order to separate the valuable parts from the less valuable, collectors have to dismantle the discarded electronics. Activities such as the breaking of the whole monitor to extract the copper yoke, with a high risk to inhale lead from the glass and dissemination of the lead containing glass in inadequate places. These collectors are informal and work independently which makes it complex to control and monitor them. Hence, it is important that any dismantling should be done professionally and under control. The government needs to lay down proper guidelines for, and perhaps also get directly involved in, E-waste processing.

6. FINAL DISPOSING

Since e-waste is considered hazardous waste, it has to be disposed in an authorized hazardous landfill site. This however, should be considered as the ultimate option after reuse and recycling.

TRACING THE PROBLEMS

Above problems can be identified as arising out of the lack of incentives, and the constraints faced by, the following *four* groups:

Government: the government has a responsibility to find solutions to the social and environmental problems generated by e-waste and therefore is a direct stakeholder in the entire exercise. The government currently has no proper guidelines and framework for e-waste management. There is also a lack of technological capability as well as of the funds needed to carry out e-waste management in an eco-friendly manner across the country.

Electronic companies: electronic companies have a social obligation to limit the anti-social outcomes arising out of e-waste as they are the producers of these goods. However, e-waste recycling is not currently an attractive enough area to be taken up as a business on a whole.

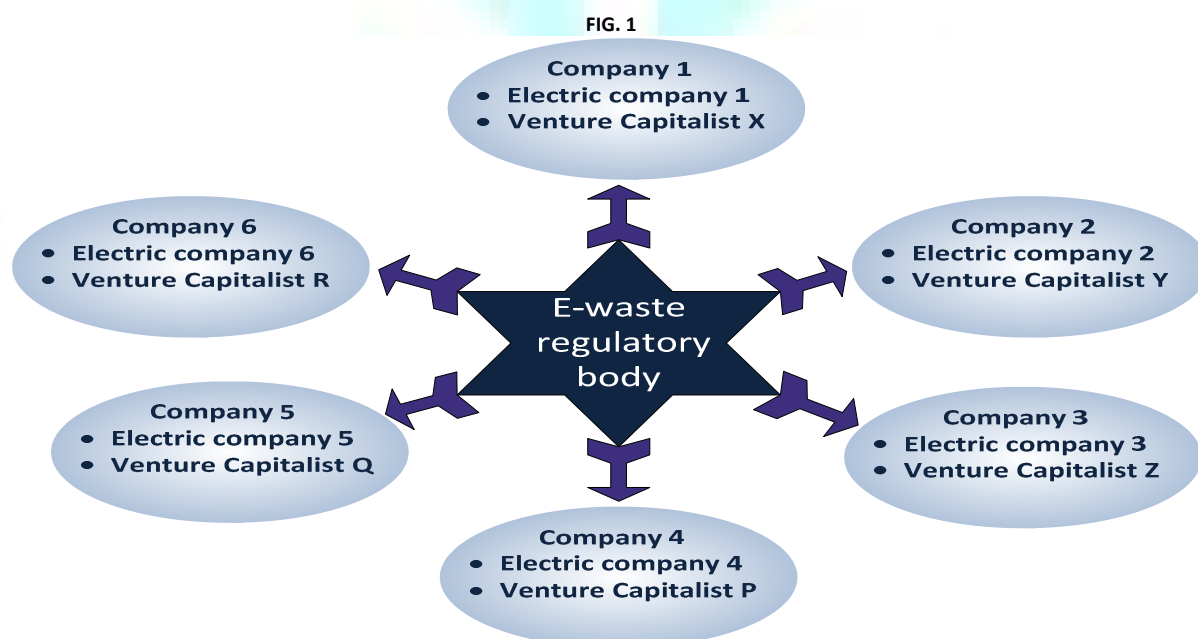
Venture capitalists: e-waste management is a new business in India and currently there are no proper regulations and guidelines in place which diverts these activities towards the informal sector. Apart from this, individual venture capitalists could face the problem of lack of funds and technological know-how.

Consumer: the consumers in India are under the mindset of money being due to them when they dispose off their scrap as most of household scraps including e-waste are sold to local kabadiwallas in exchange for money. This is in contrast to systems in countries like Switzerland where consumers actually pay money for getting their waste recycled. Therefore there is a need to give the consumers some incentive to get their e waste recycled, resold or disposed off by responsible stakeholders in the process. There is also a need to raise awareness among people on this issue.

WHAT DO WE PROPOSE TO RESOLVE THE ISSUE OF E-WASTE

Lack of proper *incentive structure* is the reason why various problems arises related to e-waste and this is what our model aims to address in a manner which not only targets the social and environmental concerns but promotes e-waste recycling as a viable business keeping in mind the social responsibilities and regulations under which works need to be performed in an organized way.

The basic idea is to make handling of e-waste a profitable business which attracts all interested parties to it and hence we suggest formation of companies running under the concept of public private partnership including private venture capitalist, electronic company and government as three stakeholders.



It starts with regulatory body inviting tenders for formation of a company. A private venture capitalist can join hands with any of the electronic companies existing in the country to fill tenders and to create a joint stock company with government.

Roles of various stakeholders in this company would be:*Government*

- 1) Regulatory body
- 2) Framing policies regarding e-waste disposal, recycling etc.
- 3) providing funds
- 4) general management of company

Electronic company

- 1) taking care of technological requirements for upgrading products
- 2) general management of company
- 3) providing funds

Venture capitalist

- investment
- general management of company

WORKING OF THE MODEL

The organization would initiate its activities by providing door to door service to users of electronic goods, who wish to replace or upgrade their existing product. For doing so, the consumer would be paid some competitive amount or be given discount coupon for their next purchase of the product. The prime objective of organization would be to reuse the product, given by the seller, by upgrading it and reintroducing it into the market or providing it to govt. schools, NGO's at a subsidized price.

Now, If the product brought by the organization is not fit enough to reuse and introduce into the market in its original form, then the product would be passed on to the Recycling department of the firm whereby the product would be dismantled and useful parts being separated, for further use in an assembled product or otherwise.

After separation of the useful parts, the leftover would be sent to the Extraction department of the firm where all the possible metals could be extracted from the left over product.

After going through the above stated processes, the residual of all the products left would be shifted to the Dumping department. However it would be mandatory for the department to adhere to the rules and regulations laid down by the govt. pertaining to proper disposal of the waste at approved disposal sites.

WHY THIS PROCESS IS PROFITABLE**VALUE ADDED CENTRES**

The proposed public-private entity could take up more side activities to add value to the waste. These centres could undertake the production of arts and craft items made from recyclables and other materials that have been discarded. Waste-to-art can be lucrative for the crafter, as the raw material - e-waste - is received for free or nearly, and products such as jewellery can be made out of it. Other products such as clocks can be elaborated with an addition of new components. Waste-to art products could be sold in a second hand shop together with refurbished PC's.

Such centres can have a display showing the components of a computer and what can be done with it, explaining the value and hazard of it: they could be considered as a place to carry out awareness raising and for visits by schools etc.

BENEFITS TO THE AGENTS- WHY THIS MODEL IS FEASIBLE**Electronic Company**

The investing electronic co. would have its claim on the profits generated of the firm in proportion to its share in the joint venture. Further, in the stock market, the company's shares would be labelled as green equity as it would be involved in an environment friendly activity. This would potentially enhance the share price of the company too, leading to more investment in the venture.

Consumer

The consumer (seller) could earn a competitive return on his/her product without any hassle due to the door to door service. Further, with the expected rise in share prices of the electronic co. involved, the consumer would be interested in buying its shares and thereby indirectly fund the organization.

Government

The prime objective of the government would be to oversee safe disposal of the waste as well as ensure recycling of the e-waste in adherence with proper guidelines that limit the environmental fallouts of this activity.

DATA SECURITY

Data security has become an extremely important issue in today's competitive and compliant driven scenario of business. Companies planning to get their technology or systems upgraded sometimes buy new computers simply dumping their old ones. What makes them not upgrade existing systems is the concern for their data. It is difficult to make different companies engaged in different activities accountable for data security. But all jobs like recycling, collection etc being done by one company solve this problem.

BENEFIT TO THE SOCIETY AS A WHOLE

This is a model which creates a mechanism wherein all the parties involved have a stake in the proper and safe reuse, recycle, and disposal of e waste. The underlying objective of this model is to limit, and possibly eliminate the serious environmental and human health related problems caused by the rapidly increasing quantities of e-waste in Delhi (and also in other Indian metropolitans). This goal is to be achieved by the two major changes that this model seeks to bring about in the current system-

- A) Recycling activities would be brought from the informal to the formal sector and would only be carried out under the regulations of the government. This is because they would fall directly under the purview of the regulatory body issuing tenders for this purpose.
- B) The technological capacity of India to safely recycle e-waste would be enhanced as more capital for research and development flows in from the private sector.

CONCLUSION

Gandhiji once said that "A technological society has two choices. First, it can wait until catastrophic failures expose systemic deficiencies, distortions, and self-deceptions. Secondly, a culture can provide social checks and balances to correct for systemic distortion prior to catastrophic failures."

The future scenario has, indeed, presented both challenges and opportunities in terms of minimizing wants, managing e-waste as well as developing cleaner and more sustainable products. It is, therefore, important that viable solutions are found so as to convert this threat and challenge into an opportunity to exploit the latent potential benefits from it and develop a sustainable model of urban living.

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USE OF XBRL: AS E-TECHNOLOGY IN COMMERCE

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ABSTRACT

Extensible Business Reporting language or XBRL is the new technology of electronic transmission and communication of business and financial data. It is developed by the Ministry of Corporate Affairs, Government of India for certain class of companies from the year 2010-11 for filling the financial statements to the government. ICAI also plays a important role for the universal acceptability of XBRL among various accountants and professionals. XBRL fulfills the entire requirements regarding the disclosure and filling of financial data and information. It is an open, royalty free and international information formats (software application) developed through the collaboration of accountants and technologists from all over the world. Thus the primary objective of this paper is to examine and analyses the all aspects and issues regarding the XBRL in India and also investigate the effectiveness in accordance with their applicability in India.

KEYWORDS

XBRL, e-technology.

INTRODUCTION

Growth of Internet or Web technology has completely transformed business scene around the world. Due to the popularity, growth and success of E-business entities such as Amazon.com, ebay.com, and Yahoo, and linkage of such terms as e-commerce (B2B, B2C, and C2C) and ebusiness in the business world needs a widespread use of digital technology in the business place. In fact the trillions of dollars worth of business is transacted everyday in the world foreign exchange market using the modern communication technologies, including Internet. Thus Internet is a worldwide network of computer systems. This network provides an electronic medium for delivering, gathering and analysing information of all kinds and on every subject or otherwise. For instance, a business unit can use a technology for creating and reporting its financial and other business information to varied external user groups. And, periodicity of this information outflow can range from the usual annual, to quarterly, and to real-time reporting. The paper is to investigate some of the major issues in delivery of business information through the Web using the 'digital' language of business called the eXtensible Business Reporting Language (XBRL). The XBRL.ORG (<http://www.xbrl.org>) has defined XBRL as

"... (a) framework that the global business information supply chain can use to create, exchange, and analyze financial reporting information including, but not limited to, regulatory filings such as annual and quarterly financial statements, general ledger information, and audit schedules. ... XBRL ... facilitates the automatic exchange and reliable extraction of financial information among various software applications anywhere in the world."

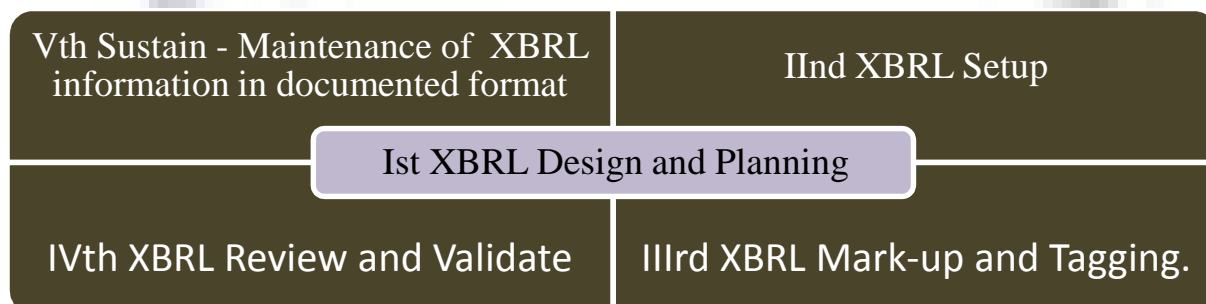
XBRL or the Extensible Business Reporting Language is recent technology in the field of accounting. It is a language for the electronic communication of business and financial data. The Ministry of Corporate Affairs, Government of India, has required certain classes of companies to file their financial statements in XBRL form only from the year 2010 – 2011 and such financial statements have to be certified by authority i.e., the Chartered Accountants before filing with the Ministry. The Auditing & Assurance Standards Board is bringing out the Guidance Note on Certification of XBRL Financial Statements for the benefit of the members by providing them much needed guidance on the matter of this certification. The Guidance Note provides comprehensive guidance on several important related aspects such as Management Responsibility for XBRL Financial Statements, Practitioner Responsibility for XBRL Financial Statements, Procedures for Certification of XBRL Financial Statements etc. Thus the Guidance Note would help the accountant and users for understanding and implementation the XBRL in the preparation of financial statements. Adoption of XBRL gives companies the opportunity to introduce new efficiencies into their financial reporting workflow, preventing redundant tasks by automating data extraction and increasing accuracy through the validation of both syntax and semantics. XBRL has been developed by XBRL International, a not-for-profit consortium of over 600 companies and agencies which is promoting its worldwide use. Thus the XBRL in India is the jurisdiction of XBRL International. The main objective of XBRL is to promote and encourage the adoption of XBRL in India as the standard for electronic business reporting in India in accordance with regulators, stock exchanges and software companies. The Institute of Chartered Accountants of India (ICAI), the standards setting body has developed taxonomy for Commercial and Industrial companies as per the provisions of Revised Schedule VI to the Companies Act, 1956. It has been developed as per the IFRS architecture 2011. This taxonomy has been developed to enable companies prepare their financial statements, viz., Profit and Loss Account, Balance Sheet and Cash Flow Statement in XBRL format, based on the requirements of the Accounting Standards and Indian Company Law.

XBRL AS A GLOBAL VIEW

Extensible Business Reporting Language (XBRL) is an XML-based markup language for electronic transmission of business and financial data. With a new mandate from the United States Securities and Exchange Commission (SEC), and official support from European Parliament as well as the governments of Japan and China, XBRL aims to reduce costs through the elimination of time consuming and error prone human interaction. XBRL makes increase the speed of data integration and exchange, while at the same time eliminating data redundancy and quality issues. XBRL is an open standard that is maintained by XBRL International, a global non-profit consortium of over 550 major companies, organizations, and government agencies. XBRL International now includes 23 jurisdictions in Europe, Asia, the Middle East, North and South America, and Australia.

XBRL APPROACH

There are five steps involved in the XBRL approach, they are namely:



Form 23AC-XBRL and Form 23ACA-XBRL is the XBRL documents which have to be file by the companies. As per section 220 of the Companies Act 1956 FORM NO. 23AC-XBRL is in respect of balance sheet and other documents and Form 23ACA-XBRL in respect of Profit and Loss account and other documents with the Registrar.

XBRL makes the data readable with the help of two documents – the taxonomy and the instance document.

Taxonomies are dictionaries that contain the terms used in the financial statements and their corresponding XBRL tags (i.e., electronically readable codes for each item of financial statements). Thus, taxonomies define the elements and their relationships based on the regulatory requirements and the basic XBRL properties. It includes terms such as net income, earnings per share, cash, etc. Each term has specific attributes that help define it, including label and definition and potential references. Taxonomies may represent a number of individual business reporting concepts, mathematical and definitional relationships among them, along with text labels in multiple languages, references to authoritative literature, and information about how to display each concept to a user.

Instance document is a file that contains business reporting information and represents a collection of financial facts and report – specific information using tags from one or more XBRL taxonomies. The instance document is a computer file that contains entity's data and other entity specific information and is generally not intended to be read by the human eye. Thus, an XBRL instance document is a business report in an electronic format created according to the rules of the XBRL. It contains the facts that are defined by the elements in the taxonomy it refers to, together with their values and an explanation of the context in which they are placed. XBRL Instances contain the reported data with their values and "contexts". Instances documents must be linked to atleast one taxonomy, which defines the contexts, labels or references.

RESEARCH METHODOLOGY

RELEVANCE OF THE STUDY

Extensible Business Reporting Language is the electronic communication of business and financial information at globally. Previously the companies had filling their details about the financial information through the downloaded form from the site of ministry of corporate affairs and then submitted it through online. But now the introduction of XBRL a class of companies can directly fill the details about the financial statements through electronically at international information formats. But the financial statements are to be verified by the chartered accountants before filling it. This is not applicable to all companies, some class of companies have to be use such technology. XBRL aims to change all this by providing a mechanism for automation to ensure seamless data exchange, credibility, and transparency – all in a normalized electronic environment.

OBJECTIVES OF THE STUDY

The study is descriptive and analytical type, which is used to find facts and critical aspects regarding this area. The major objective is to find out the details about the XBRL E-Technology in India. For achieving the major objectives, sub objectives has also been determined and achieved which are as follows:

- To find out the role of XBRL as new E-technology in the preparation and filling of the financial statements and annual returns.
- To obtain the all information regarding the application of XBRL in India.
- To analyses and examinee the effectiveness of use of XBRL as E-technology between various Chartered Accountants, professionals and users in India.
- To find out the statutory requirement and regulation given by MCA, Government of India and role of ICAI regarding the application of XBRL technology.

HYPOTHESES

The various hypotheses have been formulated and have to be tested as follows:

H0: Whether the XBRL makes a revolutionary changes in the forms and procedure of preparation & filling the annual returns or not.

H1: Whether the XBRL is applicable to all type of business and companies in India or not.

H2: Whether the XBRL E-technology is effectively used in terms of timeliness, accessibility and comparability of the financial statements by an accountants, professionals and users or not.

H3: Whether the ICAI and their members has fulfilled all the statutory requirements, regulation and pronouncements given by the MCA, Government if India or not.

SCOPE OF THE STUDY

The study on "Use of XBRL: As E-Technology in commerce" covers all the aspect, relevant regulation, pronouncement and statutory requirement given by the Ministry of Corporate Affairs, Government of India and ICAI. XBRL is the new dimension for preparation and filling the financial statement as electronically. The companies in India have to use this technology for the submission of financial data and information to the government. But the above financial statement and data have to be certified by the Chartered Accountant. The ICAI also plays an important role and make their member updated about the use of such technology. Thus this paper has to drawn about the facts and all the information about XBRL in India.

DATA COLLECTION AND ANALYSIS

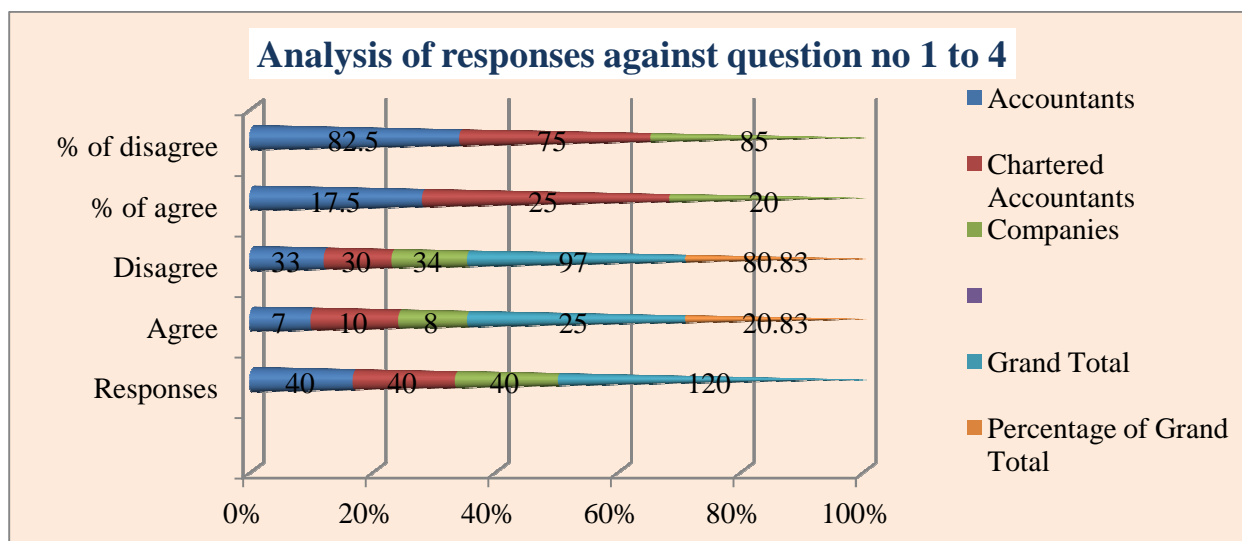
The study area for selecting the sample is Varanasi zone, U.P. The number of sample is 30 in which 20 samples are taken from accountants (Non CA) and professionals (Chartered Accountants) and the rest from the companies. The convenience method is used for selecting the samples. In order to achieving the objectives of the study, primary and secondary data have been used. Primary data has been collected through structured questionnaire in the type of close – end. Secondary data has been collected through various journals, magazines, books and other websites. The collected data has been arranged in the form that represents meaningful information so that the inferences could be drawn.

INTERPRETATION AND CALCULATION

S.No	Particular	No.of respondent	Agree	Disagree
H0: Whether the XBRL E-technology makes a revolutionary changes in the forms and procedure of preparation & filling the annual returns or not.				
1.	If the XBRL makes any changes in the format of financial statements?	30		
2.	Does the XBRL makes any changes about the application of accounting standards in the preparation of financial statements?	30		
3.	Is the format of annual returns and forms of business reporting also change due to the XBRL?	30		
4.	Is the XBRL makes any drastic change in the process of filling the return?	30		
H1: Whether the XBRL is applicable to all type of business and companies in India or not.				
5.	If the application of XBRL is necessary as per the Companies Act 1956 in India?	30		
6.	Whether the implication of XBRL covers all the types of business like whole sale business, retail business and sole proprietorship business in India?	30		
7.	Is the XBRL required to all class of companies like banking, insurance and other types of companies?	30		
H2: Whether the XBRL E-technology is effectively used in terms of timeliness, accessibility and comparability of the financial statements by an accountants, professionals and users or not.				
8.	Does the XBRL reduce the efforts in preparation and finalization of annual return?	30		
9.	Whether the use of XBRL E-technology in filling of annual return as timely in manner?	30		
10.	If the financial statement through the XBRL E-Technology are easily accessible and comparable between national and international?	30		
11.	Whether the XBRL E-technology is more updated and effective software than the other accounting and reporting software?	30		
12.	Do the accountants, professionals and users feel an ease of use of XBRL technology in filling the return?	30		
H3: Whether the ICAI and their members has fulfilled all the statutory requirements, regulation and pronouncements given by the MCA, Government of India or not.				
13.	Whether the accountants and professional follows norms & provisions given by MCA government of India and ICAI during filling of Annual return?	30		
14.	Does the ICAI accommodate the changes about regulatory/supervisory framework in XBRL?	30		
15.	Is the format of XBRL Form prescribed & designed as per issuance of MCA and Companies act 1956?	30		
16.	Whether the financial statements through XBRL are also certified by the Chartered Accountant?	30		
17.	Does the ICAI issue the guidance note to the member regarding the use of XBRL in accordance with rules and regulations given by MCA, Government of India?	30		
18.	Does ICAI also issue additional certification validations in the process of filling the returns through XBRL to their members?	30		
19.	Whether the Chartered Accountant is more updated and knowledgeable about the XBRL?	30		

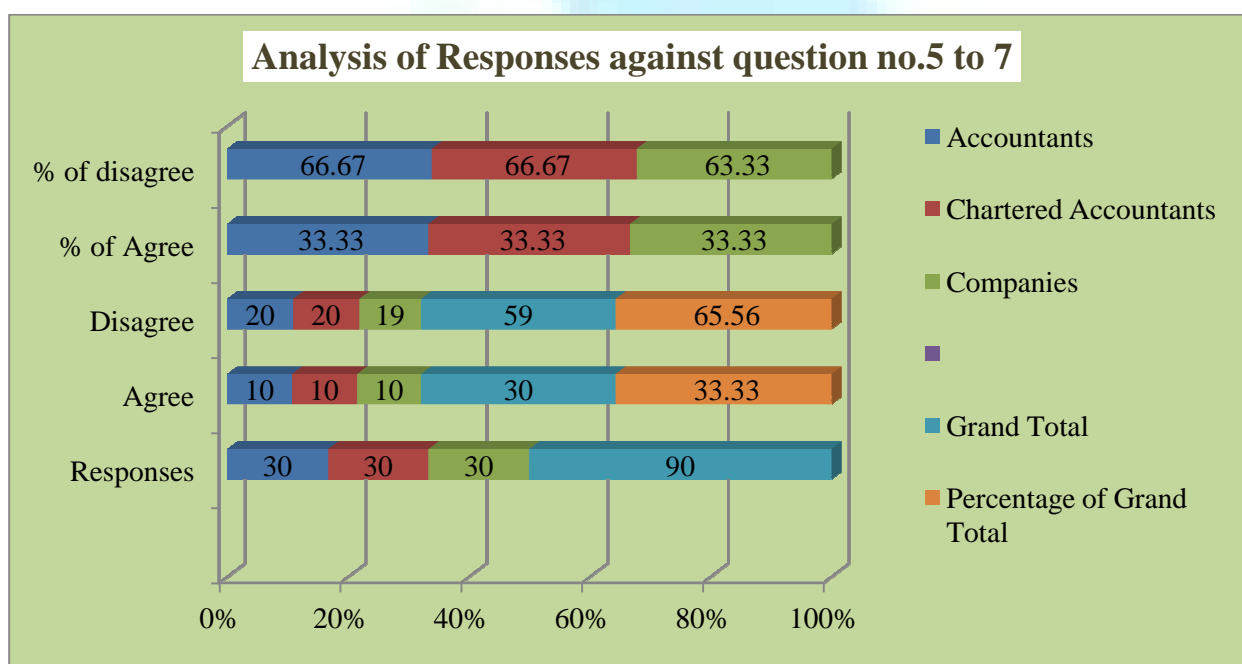
TABLE OF INDIVIDUAL RESPONSES ON ABOVE QUESTIONS						
Question No.	Number of Respondents					
	Accountants (Whose non CA)		Chartered Accountant		Companies (Users)	
	Agree	Disagree	Agree	Disagree	Agree	Disagree
1	0	10	0	10	0	10
2	0	10	0	10	0	7 & *
3	0	10	0	10	0	7 & *
4	7	3	10	0	8 & *	0
Total	7	33	10	30	8	34
5	10	0	10	0	10	0
6	0	10	0	10	0	9 & *
7	0	10	0	10	0	10
Total	10	20	10	20	10	19
8	8	2	9	1	7 & *	0
9	8	2	9	1	7 & *	0
10	8	2	10	0	7 & *	0
11	9	1	10	0	7 & *	0
12	8	2	10	0	7 & *	0
Total	41	9	48	2	35	0
13	10	0	10	0	10	0
14	10	0	10	0	10	0
15	10	0	10	0	10	0
16	10	0	10	0	10	0
17	10	0	10	0	7 & *	0
18	10	0	10	0	7 & *	0
19	10	0	10	0	10	0
Total	70	0	70	0	64	0
Grand Total	186	124	206	104	113	73

*It is the question in which no responses are given by the respondent.



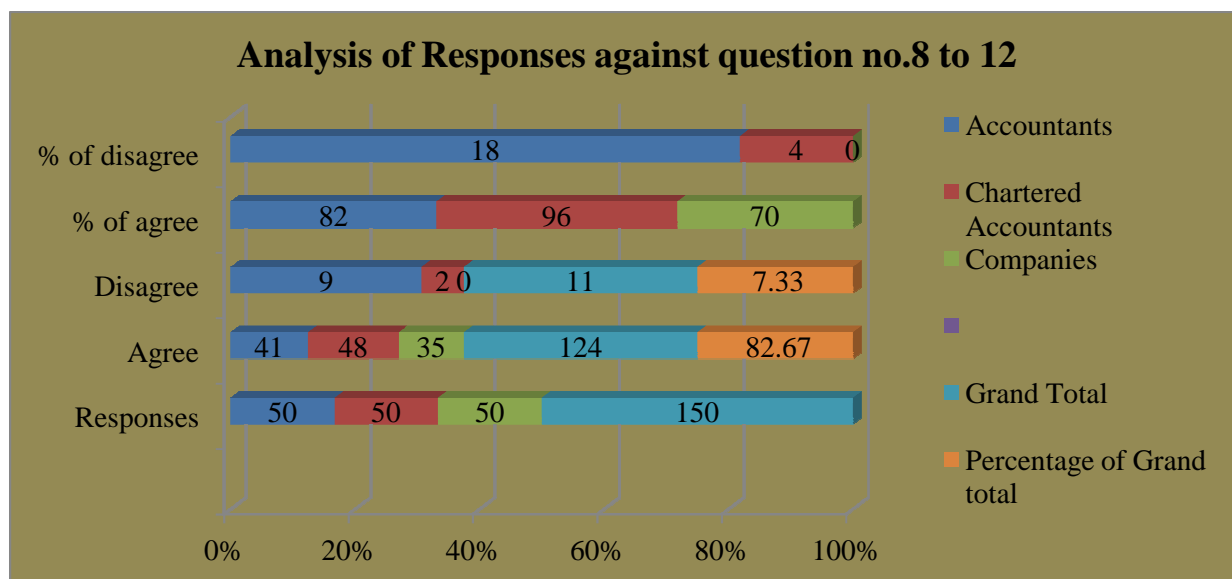
The responses given on above questions most of the respondents i.e. 82.5% of accountants, 75% of professional and 85% of the users (Companies) are disagreeing about the changes in the format of financial statements, application of accounting standards and the format of annual return due to the introduction of XBRL technology. But all the 10 professionals (CA) & most of the accountants & companies are strongly agreeing with the statement that XBRL technology make revolutionary change in the form and procedure of reparation and filling the annual return of any company. Previously the annual return is to be prepared and filled in PDF format and also not to be submitted directly to the Ministry of Corporate Affairs, Government of India. But after the introduction of XBRL technology the above gaps has been fulfilled i.e. annual return is to be submitted and filled in XBRL form and format directly to the MCA, Government of India. And a company can also be communicate and report their business information and data anywhere on the world. On the basis of above analysis it is generalized that XBRL is a language for electronic communication of business and financial data which is revolutionize of business reporting around the world. Therefore this hypothesis is strongly accepted.

H1: Whether the XBRL is applicable to all type of business and companies in India or not.



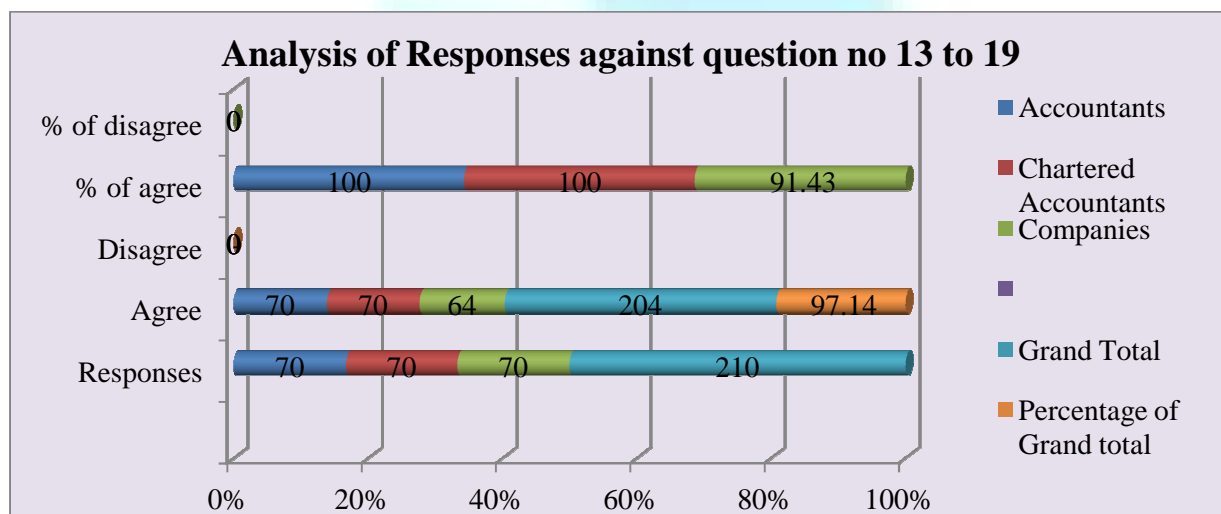
The above questions are completely related with the XBRL in India. 100% of the respondents are agreeing with the applicable of XBRL as necessary but the scope of their applicability on all types of business and companies, all accountants, professionals and companies except 1 respondent of companies are strongly disagreeing. XBRL is a tool or technology which is necessary to applicable in Indian Companies by MCA, Government of India through the circular no.37/2011, and dated June 07, 2011 from the year 2010-11. XBRL is applicable to some class of companies (except Banking, Insurance, Power corporation and Non-banking financial companies) are as: 1) All companies listed in India and their Indian subsidiaries. 2) All companies having paid up capital of Rs. 5 crore and above. 3) All companies having turnover of Rs.100 crore and above. On the basis of above responses and their analysis this hypothesis is rejected and alternate hypothesis "XBRL is require and applicable to some class of companies in India" has been formulated and accepted.

H2: Whether the XBRL E-technology is effectively used in terms of timeliness, accessibility and comparability of the financial statements by an accountants, professionals and users or not.



Before the introduction of XBRL technology, various software's or technology like Compu-Tax, Tally ERP and KDK software are used by the various accountants & professionals for the preparation & finalization of financial statement. But they are not used globally and also not necessary by the government. The various users can also not access & compare their financial information and data at universally with the above technology and software. Thus for removing the above drawback MCA, Government of India introduced the XBRL technology for some class of companies for reporting the business information and data around the world. The responses given on above questions 82% of accountants, 96% of professionals and 70% of the users (companies) are agreeing about the terms of timeliness, accessibility and comparability quality of XBRL than the previous technology. Thus XBRL is the effective e-technology for the electronic communication business and financial data as well as business reporting around the world. The XBRL technology is also growing day by day. Thus this hypothesis is accepted on the basis of above conclusion and also generalized that XBRL E-technology is fulfilled in terms of timeliness, accessibility and comparability of financial statements of the companies around the world.

H3: Whether the ICAI and their members has fulfilled all the statutory requirements, regulation and pronouncements given by the MCA, Government of India or not.



The Institute of Chartered Accountants of India plays a very important role about the preparation and filling the financial statements. It is necessary for all the business & companies to file the return due to excess of the income and transaction to the exemption limit. After the introduction of XBRL technology by the MCA, Government of India, all statutory requirements, regulation and pronouncements regarding the implication of XBRL has been completely follows by the ICAI and their member. Moreover ICAI also issue the guidance note and certification courses to their members, which provides a comprehensive guidance on several important & related aspects such as Management & Practitioner responsibility for XBRL financial statements and procedure for certification of XBRL financial statements etc. It is analyze with the graph that 100% of accountants & professionals, 91.43% of companies are strongly agreeing with above question from 13-19. On the basis of above analysis, this hypothesis is strongly accepted and it is generalized that ICAI and their members follows all the statutory requirement, norms & provision during the certification and filling of annual return of the companies to MCA 21 portal online as well as ICAI also accommodate any changes given by MCA in the framework of XBRL.

CONCLUSIONS

It is concluded that historically, the accounting reports have been prepared and supplied to varied user-groups in document form. But due to the emergence of Internet, it is now possible for the suppliers of financial statements to use electronic media for gathering information in a cost-efficient way and communicating it in an effective way. As a technology, XBRL is attempting to provide a language (digital) to the (electronic) accounting statements so that they are able to make a conclusion and taking a decision. XBRL shall enable financial reports to communicate at across with all software and technologies. In fact, emergence of XBRL has generated many opportunities for academic research, besides making yet another tool available with the corporate management for gathering, analyzing and retrieving accounting data. It is accepted that XBRL has caused a revolution in the domain of financial reporting. XBRL gives technical professionals across any industry enormous opportunities for creating fully scalable integrated solutions for financial reporting and analysis to make this data available in real-time to

reporting entities, stockholders, trading partners, subsidiaries and parent companies, and internally within organizations. As the XBRL standard evolves over time and expands the new supporting technologies & tools in well positioned to meet the challenges with strong support for Service-oriented Architecture (SOA), Web services, XML document management and analysis, and the Semantic Web.

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E-COMMERCE IN INDIA – GROWTH & CHALLENGES: A THEORETICAL PERSPECTIVE

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ABSTRACT

E-Commerce has unleashed yet another revolution, which is changing the way businesses buy and sell products and services. The term Electronic commerce or e-commerce consists of all business activities carried on with the use of electronic media, that is, computer network. E-business all over the world has become a popular medium for buyer-seller transaction as a means that complements and supplements the experiences of a physical store. India is showing tremendous growth in the Ecommerce. The low cost of the PC and the growing use of the Internet is one of reasons for that. Undoubtedly, with the middle class of 288 million people, online shopping shows unlimited potential in India. The future does look very bright for ecommerce in India where you can buy a car to cake online or find a suitable match for marriage. By the year 2015 the size of online market in India is expected to touch 7000cr, at an annual growth rate of 35%.

KEYWORDS

e-Commerce, online business in India, online shopping.

1. INTRODUCTION

With rapid economic growth and increase in prosperity, Indian consumer markets have seen unprecedented expansion in interest and activity in the last 15-20 years. Better

Social attainment in terms of education coupled with advent of internet, telecommunication and media has further intensified this growth, closing many gaps between urban and up-country tastes and preferences as well as consumption patterns. In this scenario, consumer e-commerce is becoming increasingly relevant as an efficient alternative distribution channel to reach out to the consumers, across geographies as well as products and services categories.

In the present dynamic scenario, e-commerce market in the B2C space is growing in demand as well as in the array of services. The internet user base in India might still be a mere 100 million which is much less when compared to its penetration in the US or UK but it's surely expanding at an alarming rate.

Indian middle class of 288 million people is equal to the entire U.S. consumer base. This makes India a real attractive market for e-commerce. To make a successful e-commerce transaction both the payment and delivery services must be made efficient. There has been a rise in the number of companies' taking up e-commerce in the recent past. Major Indian portal sites have also shifted towards e-commerce instead of depending on advertising revenue. Many sites are now selling a diverse range of products and services from flowers, greeting cards, and movie tickets to groceries, electronic gadgets, and computers.

According to latest ASSOCHAM Report 1 out of every 10 Indians are online, making it a 10% online user penetration in India.

2. DIFFERENT TYPES OF E-COMMERCE

Business to Business (**B2B**), where businesses or organizations (including government) transact among each other to create value. What distinguishes this form from the others is the potential of using private or limited networks, and customized infrastructure to carry out the transactions e.g. customer to supplier and intra government networks.

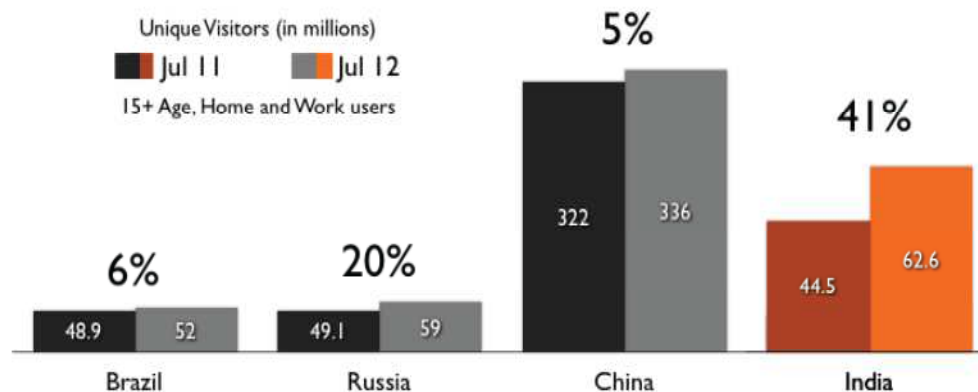
Business to Consumer (**B2C**), where businesses or organizations (including government) transact with consumers or public at large to market their products and services and satisfy consumer demand.

Consumer to Consumer (**C2C**) and Consumer to Business (**C2B**), where individuals or groups of individuals transact among each other or with businesses using either public platforms (selling their produce) or private networks (Reverse auctions).

3. E-COMMERCE IN INDIA

An increasing number of global companies are eyeing the rapidly growing eCommerce market in India as improvements in infrastructure are made and India's economy grows.

E-commerce can be defined as modern business methodology that addresses the needs of the organization, merchants and consumers to cut costs while improving the quality of goods and services and speed of service delivery. E-commerce is associated with the buying and selling of information, products, and services via computer networks. A key element of e-commerce is information processing. According to Forrester Research Online Retail Forecast, 2011 To 2016 (Asia Pacific) the total retail revenues was \$1.6 Billion in 2012 in India. According to ASSOCHAM Sept 2012 report among the BRIC Nations, India has been the fastest growing market adding over 18 million internet users and growing at an annual rate of 41%. India is also among the top 3 fastest growing markets worldwide in the last 12 months.

FIG. 1

Source-State of Ecommerce in India - Sept 2012

According to the ASSOCHAM Report the online travel transactions are leap forward when it is compared with the retail transactions. The total percentage reach of 44% in travel transactions in India is much more than the worldwide average of 39%. But in retail transactions the Indian reach of 59.9% is much lower when it comes into the comparison with the worldwide average of 72.3%.

4. FUTURE OF E-COMMERCE IN INDIA

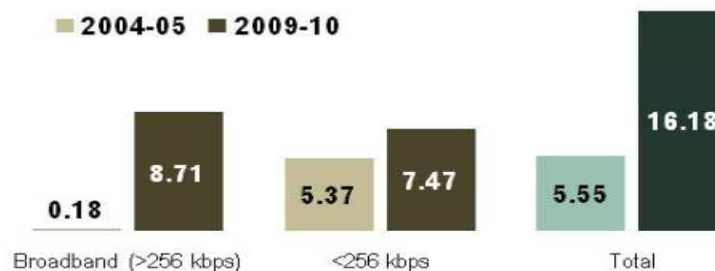
Indian e-commerce market is growing rapidly, and was estimated to be worth Rs.46,520 crore or USD 10 billion in 2011. The current e-commerce user base is estimated at around 10 million people. Assuming two users per household, the current overall potential for e-commerce in India is 292 million people. Considering this as the base, the current adoption of e-commerce is only 3.5 per cent. In a business as usual case, the adoption is expected to increase to 15 percent of overall potential by 2024-25.

Besides the significant acceleration in growth since 2000-01, what is perhaps more important is the nature of this growth. The recent growth experience has been more broad based. Although the change is immediately visible in urban metropolises and large towns, the growth has not been restricted to urban parts of India. Rural parts of the country, which accounts for 70 percent of India's population, have also been an important part of this growth and have contributed significantly to the performance of the economy.

The sustained growth in economy has brought about significant increase in incomes and level of well being. According to IAMAI May 2011 report Per capita income has more than doubled from Rs.16,700 in 2000-01 to Rs.44,300 in 2009-10. Household ownership of PC near about doubled from 1% in 2005 to 2.2% in 2010 and internet accessibility from home also doubled from .4% in 2005 to 1.1% in 2010. There has been a significant increase in internet subscribers. More important, most of the growth after 2004-05 has come from the broadband segment, where the current uptake is over 200,000 Connections per month.

FIG. 2

Internet Subscribers (Million)



Source: IAMAI May 2011 report

According to ASSOCHAM and Forester, August 2012 Report, Trends in India's ecommerce market, online retail revenues are going to be \$8.8 Billion by 2016. Given the strong penetration of mobile phones in India, mobile based digital payments, which is currently the most preferred mode of payment among only one percent of the online shoppers, has huge potential in this regard. Certain unique attributes of the E-commerce industry in India such as cash on delivery mode of payment and convenient delivery and efficiency that lower costs considerably are probably going to bring about a speedy growth in this industry in years to come.

The E-Commerce market size has increased many folds in recent years from Rs.8146 in 2007 to Rs.46520 in 2011 and the major portion of revenues coming from online travel industry revenues.

FIG. 3



Source: Consumer E-commerce Potential in India, IAMAI, May-2011

E-commerce can become an integral part of sales strategy while it is one of the cheapest medium to reach out to the new markets, through ecommerce companies maximize its reach to its potential customers, if implemented successfully, it offer a smart way of expansion & doing e-commerce attribute to the successful implementation to carefully understanding the products & services and providing consumers with convenient, satisfying and secure shopping experience.

5. BENEFITS OF ECOMMERCE FOR CONSUMERS & BUSINESSES

From the point of view of consumers, there are three key benefits of using e-commerce:

- **Cost Saving:** - Transparent pricing often leads to a direct cost saving for the consumers. Apart from this, there are indirect cost savings such as in travelling and time saving and arranging for physical delivery.
- **Convenience:** - This is a result of 24x7 availability, that the online portals are available, the time saved in travelling and waiting in queues and provides the ability to carry out transactions from the comfort of home.
- **Competitive offerings:** - As there are a lot of portals selling same kind of products consumers can compare the quality and the prices online, hence offering more variety to consumers. Besides, transparent information helps in easy and effective decision making.

For businesses, there are three key benefits of using ecommerce to distribute their products and services:

- **Accessibility:** - In the current economic environment, reaching out to newer markets at a reasonable cost is one of the biggest benefits for ecommerce as an alternative distribution model. With the help of ecommerce new markets can be easily accessed where it is difficult to be present physically.
- **Efficiency:** - the product and the service efficiency also improves with the one stop solution for all, the consumer feedback can easily be tracked and to incorporate the new changes according to the tastes of consumers.

- **Lower costs:** - less requirement of manpower and no physical presence at each stop lower the operating cost and with efficient distribution channel the products can be offered at lower price.

6. E-COMMERCE: CHALLENGES

- **Security of financial transactions:** -As no direct physical communication takes place the consumer remains worried about the safety of online financial transactions.
- **Quality of merchandise:** - No physical inspection of products are done, the consumers hesitate to purchase the products online, this mostly happens in the clothing and fashion segment.
- **Authenticity of website:** - while some fake websites also come up to dupe investors the inclination of consumers decreases towards the online shopping.
- **Payment gateways:** - poor payment gateway infrastructure results in high transaction failures and poor customer satisfaction, the ability to make digital payments outside cities is very limited.
- **Digital Literacy:** - India with majority of population living in rural areas and low literacy level it becomes difficult to reach to each and every individual.
- **Internet penetration:** - Low internet density also blocks the way in the growth of the ecommerce in India, the current connectivity infrastructure available to consumers in terms of quality is of very low level.
- **Penetration of credit/Debit cards:** - Online usability knowledge of credit and debit cards is very low in India.
- **Taxation structure:** - Number of local taxes and levies varies with each state as taxes are charged on central, state and local level.
- **Country wide service providers:** - Supply chain companies that can provide competitive pan India services with justified service level agreements are minimal.
- **Customer Service Standards:** - without the prescribed industry standards it becomes difficult to understand minimum requisite standards for consumers.

7. ESSENTIAL FACTORS FOR MAKING ECOMMERCE ACTIVITIES MORE EFFECTIVE

- **Privacy:** - Promising online security and safety of personal information by the portals with whom transactions takes place.
- **Customer convenience:** - By providing Cash on delivery payment option service to customers.
- **Reach:** - Enabling mobile-capable sites and supporting M-Commerce services.
- **Delivery:** -Mention clearly the delivery time and delivering the product within that timeframe.
- **Location based services:** - Since customers these days are always on the move, promoting the right product at the right time and location becomes an integral aspect
- **Multiple payment option:** -standard credit cards, debit cards and bank payments option should be there.
- **Logistical challenges:** - In India, the geographical spread throws logistical challenges. The kind of products being offered by providers should determine the logistics planning.
- **Comparison:** - Providing price comparison to customer.
- **Cyber laws:** - Strong government policies against online frauds and cyber crimes and policies favoring ecommerce industry.
- **Quick Service:** -Timely service provided by the company.
- **Replacement:** Should Offer 30 day replacement guarantee to the customers.
- **Products:** - Products offered and products delivered should not vary.

8. CONCLUSION

E-Commerce has unleashed yet another revolution, which is changing the way businesses buy and sell products and services. E-Commerce is the future of shopping. But there is a huge gap between the estimated potential and the current consumer participation in ecommerce, which in spite of favorable growth in the last few years, continues to be limited. With the deployment of 3G and 4G wireless communication technologies, the Internet economy will continue to grow robustly.

Although there are grass root problems, I still believe that Online Shopping in India is in nascent stage; it is evolving fast and has the potential to grow exponentially in the times to come, as the internet penetration reaches far and wide across the rural area.

The medium term outlook for improvement in these areas is positive, be it introduction of 3G services or the government's efforts to improve financial inclusion as well as achieve greater broadband connectivity, digital education and training. However, a lot more will need to be done. These technologies will prove to be a catalyst in the growth of E-commerce and internet users would buy more products and buy more frequently online; both new and established companies will reap profits online.

Thus, with modernization and fast paced life, came the constraints of time and eventually increasing dependence on online shopping.

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FINANCIAL DERIVATIVES MARKET IN INDIA

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ABSTRACT

The emergence and growth of derivatives market in India is relatively a recent phenomenon. Since June 2000, derivatives market has exhibited exponential growth both in terms of volume and number of traded contracts. The market turnover has grown from Rupees 2,365 Crore in the year 2000-2001 to Rupees 16,807,782.22 Crore in the year 2012-13. The emergence of the market for derivatives products, mostly notably forwards, futures and options, can be traced back to the willingness of risk adverse economics agents to guard themselves against uncertainties arising out of fluctuations in assets prices. By their very nature, the financial markets are marked by a very high degree of volatility. Through the use of derivatives products, it is possible to partially or fully transfer price risks by locking in assets prices. The present study encompasses in its scope an analysis of historical roots of derivative trading, types of derivative products, traders, factors affecting, trend and growth, future prospects and new era of derivative market in India. In this context, the emergence of a well-functioning derivative market, with a wide range of trading mechanisms, is definitely a boost to all those perspective investors who are willing to join the mainstream of investment business to meet with their own expectation of return on investment along with a support to structures the economy in a new way. The present topic is an endeavour to have an analytical study on the present status of derivative market in India by bridging the gap of its past experiences to project the future possible performances.

KEYWORDS

Derivatives, Forward, Futures, Option, trends in derivative market.

LIST OF ABBREVIATIONS

- BSE- Bombay Stock Exchange
- NSE- National Stock Exchange
- RBI- Reserve Bank of India
- SEBI- Securities and Exchange Board of India

INTRODUCTION

Risk is a characteristic feature of all commodity and capital markets. Over time, variations in the prices of agricultural and non-agricultural commodities occur as a result of interaction of demand and supply forces. The last two decades have witnessed a many-fold increase in the volume of international trade and business due to the ever growing wave of globalization and liberalization sweeping across the world. As a result, financial markets have experienced rapid variations in interest and exchange rates, stock market prices thus exposing the corporate world to a state of growing financial risk. Increased financial risk causes losses to an otherwise profitable organisation. This underlines the importance of risk management to hedge against uncertainty. Derivatives provide an effective solution to the problem of risk caused by uncertainty and volatility in underlying asset. Derivatives are risk management tools that help an organisation to effectively transfer risk. Derivatives are instruments which have no independent value. Their value depends upon the underlying asset. The underlying asset may be financial or non-financial.

It is widely believed in financial world that the most significant milestone in financial innovation is achieved with the issuance and trading of derivatives. Along with this positive element, the proponents of derivatives also admit that this term arouses more controversies and most people look at them with suspicion and few would believe that they do contribute to the society's welfare. But the matter of fact is that derivatives are a standard risk management tool that enables risk-sharing and facilitates the efficient allocation of capital to productive investment activities. In this study, we will try and examine the veracity of a few misconceptions that surround derivatives along with their economic benefits.

The present study attempts to discuss the genesis of derivatives trading by tracing its historical development, types of traded derivatives products, regulation and policy developments, trend and growth, future prospects and challenges of derivative market in India.

CONCEPT OF DERIVATIVE

The term 'derivatives', refers to a broad class of financial instruments which mainly include options and futures. These instruments derive their value from the price and other related variables of the underlying asset. They do not have worth of their own and derive their value from the claim they give to their owners to own some other financial assets or security. A simple example of derivative is butter, which is derivative of milk. The price of butter depends upon price of milk, which in turn depends upon the demand and supply of milk. The general definition of derivative means to derive something from something else. Some other meanings of word derivatives are:

- **A DERIVED FUNCTION:** The result of mathematical differentiation; the instantaneous change of one quantity relative to another; $df(x)/dx$.
- **A DERIVATIVE INSTRUMENT:** A financial instrument whose value is based on another security, (linguistics) a word that is derived from another word; "electricity" is a derivative of 'electric'.

The asset underlying a derivative may be commodity or a financial asset. Derivatives are those financial instruments that derive their value from the other assets. For example, the price of gold to be delivered after two months will depend, among so many things, on the present and expected price of this commodity.

DEFINITION

The **Securities Contracts (Regulation) Act 1956** defines "derivative" as under section 2(ac), As per this "Derivative" includes:

1. "A security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security."
2. "A contract which derived its value from the price, or index of prices at underlying securities."

The above definition conveys that the derivatives are financial products. Derivative is derived from another financial instrument/ contract called the underlying. A derivative derives its value from underlying assets.

Standard SFAS133 defines a derivative as "a derivative instrument is a financial derivative or other contracts will all three of the following characteristics:

1. It has one or more underlying, and one or more notional amount or payments provisions or both. Those terms determine the amount of the settlement or settlements.
2. It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contract that would be expected to have a similar response to changes in market factors.
3. Its terms require or permit net settlement. It can be readily settled net by a means outside the contract or it provides for delivery of an asset that puts the recipients in a position not substantially different from net settlement.

From the aforementioned, derivatives refer to securities or to contracts that derive from another whose value depends on another contract or assets. As such the financial derivatives are financial instrument whose prices or values are derived from the prices of other underlying financial instruments or financial assets. The underlying instruments may be an equity share, stock, bond, debenture, Treasury bills, foreign currency or even another derivative asset. Hence, financial derivatives are financial instruments whose prices are derived from the prices of other financial instruments.

UNDERLYING ASSET IN A DERIVATIVES CONTRACT

As defined above, its value is entirely derived from the value of the underlying asset. The underlying asset can be securities, commodities, bullion, currency, livestock or anything else. In other way the underlying asset may assume many forms:

1. Commodities including grain, coffee beans, orange juice.
2. Precious metals like gold & silver.
3. Foreign exchange rates or currencies.
4. Bonds of different types, including medium to long term negotiable debt, securities issued by governments, companies etc.
5. Shares and share warrants of companies traded on recognized stock exchanges and stock index.
6. Short term securities such as T-bills.
7. Over the counter (OTC) money market products such as loans or deposits.

THE MAJOR PLAYERS IN DERIVATIVES MARKET

There are three major players in the financial derivatives trading:

1. **HEDGERS:** Hedgers are traders who use derivatives to reduce the risk that they face from potential movements in a market variable and they want to avoid exposure to adverse movements in the price of an asset. Majority of the participants in derivatives market belongs to this category.
2. **SPECULATORS:** Speculators are traders who buy/sell the assets only to sell/buy them back profitably at a later point in time. They want to assume risk. They use derivatives to bet on the future direction of the price of an asset and take a position in order to make a quick profit. They can increase both the potential gains and potential losses by usage of derivatives in a speculative venture.
3. **ARBITRAGEURS:** Arbitrageurs are traders who simultaneously buy and sell the same (or different, but related) assets in an effort to profit from unrealistic price differentials. They attempt to make profits by locking in a riskless trading by simultaneously entering into transaction in two or more markets. They try to earn riskless profit from discrepancies between futures and spot prices and among different futures prices.

TYPES AND CLASSIFICATION OF DERIVATIVES

There are many ways in which the derivatives can be categorized based on the markets where they trade; based on the underlying asset and based on the product feature etc. some ways of classification are following:

1. **ON THE BASIS OF LINEAR AND NON-LINEAR:** On the basis of this classification the financial derivatives can be classified into two big class namely linear and non-linear derivatives:
 - a) **LINEAR DERIVATIVES:** Those derivatives whose values depend linearly on the underlying value are called linear derivatives. They are following:
 - Forwards
 - Futures
 - Swaps
 - b) **NON-LINEAR DERIVATIVES:** Those derivatives whose value is a non-linear function of the underlying are called non-linear derivatives. They are following:
 - Options
 - Convertibles
 - Equity linked bonds
 - Reinsurances
2. **ON THE BASIS OF FINANCIAL AND NON-FINANCIAL:** On the basis of this classification the derivatives can be classified into two category namely financial derivatives and non-financial derivatives.
 - a) **FINANCIAL DERIVATIVES:** Those derivatives which are of financial nature are called financial derivatives. These derivatives can be credit derivatives, foreign exchange, currency fixed income, interest, insider trading and exchange traded. They are following
 - Forwards
 - Futures
 - Options
 - Swaps
 - b) **NON-FINANCIAL DERIVATIVES:** Those derivatives which are not of financial nature are called non-financial derivatives. They are following:
 - Commodities
 - Metals
 - Weather
 - Others
3. **ON THE BASIS OF MARKET WHERE THEY TRADE:** On the basis of this classification, the derivatives can be classified into three categories namely; OTC traded derivatives, exchange-traded derivative and common derivative.
 1. **OVER-THE-COUNTER (OTC) TRADED DERIVATIVE:** These derivative contracts are traded (and privately negotiated) directly between two parties, without going through an exchange or other intermediary. The OTC derivative market is the largest market for derivatives and largely unregulated with respect to disclosure of information between parties. They are following:
 - Swaps
 - Forward rate agreements
 - Exotic options
 - Other exotic derivative
 2. **EXCHANGE TRADED DERIVATIVE:** Those derivatives instrument that are traded via specialized derivatives exchange of other exchange. A derivatives exchange is a market where individual trade standardized contracts that have been defined by the exchange. A derivative exchange act as an intermediary to all related transactions and takes initial margin from both sides of the trade to act as a guarantee. They may be followings:
 - Futures
 - Options

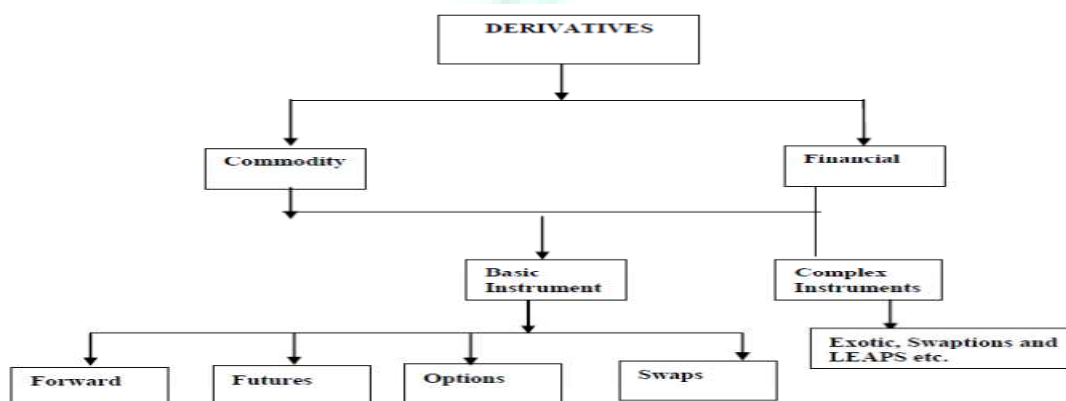
- Interest rate
- Index product
- Convertible
- arrants
- Others

3. **COMMON DERIVATIVE:** These derivatives are common in nature/trading and classification. They are following:

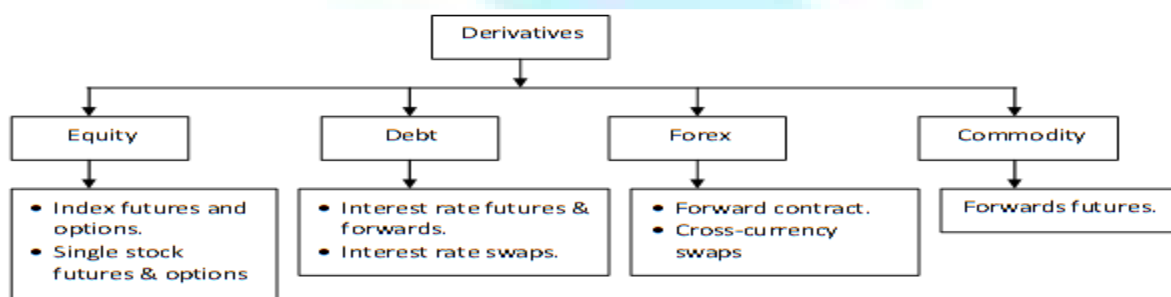
- Forwards
- Futures
- Options
- Binary options
- Warrant
- Swaps

The various types of financial derivatives based on their different properties like, plain. Simple or straight forward, composite, joint or hybrid, synthetic, leveraged, mildly leveraged, customized or OTC traded, standardized or organized exchange traded, regulated and unregulated etc. are available in the market.

CLASSIFICATION OF DERIVATIVES



DERIVATIVES CONTRACTS PERMITTED FOR TRADING IN INDIA



FORWARD CONTRACT

A forward contract is a customized contract between the buyer and the seller where settlement takes place on a specific date in future at a price agreed today. In case of a forward contract the price which is paid/ received by the parties is decided at the time of entering into contract. It is simplest form of derivative contract mostly entered by individual in day to day life. It is contract for delivering the goods. These transactions are spot transactions. It is also known as "specific delivery contract". Forward contract is a cash market transaction in which delivery of the instrument is deferred until the contract has been made. Although the delivery is made in the future, the price is determined on the initial trade date. One of the parties to a forward contract assumes a long position (buyer) and agrees to buy the underlying asset at a certain future date for a certain price. The other party to the contract known as seller assumes a short position and agrees to sell the asset on the same date for the same price. The specified price is referred to as the deliver price. The contract terms like delivery price and the quantity are mutually agreed upon by the parties to the contract. Forward contracts are traded at over-the-counter and are not dealt with on an exchange. Usually traded between two financial institutions or between a financial institution and one of its client. The basic features of a contract are given in brief here as under:

- Forward contracts are bilateral contracts, and hence, they are exposed to the counter party risk. There is risk of non-performance of obligation either of the parties, so these are riskier than to futures contracts.
- Each contract is custom designed, and hence, is unique in terms of contract size, expiration date, the asset type, quality etc.
- In forward contract, one of the parties takes a long position by agreeing to buy the asset at a certain specified future date. The other party assumes a short position by agreeing to sell the same asset at the same date for the same specified price. A party with no obligation offsetting the forward contract is said to have an open position. A party with a close position is, sometimes, called a hedger.
- The specified price in a forward contract is referred to as the delivery price. The forward price for a particular forward contract at a particular time is the delivery price that would apply if the contract were entered into at that time. It is important to differentiate between the forward price and the delivery price. Both are equal at the time the contract is entered into. However, as time passes, the forward price is likely to change whereas the delivery price remains the same.
- In the forward contract, derivative asset can often be contracted from the combination of underlying assets; such assets are often known as synthetic assets in the forward market.
- In the forward market, the contract has to be settled by delivery of the asset on expiration date. In case the party wishes to reverse the contract, it has to compulsory go to the same counter party, which may dominate and command the price it wants as being in a monopoly situation.
- In a forward contract, covered party or cost of carry relations are relation between the prices of forward and underlying assets.
- Forward contract are very popular in foreign exchange market as well as interest rate bearing instruments. Most of the large and international banks quoted the forward rate through their 'forward desk' lying within their foreign exchange trading room. Forward foreign exchange quotes by these banks are displayed with the spot rates.

FUTURES CONTRACTS

Futures contracts are an agreement between two parties to buy or sell a specified quantity of an asset at a specified price and at a specified time and place. Future contracts are normally traded on an exchange which sets the certain standardized norms for trading in futures contracts. The features of a futures contract may be specified as follows:

- Futures are traded only in organized exchanges.
- Futures contract required to have standard contract terms.
- Futures exchange has associated with clearing house.
- Futures trading required margin payment and daily settlement.
- Futures positions can be closed easily.
- Futures markets are regulated by regulatory authorities like SEBI.
- The futures contracts are executed on expiry date.
- The futures prices are expressed in currency units, with a minimum price movement called a tick size.

There are different types of contracts in financial futures which are traded in the various futures market of the world. The followings are the important types of financial futures contract:

1. Stock future or equity futures
2. Stock index futures
3. Currency futures
4. Interest rate futures

OPTIONS CONTRACT

Options are derivative contract that give the right, but not the obligation to either buy or sell a specific underlying security for a specified price on or before a specific date. In theory, option can be written on almost any type of underlying security. Equity (stock) is the most common, but there are also several types of non-equity options, based on securities such as bonds, foreign currency, indices or commodities such as gold or oil.

The person who buys an option is normally called the buyer or holder. Conversely, the seller is known as the seller or writer. Again we can say "An option is a particular type of a contract between two parties where one person gives the other person the right to buy or sell a specific asset at a specified price within a specified time period." Today, options are traded on a variety of instruments like commodities, financial assets as diverse as foreign exchange, bank time deposits, treasury securities, stock, stock indexes, petroleum products, food grains, metals etc. The main characteristics of options are following:

- Options holders do not receive any dividend or interest.
- Option yield only capital gains.
- Options holder can enjoy a tax advantages.
- Options are traded on OTC and in all recognized stock exchanges.
- Options holders can control their rights on the underlying assets.
- Options create the possibility of gaining a windfall profit.
- Options holder can enjoy a much wider risk-return combinations.
- Options can reduce the total portfolio transaction costs.
- Options enable with the investors to gain a better returns with a limited amount of investment.

A call which is the right to buy shares under a negotiable contract and which do not carry any obligation. The buyers have the right to receive the delivery of assets are known as 'call option.' In this option the owner has the right to sell the underlying asset under the negotiable contract. Put option holder has the right to receive the payment by surrendering the asset. The writer of an option is a stock broker, member or a security dealer. The buyer of an option pays a price depending on the risk of underlying security and he as an investor or a dealer or trader. The basic features of this are:

- The option is exercisable only by the owner namely the buyer of the option.
- The owner has limited liability.
- Owners of options have no voting rights and dividend right.
- Options have high degree of risk to the option writers.
- Options involving buying counter positions by the option sellers.
- Flexibility in investors' needs.
- No certificates are issued by the company.
- Options are popular because they allow the buyer profits from favourable movement in exchange rate.

Options can be classified into different categories like:

1. Call options
2. Put options
3. Exchange traded options
4. OTC traded options
5. American options
6. European options
7. Commodity options
8. Currency options
9. Stock options
10. Stock Index options

SWAPS CONTRACT

A swap is an agreement between two or more people or parties to exchange sets of cash flows over a period in future. Swaps are agreements between two parties to exchange assets at predetermined intervals. Swaps are generally customised transactions. The swaps are innovative financing which reduces borrowing costs, and to increase control over interest rate risk and foreign exchange exposure. The swap includes both spot and forward transactions in a single agreement. Swaps are at the centre of the global financial revolution. Swaps are useful in avoiding the problems of unfavourable fluctuation in foreign exchange market. The parties that agree to the swap are known as counter parties. The two commonly used swaps are interest rate swaps and currency swaps.

Interest rate swaps which entail swapping only the interest related cash flows between the parties in the same currency.

Currency swaps entail swapping both principal and interest between the parties, with the cash flows in one direction being in a different currency than the cash flows in the opposite direction.

HISTORICAL DEVELOPMENT OF DERIVATIVE MARKET IN INDIA

Derivative markets in India have been in existence in one form or the other for a long time. In the area of commodities, the Bombay Cotton Trade Association started future trading way back in 1875. This was the first organized futures market. Then Bombay Cotton Exchange Ltd. in 1893, Gujarat Vyapari Mandall in 1900, Calcutta Hessian Exchange Ltd. in 1919 had started future market. After the country attained Independence, derivative market came through a full circle from prohibition of all sorts of derivative trades to their recent reintroduction. In 1952, the government of India banned cash settlement and options trading, derivatives trading shifted to informal forwards markets. In recent years government policy has shifted in favor of an increased role at market based pricing and less suspicious derivatives trading. The first step towards introduction of financial derivatives trading in India was the promulgation at the securities laws (Amendment) ordinance 1995. It provided for withdrawal at prohibition on options in securities. The last decade, beginning the year 2000, saw lifting of ban of

futures trading in many commodities. Around the same period, national electronic commodity exchanges were also set up. The more detail about evolution of derivatives are shown in Table No.1 with the help of the chronology of the events. This table is presenting complete historical developments.

TABLE NO. 1: HISTORICAL DEVELOPMENTS IN INDIAN DERIVATIVE MARKET

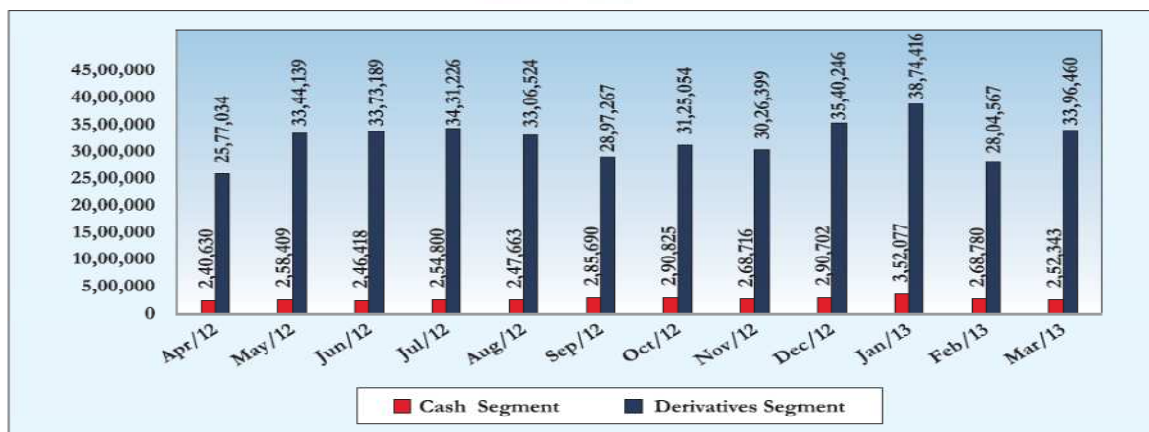
S. No.	Progress Date	Progress of Financial Derivatives
1	1952	Enactment of the forward contracts (Regulation) Act.
2	1953	Setting up of the forward market commission.
3	1956	Enactment of SCRA
4	1969	Prohibition of all forms of forward trading under section 16 of SCRA.
5	1972	Informal carry forward trades between two settlement cycles began on BSE.
6	1980	Khuso Committee recommends reintroduction of futures in most commodities.
7	1983	Government amends bye-laws of exchange of Bombay, Calcutta and Ahmedabad and introduced carry forward trading in specified shares.
8	1992	Enactment of the SEBI Act.
9	1993	SEBI Prohibits carry forward transactions.
10	1994	Kabra Committee recommends futures trading in 9 commodities.
11	1995	G.S. Patel Committee recommends revised carry forward system.
12	December, 1995	NSE asked SEBI for permission to trade index futures
13	1996	Revised system restarted on BSE.
14	18th November, 1996	SEBI setup LC Gupta committee to draft frame work for index futures
15	11th May, 1998	LC Gupta committee submitted report
16	1st June 1999	Interest rate swaps/forward rate agreements allowed at BSE
17	7th July 1999	RBI gave permission to OTC for interest rate swaps/forward rate agreements
18	24th May 2000	SIMEX chose Nifty for trading futures and options on an Indian index
19	25th May 2000	SEBI gave permission to NSE & BSE to do index futures trading
20	9th June 2000	Equity derivatives introduced at BSE
21	12th June 2000	Commencement of derivatives trading (index futures) at NSE
22	31st Aug. 2000	Commencement of trading futures & options on Nifty at SIMEX
23	1st June 2001	Index option launched at BSE
24	Jun 2001	Trading on equity index options at NSE
25	July 2001	Trading at stock options at NSE
26	9th July 2001	Stock options launched at BSE
27	July 2001	Commencement of trading in options on individual securities
28	1st Nov. 2001	Stock futures launched at BSE
29	Nov. 2001	Commencement of trading in futures on individual security
30	9th Nov. 2001	Trading of Single stock futures at BSE
31	June 2003	Trading of Interest rate futures at NSE
32	Aug. 2003	Launch of futures & options in CNX IT index
33	13th Sep. 2004	Weekly options of BSE
34	June 2005	Launch of futures & options in Bank Nifty index
35	Dec. 2006	'Derivative Exchange of the Year by Asia risk magazine
36	June 2007	NSE launches derivatives on Nifty Junior & CNX 100
37	Oct. 2007	NSE launches derivatives on Nifty Midcap -50
38	1st Jan. 2008	Trading of Chhota (Mini) Sensex at BSE
39	1st Jan. 2008	Trading of mini index futures & options at NSE
40	3rd March 2009	Long term options contracts on S&P CNX Nifty index
41	NA	Futures & options on sectoral indices (BSE TECK, BSE FMCG, BSE Metal, BSE Bankex & BSE oil & gas)
42	29th Aug. 2008	Trading of currency futures at NSE
43	Aug. 2008	Launch of interest rate futures
44	1st Oct. 2008	Currency derivative introduced at BSE
45	10th Dec. 2008	S&P CNX Defty futures & options at NSE
46	Aug. 2009	Launch of interest rate futures at NSE
47	7th Aug. 2009	BSE-USE form alliance to develop currency & interest rate derivative markets
48	18th Dec. 2009	BSE's new derivatives rate to lower transaction costs for all
49	Feb. 2010	Launch of currency future on additional currency pairs at NSE
50	Apr. 2010	Financial derivatives exchange award of the year by Asian Banker to NSE
51	July 2010	Commencement trading of S&P CNX Nifty futures on CME at NSE
52	Oct. 2010	Introduction of European style stock option at NSE
53.	January, 2011	SEBI permitted stock exchanges to introduce derivative contracts (Futures and Options) on foreign stock indices in their equity derivatives segment.
54.	March, 2011	SEBI permitted stock exchanges to introduce Futures on 91-day Government of India Treasury-Bills in their currency derivatives segment.
55.	May, 2011	SEBI permitted a new category of trading member, namely, self-clearing member in the currency derivatives segment having minimum net-worth of Rupees 5 crore.
56.	June, 2011	SEBI permitted stock exchanges to introduce one or more liquidity enhancement schemes (LESs) to enhance liquidity of illiquid securities in their equity derivatives segments.
57.	September, 2011	SEBI prescribed stringent penalty structure for short-collection/non-collection of margins from clients in the derivatives segment. In addition, it has been mandated that for wrong/ false reporting of client margin, the member shall be penalized 100 percent of the falsely Reported amount along with suspension of trading for one day in that segment.
58.	December, 2011	SEBI permitted stock exchanges to introduce cash settled futures on 2-year and 5-year notional coupon bearing Government of India (GOI) security on currency derivatives segment of stock exchanges. Exchanges are yet to introduce interest rate futures contracts on 2-year and 5-year notional coupon bearing GOI security.
59.	January, 2012	SEBI permitted stock exchanges to introduce derivative contracts on global indices, permission/approval has been granted to NSE for introduction of futures and options contracts on S&P 500 Index and FTSE 100 Index and futures contracts on DJIA. In addition, BSE has been permitted to introduce futures contracts on FTSE/JSE Top 40 Index (Africa), Hang Seng Index (Hong Kong), iBovespa Index (Brazil) and MICEX Index (Russia).
60.	January, 2013	SEBI discontinued mini derivative contracts (having contract size of Rupees 1 lakh) on Index (Sensex and Nifty).

TRENDS IN DERIVATIVE MARKET IN INDIA

Derivatives markets are central to today's financial markets. The impressive growth in derivatives markets have been driven by the product and technology innovation in consonance with competition. Over the years, derivatives markets have evolved as the single largest segment in global financial markets with traded turnover outstripping the turnover in equity and bond markets.

EQUITY DERIVATIVE SEGMENT

The equity derivatives segment is the most vibrant, active and dominant segment in the Indian Securities market. Over the years, there has been manifold increase in the volumes- both in terms of number of contracts traded and traded value and products traded. India holds a significant place in the arena of world derivative markets. Currently, India's NSE, MCX Group and BSE were found to be among the top 30 derivative exchanges, when positioned by the number of contracts traded and/or cleared. Volumes of derivatives market have far exceeded that of cash segment that as at the close of year 2012-13, the turnover in the derivatives market was 12.6 times of the latter (Chart 1). Trading in equity derivatives segment is dominated by NSE, which has a share of more than 81.5% of the total turnover. MCX-SX commenced its operations in the equity derivative segment with effect from February, 2013.

CHART 1: DERIVATIVE TURNOVER VIS-À-VIS CASH MARKET TURNOVER

Source: BSE, NSE

The total number of contracts traded in the derivative segment of NSE decreased by 6.1% to 113,14,67,418 in the year 201-13 from 120,50,45,464 in the year 2011-12, whereas, at BSE, the number of contracts exploded at 715.5% from 3,22,22,825 in the year 2011-12 to 26,24,43,366 in the year 2012-13. In BSE, volumes were driven mainly by the incentives offered by the exchange. The value of the contracts traded in the derivative segment of NSE increased by 0.6% to Rupees 3,15,33,004 crore in the year 2012-13 from Rupees 3,13,49,732 crore in the year 2011-12, whereas the turnover at the derivatives segment of BSE increased by 786.1% to Rupees 71,63,519 crore in the year 2012-13 from Rupees 8,08,476 crore in the year 2011-12. The open interest in the derivative segment of NSE declined by 3.5% to Rupees 85,952 crore at the end of the year 2012-13 from Rupees 89,049 crore at the end of year 2011-12.

The monthly turnover in the derivatives segment at NSE recorded a mixed trend during the year 2012-13 as shown in Table 2. The highest turnover was recorded in March 2013 followed by January, 2013 and May, 2012. Growth in the derivatives turnover at NSE was the highest in May, 2012 when turnover rose by 23.2%, followed by March, 2013 and January, 2013. The average daily turnover at NSE in the year 2012-13 increased marginally by 0.6% to Rupees 1,26,639 crore in the year 2012-13 from Rupees 1,25,903 crore in the year 2011-12.

TABLE NO. 2: TRENDS IN TURNOVER AND OPEN INTEREST IN EQUITY DERIVATIVES SEGMENT

Year/Month	No. of Contracts		Turnover (₹ crore)		Open Interest at the End of the Year / Month			
					No. of Contracts		Notional Turnover (₹ crore)	
	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE
1	2	3	4	5	6	7	8	9
2008-09	65,73,90,497	4,96,502	1,10,10,482	11,775	32,27,759	22	57,705	0
2009-10	67,92,93,922	9,026	1,76,63,665	234	34,89,790	0	97,978	0
2010-11	103,42,12,062	5,623	2,92,48,221	154	36,90,373	4	1,01,816	0
2011-12	120,50,45,464	3,22,22,825	3,13,49,732	8,08,476	33,44,473	28,176	89,049	736
2012-13	113,14,67,418	26,24,43,366	3,15,33,004	71,63,519	30,41,192	90,075	85,952	2,299
Apr-12	8,28,12,184	1,41,15,666	22,07,317	3,69,717	34,59,455	44,311	89,002	1,151
May-12	11,01,52,708	2,51,19,550	27,19,843	6,24,296	33,75,635	59,434	80,736	1,446
Jun-12	10,50,12,433	2,89,86,767	26,40,706	7,32,483	38,76,435	84,988	1,02,040	1,741
Jul-12	9,31,81,580	3,79,12,818	24,53,083	9,78,143	42,61,297	88,708	1,10,888	2,294
Aug-12	9,09,91,925	3,28,26,346	24,32,169	8,74,355	38,51,378	90,861	99,959	2,397
Sep-12	9,33,63,996	1,11,09,685	25,91,948	3,05,319	41,04,440	78,946	1,17,367	2,237
Oct-12	9,37,97,175	1,44,04,176	27,14,209	4,10,845	45,04,745	99,755	1,23,027	2,789
Nov-12	8,65,73,274	1,93,75,154	24,79,817	5,46,582	41,43,519	48,792	1,19,945	1,438
Dec-12	8,83,79,684	3,07,47,136	26,40,393	8,99,853	36,84,066	68,370	1,11,815	2,028
Jan-13	9,46,54,356	3,05,26,334	29,50,975	9,23,441	31,42,662	7,341	97,245	219
Feb-13	8,54,85,498	78,61,330	25,75,097	2,29,470	33,66,109	86,079	96,291	2,402
Mar-13	10,70,62,605	94,58,404	31,27,446	2,69,014	30,41,192	90,075	85,952	2,299

Source: SEBI Annual report 2012-13

TABLE 2: PRODUCT-WISE DERIVATIVES TURNOVER AT NSE AND BSE

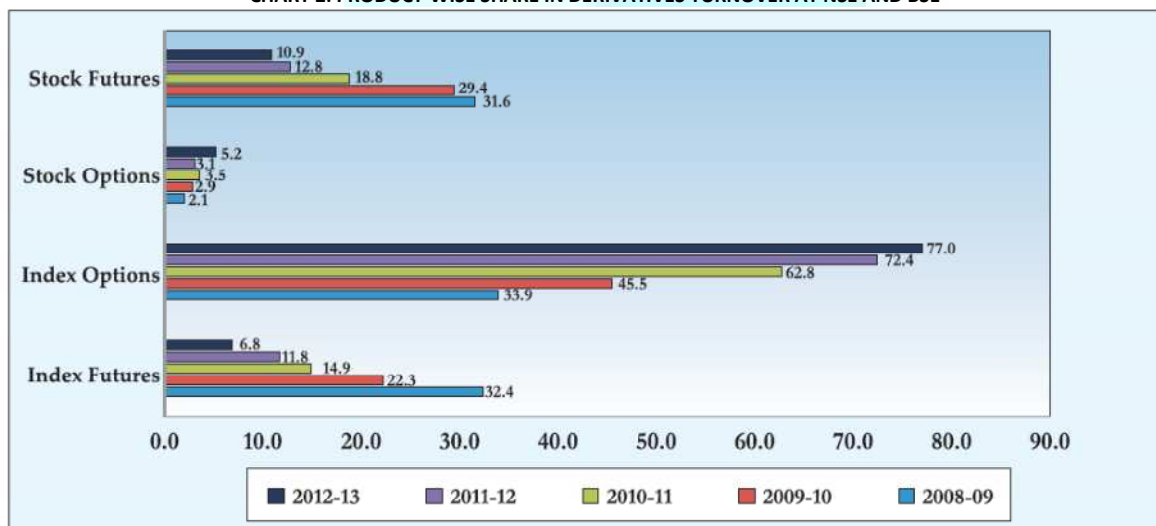
(Percent)

Year / Month	Index Futures	Index Options	Single Stock Options	Single Stock Futures	Total
1	2	3	4	5	6
2008-09	32.4	33.9	2.1	31.6	100.0
2009-10	22.3	45.5	2.9	29.4	100.0
2010-11	14.9	62.8	3.5	18.8	100.0
2011-12	11.7	72.6	3.0	12.7	100.0
2012-13	6.8	77.0	5.2	10.9	100.0
Apr-12	10.1	74.2	3.9	11.8	100.0
May-12	8.6	79.0	3.4	9.1	100.0
Jun-12	8.5	79.3	3.2	9.0	100.0
Jul-12	7.1	79.2	4.0	9.8	100.0
Aug-12	6.3	79.8	4.4	9.5	100.0
Sep-12	7.3	74.9	5.7	12.1	100.0
Oct-12	7.0	74.1	6.5	12.4	100.0
Nov-12	5.7	76.8	5.9	11.5	100.0
Dec-12	5.1	78.8	5.0	11.1	100.0
Jan-13	5.0	74.5	7.7	12.8	100.0
Feb-13	6.5	73.6	7.0	12.9	100.0
Mar-13	6.1	78.7	5.5	9.6	100.0

Source: BSE, NSE

MCX-SX commenced its operations in the equity derivative segment on February, 2013. During the period from February to March 2013, 2.75 lakhs contracts were traded recording a turnover of Rupees 8,049 crore. The equity derivatives markets have experienced considerable shifts in the product shares in the recent years as shown in Table 3. Till the year 2006-07, single stock futures were the most traded product in India. During the year 2012-13, the largest share in the total derivatives turnover has been contributed by Index options with 77%. Share of single stock futures have declined substantially over the years and now constitute a mere 10.9% in the year 2012-13. Index futures share constituted 6.8% of the turnover of derivatives market in the year 2012-13. The share of stock options increased from 3% in the year 2011-12 to 5.2% in the year 2012-13 as shown in Chart 2.

CHART 2: PRODUCT-WISE SHARE IN DERIVATIVES TURNOVER AT NSE AND BSE



Source: BSE, NSE

In the Index derivative segment of NSE, derivatives are offered on the following indices- NIFTY, NIFTY Midcap 50, Bank Nifty, CNX Infra, CNX IT and CNX PSE. Index derivatives are also allowed in 3 foreign indices, namely, Dow Jones index, S&P 500 and UK FTSE 100 index. On an average, for the year 2012-13, NIFTY futures and options accounted for more than 90% share in the index derivative turnover. Bank Nifty comprised a share in the range of 3 to 8% in the year 2012-13. At BSE, the share of derivatives on BSE Sensex fluctuated between 0.8 to 100% over the months. Turnover of derivatives on BSE 100 index also fluctuated within the range of 0.01 to 99.9%. In BSE also futures are available on foreign indices, namely, HIS Index, MICEX index, FTSE/ JSE top 40 and Bovespa Index. Product wise share in the open interest shows that the notional value of outstanding contracts was the highest for Index Options followed by single stock Futures, Index Futures, and Stock Options. The Tables 3 to 6 shows the product wise trends in the derivative market in India during the recent years. Among the various classes of derivative members, the transaction undertaken by trading- cum- selling clearing members contributed 51.7% of the total turnover of Futures and Options (F&O) segment in the year 2012-13.

The percentage share in the traded value by trading-cum-clearing members and trading members was 33.1% and 15.2% respectively as shown in Table 7.

TABLE 3: TRENDS IN INDEX FUTURES AT NSE AND BSE

Year/ Month	No. of Contracts		Notional Turnover (₹ crore)		Open Interest at the End of the Year / Month			
					No. of Contracts		Notional Turnover (₹ crore)	
	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE
1	2	3	4	5	6	7	8	9
2008-09	21,04,28,103	4,95,830	35,70,111	11,757	8,28,369	22	12,060	0.3
2009-10	17,83,06,889	3,744	39,34,389	96	5,81,510	0	14,979	0
2010-11	16,50,23,653	5,613	43,56,755	154	6,18,576	4	16,941	0.1
2011-12	14,61,88,740	70,73,334	35,77,998	1,78,449	5,71,933	11,693	14,341	305
2012-13	9,61,00,385	47,04,602	25,27,131	1,22,374	2,97,198	2,080	8,503	59
Apr-12	92,18,725	12,12,385	2,28,989	31,589	5,24,030	17,655	12,955	459
May-12	1,14,44,310	8,70,652	2,66,002	20,859	4,31,114	28,288	9,914	688
Jun-12	1,10,66,729	8,32,231	2,64,304	20,776	6,14,699	47,996	15,530	1,255
Jul-12	90,49,837	6,70,155	2,24,504	17,575	6,14,326	57,328	15,382	1,482
Aug-12	78,81,956	3,32,146	1,99,628	8,818	5,14,566	54,277	13,063	1,421
Sep-12	78,15,624	1,63,740	2,06,910	4,516	6,09,549	56,549	16,634	1,600
Oct-12	79,25,535	1,27,788	2,16,004	3,636	4,93,067	32,473	12,648	912
Nov-12	61,69,741	79,823	1,69,757	2,274	5,02,165	31,571	14,207	932
Dec-12	60,81,895	80,551	1,76,492	2,400	4,06,859	31,380	11,725	937
Jan-13	63,37,412	1,20,434	1,90,094	3,674	3,09,576	1,230	9,431	37
Feb-13	60,51,654	1,18,539	1,79,682	3,484	3,52,371	27,069	10,088	765
Mar-13	70,56,967	96,158	2,04,763	2,773	2,97,198	2,080	8,503	59

Source: SEBI Annual Report 2012-13

TABLE 4: TRENDS IN SINGLE STOCK FUTURES AT NSE AND BSE

Year/ Month	No. of Stocks Traded		No. of Contracts		Notional Turnover (₹ crore)		Open Interest at the End of the Year / Month			
							No. of Contracts		Notional Turnover (₹ crore)	
	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE
1	2	3	4	5	6	7	8	9	10	11
2008-09	250	3	22,15,77,980	299	34,79,642	9	5,11,334	0	15,722	0.0
2009-10	190	0	14,55,91,240	6	51,95,247	0	9,90,917	0	32,053	0.0
2010-11	223	0	18,60,41,459	0	54,95,757	0	11,26,190	0	28,354	0.0
2011-12	217	219	15,83,44,617	3,26,342	40,74,671	10,216	8,86,326	19	24,663	1
2012-13	146	122	14,77,11,691	1,16,933	42,23,872	3,418	7,90,886	417	22,168	12
Apr-12	215	19	1,07,39,998	1,299	3,03,853	36	10,20,668	0	25,905	0
May-12	210	14	1,27,48,867	123	3,03,008	3	9,45,947	0	21,736	0
Jun-12	210	18	1,24,82,626	0	3,04,796	0	10,23,838	0	27,299	0
Jul-12	208	58	1,24,36,098	404	3,35,785	10	10,61,842	0	27,845	0
Aug-12	208	87	1,16,75,491	1,059	3,15,699	29	10,40,212	2	26,570	0
Sep-12	207	130	1,24,41,509	1,799	3,49,877	46	10,66,649	3	31,311	0
Oct-12	156	88	1,29,92,449	1,322	3,88,103	40	11,81,950	0	31,189	0
Nov-12	152	67	1,22,03,483	459	3,49,431	13	11,63,804	0	32,886	0
Dec-12	151	72	1,28,74,846	836	3,92,327	25	10,93,228	0	35,144	0
Jan-13	149	114	1,46,48,279	21,272	4,95,366	670	10,17,631	2	32,718	0
Feb-13	148	113	1,15,00,825	20,615	3,61,294	590	8,93,704	217	25,810	7
Mar-13	146	122	1,09,67,220	67,745	3,24,332	1,956	7,90,886	417	22,168	12

Source: BSE, NSE

TABLE 5: TRENDS IN INDEX OPTIONS AT NSE AND BSE

Year/ Month	No. of Contracts		Notional Turnover (₹ crore)		Open Interest at the End of the Year / Month			
					No. of Contracts		Notional Turnover (₹ crore)	
	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE
1	2	3	4	5	6	7	8	9
2008-09	21,20,88,444	373	37,31,502	9	18,09,483	0	27,402	0.0
2009-10	34,13,79,523	5,276	80,27,964	138	18,19,841	0	47,808	0.0
2010-11	65,06,38,557	0	1,83,65,366	0	18,90,463	0	55,022	0.0
2011-12	86,40,17,736	2,47,75,644	2,27,20,032	6,18,342	17,96,546	16,464	47,540	430
2012-13	82,08,77,149	25,72,33,961	2,27,81,574	70,27,481	18,48,581	34,729	52,523	981
Apr-12	5,93,96,590	1,29,01,982	15,73,860	3,38,092	17,69,785	26,656	46,408	692
May-12	8,14,52,069	2,42,48,628	20,37,937	6,03,432	19,16,878	31,146	47,161	758
Jun-12	7,72,61,461	2,81,54,295	19,63,477	7,11,702	21,27,363	23,955	56,125	626
Jul-12	6,69,82,807	3,72,41,751	17,57,190	9,60,545	23,99,316	31,380	62,702	811
Aug-12	6,63,59,441	3,24,91,306	17,73,000	8,65,467	21,37,543	36,456	56,105	963
Sep-12	6,74,58,468	1,09,37,357	18,70,592	3,00,612	22,67,968	22,291	64,666	634
Oct-12	6,64,95,200	1,42,68,372	19,07,596	4,07,019	25,76,739	66,770	72,393	1,866
Nov-12	6,22,25,955	1,92,89,130	17,81,059	5,44,170	23,05,664	17,116	67,825	503
Dec-12	6,36,83,543	3,06,52,658	18,93,973	8,97,110	20,06,322	35,877	59,336	1,059
Jan-13	6,47,66,416	3,03,54,345	19,66,918	9,18,184	16,71,651	6,109	50,538	182
Feb-13	6,18,01,321	76,53,778	18,39,346	2,23,505	19,81,418	45,559	56,418	1,290
Mar-13	8,29,93,878	90,40,359	24,16,627	2,57,644	18,48,581	34,729	52,523	981

Source: BSE, NSE

TABLE 6: TRENDS IN STOCK OPTIONS AT NSE AND BSE

Year / Month	No. of Stocks		No. of Contracts		Notional Turnover (₹ crore)		Open Interest at the End of the Year / Month			
							No. of Contracts		Notional Turnover (₹ crore)	
	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE	NSE	BSE
1	2	3	4	5	6	7	8	9	10	11
2008-09	250	115	1,32,95,970	0	2,29,227	0	78,573	0	2,521	0.0
2009-10	190	98	1,40,16,270	0	5,06,065	0	97,522	0	3,137	0.0
2010-11	223	89	3,25,08,393	0	10,30,344	0	55,144	0	1,499	0.0
2011-12	216	217	3,64,94,371	47,505	9,77,031	1,469	89,668	0	2,504	0
2012-13	146	146	6,67,78,193	3,87,870	20,00,427	10,246	1,04,527	52,849	2,758	1,247
Apr-12	215	216	34,56,871	0	1,00,615	0	1,44,972	0	3,734	0
May-12	210	212	45,07,462	147	1,12,897	3	81,696	0	1,926	0
Jun-12	210	211	42,01,617	241	1,08,129	5	1,10,535	0	3,086	0
Jul-12	208	209	47,12,838	508	1,35,603	13	1,85,813	0	4,959	0
Aug-12	208	209	50,75,037	1,835	1,43,841	42	1,59,057	126	4,221	3
Sep-12	207	208	56,48,395	6,789	1,64,569	146	1,60,274	103	4,757	2
Oct-12	156	156	63,83,991	6,694	2,02,506	150	2,52,989	512	6,797	11
Nov-12	152	152	59,74,095	5,742	1,79,570	125	1,71,886	105	5,027	3
Dec-12	151	151	57,39,400	13,091	1,77,600	317	1,77,657	1,113	5,610	32
Jan-13	149	149	89,02,249	30,283	2,98,597	914	1,43,804	0	4,558	0
Feb-13	148	148	61,31,698	68,398	1,94,775	1,890	1,38,616	13,234	3,976	340
Mar-13	146	146	60,44,540	2,54,142	1,81,724	6,641	1,04,527	52,849	2,758	1,247

Source: BSE, NSE

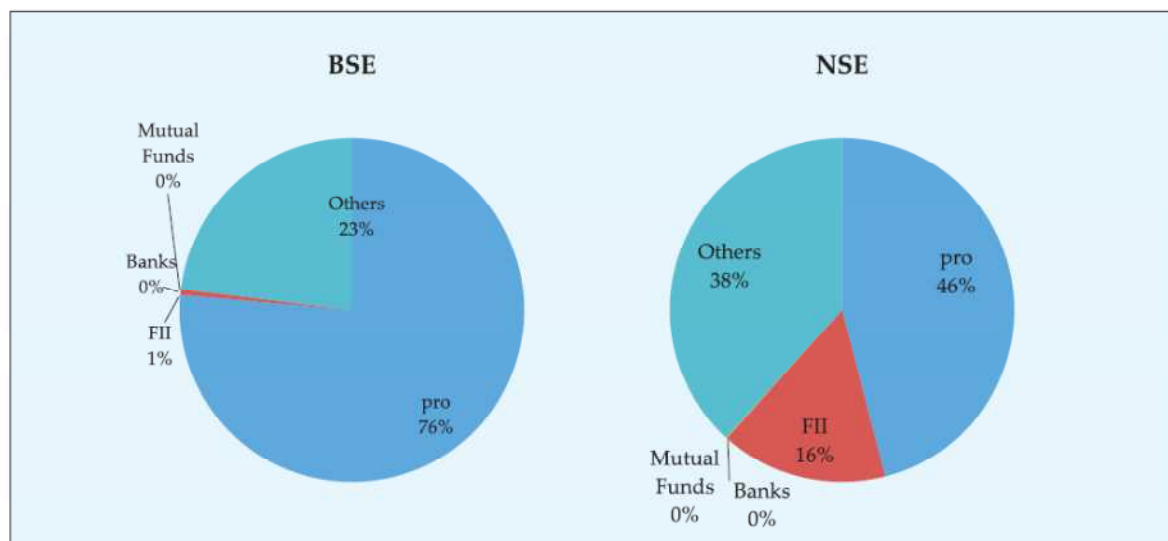
TABLE 7: SHARES OF VARIOUS CLASSES OF MEMBERS IN DERIVATIVE TURNOVER AT NSE AND BSE

Year / Month	Turnover (₹ crore)				Percentage Share		
	Trading Members	Trading cum Clearing Members	Trading cum Self Clearing Members	Total	Trading Members	Trading cum Clearing Members	Trading cum Self Clearing Members
1	2	3	4	5	6	7	8
2008-09	33,99,848	1,24,60,554	61,84,083	2,20,44,486	15.4	56.5	28.1
2009-10	48,99,892	2,02,12,013	1,02,15,902	3,53,27,807	13.9	57.2	28.9
2010-11	75,50,080	3,35,63,069	1,74,04,062	5,85,17,211	12.9	57.4	29.7
2011-12	79,81,555	3,45,47,595	2,05,54,043	6,30,83,193	12.7	54.8	32.6
2012-13	96,14,647	2,08,51,487	3,25,99,875	6,30,66,008	15.2	33.1	51.7
Apr-12	6,28,083	14,60,834	23,25,717	44,14,634	14.2	33.1	52.7
May-12	7,82,473	17,87,357	28,69,856	54,39,686	14.4	32.9	52.8
Jun-12	7,11,493	17,54,138	28,15,782	52,81,413	13.5	33.2	53.3
Jul-12	7,12,395	17,27,062	24,66,709	49,06,166	14.5	35.2	50.3
Aug-12	7,34,070	16,45,518	24,84,749	48,64,337	15.1	33.8	51.1
Sep-12	7,60,212	17,11,826	27,11,858	51,83,897	14.7	33.0	52.3
Oct-12	8,20,548	17,97,597	28,10,274	54,28,419	15.1	33.1	51.8
Nov-12	7,99,236	16,16,085	25,44,313	49,59,633	16.1	32.6	51.3
Dec-12	8,47,974	17,21,974	27,10,838	52,80,786	16.1	32.6	51.3
Jan-13	9,85,202	18,52,805	30,63,943	59,01,950	16.7	31.4	51.9
Feb-13	8,24,263	16,91,663	26,34,269	51,50,195	16.0	32.8	51.1
Mar-13	10,08,697	20,84,628	31,61,567	62,54,892	16.1	33.3	50.5

Source: SEBI Annual Report 2012-13

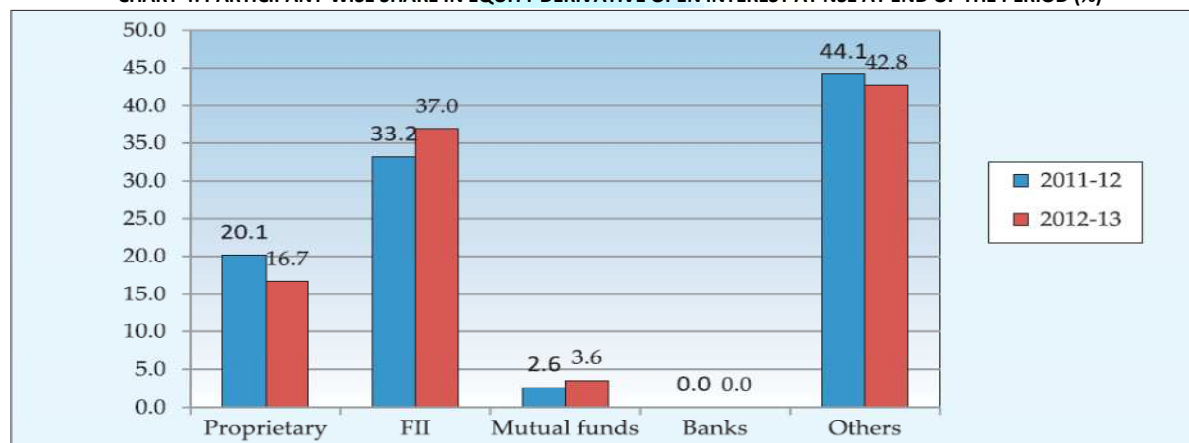
Participant-wise share in NSE Futures and options turnover for the year 2012-13 shows that proprietary trades accounted for an average 46% share in the total turnover as shown in Chart 3. While FIIs accounted for a share of 16% in the total turnover, others category comprising retail, HNIs, private and public companies had an average share of 38% in the total turnover. In the BSE Futures and Options (F&O) turnover, proprietary trades accounted for 76% share followed by others at 23% and FIIs at 1%. The participant-wise share in notional value outstanding at NSE for the period ending March 2013 is shown in the Chart 4.

CHART 3: PARTICIPANT-WISE AVERAGE SHARE IN F&O EQUITY TURNOVER IN THE YEAR 2012-13 (%)



Source: BSE, NSE

CHART 4: PARTICIPANT-WISE SHARE IN EQUITY DERIVATIVE OPEN INTEREST AT NSE AT END OF THE PERIOD (%)



Source: BSE, NSE

CONCLUSION

Innovation of derivatives have redefined and revolutionised the landscape of financial industry across the world and derivatives have earned a well-deserved and extremely significant place among all the financial products due to innovation and revolutionized the landscape. Derivatives are risk management tool that help in effective management of risk by various stakeholders. Derivatives provide an opportunity to transfer risk, from the one who wish to avoid it; to one, who wish to accept it. India's experience with the launch of equity derivatives market has been extremely encouraging and successful. The derivatives turnover on the NSE has surpassed the equity market turnover. Significantly, its growth in the recent years has surpassed the growth of its counterpart globally. India is one of the most successful developing countries in terms of a vibrant market for exchange-traded derivatives. This reflects the strengths of the modern development of India's securities markets, which are based on nationwide market access, anonymous safe and secure electronic trading, and a predominantly retail market. There is an increasing sense that the equity derivatives market is playing a major role in shaping price discovery. Factors like increased volatility in financial asset prices; growing integration of national financial markets with international markets; development of more sophisticated risk management tools; wider choices of risk management strategies to economic agents and innovations in financial engineering, have been driving the growth of financial derivatives worldwide and have also fuelled the growth of derivatives here, in India.

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A STUDY INTO THE PROCESS OF OPEN TENDERING AND HOW IT INFLUENCES STRATEGIC ORGANIZATIONAL PERFORMANCE: A CASE STUDY OF KENYA POWER AND LIGHTING COMPANY

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ABSTRACT

A tender or bid is a formal offer to supply goods or services for an agreed price. From a purchasing perspective, tendering or competitive bidding is a purchasing procedure whereby potential suppliers are invited to make a firm and unequivocal offer of the price and terms on which they will supply specified goods or services, which on acceptance, shall be the basis of subsequent contract. Open tendering is the process of inviting all interested suppliers in the market to provide price and other terms at which they are prepared to supply organizational requirements. The process involves analyzing the information provided and opting for the best offer in a transparent and open fashion that is devoid of any obligation to accept the lowest bid. The main objective of this study therefore is to analyze this process of open tendering and how it influences strategic organizational performance.

KEYWORDS

open trading, strategic organizational performance.

LIST OF ABBREVIATIONS

CCT	Compulsory Competitive Tendering
DAC	Development Assistance Committee
DETR	Department of the Environment, Transport and the Regions
DoE	Department of Environment
DSO	District Service Organization
EOCD	Organization for Economic Cooperation and Development
EPSRC	Engineering and Physical Sciences Research Council
KPLC	Kenya Power and Lighting Company
NEDO	National Economic Development Organization
PPDA	Public Procurement and Disposals Act
PPRA	Public Procurement Regulatory Authority

1.0 INTRODUCTION

BACKGROUND OF THE STUDY



Organizations are embarking on strategically streamlining the supply chain to reduce or cut any unwanted costs burdening the purchasing process and unwanted inefficiencies leading to unnecessary costs. This is in attempt to gain competitive edge in the market place. Organizations therefore try to engage on effective purchasing methods that ensure maximum returns for their money value. But this requires organisations to abide by the respective legislative Acts (Bella, 2006).

The Public Procurement and Disposals Act, 2005; defines procurement as the acquisition by purchase, rental, lease, hire purchase, license, tenancy, franchise, or by any other contractual means of any type of works, assets, services or goods including livestock or any combination. From a purchasing perspective, tendering in a competitive bidding process entails a procedure whereby potential suppliers are invited to make a firm and unequivocal offer of the price and terms on which they will supply specified goods or services, which on acceptance, shall be the basis of subsequent contract (Onyango, 2012).

Open tendering on the other hand is the process of inviting all interested suppliers in the market to provide price and other terms at which they are prepared to supply organizational requirements. Competitive tendering is the main mechanism in a market in which open competition between different operators is engaged (Laffont and Tirole, 2008; Klempner, 2009). Thus, if competition in the market is limited for technical reasons, the only way to enhance the efficiency is to introduce competition for the market. This may entail instituting distinct strategies (Demsetz, 2012).

2.0 REVIEW OF LITERATURE

This review summarizes information on open tendering and makes mention of how closely it has embraced free market competition. It covers numerous scholarly work in the theoretical review and empirical review.

2.1 THEORETICAL REVIEW

Open tendering had begun long time ago mostly in the European countries. Following the wave of liberalization in the late 1980s, articles began to appear in the 1990s which assessed the outcomes and the factors influencing competition in markets where competition had been introduced at every early stage (Tough (2004). Alexandersson et al. (1998) showed initial effects of tendering in Sweden, including significant cost-reducing effects. One of their main findings was that the decline in demand in Sweden during those years was not a result of the introduction of tendering or of deregulation, but was probably related to the country's deep recession.

Sharaby and Shifan (2008) analyzed the results of introducing tendering in Israel, which again confirms increasing quality levels and decreasing prices. A notable recent paper is Wolanski (2009), which compared the efficiency levels of direct awarding and competitive tendering and analyzed the drivers of efficiency in the Polish market. He confirmed that tendering public bus transport services results in considerable improvements in efficiency.

2.2 EMPIRICAL REVIEW

A recent survey of Australian building constructors has overwhelmingly indicated that contractors and subcontractors perceive their market success to be determined by their company's ability to be the lowest cost tenderer —75% of respondents ranked submission of the lowest price as the number one reason for tender award success. With the introduction of open tendering many returns were seen as evidenced (Pyddoke, 2003).

With procurement accounting for about 20% of government expenditure in most developing countries, proper management of the activity is of paramount importance. The Public Procurement Regulatory Authority (PPRA) in Tanzania admits in an EOCOD/DAC assessment of the country's procurement system in 2006 that there were no defined skills and knowledge profiles for specialized procurement skills (EOCD/DAC, 2007). The EOCOD/DAC study revealed failure by many procuring entities to observe simple issues like bid validity periods thus rendering many awarded tenders null and void. Some tenders were awarded far beyond the legally allowed maximum periods, (sometimes up to six months later) while others had their bid period dated too below the legally allowed minimum period, for example, 19 days instead of 30 days (Msita, 2009).

2.3 CRITIQUE OF THE EXISTING LITERATURE

Much of previous research concentrated solely on the application of open tendering in the public sector and especially in the procurement operations of the government. Non looked at how performance improved strategically. In Tanzania for instance, as Mista (2009) reports, the Public Procurement Regulatory Authority (PPRA) was singled out by the EOCOD/DAC whose study revealed failure of the Tanzania PPRA by many procuring entities to observe simple issues like bid validity periods thus rendering many awarded tenders null and void. Some tenders were awarded far beyond the legally allowed maximum periods, sometimes up to six months later while others had their bid period dated too below the legally allowed minimum period, for example, 19 days instead of 30 days. No study touched on procurement and strategic organizational performance. This research thus attempted to bring the knowledge of open tendering and its effect on strategic organizational performance.

3.0 IMPORTANCE OF THE STUDY

The findings of this research will be of beneficial interest to several concerns. Kenya Power and Lighting Company is a public utility company providing power distribution to the citizenry. It is of great interest to the government that improved efficiency in the company will be of integral role in achieving Vision 2030 goal of rural electrification. The government will also gain revenue and performance as a result of the improved efficiency thus translating to better strategies. Firms will be bound to integrate and optimize the supply chain by understanding the operations of the open tendering process and on how best to strategically optimize the process to gain a competitive edge in the competitive market place.

4.0 STATEMENT OF THE PROBLEM

Although open tendering has, upon occasion, been discredited in the UK following continued criticisms in industry transformation reports that it negatively translates to increasing bureaucracy hence slowing business, a relatively recent report (Holt et al., 1996) has suggested that it is making a surprising return. For a developing country like Kenya, the question arose of public procurement policies gaining prominence as it is difficult to imagine how a government can deliver substantial improvements and the wellbeing of its citizens without a public expenditures system that includes effective public procurement policies (Evenette et al, 2005). This motivated the researchers to look into the process of open tendering and its importance in strategic organizational performance.

5.0 OBJECTIVES OF THE STUDY

5.1 GENERAL OBJECTIVE

The broad objective of this research was to study the process of open tendering and how it influenced strategic organizational performance.

5.2 SPECIFIC OBJECTIVES

The specific objectives of this study were:

1. To find out the importance of open tendering in strategic organizational performance
2. To investigate the limitations of open tendering as a means of procurement
3. To find out the role of organizational management in implementing open tendering
4. To assess the challenges faced by management in implementing open tendering

6.0 RESEARCH METHODOLOGY

6.1 INTRODUCTION

This aspect describes the method which was used to carry out the research study. It entails the research design, the target population, the sampling design and sampling procedure, sample size, data collection methods, data analysis and presentation.

6.2 RESEARCH DESIGN

The researcher adopted a descriptive study approach. Descriptive research includes surveys and fact-finding enquiries of different kinds. This involves describing the situation as it is (Rop, 2012).

6.3 TARGET POPULATION

The population of interest in this study consisted of 100 respondents covering employees of KPLC from branches selected randomly. The major concentration was on their head office in Nairobi and its sub-branches in Mombasa and Voi towns. This was because of practical accessibility, capacity, time and budgetary constraints. The respondents encompassed top management, middle management and the lower level staff.

TABLE 6.1 : TARGET POPULATION

	Target Population (N)	Percentage (%)
Top management	10	10
Middle management	30	30
Lower level management	60	60
TOTAL	100	100

Source: HR Department KPLC (2013)

6.4 SAMPLING DESIGN AND SAMPLE STUDY

In this study, the researchers used non-homogeneous sampling design whereby random sampling technique was used to select individual branches. The respondents on the other hand were selected stratified sampling. This eliminated bias because every element in the population had a known chance of being selected for the sample (Saunders et al, 2003).

TABLE 6.2: SAMPLE FRAME

	Target Population (N)	Ratio	Sample Size (n)
Top management	10	0.5	5
Middle level management	30	0.5	15
Lower level management	60	0.5	30
TOTALS	100		50

Source: Researchers (2013)

6.5 DATA COLLECTION

In this study, both primary and secondary data were used to gather information. Secondary data was collected from the past research works, internet, relevant journals, magazines, newspapers and the Chartered Institute of Purchasing and Supplies (CIPS) publications. Primary data was collected using questionnaires. The questionnaires were structured in such a way that they elicited specific information from the respondents. The questions comprised of multiple choice, open-

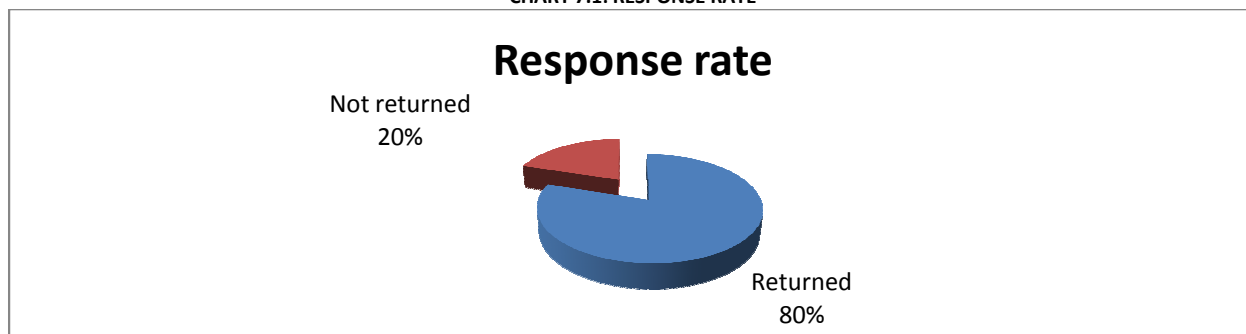
ended and dichotomous questions. In addition, Likert scale attitude type of questionnaires were used to evaluate the strength of attitudes held by the respondents.

7.0 RESULTS AND DISCUSSION

7.1 RESPONSE RATE

Table 7.1 below shows that out of 50 questionnaires that were administered to the respondents, a significant 40 of them were returned. This translated to a whopping 80% response rate which was acceptable for analytical purpose hence an indication that the responses reflected the views of the employees of KPLC and thus a reliable source of information.

CHART 7.1: RESPONSE RATE



Source: Research Data, 2013

7.2 ROLE OF MANAGEMENT IN STRATEGICALLY IMPLEMENTING OPEN TENDERING

7.2.1 Responsibility for Strategic Implementation

All the respondents were found to apply the open tendering process in their operations. This is true since all public parastatals are required by the law to make their procurement open and transparent. Open tendering therefore comes as a prerequisite. From the findings, 92.5% respondents were of the view that the management was solely responsible for the strategic implementation of the open tendering process. However, 7.5% of their counterparts were of the idea that employees had an hand in the process too. Respondents seem to understand that most of the lower level employees only undertake to implement directions sought by the management echelon. Managers strategically form part of the procurement, tender, and even the disposals committees and are thus the people in charge of the tendering process.

TABLE 7.1: RESPONSIBILITY FOR STRATEGIC IMPLEMENTATION

Responsibility for Implementation	Frequency	Percentage
Management	37	92.5
Employees	3	7.5
Total	40	100

Source: Researchers (2013)

7.2.2 Improvement Mechanisms

In an effort to improve upon the procurement system, management have endeavored to fill relevant and qualified staff to the associated positions. Towards this end, respondents were asked to opine how they rated the improvement mechanisms. Of the respondents, 35(87.5%) rated the improvement mechanism as good while only 5(12.5%) rated the mechanism as very good. A mean of 3.1250 supports the trend with a likert scale within the range of 3. There is therefore a general trend of satisfaction with what the management has adopted to improve open tendering. A mean of 3.1250 and a standard deviation of 0.33493 shows a close dispersion towards the mean and thus respondents agree on the mechanisms adopted by management to improve on open tendering. There is a sense of direction in the organization and therefore corporate energy can be channeled to improve the general organizational performance.

TABLE 7.2: IMPROVEMENT MECHANISMS ADOPTED BY TOP MANAGEMENT

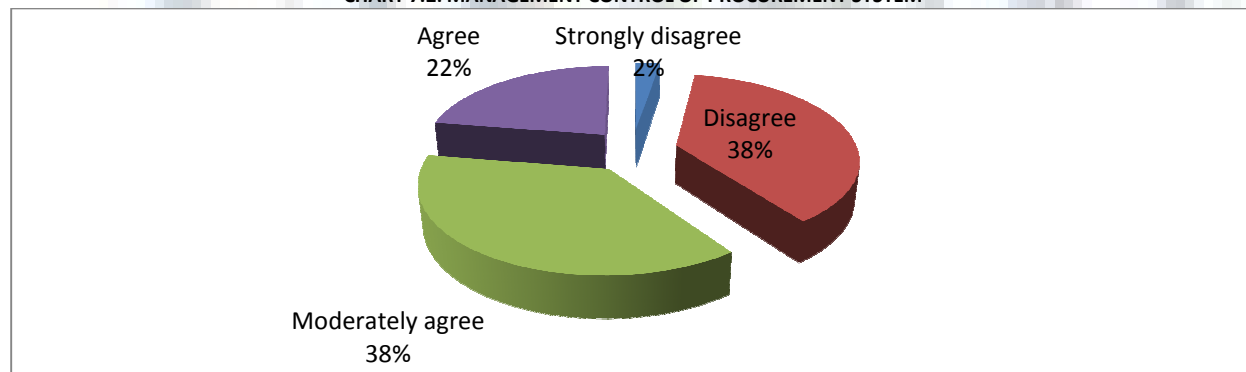
Improvement mechanism	Frequency	Percentage	Mean	SD	Skewness
Good	35	87.5	3.1250	0.33493	2.357
Very good	5	12.5			
Total	40	100			

Source: Research Data (2013)

7.2.3 Control of Open Tendering

Respondents were asked to provide their views on whether the firm is better strategically placed in allowing sole control of the entire procurement operations at the helm of management. 1(2.5%) strongly disagree, 15(37.5%) disagree, 15(37.5%) moderately agree and 9(22.5%) agree that management solely controls the process of open tendering. The 2.8000 mean with the support of the Likert scale, shows that respondents moderately agree that management solely controls the method procurement. The 0.82275 shows some considerable distribution of values along the mean showing an extent of agree towards who controls the procurement method. Also, the data from the SSPS is positively tailed with a skewness of 0.108. This calls for some soul searching of the company procurement system since some of the staff feel that the process is not fair, or credible enough to abide by the rules of procurement. May be this is due to corruption, inflexible management structures or any another knock-offs in the supply chain that need to be streamlined to optimize performance.

CHART 7.2: MANAGEMENT CONTROL OF PROCUREMENT SYSTEM



Source: Research Data (2013)

7.3 IMPORTANCE OF OPEN TENDERING IN ORGANIZATIONAL PERFORMANCE**7.3.1 Conversance with the Application of Open Tendering**

Knowing the law and applying it are two different sides of the same coin. Respondents were asked to provide their views on whether in fact employees at the outset were conversant with the process of application of open tendering. All the respondents were conversant with the application of the open tendering process. KPLC may therefore be hiring qualified staff and also may be credited with a great deal of training its workforce which is paramount for better performance.

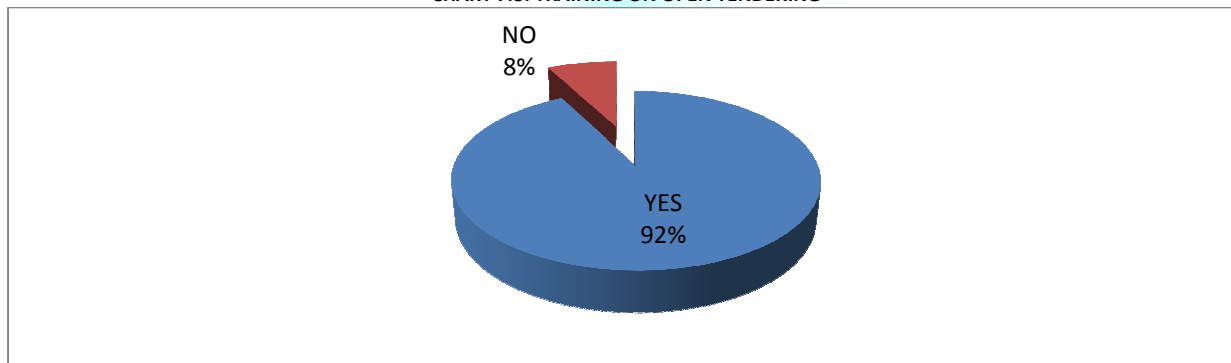
TABLE 7.3: CONVERSANCE WITH THE APPLICATION OF OPEN TENDERING

Response	Frequency	Percentage
Yes	40	100
No	0	0
Total	40	100

Source: Research Data (2013)

7.3.2: Training on Open Tendering

Despite having knowledge of open tendering, respondents views were solicited for in gathering whether additional training of procurement was undertaken or not. Of the respondents, 37(92.5%) had been trained, while 3(7.5%) stated to have never been trained on open tendering process. Certainly the large majority are able to act on the procurement method. The little percentage of un-trained staff may be new in which case need training to enable them carry out the process efficiently.

CHART 7.3: TRAINING ON OPEN TENDERING

Source: Research Data (2013)

7.3.3 Strategic Organizational Performance and Open Tendering

Information was sought on respondents' views on the strategic performance of the firm. Respondents strongly agree that organizational performance is directly related to the application of open tendering. To illustrate the same, bad orders of materials would lead to organization losing important customers and eventually affect the organization profit margins. With a mean of 4.8750, there is strong agreement as supported by the Likert scale. There is a slight deviation of 0.33493 from the mean and the SSPS data is negatively skewed as shown by -2.357. Therefore organizational performance is directly related to open tendering.

TABLE 7.4: ORGANISATIONAL STRATEGIC PERFORMANCE AND OPEN TENDERING

Organizational performance	Frequency	Percentage	Mean	SD	Skewness
Agree	5	12.5	4.8750	0.33493	-2.357
Strongly agree	35	87.5			
Total	40	100			

Source: Research Data (2013)

8.0 FINDINGS**8.1 SUMMARY**

From the analysis and data collected, disparity pointed out the case for lack of equal gender empowerment in top, middle and lower level cadres in matters pertaining to procurement. Management need to step up strategic efforts in ensuring equitable performance. Manpower and profit performance is often subject to uncontrollable external factors. The power industry is oft volatile.

9.0 RECOMMENDATIONS

- KPLC is operating in a virtual monopolistic market. It is therefore important for competitive players to be allowed to contribute their efforts in the market.
- Training is crucial. Employees need to be imparted with continuous training to improve performance.
- Strategic plans reveal need to eradicate bureaucratic tendencies from procurement process.

10.0 CONCLUSION

From the study the researcher concludes that organisational performance seems insofar as open procurement is concerned, to be clouded under hidden guise of corruption, loot and plunder. To tackle this, hard decisions will need to be made in reigning in officers engaged in such vices

11.0 LIMITATIONS

The following limitations were faced during the study.

1. The study was limited to just one institution due to time constraints.
2. Confidentiality was a concern as some of the respondents chose to withhold some information deemed for the organization only.

12.0 SCOPE FOR FURTHER RESEARCH

There is need to capture all sectors of the economy especially the private sector which are the economic drivers of this country.

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APPENDIX

QUESTIONNAIRE

This questionnaire has been set in relation to the objectives of the study. All the questions relate to the process of open tendering and how it influences organizational performance. Kindly read the questions carefully and answer them as honestly as possible by ticking (✓), rating, specifying or writing the correct answers precisely on the spaces provided.

PART 1: GENERAL INFORMATION

1. Gender
 - a) Male
 - b). Female
2. What is the name of organization? _____
3. In which department do you work? _____
4. What's your designation? _____
5. How long have you worked in this company? _____
6. What is your academic qualification?
 - a) Certificate
 - b). Diploma
 - c). Graduate
 - d). Post graduate
 - f). other (specify) _____

PART 2: ROLE OF MANAGEMENT IN IMPLEMENTING OPEN TENDERING

Does your Company apply the process of open tendering?

- Yes _____ No _____
1. If YES, for how long? _____
 2. Who has been responsible for the implementation of open tendering?
 - a).Management
 - b).Employees
 - c).Stakeholders
 3. Did that process of implementation receive any support from the management?

Yes _____ No _____
 4. If YES, specify the form of support _____
 5. What efforts does your management execute to support the application of open tendering? (specify) _____
 6. What improvement mechanisms does your management put in place to enhance the application of open tendering?(specify) _____
 7. In your opinion how do you rate the improvement mechanisms of your managements towards the application of open tendering?
 - a). Excellent
 - a b).Very Good
 - c).Good
 - d). Fair
 - e).Poor
 8. Kindly read the following statements relating to the role of management on the application of open tendering and show the degree to which you agree or disagree by ticking where appropriate. Please note that the numbers indicated therein in the table represent your level of agreement ranging as follows:
 - a). Strongly disagree-1
 - b).Disagree-2
 - c).Moderately agree-3
 - d). Agree-4
 - e).Strongly agree-5

No	Statement	1	2	3	4	5
1	I think without management's commitment the application of open tendering impossible.					
2	It is the responsibility of management to allocate resources required for the application of open tendering.					
3	The management solely controls open tendering					
4	I think it is the responsibility of management to identify changes in open tendering and implement remedial mechanisms in order to remain relevant.					
5	The management must ensure that employees are able to apply open tendering.					

9. How do you rate the role of management in the application of open tendering?
 - a) Very important
 - b) Important
 - c) Moderately important
 - d) Less important
 - e) Not important

PART 3: IMPORTANCE OF OPEN TENDERING IN ORGANIZATIONAL PERFORMANCE

10. Are you conversant with the application of open tendering?

Yes _____ No _____
11. If YES, how did you acquire the knowledge you have about the application of open tendering? (specify) _____
12. (i). Have you ever been trained on the application of open tendering?

Yes _____ No _____
- (ii). who organized the training?
 - a). Management
 - b). Government
 - c).Stakeholders
- b). any other (specify) _____

(iii). How often are you trained on the application of open tendering?

- a) Very often
- b) Often
- c) Less often
- d) Not at all

13. Briefly specify how knowledge on the application of open tendering is sustained in your company _____

14. Kindly read the following statements relating to the importance of open tendering and show the extent to which you agree or disagree by ticking where appropriate. Kindly note that the numbers indicated below represent the level to which you agree or disagree.

- a). Strongly disagree-1 b). Disagree-2 c). Moderately agree-3 d). Agree-4 e). Strongly agree-5

No	Statement	1	2	3	4	5
1	I think without knowledge the application of open tendering is impossible.					
2	Open tendering is dynamic hence the need to continuously train the employee.					
3	Organizational performance is directly proportional to application of open tendering.					
4	I think in order for good results of open tendering one must be encouraged.					
5	Application of open tendering requires management support.					

15. How do you rate the importance of open tendering in organizational performance?

- a) Very important
- b) Important
- c) Moderately important
- d) Less important
- e) Not important

PART 4: CHALLENGES FACED BY MANAGEMENT IN IMPLEMENTING OPEN TENDERING

16. Are you conversant with the role of management in implementing open tendering?

Yes No

17. If YES, expound _____

18. Did the process of implementation receive any support from top management?

Yes No

19. If YES, specify the form of support _____

20. What effort does the top management execute to support application of open tendering? Specify _____

21. In your opinion how do you rate the improvement mechanisms of your top management towards open tendering?

- a). Excellent b) Very Good c). Good d). Fair e) Poor

22. What do you understand by collusion of contractors? Please expound _____

23. In your opinion, are the contractors colluding to influence the outcome of the process of open tendering?

Yes No

24. If YES, give an explanation _____

PART 5: LIMITATIONS OF OPEN TENDERING IN PROCUREMENT

25. Does your organization use open tendering in procurement?

Yes No

26. If YES, indicate the type of materials?

- a) Stationeries
- b) Spares parts and tools
- c) Line building and construction

27. In your opinion how do you rate the effectiveness of open tendering in procurement?

- a). Excellent b). Very Good c). Good d). Fair e). Poor

28. Please, explain your opinion _____

Thank you for your invaluable information and co-operation.

A TEXT READING SYSTEM FOR THE VISUALLY DISABLED

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ABSTRACT

There are about 45 million blind people and 135 million visually impaired people worldwide. Disability of visual text reading has a huge impact on the quality of life for visually disabled people. Although there have been several devices designed for helping visually disabled to see objects using an alternating sense such as sound and touch, the development of text reading device is still at an early stage. Existing systems for text recognition are typically limited either by explicitly relying on specific shapes or color masks or by requiring user assistance or may be of high cost. Therefore we need a low cost system that will be able to automatically locate and read the text aloud to visually impaired persons. The proposed system continuously captures images, locates textual characters and extracts contents within, and converts it into speech and reads it aloud to the user. The system consists of a wearable camera, a computing device and a headphone. The framework has two main parts: image to text conversion and text to voice conversion.

KEYWORDS

text reading system, visually disabled people.

1. INTRODUCTION

Reading challenges can affect people who are visually impaired, those with learning disabilities or low literacy skills, as well as those who have difficulty in holding books or documents. These individuals may benefit from the use of various reading technologies and strategies. One solution is to use a reading system that uses optical character recognition technology to make an electronic copy of a document and then use text to speech technology to read the information to the user.

There are three essential elements for text reading technology. They are scanning, recognition and reading text. Initially a printed document is scanned by a camera. OCR then converts images into recognized characters. And then speaks out the recognized text. Optical Character Recognition (OCR) converts the pixel representation of a letter obtained by scanning a text or a document into its equivalent character representation. OCR has been in development for almost 80 years. Modern version of OCR appeared in the middle of 1940's, with the development of digital computers. Since then several character recognition systems has been proposed. First patent for an OCR machine was filed by a German named Gustav Tauschek in 1929. There are varieties of software based solutions available for OCR. However there is little work done in the area of hardware implementation of OCR. A text-to-speech system converts normal language text into speech. Text to speech conversion systems have an enormous range of applications. Their first real use was in reading systems for the blind, where a system would read some text from a book and convert it into speech.

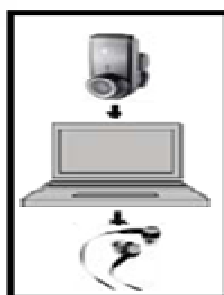
Automatic text recognition from images has recently received a growing interest because of its use in image retrieval, video indexing, mobile robotics, and intelligent transport systems, to name but a few key applications. In particular, methods have been developed to read the text encountered in natural scenes, with the aim to assist the visually impaired persons [1] or to detect the text within road signs from natural scene video. However, the authors generally admit that current results are not enough for practical use. Other approaches of interest include a camera-equipped cell phone based way finding system as well as a wearable camera system that automatically finds and track text regions in surrounding scenes [2]. A lot of related research work is now focusing on multi-purpose reading assistants.

Character recognition for visually disabled is one of the most difficult tasks. Some robots with character recognition capability have been proposed earlier. A text capturing robot equipped with an active camera has been presented by Makoto Tanaka and Hideaki Goto [3]. Their robot can find and track multiple text regions. Text region recognition can be done using a camera. But in robot application the camera movement is constrained by simple and steady robot movements. A portable camera can be used which can be moved freely. So a robust text tracking method is needed to develop a text capturing device.

First successful prototype of reading machine was developed at Haskin Laboratories in 1970's. These large prototypes sent the output from a fixed font OCR to the input of speech synthesis algorithms developed at Haskin Laboratories. First commercial reading machine for the visually impaired was marketed by Ray Kurzweil. Available text reading systems for visually impaired persons are Cicero text reader, i-scan, Kurzweil 1000; Open Book, Ovation, Scan N Talk, VERA etc. All these systems are highly expensive and cost more than rupees 2 lakhs. By the end of 2009 Intel announced a Linux-based text reading device with optical character recognition and text-to speech technology. But the cost of the system is nearly rupees eighty thousand. Another text reader has also been introduced in 2010, Optelec Clear Reader+ Advanced, a reading assistant to scan, view, magnify, save and/or listen to any printed text in one portable solution. The cost of the system is above one lakh rupees. These two latest text reading systems for visually disabled are of high cost [7] [8].

In this paper a text reading device with optical character recognition and text to speech technology designed for visually impaired is presented. The device is equipped with a camera for a snapshot of the text which is then made audible to the user using a headphone. The rest of this paper is organized as follows. Section 2 presents an overview of the text reading system, in terms of requirements, architecture, and implementation. Section 3 concludes the paper with comments on current and future work, followed by an abridged list of major references.

FIG.1. SYSTEM SETUP

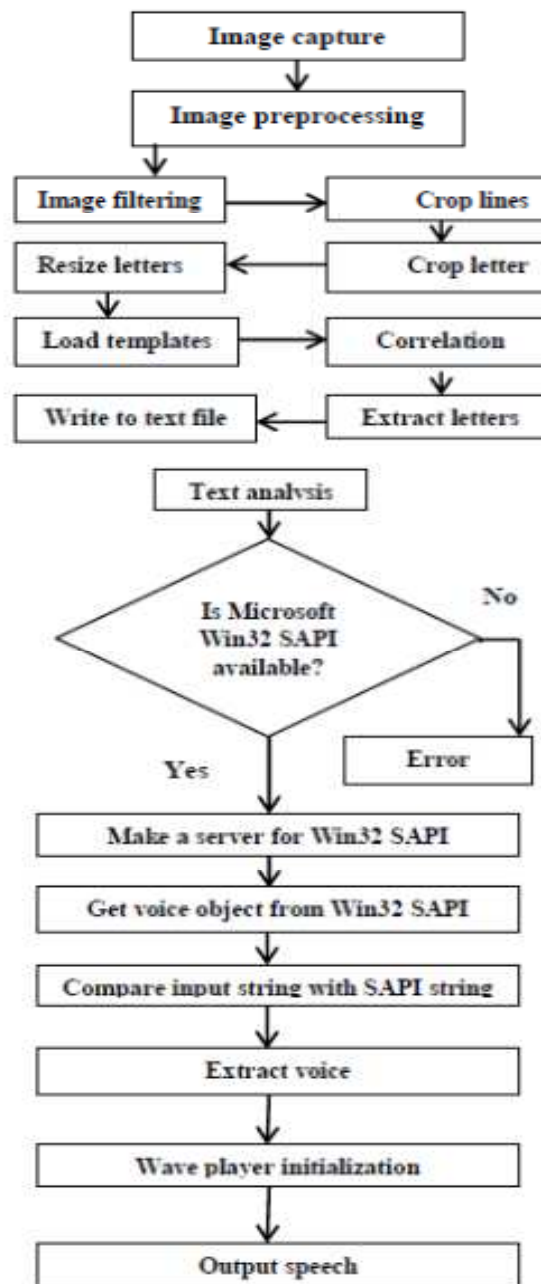


2. DESIGN AND IMPLEMENTATION

2.1. SYSTEM ARCHITECTURE

The system consists of a portable camera, a computing device and a headphone similar to that shown in Fig 1. Images can be captured using the camera. For better results we can use a camera with zooming and auto focus capability. System then attempts to detect text regions in the image and then retains text areas discarding the others. Then image filtering is done which comprises of cropping the text regions detected. Next, character recognition consists of converting the processed text image into characters. And finally the selected text is converted into a speech stream, which is then spoken to the user [4].

FIG.2. PROCESS FLOWCHART



2.2. SYSTEM DESIGN

Operational stages of the system can be summarized as: 1) Image capture 2) Image preprocessing 3) Image filtering 4) Character recognition 5) Text to speech conversion [4]. Process flowchart is shown in Fig.2.

Image captured by camera is stored in a file in a specified format. Application software used is MATLAB. After image capture we have to perform image preprocessing, which comprises of image format conversions, thresholding etc. Then perform image filtering. Image filtering comprises of cropping the image. Then character recognition. Character recognition comprises of cropping each line, cropping each letter, performing correlation and writing to a text file [5]. Before character recognition create a file containing the model templates of all alphabets, numbers and special characters. First crop each line and then crop every letter of each line of the text document. After cropping each letter perform correlation of cropped letter with already stored model of template. As a result of correlation we get the model template which is most similar to the cropped letter. The process is repeated for entire cropped letters [6]. After performing correlation of all cropped letters write the recognized letters to a text file and then convert this text to speech. Microsoft Win 32 SAPI library has been used to build speech enabled applications, which retrieve the voice and audio output information available for computer. This library allows selecting the voice and audio device one would like to use.

FIG.3. TEXT READING SYSTEM



2.3. SYSTEM IMPLEMENTATION

The current system prototype as shown in Fig.3 consists of a 30-megapixel Tech-Com web camera, interfaced via USB 2.0 to a Lenovo laptop computer with 2.16GHz Intel Pentium Dual Core CPU and a headphone. Actual deployment systems ought to use a smaller notebook. Captured images have a resolution of 640x480. Since this system is for visually disabled persons a holder is used to keep the text documents in position.

3. RESULTS AND CONCLUSION

Image into text and then that text into speech is converted using MATLAB. For image to text conversion firstly image is converted into gray image then black and white image and then it is converted into text by MATLAB. Microsoft Win 32 SAPI library has been used to produce speech. By this approach we can read text from a document and generate synthesized speech through a computer's speakers. The program has the flexibility to be modified. This approach can be used in part as well. If we want only image to text conversion then it can be possible and if we want only text to speech conversion then it is possible easily. People with poor vision or visual dyslexia or totally blindness can use this approach for reading the documents and books easily. People with speech loss or totally dumb person can utilize this approach to turn typed words into vocalization. Since the system uses portable camera it can also be used by visually disabled persons for navigating within new or unfamiliar environments by locating signs and reading their content out loud. System can also be used to make information browsing for people who do not have the ability to read or write. The system integrates both proven algorithms and novel techniques for image processing text detection; character recognition and speech synthesis and good results have been achieved. Future work will need to address image processing issues such as blurred pictures or dim lighting as well as with various types of fonts.

4. REFERENCES

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