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IDENTIFICATION OF KEY MOTIVATIONAL FACTORS; AN IMPLEMENTATION OF MASLOW'S HIERARCHY OF NEEDS IN PAKISTANI ORGANIZATIONS

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ABSTRACT

Motivation is vital for individuals to boost their moral satisfaction and performance level at workplace. This study aims to identify the key moving factors related to work environment using Maslow's Hierarchy of Needs pyramid and seek motivational factors those influence an employee to excel. The purpose of this paper is to seek implementation of hierarchy of needs theory in Pakistani organizations to identify levels of satisfaction of Pakistani employees. The study explored the efficacy of five-stage humanist model of Maslow's Hierarchy of Needs to predict current and future state of human need system in developing countries environment such as Pakistan. Maslow's motivation theory offers profound implications for society to develop self-actualized individuals. To Maslow, both intrinsic and extrinsic motivation factors contribute to motivate employees to excel in performance and improve their professional behavior. There is a great scope of development in Maslow's theory as the concepts are constantly changing to conduct research studies on positive psychology of employees in different parts of world. This theoretic research study is limited to Abraham Maslow's Hierarchy of Needs motivational model and two motivational theories IM & EM. The study has far reaching implications for future exploration in human needs and social psychology. Diagnosing the needs and expectations of employees has been less researched area in Pakistani organizations. This study is unique to find key motivational factors those prop up employees to generate remarkable performance output.

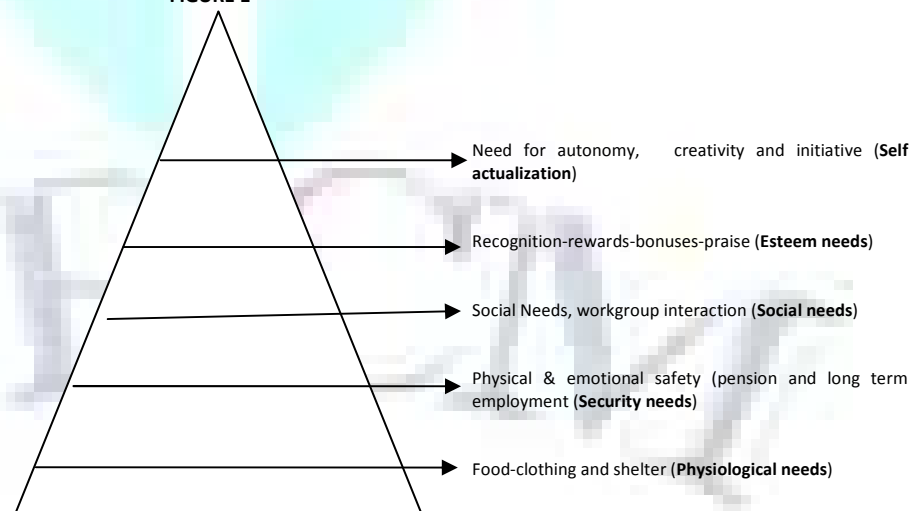
KEYWORDS

Maslow, motivation, employee needs, satisfaction, performance output.

INTRODUCTION

Human nature is complex. His needs are interchangeable from culture to culture. If he does not find a way to satiate one need, he drifts towards the other (Douglas McGregor, 1960). Human need system is problematic throughout the world organizations (Kae H.Chung,1969). This is a common issue of humanity. Understanding employees' needs is a key ingredient of people management. A need structure comes into being as a result thereof and incentives are applied to utilize employees' productive energy on the basis of need system. It is a multifaceted phenomenon. If this need structure is run with its fullest operational input, future needs can be predicted (Kae H.Chung,1969). Main objective of conducting current research study is to examine the current state of human need system in developing societies and predict the future state. Eminent American psychologist Abraham Maslow presented the hierarchy of needs theory. To this theory, humans have a series of ascending needs. Whilst they remain unsatisfied they act as motivators, one satisfied; the higher need comes into play.

FIGURE 1



FIRST VERSION OF MASLOW'S HIERARCHY OF NEEDS PYRAMID (1943, 1954)

The needs he identified are: Basic needs are **Physiological needs** these are concerned with survival and health and the need for food, sleep, shelter and sex. **Security needs** include physical safety and emotional and economic security. **Social needs** are liking and belonging needs pertaining to a group with whom we live and work. **Esteem needs** include recognition, rewards, bonuses and praise Recognition needs arise when one has made a contribution and he needs acknowledgement and praise for his achievements. **Self actualization** needs pertain to the emphasis on the autonomy, importance of freedom and individual self control. It includes achievements, innovation, risk taking, change and learning.

ANNOTATIONS ON MASLOW'S HIERARCHY OF NEEDS

The Maslow model portrays a picture of human needs relating to recognition, gratification and deprivation. It deals with different categories of human needs. Question is whether the model under study has universality and has the ability to operationalize in different cultural and national context. Various empirical and theoretical research studies added new levels in this hierarchy and advanced the discussion and on cultural relativity and universalism. The directionality of this model implied its affectivity and validity throughout the model. Various researchers have offered modification in need hierarchy theory and restructured the need categories according to demands of different human societies and organizations but they have not declined the inner concepts proposed by Maslow but support the concept of self-actualization (to provide a conducive workplace environment that enables employees to fulfill their own unique potential and self credence (self-actualization), the existence of lower and higher needs and gratification-deprivation as motivators of human behavior.

THE POSITIVE THEORY OF HUMAN MOTIVATION

Maslow (1943, 1954,1970) proposed a positive theory of human motivation based on his studies of successful people including his own mentors. Maslow rejected the previous studies based on dysfunctional and unsuccessful people. He criticized traditional psychological methods of developing theories based on studies of deviant people, and he developed a theory of behavior motivation based on the concept of self-actualization. Prior to Maslow's ground breaking work in the area of motivation, social scientists generally focused on distinct factors as biology, achievement, or power to explain and attempt to predict human behavior and its primary motivations (Huitt, 2001).

The need categories proposed by Maslow are the reflection of the development of his thought. His childhood and adulthood are explored with regard to physiological, safety, love and self-actualization needs. This analysis focuses on Maslow's frustration in the four basic needs during his childhood, in contrast to his adult life when his needs seem to have been well satisfied. Maslow was able to engage in self-actualization goals and behaviors in adulthood because his basic needs were satiated and these were no longer the primary motivators for his behavior. This particular life course trajectory fits well with the model that Maslow proposed, which is clearly not coincidental: Maslow's phenomenological experiences contributed to his theoretical creations, and his own theories have profound salience in the contextualization of Maslow's personal development. Sumrow (2003) regarded Maslow's theory motivating and practical in the organization. On the basis of it, need hierarchy of employees of an organization can be determined. To his findings, there is a need to establish a motivating work atmosphere that would fetch satisfaction to employees and fulfill the higher needs. He stresses upon the managers and his team members to employ Maslow's theory principles to identify personnel needs relating to a specific organizational environment.

AMENDMENT IN MASLOW'S HIERARCHY OF NEEDS MODEL

A research study offered a rectified version of Maslow's Hierarchy of Needs. The study started from the earliest version of Maslow's Hierarchy of Needs. This version had five motivational levels. In 2nd version, he added self transcendence as the six motivational levels in Hierarchy of Needs pyramid.

Motivation levels	Description of persons at this level
Self-transcendence	Seeks to further a cause beyond the self and to experience a communion beyond the boundaries of the self through peak experience.
Self-actualization	Seeks fulfillment of personal potential.
Esteem needs	Seeks esteem through recognition or achievement.
Belongingness and love needs	Seeks affiliation with a group.
Safety needs	Seeks security through order and law.
Physiological (survival) needs	Seeks to obtain the basic necessities of life.

(Koltko-Rivera, M.E. 1998)

The study of above table helps to disseminate the spirit of Maslow's thought which one of the core objectives of this study is.

ANNOTATIONS ON MASLOW'S EXPANSION OF THOUGHT FROM ORIGINAL TEXT

In 60's, Maslow enhanced his previous stance when he found a relationship between self actualization and self transcendence. Self actualization he found an unaccomplished fact so does not represent human need functioning mechanism (Maslow, A. H., 1969a). At one stage Maslow remarked that

"I told him i.e., Murray of my new discovery of the difference between Eisenhower-Truman SA and the health-beyond-health of the B-person. The B-person may be more symptom-loaded and have more value pathology² than the symptom-free "healthies." Maybe one is symptom-free only by virtue of not knowing or caring about the B-realm, never having experienced the B-realm in the highest peaks (now that must be changed also; must separate Eisenhower-Truman-type peaks from those with full cognition of the B-realm). Having value-pathology symptoms is "higher" (& B-healthier?) than being symptom-free. One can get fixated at Eisenhower-Truman SA level of health and non illness & then be perfectly content, happy, without even being aware of the B-realm in an experiential way. . . . If one tries to transcend healthy SA of the Eisenhower-Truman level, then troubles (of the highest type) begin. Value pathologies can be a very high achievement. And one can respect profoundly those in whom one can see—through the symptoms of frustrated idealism—the beautiful B-realm that they are reaching for and may therefore get to. The ones who are struggling & reaching upward really have a better prognosis than the ones who rest perfectly content at the SA level. (I've really been touting value pathology & singing its praises!) (Maslow, 1979, Vol. 2, pp. 798–799; first paragraph also in Maslow, 1982, p. 206)". The above text reveals that Maslow simply drew line between self actualized and healthy people. Prior to this, he did not experience this difference. He coined the term, "being cognition" which means mystical and above self experience thought. We call it "Sufism" in our mystic culture. The people whom Maslow regarded 'self actualized' are satisfied but within the continuum of this physical world whilst there is another class of B-cognized people who think beyond this and work selflessly for humanity and its welfare. From our national current history, names of Abdul Sattar Edie, Ansaar Burni like social workers bear nobility of international stature. From negative side, suicide bombers perceive the things in another way and display a spiritual ailment spirit termed by Maslow as "meta-pathologies". He later improved his thought and gave another term, "transpersonal" to such personalities who think beyond their self benefits (Koltko-Riyera, 1998). A researcher Stark comments that monotheistic religion has proved as a viable source of energy to make a desired progress in the field of social sciences (Stark, 2003). Maslow pointed out that various persons surpass the limit of self-actualization which is a leading motivation stage. These persons find a place in Maslow's revised hierarchy of motivation above self-actualization toward self-transcendence stage that needs strong motive. This shows that such persons attain mystical experiences above the normal human capacity and get to the stage of extraordinary humans who rise to serve the humanity beyond self (unpublished paper, "the good of other people (Maslow, 1996, p. 31). At one stage, he remarked that

"I have recently found it more and more useful to differentiate between two kinds for better degree of self-actualizing people, those who were clearly healthy, but with little or no experience of transcendence, and those in whom transcendent experiencing was important and even central. It is unfortunate that I can no long be theoretically neat at this level. I find no only self actualizing persons who transcend, but also non healthy people, non self-actualizers who have important transcendent experiences. It seems to me that I have found some degree of transcendence in many people other than self-actualizing ones (Maslow, 1969/1993)"

The above original excerpt from Maslow's "Theory Z paper" reveals that Maslow was not clear about the state of motivational levels between self-actualized and self-transcendence. This gives the future reader that this discussion on healthy and self actualized people will continue in future. Five needs pointed out by Maslow relate to unhealthy people. To fulfill these needs, healthy effort and psychological edge is required. He studied those who had attained self actualized motivational level and they impressed Maslow. Maslow experienced human main needs and desires those led him to build a Hierarchy of needs (Hoffman, 1999). There is a plenty of scope to bridge the gap between personality and social psychological theory, and religious and spiritual phenomena. Insertion of the

self-transcendence step in Maslow's motivational hierarchy narrows the bridge. It invited views from all over the world and has given new dimensions of human personality and life (Emmons, 1999).

MOTIVATION AND BEHAVIOR

Maslow's work was philosophical in nature. Several meanings could be derived from his work (Dye, K. Mills., et al, 2004). Maslow's work promoted to the school of social psychology. Later he presented his theory of motivation. The customary description of Maslow's hierarchy of Needs is persistent over the years (Mark E.Kollok Rivera, 2006). A study discovered that true version of Maslow's hierarchy of Needs had description of self-transcendence and opportunities for theory and research purpose. The addition in existing hierarchy addresses knotty socioeconomic issues, shared human thought and beliefs. In-depth study of Maslow's theory leads to new dimensions of mystical sublime of pragmatism (Michel, W. 1999).

There is a great challenge before a manager if he understands and accepts Maslow's theory is how to recognize what motivates his subordinates. The best guide is their behavior. He needs to persuade young employees to work seniors and instead of criticizing give them direct encouragement for high performance (Richard Branson, 2010). This kind of management support helps him to meet the self esteem needs and minimizes his inferiority complex, boosts employees' morale and confidence to serve as fulcrum of motivation.



Maslow, A. H. (1969a, "The Farther Reaches of Human Nature")

For the last six decades, this theory has been under immense analysis from different national contexts. Maslow researched that humans cannot remain dissatisfied from needs of pleasure or displeasure. His motivation lies in the achievement associated with his desired needs. One is hungry, bread will satisfy his need. The other one is in financial need; financial aid will satisfy his needs. Arrangement in a hierarchy from physiological, to safety, to social, to esteem, to self-actualization is undoubtedly an initiative that is workable. According to Maslow's theory, Human behavior find motivation through satisfaction or frustration of needs developed right from gaining maturity to physiological (physical), to safety, to social, to esteem, to self-actualization stages. Maslow presented his motivation thought using a psychobiography orientation in the context of ecological environment around him. Maslow uncovered secrets of human psychology and phenomenon of human needs development. About the two higher levels named as self-actualization and spiritual needs. These needs come from man's natural and intuitive pleasure to take advantage of their skills to develop into better and better. These needs are present in varying forms with individuals. Here Maslow states in his essay, "people who have reached a state of self-actualization often enter a state of transcendence, in which they become aware not only of their personal potential, but also of the full potential of the human species" (Maslow, A. H. (1969a, "The Farther Reaches of Human Nature"). In the hierarchy of needs, the higher spiritual needs are at the top (Maslow, 1971). The higher need stays on the lower need. Maslow discovered a hierarchy of higher and lower values more close to inbuilt human nature in ladder steps from lower to higher needs (Maslow, 1968). Maslow gave special focus on self-actualization need of humans. According to Maslow, humans strive for health, identification, autonomy and desire for excellence.

SPIRITUAL NEEDS

Word "Spiritual" refers to "the experience of being related to or in touch with an "other" that transcends one's individual sense of self and gives meaning to one's life at a deeper than intellectual level" (Jaffe, L.W. 1990). It has complex and in depth gamut of human internal experiences with great objectivity. From an external lens, this phenomena may seem subjective. In a spiritual trance, an individual experiences one's self and happens to think beyond 'self'. It is difficult to give an objective term to this experience "other" from religious glossary of terms. By tradition spirit and soul are considered mystical and supernatural. Maslow, (1974) views spiritual phenomena in psychological terms for open discourse among intellectuals. A research indicated that all humans have inborn processes of behavior, emotion and imagination. As people interact the other people, these natural processes give meaning to this interactions. These are the "other" that people encounter in spiritual experiences. People experience in depth knowledge and understanding and communication about 'self' spiritual feelings and get good judgment of society but they should not be little other outlook (Jaffe, L.W. 1990)

DIMENSIONS OF MOTIVATION IN ORGANIZATIONS

Term motivation reflects both the physical and psychological side of human actions and a peculiar behavior of one individual towards the other. In this backdrop, motivation is a vibrant course of action that needs a balance between communication channels, structure and rewards system of organizations (J.D. Chiffre and J. Teboul, 1990). To motivate employees is not an easy task for managers. Many find it hard to implement. People want motivation from an organization. Managers are required to gear up themselves and the others to get and sustain an optimum level of performance (Lupuleac S., 2009). In our developing country, analysis of need hierarchy generates needs and expectation through assurance of a certain income, job safety, public relations and sense of esteem, self actualized approach, fulfillment of spiritual needs, .intrinsic and extrinsic motivation make up organizational behavior of an organization. (Nicolescu O., Verboncu I., 2002).

INTRINSIC MOTIVATION (IM)

In case of intrinsic motivation, a worker gets reward directly in lieu of task performed by him. Performance of duties by showing interest and competence grants him sense of achievement and accomplishments are intrinsic form of motivational factors(Nicolescu O., Verboncu I., 2002).

EXTRINSIC MOTIVATION (EM)

This kind of motivation generates from concrete and meaningful rewards including external conditions relating to job and its environment(Nicolescu O., Verboncu I., 2002). A study identified that above average salary, attractive internal promotion system, training opportunities, fair looking rewards and incentive

system within the organization and yearly bonuses were found significant factors motivating employees in the organization (Sumrow,2003). Public organizations of Pakistan do not exhibit these factors within their domain which results in low level of job satisfaction and un-fulfillment of higher need propounded by Maslow.

OUTCOME OF LITERATURE REVIEW

Maslow's theory is interesting and still valid. It was created in the context of US culture and middle class background. It focuses on human needs and motivation to attain these needs for internal satisfaction of human beings. The motivation process is indispensable to attain high performance and realize organizational targets. Motivation is like a soul to generate employee's efficiency and ultimately organizational performance. IM is seen as a state of psychological rewards that arises on completion of a task by a worker. It is purely internal as compared to EM whose indicators are pay, promotion, job benefits, working conditions, job security and management support (Nicolescu O., Verboncu I., 2002). In essence, motivation is the building block of producing things.

CONCLUSION

The Maslow theory identifies healthy and self actualized people using hierarchy of needs pyramid leading to employee fulfillment of needs and satisfaction. Pakistan job market needs to develop self actualized people to attaining high performance. This theoretic study concludes that IM & EM are key moving factors those need to be researched through empirical evidence in Pakistani organizational culture. Maslow's theory should be seen in the context of developing countries environment where employees' needs remain unfulfilled. This deficiency in un-fulfillment of needs leads to develop different strata and classes in society. A sense of fulfillment and deprivation co-exist in human society. There is a need to understand the fulfillment of needs and expectations of employees. This gap was detected that needs to be addressed through empirical research. Future research may uncover new dimensions of human psychology and social behavior. Literature review leads us to conclude that role of monotheistic religion i.e. Islam may assume high importance in future. We being followers of monotheistic religion are expected to be more dynamic in thought and action. Our managers must focus needs of our employees and build our indigenous human need system. Using this system, we will be able to differentiate between high and low esteemed, self-actualized and self transcendent personalities to exhibit remarkable performance at our workplace. This is a noteworthy fact that Maslow was not believer and he developed his value system in US cultural context. Humans have infinite capacity to learn but finite capacity to hold the data at one time. One can get more and more new knowledge through intuition. Intuition is a great gift of Almighty without which Maslow was not able to formulate human need hierarchy. Fulfillment of spiritual need at workplace will reward the employee with a great power of intuition to serve the nation. These acts will minimis' the corruptive intentions at workplace.

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PROFITABILITY OF POTATO BASED CROPPING PATTERNS COMPARED TO RICE BASED CROPPING PATTERNS IN MYMENSINGH REGION

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ABSTRACT

The study was carried out to evaluate the performance of different cropping patterns for identification of the most profitable cropping pattern during April to May; 2010. The area selected for the study covered four villages. Two villages from Shakhipur upazila of Tangail district and two villages from Bhaluka upazila of Mymensingh district were purposively selected. Sixty (60) farmers were selected randomly for this study. There were four major cropping patterns selected in the study area, namely, Jute-Aman rice-Wheat, Aus rice-Potato-Fallow, Jute-Potato-Fallow and Aus rice-Aman rice-Wheat. It was found that per hectare total human labor used in cultivation of aforesaid patterns were 215, 291, 254 and 253 respectively. Farmers responded to have applied the dose of 469.34, 425.26, 388.21 and 506.39 kg Urea, 318.76, 283.51, 214.83 and 387.44 kg TSP, and 292.32, 351.16, 316.58 and 326.90 kg MP per hectare for the selected patterns, respectively. In terms of economic viability, the Aus rice-Potato-Fallow pattern appeared to have the high potential as replacement for the farmers' other existing cropping patterns having the highest net return of Tk. 57143.82 per hectare. Based on findings Aus rice-Potato-Fallow pattern might be recommended to the farmers as the economically pattern.

KEYWORDS

Profitability, Economic Viability, Cropping Pattern, Net Return, Competitive Crops.

INTRODUCTION

Bangladesh is a densely populated agrarian country where agriculture contributes 23.50 percent to the Gross Domestic Product. The total cropped area is estimated to be 13.742 million hectares with an average cropping intensity of about 175.97 percent (BBS, 2008). 8.44 million hectares are cultivable; 2.599 million hectares are utilized for forest of the total cropped area. Homesteads, rivers, tidal creeks, lakes, ponds, and roads cover the rest. Besides, augmentation of new roads and highways, dwelling house, industrialization and land fragmentation, etc. is causing the cropland reduced day by day. So, a little scope is left to increase agricultural output by putting new land under cultivation. Adopting improved cropping patterns, improved management and cultural practices can attain increase in crop output. Rice, the staple food of the people of Bangladesh, occupies about 72.24 percent of the total cropped area and remaining 27.76 percent of total cropped area (i.e. 3.58 percent Jute, 2.11 percent Wheat and 2.23 percent Potato) is devoted to other non-rice crops (BBS, 2008).

Potato (*Solanum tuberosum*) is the third largest food crop in Bangladesh next to rice and wheat. It is the leading vegetable crop in the world and at present people of at least 40 countries eats potato as their also staple food (Islam, 1987 and Huq *et al.*, 2007). Potato production constitutes 23 percent of total world production of potato, rice and wheat (FAO, 1987 and Roy, 1993). It is very important crop due to its higher yield, diversified use, low risk involvement, excellent potentiality to grow in the soil and agro-climatic conditions of Bangladesh. Expansion of potato hectareage depends on its economic viability compared to its competitive crops. Most of the farmers' cropping patterns need modification, in particular, in terms of improved varieties, optimum planting schedules, input use and management of individual crops in the patterns. There are some economic studies on cost and returns of potato and some other crops, conducted individually. But little information is available on economic aspects of profitability of alternative cropping patterns. For this reason the present study is an attempt to the relative profitability of potato based cropping patterns compared to rice based cropping patterns in Mymensingh region.

OBJECTIVES OF THE STUDY

The specific objectives of the study are: i) to identify different cropping patterns practiced by the farmers; ii) to find out the extent of land resource and other inputs utilized for different patterns according to cropping; iii) to evaluate the performance of different cropping patterns for identification of the most profitable cropping pattern.

MATERIALS AND METHODS

The area selected for the study covered four villages. Two villages from Shakhipur upazila of Tangail district, namely Mucharia Pathar and Gajaria and two villages from Bhaluka upazila of Mymensingh district, namely, Batajore and Gilachala were purposively selected. 60(Sixty) farmers were selected randomly for this study. Before finalizing the questionnaire, it was pre-tested. After pre-testing, the schedule was changed, rearranged, improved and modified in the light of the practical experience gained from the pre-testing. The schedule was then finalized and questions were listed in logical sequence so that the farmers could answer easily. After preparing final schedule primary data were collected from the selected farmers by the author himself. Survey method was used to collect the data. The collected data were coded, tabulated and analyzed for achieving the ultimate objectives of the study. Mainly tabular method using average, percentages were followed to find out the various objectives of the study.

RESULTS AND DISCUSSION**A. SOCIO-ECONOMIC CHARACTERISTICS OF THE SAMPLE FARMERS****Family size and composition of the Sample Farmers**

In this study, a family has been considered as one which has a group of persons living together and taking their meals jointly from the same kitchen under the administration of the head of the family. The permanent hired labor was not included as a member of the family.

Table 1 show that the average family size of the selected beneficiaries stood at 4.8 members. The estimated family size was lower than the national average of 4.9 (BBS, 2010). The study reveals that the highest number of members (60.62 percent) belonged to the working age group, i.e. above 18 to 60 years, while 23.60 percent of the family members aged above 6 to 18 years. In the case of beneficiaries 50.69 percent members were male and 49.31 percent members were female.

TABLE 1: FAMILY COMPOSITION OF THE BENEFICIARIES ACCORDING TO AGE AND SEX

Type of sex	Age				Total	Average family size
	Up to 6 years	Above 6 to 18 years	Above 18 to 60 years	Above 60 years		
Male	4.86	10.75	31.25	3.82	50.69	4.90
Female	4.17	12.85	29.17	3.13	49.31	4.75
All	9.03	23.60	60.62	6.95	100	4.80

Source: Field survey, 2010

Farm size of the sample farmers

The farm size of a farmer was measured by using the following formula (Yang, 1965): Farm size = cultivated land + rented in + mortgaged in – (rented out + mortgaged out) + homestead. Based on farm size, in this study, farmers were classified into three categories ranging from 0.01 to 1.00, 1.01 to 3.00 and above 3.00 hectare. It was found that 14, 44 and 3 in percentage 23.34, 73.33 and 3.33, respondent farmers were belonged to the farm size 0.01 to 1.00, 1.01 to 3.00 and above 3.00 hectare (Table 2).

TABLE 2: FARM SIZE OF THE SAMPLE FARMERS

Farm size (hectare)	Number of respondent farmers	Percentage of respondent farmers
0.01 to 1.00	14	23.34
1.01 to 3.00	44	73.33
Above 3.00	2	3.33

Source: Field survey, 2010

B. MAJOR CROPPING PATTERNS AND AREA COVERAGE

There were four major cropping patterns identified in the study area namely Jute- Aman rice-Wheat, Aus rice-Potato-Fallow, Jute-Potato-Fallow, Aus rice-Aman rice-Wheat having an area of 45.20, 27.00, 26.70 and 45.40 ha, capturing 31.32, 18.71, 18.51 and 31.46 percent of the total area (Table 3). The above mentioned patterns will be abbreviated to P1, P2, P3 and P4 respectively, in the succeeding chapter of this report.

TABLE 3: AREA COVERED BY THE CROPPING PATTERNS PRACTICED BY THE RESPONDENT FARMERS

Cropping patterns	Gross area coverage(hectare)	Percentage of total gross area
Jute-Aman rice-Wheat (P1)	45.20	31.32
Aus rice-Potato- Fallow (P2)	27.00	18.71
Jute-Potato- Fallow (P3)	26.70	18.51
Aus rice-Aman rice-Wheat (P4)	45.40	31.46
Total	144.30	100.00

Source: Field survey, 2010

C. PROCEDURE FOR COMPUTATION OF COST AND RETURNS OF DIFFERENT CROPPING PATTERNS

In this section, methods of costing of various items used in producing different crops have been discussed in order to determine relative profitability of different cropping patterns. In calculating cost, both full cost and cash cost were considered. The cost items classified in calculating the total cost were as follows: cost of human labor, cost of animal labor, cost of seed/ seedling, cost of manure's, cost of chemical fertilizer, cost of insecticides, cost of irrigation, cost of tools and equipment, interest on operating capital and land rent.

Cost of human labor

One of the most important inputs used in crop production is human labor. In this study, human labor was classified into family labor and hired labor. Family labor included the farmer himself, the adult male and female as well as children of the farmer's family and the permanent labor appointed by him. The cost of hired labor was calculated at the average wage rate actually paid by the farmers. To standardize labor hours or man-days required for different operations, all the labor units were converted into man-equivalents. This was performed as: 1 adult male = 1.5 adult female = 2 children (Shiblee *et al.*, 2000). The family labor was priced at the rate as hired labor. In the study area, wage rate varied from Tk. 200-250 and average wage rate was Tk.200 per man-day for different crop cultivation. One man-day was equal to 8 hours of work. Labor wage was highest at the peak period such as land preparation, harvesting and lowest at the lean period. Total human labor used in cultivation of patterns P1, P2, P3 and P4 were 215.48, 291.40, 254.12 and 252.76 man-days per hectare of which 107.28, 102.04, 91.10 and 118.22 man-days were hired labor, respectively. Corresponding total cost incurred for human labor for aforementioned cropping patterns were Tk. 43072.95, Tk. 58280, Tk. 50824 and Tk. 50552 respectively (Table 4 & 5). The result indicated that the highest employment was created by the pattern P2 followed by the pattern P3. For the purpose of harvesting, carrying and thrashing/ washing and drying the highest labor use was found to be 77.16 man-days per hectare for the pattern P2 followed by 76.39 man-days for the pattern P3 and the lowest 71.24 man-days per hectare for the pattern P1 (Table 4). The human labor use for transplanting/ sowing were found to be 34.72, 64.00, 42.00 and 56.72 man-days, per hectare of which 21.16, 26.00, 15.50 and 31.66 were hired labor for the patterns P1, P2, P3, and P4, respectively and corresponding total costs were Tk.6944, Tk. 12800, Tk. 8400 and Tk. 11344, respectively (Table 4 & 5).

TABLE 4: OPERATION-WISE DISTRIBUTION OF HUMAN LABOR FOR PRODUCING DIFFERENT CROPPING PATTERNS ON FULL COST BASIS

Operations	Jute-Aman rice-Wheat (P1)		Aus rice-Potato- Fallow (P2)		Jute-Potato- Fallow (P3)		Aus rice-Aman rice-Wheat (P4)	
	Qty. (man-days/ha)	Tk./ha	Qty. (man-days/ha)	Tk./ha	Qty. (man-days/ha)	Tk./ha	Qty. (man-days/ha)	Tk./ha
Land preparation	25.05	4982.95	39.51	7902.00	34.31	6862.00	30.23	6046.00
Spading	12.51	2502.00	28.18	5636.00	22.78	4556.00	17.91	3582.00
Transplanting/ Sowing	34.72	6944.00	64.00	12800.00	42.00	8400.00	56.72	11344.00
Weeding	34.34	6868.00	28.35	5670.00	23.65	4730.00	39.04	7808.00
Application of fertilizer and manure	11.26	2252.00	17.77	3554.00	16.27	3254.00	12.76	2552.00
Application of insecticide	5.86	1172.00	6.07	1214.00	5.67	1134.00	6.26	1252.00
Application of irrigation	6.07	1214.00	12.04	2408.00	12.04	2408.00	6.07	1214.00
Harvesting, carrying and thrashing /washing and drying	71.24	14248.00	77.16	15432.00	76.39	15278.00	72.01	14402.00
Marketing	14.45	2890.00	18.32	3664.00	21.01	4202.00	11.76	2352.00
Total human labor	215.50	43072.95	291.40	58280.00	254.12	50824.00	252.76	50552.00

Source: Field survey, 2010.

TABLE 5: OPERATION-WISE DISTRIBUTION OF HUMAN LABOR FOR PRODUCING DIFFERENT CROPPING PATTERNS ON CASH COST BASIS

Operations	Jute-Aman rice-Wheat (P1)		Aus rice-Potato- Fallow (P2)		Jute-Potato- Fallow (P3)		Aus rice-Aman rice-Wheat (P4)	
	Qty. (man-days/ha)	Tk./ha	Qty. (man-days/ha)	Tk./ha	Qty. (man-days/ha)	Tk./ha	Qty. (man-days/ha)	Tk./ha
Land preparation	8.27	1654.00	11.71	2342.00	9.51	1902.00	10.47	2094.00
Spading	4.02	804.00	7.42	1484.00	4.22	844.00	7.22	1444.00
Transplanting/ Sowing	21.16	4232.00	26.00	5200.00	15.50	3100.00	31.66	6332.00
Weeding	19.57	3914.00	10.80	2160.00	13.10	2620.00	17.27	3454.00
Application of fertilizer and manure	-	-	3.57	714.00	2.37	474.00	1.20	240.00
Application of insecticide	-	-	-	-	-	-	-	-
Application of irrigation	3.57	714.00	4.36	872.00	4.36	872.00	3.57	714.00
Harvesting, carrying and thrashing/washing and drying	44.87	8974.00	32.00	6400.00	33.56	6712.00	43.31	8662.00
Marketing	5.82	1164.00	6.18	1236.00	8.48	1696.00	3.52	704.00
Total human labor	107.28	21456.00	102.04	20408.00	91.10	18220.00	118.22	23644.00

Source: Field survey, 2010

Cost of Animal Labor / Mechanical Power

In Bangladesh, the use of animal labor usually involves a pair of animal and one attendant. Most of the sample farmers used family supplied animal labor, but a few of them used hired animal labor. The measuring unit for animal labor was pair-day, locally called 'hal'. Animal pair-day was assumed to be five hours of work. Home supplied animal labor was priced at the prevailing hiring rate. Due to scarcity of animal draft power, some farmers used power tiller for land preparation in the study area. During the study period, the average hiring rate of animal labor was Tk. 280 per pair-day and power tiller cost was Tk.2000 per hectare in the study area. For animal and mechanical power together, farmers spent Tk.10243.20, Tk. 7817.60, Tk. 7664.00 and Tk.10396.80 in full cost basis and no cost in cash cost basis for the patterns P1, P2, P3, and P4 respectively (Table 6 & 8).

Cost of Seed /Seedling

Farmers used home supplied seed / seedlings. The cost of home supplied seed / seedlings were valued at the price which farmers would have got if he had sold it to the market. Farmer used the seed / seedling having costs of Tk. 6297.15, Tk. 35899.50, Tk. 33895.95 and Tk. 8300.70 for the patterns P1, P2, P3, and P4 respectively (Table 6). Price of seeds was charged Tk.100 per kg for Jute, average price Tk. 40 per kg for Wheat, Potato, Aus and Aman during the period of study area.

Cost of Manure

For producing different crops, most of the farmers in the study area used manure, such as cow dung, and oilcake from home-supplied and purchased. Use of cow dung as manure was very low. Because, they mostly used cow dung as fuel. Price of oilcake was Tk.18.00/ kg and cow dung was assumed fixed for all farmers at Tk. 0.30/ kg. It was observed from the Table 6 that farmers applied 10451.58, 10254.70, 9928.98 and 10777.30 kg cow dung per hectare amounting Tk. 3135.47, Tk. 3076.41, Tk. 2978.69 and Tk. 3233.19 for the patterns P1, P2, P3, and P4 respectively. Oilcake was not applied for the patterns P1 and P4 but the patterns P2 and P3 were applied same amount of oilcake of 193.56 kg/ ha and costing at Tk. 3484.08 (Table 6).

Cost of Fertilizers

Proper use of fertilizer can enhance agricultural production to a great extent and help to improve soil fertility. Farmers in the study area used three kinds of chemical fertilizers namely Urea, Triple Super Phosphate (TSP) and Muriate of Potash (MP) which were purchased by the farmers. In study area, the cost of fertilizers was charged at the purchase price of fertilizer from the market. Application of Urea was common for all farmers. Farmers responded to have applied the dose of 469.34, 425.26, 388.21 and 506.39 kg Urea, 318.76, 283.51, 214.83 and 387.44 kg TSP and 292.32, 351.16, 316.58 and 326.90 kg MP for the patterns P1, P2, P3, and P4 respectively. Their corresponding costs were estimated at Tk.2581.37, 2338.93, 2135.16 and 2785.15 for Urea, Tk.3825.12, 3402.12, 2577.96 and 4649.28 for TSP and Tk.2630.88, 3160.44, 2849.22 and 2944.10 for MP for the aforementioned patterns, respectively (Table 6 & 8). It is evident from Table 6 that the highest amount of fertilizer (1220.73 kg/ ha) was used for the pattern P4 than those of other patterns practiced by the farmers in the study area.

Cost of Insecticides

In the study area most of the farmers used insecticides, such as Tilt, Agro-vita, Vitaforan, Agnol, Relothin, Opsin, Basudin etc. The costs of insecticides were computed on the basis of the actual prices paid by the farmers. Insecticide costs were Tk.1499.73, Tk. 1629.05, Tk. 1628.71 and Tk. 1500.07 for the patterns P1, P2, P3, and P4 respectively (Table 6 & 8).

Cost of Irrigations

Irrigation was a leading input in producing different crop. In the study area, shallow and deep tubewells were used for irrigation purpose. The cost of irrigation was estimated on the basis of the actual prices paid by the farmers. A few farmers used their own shallow tubewells. Irrigation costs were Tk. 6437.82, Tk. 2691.54, Tk. 2691.54 and Tk. 6437.82 for the patterns P1, P2, P3, and P4 respectively (Table 6 & 8).

Land Rent

The cost of land was different for different crops depending upon their location, topography and fertility of the soil. The cost of land use may be estimated using one of the following three alternative ways:

- Interest on the average value of land;
- Rental value, and
- Forgoing income from alternative use.

In this study, the cost of land was estimated taking the interest on the average value of land. The interest was charged at the rate of 9 percent per annum. Interest on the average value of land was computed by using the following formula (Hossain, 2000):

$$C = V \times I \times T$$

Where,

C = Interest on the average value of land

V = value of land

I = Rate of interest per annum

T = Length of production period.

It was assumed at Tk. 82585.35, Tk. 44242.26, Tk. 50141.22 and Tk. 76689.39 for the patterns P1, P2, P3, and P4 respectively (Table 6).

Interest on Operating Capital

The operating capital included cash expenses on purchased inputs, such as, human labor, animal power, seeds, manure's, fertilizers, insecticides, irrigation etc. In estimating this cost the interest rate was assumed to be 9 percent per annum. Interest on operating capital was calculated in accordance with the following formula (Hossain, 2000):

Interest on operating capital = $Alit$

Where,

Al = (total investment)/2

i = interest rate

t = length of the period of crop production

Here, time covered the period from land preparation to harvesting. In this case, interest on operating capital was charged for four months for each crop. Interest on operating capital was calculated at Tk. 1385.97, Tk. 1159.35, Tk. 1288.23 and Tk. 1257.09 for the patterns P1, P2, P3, and P4 respectively (Table 6).

Total Variable Cost and Gross Cost

At full cost basis, gross cost and total variable cost were Tk. 163695.01 and Tk. 81109.66 for pattern P1, Tk. 167181.26 and Tk. 122939.02 for pattern P2, Tk. 162158.72 and Tk. 112017.50 concerning pattern P3, and Tk. 168745.59 and Tk. 92056.20 regarding pattern P4, respectively. As land rent was not included in cash cost total variable cost (TVC) and gross cost are same at this cash cost basis. Costs incurred for the patterns P1, P2, P3, and P4, at cash cost basis, were Tk. 41992.07, Tk. 70361.36, Tk. 67482.62 and Tk. 44872.82, respectively (Table 9). It is observed that patterns P2 incurred the highest cost followed by the pattern P3 and pattern P4 incurred the lowest cost preceded by the pattern P1.

TABLE 6: PER HECTARE COST OF POTATO BASED AND RICE BASED CROPPING PATTERNS ON FULL COST BASIS

Costs	Jute-Aman rice-Wheat (p1)		Aus rice-Potato-Fellow (p2)		Jute-Potato-Fallow (p3)		Aus rice-Aman rice-Wheat (p4)	
	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.
1. Total Variable Cost (TVC) (A+B+C+D)	-	81109.66	-	122939.02	-	112017.50	-	92056.20
A. Material Costs (a+b+c+d+e)	-	26407.54	-	55682.07	-	52241.31	-	29850.31
a. Fertilizer costs (kg)	1080.42	9037.37	1059.93	8901.49	919.62	7562.34	1220.73	10378.53
i. Urea (kg)	469.34	2581.37	425.26	2338.93	388.21	2135.16	506.39	2785.15
ii. TSP (kg)	318.76	3825.12	283.51	3402.12	214.83	2577.96	387.44	4649.28
iii. MP (kg)	292.32	2630.88	351.16	3160.44	316.58	2849.22	326.90	2944.10
b. Manure Costs (kg)	10451.58	3135.47	10448.26	6560.49	10122.54	6462.77	10777.30	3233.19
i. Cow dung (kg)	10451.58	3135.47	10254.70	3076.41	9928.98	2978.69	10777.30	3233.19
ii. Oil cake (kg)	-	-	193.56	3484.08	193.56	3484.08	-	-
c. Seed cost (kg)	-	6297.15	-	35899.50	-	33895.95	-	8300.70
d. Insecticide	-	1499.73	-	1629.05	-	1628.71	-	1500.07
e. Irrigation	-	6437.82	-	2691.54	-	2691.54	-	6437.82
B. Human labour (man-day)	215.48	43072.95	291.40	58280.00	254.12	50824.00	252.76	50552.00
C. Animal/Mechanical Power	-	10243.20	-	7817.60	-	7664.00	-	10396.80
D. Interest on operating capital	-	1385.97	-	1159.35	-	1288.23	-	1257.09
2. Land rent	-	82585.35	-	44242.26	-	50141.22	-	76689.39
Gross cost (1+2)	-	163695.01	-	167181.26	-	162158.72	-	168745.59

Source: Field survey, 2010

TABLE 7: PER HECTARE RETURN OF POTATO BASED AND RICE BASED CROPPING PATTERNS ON FULL COST BASIS

Operations	Jute-Aman rice-Wheat (P1)		Aus rice-Potato- Fallow (P2)		Jute-Potato- Fallow (P3)		Aus rice-Aman rice-Wheat (P4)	
	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.
Gross Return (GR)	-	206572.28	-	224325.08	-	218865.47	-	212211.90
i. Main product	-	167774.78	-	218475.08	-	196167.47	-	190761.90
ii. By-product	-	38797.50	-	5850.00	-	22698.00	-	21450.00
Gross margin (GR-TVC)	-	125462.62	-	101386.08	-	106847.97	-	120155.70
E. Net Return (GR-GC)	-	42877.27	-	57143.82	-	56706.75	-	43466.31

Source: Field survey, 2010.

TABLE 8: PER HECTARE COST OF POTATO BASED AND RICE BASED CROPPING PATTERNS ON CASH COST BASIS

Costs	Jute-Aman rice-Wheat (P1)		Aus rice-Potato- Fallow (P2)		Jute-Potato- Fallow (P3)		Aus rice-Aman rice-Wheat (P4)	
	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.
1. Total Variable Costs (TVC) (A+B+C+D)		41992.07	-	70361.36	-	67482.62	-	44872.82
A. Material Costs	-	20536.07		49953.36	-	49262.62	-	21228.82
a. Fertilizer costs (kg)	1080.42	9037.37	1059.93	8901.49	919.62	7562.34	1220.73	10378.53
i. Urea (kg)	469.34	2581.37	425.26	2338.93	388.21	2135.16	506.39	2785.15
ii. TSP (kg)	318.76	3825.12	283.51	3402.12	214.83	2577.96	387.44	4649.28
iii. MP (kg)	292.32	2630.88	351.16	3160.44	316.58	2849.22	326.90	2944.10
b. Manure Costs (kg)	-	-	193.56	3484.08	193.56	3484.08	-	-
i. Cow dung (kg)	-	-	-	-	-	-	-	-
ii. Oil cake (kg)	-	-	193.56	3484.08	193.56	3484.08	-	-
c. Seed cost (kg)	-	3561.15	-	33247.20	-	33895.95	-	2912.40
d. Insecticide	-	1499.73	-	1629.05	-	1628.71	-	1500.07
e. Irrigation	-	6437.82	-	2691.54	-	2691.54	-	6437.82
B. Human labour (man-day)	107.28	21456.00	102.04	20408.00	91.10	18220.00	118.22	23644.00
C. Animal/Mechanical Power	-	-	-	-	-	-	-	-
D. Interest on operating capital	-	-	-	-	-	-	-	-
2. Land rent	-	-	-	-	-	-	-	-
Gross Costs (1+2)	-	41992.07	-	70361.36	-	67482.62	-	44872.82

Source: Field Survey, 2010

TABLE 9: PER HECTARE RETURN OF POTATO BASED AND RICE BASED CROPPING PATTERNS ON CASH COST BASIS

Operations	Jute-Aman rice-Wheat (P1)		Aus rice-Potato- Fallow (P2)		Jute-Potato-Fallow (P3)		Aus rice-Aman rice-Wheat (P4)	
	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.	Qty.	Tk.
Gross Return (GR)	-	118041.30	-	153001.21	-	148918.77	-	121810.19
Main product	-	95871.30	-	149011.21	-	133474.77	-	109915.19
By-product	-	22170.00	-	3990.00	-	15444.00	-	11895.00
Gross Margin (GR-TVC)	-	76049.23	-	82639.85	-	85714.01	-	76937.37
E. Net Return (GR-GC)	-	76049.23	-	82639.85	-	81436.15	-	76937.37

Source: Field survey, 2010.

FIG.1: GROSS RETURN, GROSS COST, GROSS MARGIN, NET RETURN OF POTATO BASED CROPPING PATTERNS COMPARED TO RICE BASED ON FULL COST BASIS

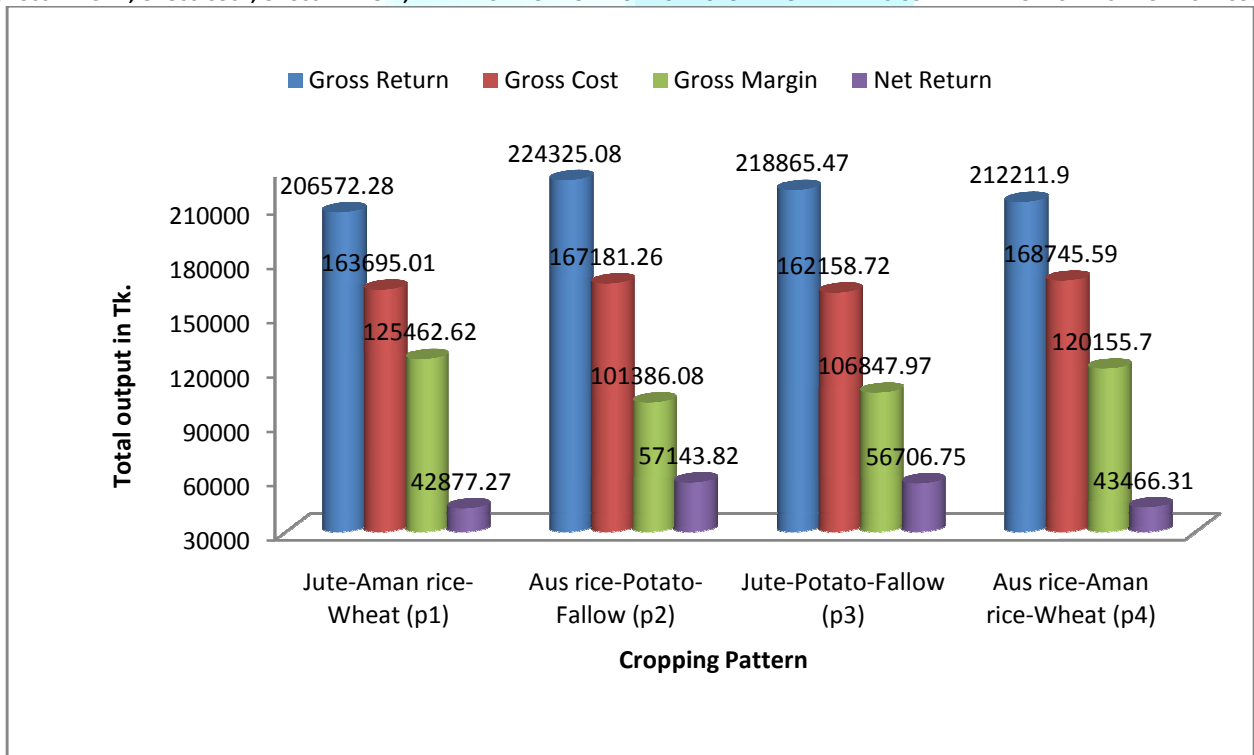
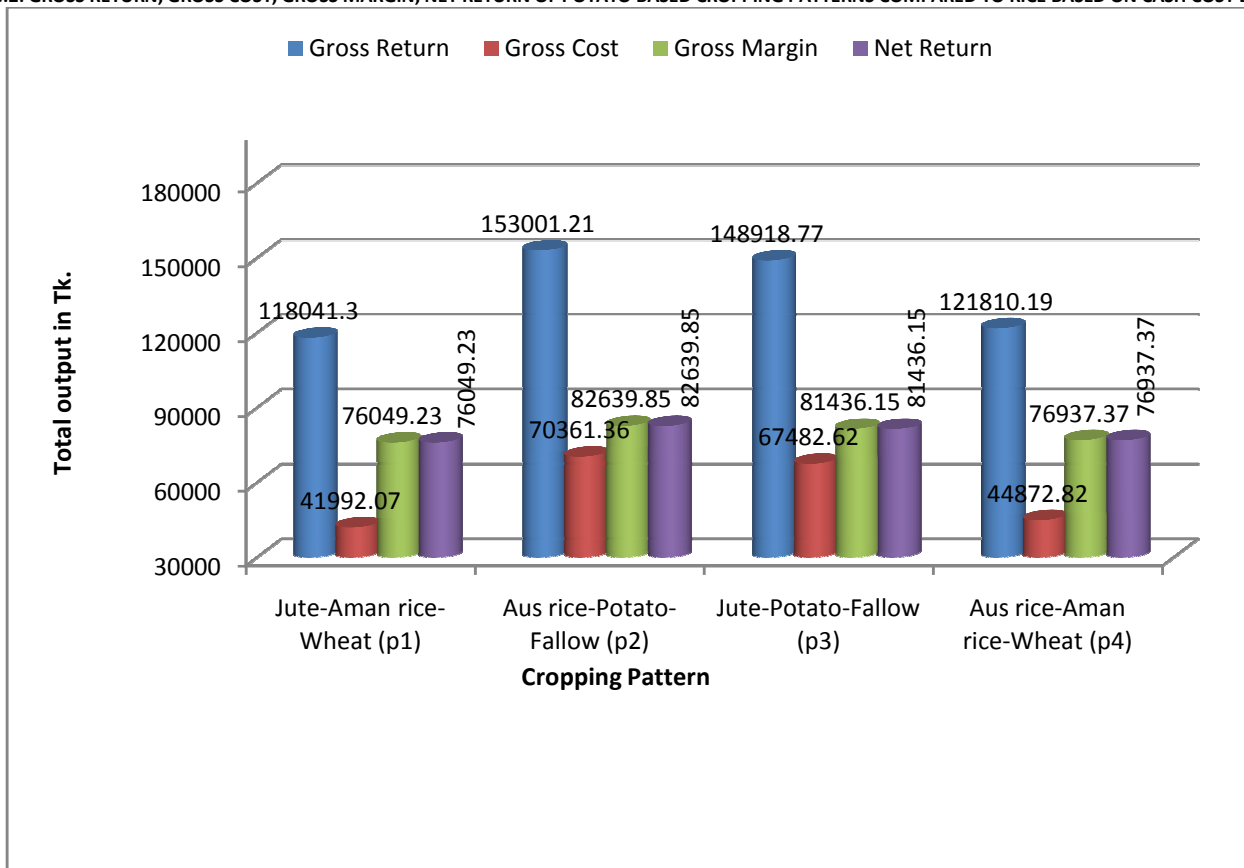


FIG.2: GROSS RETURN, GROSS COST, GROSS MARGIN, NET RETURN OF POTATO BASED CROPPING PATTERNS COMPARED TO RICE BASED ON CASH COST BASIS



D. RELATIVE PROFITABILITY: A COMPARISON

Gross Return

The pattern P2 was superior in terms of economic return in comparison with the other cropping patterns. Per hectare giving the farmers Tk.224325.08 including by-product of Tk. 5850.00 followed by the pattern P3, having per hectare amounting Tk. 218865.47 including by-product of Tk. 22698.00 among the rest of the patterns, pattern P4 that Tk. 212211.90 including by-product of Tk. 21450.00 and pattern P1 Tk. 206572.28 including by-product of Tk. 38797.50 were farmers earned (Table 8).

Gross Margin and net Return

Considering full cost, gross margin was estimated at Tk. 125462.62, Tk. 101386.08, Tk. 106847.97 and Tk. 120155.70 for the patterns P1, P2, P3, and P4 respectively (Table 6). The net return was estimated at Tk. 57143.82 for the pattern P2, Tk. 56706.75 for the pattern P3, Tk. 43466.31 for the pattern P4 and Tk. 42877.27 for the pattern P1 respectively, which have been written in order of highest to lowest. Based upon cash cost, gross margin or net return, whatever it may be, was computed at Tk.82639.85, Tk. 81436.15, Tk. 76937.37 and Tk. 76049.23 regarding the patterns P2, P3, P4, and P1 respectively (Table 9).

CONCLUSION

In terms of economic viability, the Aus rice-Potato-Fallow pattern appeared to have the greatest potential as replacement for the farmers’ than other cropping patterns. Aus rice-Potato-Fallow had the highest net return compared to other cropping patterns. Based on findings, Aus rice-Potato-Fallow pattern should be recommended to the farmers.

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THE IMPACT OF ACCOUNTING INFORMATION SYSTEMS IN THE QUALITY OF FINANCIAL INFORMATION IN THE PRIVATE JORDANIAN UNIVERSITIES: AN EMPIRICAL STUDY

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ABSTRACT

This study aimed to identify the impact of accounting information systems in the quality of financial information in the Jordanian private sector, universities, and to identify the level of awareness of accountants and financial importance to the use of those systems and their impact in improving the quality of the information, financial reporting and accounting. To achieve the objective of the study, was designed questionnaire to study the effect of accounting information systems in the quality of financial information, was distributed to (92), has recovered from (78) identify the rate of recovery was (84.7%), and after analyzing the data using descriptive analysis methods through the program (SPSS) was tested hypotheses and to reach many of the results was the most important: Information systems used by employees at private Jordanian universities, and varying degrees of these systems. also There are Accounting systems related to accounting students, purchases, stores, supplies, wages and salaries, and the General Accounting. Based on the results of the study was provided several recommendations, including: The researcher recommends that the private Jordanian universities have to computerize the financial accounting systems, including suits the sector of the private Jordanian universities, in order to improve the performance of accounting and financial. also Must follow technical developments, modern technology, and information communication, and use it to perform various tasks, with the need to link all internal systems to a network of internal and central database, and this would raise the work efficiency and get the reports in a timely manner.

KEYWORDS

AIS, financial information, private Jordanian universities.

INTRODUCTION

Entered the information technology, in all fields of life, especially the sectors of finance and business, also accounting profession, which have been affected and influenced in this new environment.

The profession accounting accompanied the changes and technological developments had to have to change its ways and methods of performance in order to submit their reports as quickly and accurately as possible, and has emerged through the use of computers for data accounting, both in terms of (Software) or equipment (Hardware), and because what is produced by modern methods of information systems and programs and reports a variety of high quality and accuracy and a reasonable cost, to provide the required information that will help make decisions and achieve the objectives of enterprises and companies.

REVIEW OF LITERATURES

Study Al-Bawab, 2011, entitled "the efficiency of accounting information systems in Islamic banks," Case Study: Applied to Saba Islamic Bank in Yemen. The main objective of this study is to identify the extent of the relationship between the efficiency of accounting information systems and the effectiveness of management decisions rationally represented in the clear information, accurate, appropriate, and in the appropriate times, which have a knowledge of the benefits and the benefits derived from the use of information technology. One of the most important findings of the study include:

1. The accounting information systems resulting from the accounting information systems used in Islamic banks suitable for service management decision-making.
2. Enjoys technological devices used in accounting information systems in Islamic banks with high efficiency.
3. Enjoys working in accounting information systems in Islamic banks with high efficiency in the performance of their business.
4. With accounting information systems in Islamic banks with high efficiency.

The study recommended the following:

1. Encourage Saba Islamic Bank management to give more attention to the provision of appropriate information for management decision-making.
2. Encourage Saba Islamic Bank to update devices and systems whenever the need arises, because of the benefits exceed the expected costs for that update.
3. Need to continue to train and qualify employees in Saba Islamic Bank on the use of sophisticated devices and systems.
4. The need to improve the efficiency of monitoring accounting information systems that serve in all levels of management.

Study Al-Bawab and Alulymi, 2010, entitled "The Importance of Using computerized accounting information systems and their impact on the quality of accounting information "field study". Study aimed to identify the importance of the use of accounting information systems in the oil sector in Yemen, and was one of the most important findings of the study include:

1. available partial use of some computerized accounting systems subsidiary.
2. There are not available centralized databases , not available internal communications networks, and there are not communications network linking major centers in the branches.
3. Available for the accountant Yemenian aware of the importance of the use of computerized accounting systems and its positive impact in improving the quality of accounting information and reports.

Based on the results of study recommended the following:

1. The need to computerize all conventional manual accounting systems, and a shift toward computerized accounting systems, to suit the oil sector in the Republic of Yemen.
2. The need cope to follow-up technical developments in the oil sector, this is will raise the efficiency in obtaining reports in a timely manner, activation of the performance of the supervisory and administrative, and can supervisors and administrative follow-up performance in all units involve.

Study of Touman, 2008, entitled " The Operating Electronic for The Accounting Data and Its Impact on The Results of The Work of Accounting," and applied on commercial banks in Yemen. This study aimed to identify the need for operating electronic data accounting, with the continued development of various aspects of life, and especially the economic ones, and of the most important results of this study include:

1. The banks use the automation system to conduct all its business.
2. The use of computers has led to improved performance and better control over the activities of different for banks.
3. The study showed that banks rely on the use of accounting information system in decision-making and the provision of administrative information.
4. Training increases the capacity to deal with the procedures and accounting software.

Studying the Abu Fares, 2006, entitled " The Skills Should be Available in The Accountant to develop his efforts ". This study aimed to measure the availability of some of the professional skills of the accountant in the Libyan oil sector, and the interest of professional accountant continuous self development, and the most important results of the study the following:

1. There are the professional skills of workers, so that the skill work in a team work more readily available, then the skill of using information technology, skill and decision-making, self-management, and finally the skill knowledge
2. The workers develop them skills by self-motivation, but they suffer a deficiency in that as a result of the low skill knowledge.

The most important recommendations of the study include:

- A. They have to develop knowledge of skills through the use of technical methods of information, subscribe to the journals, conferences, and the professional seminars.
- B. They have to develop skill of self-management.

Study Alqatawneh, 2005, entitled " The Impact of The Using of Information Technology on The Effectiveness of The Accounting Information System." The purpose of this study and applied to financial institutions in Jordan to identify the impact of the use of information technology on the effectiveness of the accounting information system in the financial institutions, The study this effect by studying the following factors:

Use devices and computer software, and its impact on the effectiveness of the accounting information system.

Databases and their impact on the effectiveness of the accounting information system.

Use of communications networks and their impact on the effectiveness of the accounting information systems.

One of the main results of the study include:

1. The use of information technology impact statistically significant on the effectiveness of the information system of accounting in the banks and insurance companies representative for the study population, and the use of communication networks is the most influential, followed by hardware and software, then databases in terms of the impact of each of these variables.
2. There is a difference in the extent of use of information technology, it was found that the banking sector has a higher technological levels, including in the insurance companies.
3. One of the major problems that accompany the use of information technology is a growing gap between the rapid development of information technology on the one hand, and the level of qualification for accountants on the other hand.

One of the main recommendations of the study include:

1. The need for enterprises to increase investment in information technology to keep pace with the last of those developments, as reflected on the effectiveness of accounting information systems.
2. The need to confront the challenges installations and accompanying problems for the use of information technology and work to resolve them, especially with regard to the training of the accountants, and brief them on the latest technological developments.
3. The need for a specialist in information technology within the work team.

Study Dahmash and Alkashah, 2004, entitled "The Appropriateness of The Accounting Profession of The E-Commerce Environment". The purpose of this study was to identify the E-Commerce environment and comparing the traditional trade environment, and then determine the appropriateness of accounting policies applicable to the new electronic commerce environment, and identify the problems faced by those policies in the electronic environment.

One of the main results of the study include:

1. The E-commerce created and there will be more changes and more on the world of accounting and auditing.
2. The changes that occur in the traditional trade are simple and slow changes, but now Under E-Commerce the changes are fast and complex.
3. Became inevitable on a business career and the accounting profession in the world as a whole that occur and the evolution of technology and evaluate similar quickly so as not to miss behind the new technology.

One of the main recommendations of this study:

1. Rehabilitation of accountants and auditors, and education to information technology in general, and E-commerce transactions in special.
2. The need to restructure the education and training systems at all levels of the accounting and auditing profession makes knowledge of IT in general, and E-Commerce in special, from the basics of scientific and certification process and to practice the profession.
3. Configure Council a global technology specialist accounting grant specialized professional certificates combine technical accounting and technical IT in general, and E-Commerce technology in special.

What distinguishes the current study from previous studies is:

The current study is the first to look at the impact of accounting information systems to raise the quality of financial information in the private Jordanian universities, Where the focus was on different accounting systems and computerized financial, as well as the need to provide a database and an internal network connecting all systems used.

IMPORTANCE OF THE STUDY

The importance of the study to assess keep up with accountants and financial in private Jordanian universities for technological development in the implementation of accounting and finance, in order to take advantage of technology developments and subject them to serve the work accounting to provide information of speed and high accuracy and low cost, and delivery of the appropriate information in a timely manner to decision-makers and in need of such information.

STATEMENT OF THE PROBLEM

Based on the above problem can be identified in the evaluation of the study and keep up with financial accountants in private Jordanian universities on information technology for the implementation of accounting, and the formulation of the problem could be to ask the following questions:

1. Is accounting information systems to help accountants and finance in the private Jordanian universities in the implementation of accounting?
2. Is there a perception by accountants and financiers in the private Jordanian universities on the importance of the use of accounting information systems, and its effect in raising the quality of information and financial reports?

OBJECTIVES

The study aimed to identify the impact of accounting information systems in the quality of financial information in private Jordanian universities for information technology, and through knowledge of the following:

1. The help of accounting information systems and financial accountants in private Jordanian universities in the implementation of their own accounting and finance.
2. Perceptions of accountants and financial importance of the use of accounting information systems, and its effect in raising the quality of information and financial reports.

STUDY HYPOTHESIS

Based on previous studies have been formulated the following hypotheses:

FIRST HYPOTHESIS

H₀: "The accounting information systems do not help the accountants and financial employees at private Jordanian universities in the working of accounting and financial".

SECOND HYPOTHESIS

H₀: "The accountants and financial employees at private Jordanian universities do not aware of importance of using accounting information systems, and its impact in raising the quality of financial information and reports".

METHODOLOGY OF THE STUDY

To achieve the objectives of the study were two follow two approaches:

First: The descriptive and the theoretical of the collection of information available in previous studies, books, articles, theses and periodicals.

Second: The analytical method and field regard to the practical aspect of this study, through design questionnaire distributed to the population of the study in private Jordanian universities in various provinces of the Hashemite Kingdom of Jordan. And to collect data that will help test hypotheses through descriptive statistical methods.

POPULATION AND SAMPLE OF THE STUDY

The statistical community of this study consist of the accountants and financial employees in private Jordanian universities, has been selected a random sample for the purpose of collecting the required data through the identification and distributed for this purpose.

THEORETICAL FRAMEWORK FOR THE STUDY**CHARACTERISTICS OF INFORMATION**

The quality of accounting information affecte by the following characteristics: (Hanan, 2006).

First: Accounting information users (Decision Makers):

There have characteristics available in those users are in the level of understanding and awareness, and their ability to analyze information, that meaning it have to provide a level of disclosure with that level of understanding.

Second: The basic characteristics of accounting information:

Is the qualitative characteristics that make information useful to users and can be summarized with the following characteristics:

1. Understandable
2. Relevance
3. Timeliness
4. Predictive Value
5. Feedback evaluation
6. Reliability
7. Faithfulness
8. Neutrality
9. Verifiability
10. Substance over form
11. Completeness
12. Comparability
13. Feasibility
14. Conservatism.

THE COMPONENTS OF ACCOUNTING INFORMATION SYSTEM

Accounting information systems consist of several elements including: (Romeny, 2003).

1. Individuals who run the system, as well as systems analysts, systems designers, and software makers who are engaged in client analysis and design, implementation and development of the information system as well as end-users of the system.
2. Procedures, instructions and the methods used to collect and inventory data preparation, processing and storage of data, whether manual or automatic.
3. The central database of the organization.
4. Various programs used in data processing.
5. Equipments.
6. Regulations, protection methods and controls on security of the system.

THE IMPACT OF THE USE OF COMPUTERS TO ACCOUNTING PROCEDURES

The result on the use of electronic computers in the field of accounting organization a significant impact on the normal accounting operations, and these effects include: (Shehata, 2000).

First: Accountant's role is limited to the following:

1. Collect documents that contain data.
2. Prepare data in a manner suitable for input into the computer.
3. Participation in the development of a computer program.
4. interpreting the information emerging from the computer to make it easier in the decisions taking.
5. remodeling output accounting in a way that suits the management.

Second: Computer's and its accessories is limited to the following:

1. recording of data and entered into the computer means in specific files when operated in accordance with the program.
2. Classify and analyzing data in accordance with the instructions and orders contained in the program, and the computer does this process by its various units.
3. Operation and storage data.

Third: Storage data centrally.

Fourth: Recording and posting by one process, and this save time and reduces errors.

Fifth: The computer performs analysis of data in a scientific methods.

Sixth: Use of computer output as reports.

STATISTICAL ANALYSIS AND HYPOTHESIS TESTING**SOURCES OF DATA COLLECTION**

Primary sources: The data that have been obtained through the questionnaire Are set up to test the hypotheses.

Secondary sources: The data that have been obtained through scientific literature, periodicals, previous studies, and scientific research.

POPULATION AND SAMPLE OF THE STUDY

The statistical community consists from the accountants and financial workers in private Jordanian universities, and based upon have been distributed (92) questionnaire has been restored (78), which represents responses amounted to (84.7%) of the questionnaires distributed, it is acceptable and suitable for statistical analysis. Table (1) shows the names of the universities that constituted the study population and establish each year.

TABLE (1): THE NAMES OF THE UNIVERSITIES AND THE ESTABLISH YEAR OF EACH ONE

No.	University Name	Year established
1	Jordan Applied University College of Hotel and Tourism Sciences	1980
2	Philadelphia University.	1989
3	Jordan Academy of Music.	1989
4	Arab Academy for Banking and Financial Sciences.	1989
5	Amman National University.	1990
6	Zarka Private University.	1990
7	Al-Zaytoonah Jordanian private University.	1990
8	Sciences Applied private University.	1991
9	Al-Isra Private University.	1991
10	Petra University.	1991
11	Princess Sumaya University for Technology.	1991
12	Jerash University.	1992
13	Irbid National University.	1992
14	Educational Sciences Faculty.	1993
15	Amman Arab University.	1997
16	Arab Open University.	2002
17	Middle East University for Higher Studies.	2005
18	Jadara University for Higher Studies.	2005
19	Ajloun National Private University.	2008
20	Madaba private University.	2009

Source: The Hashemite Kingdom of Jordan, the Ministry of Higher Education and Scientific Research, 2010.

STUDY TOOL

The questionnaire is a tool which rely upon to test the hypotheses of the study, The questionnaire consisted of two main parts:

Part 1: Related with demographic characteristics of the study population in terms of age, qualification, scientific specialization, and Job, and the number of years of experience.

Part 2: it contained two main parts the twin questions related to testing hypotheses and are as follows:

First: The aim is to identify the availability of the use of computer systems by accountants and financial employees at private Jordanian universities.

Second: The aim is to identify the perceptions of accountants and financial employees at private Jordanian universities special for importance the accounting information systems, and its impact on improving the quality of financial information.

METHODS OF STATISTICAL ANALYSIS

We have been analyzing data collected by the study tool using the Statistical Package for Social Sciences (SPSS), were used statistical techniques descriptive such as the arithmetic mean, which is a measure of central tendency, and standard deviation, which represents a measure of dispersion, and for test hypotheses have been used test One Sample t –test.

It was a test alpha Cronbach (Cronbach's Alpha 1990) to test the credibility of the study data, and this parameter to measure the stability of procedure for questions questionnaire in their ability to give results consistent responses respondents towards the study variables, reaching alpha Cronbach (87.5%) and this percentage is good and reflect for the credibility, stability and consistency of responses on questions questionnaire.

Was used test (T-Test) and that the significance level (0.05) to test the hypotheses of the study, one of the scientific tests strong (Parametric Test), as adopted this test on arithmetic means in the comparison between variables, if the value of statistical significance is greater than (0.05) will be in this case accept the premise nihilism and rejection of the alternative hypothesis, while if the level of statistical significance is equal to or less than (0.05) will be in this case rejected the hypothesis of nihilism and accept the alternative hypothesis.

ANALYSIS OF THE DEMOGRAPHIC CHARACTERISTICS OF THE STUDY SAMPLE

The goal of the first part of the questionnaire to obtain data on the general characteristics of the study sample in terms of age, educational qualification, scientific specialization, job, and the number of years of experience. The questionnaires showed recovered and distributed to the demographic characteristics of the study sample were as follows:

TABLE (2): THE DEMOGRAPHIC CHARACTERISTICS OF THE STUDY SAMPLE

Description	Rank	Number	Percentage
Age	From 20-30 years	21	%26.90
	From 31-40 years	32	%41.00
	From 41 – 50 years	13	%16.70
	More than 51 years	12	%15.40
	Total	78	%100
Qualifications	Less than Bachelor	16	%20.50
	Bachelor	51	%65.40
	Master	10	%12.80
	Ph. D	1	%1.30
	Total	78	%100
scientific specialization	Accounting	53	%67.90
	Business Administration	8	%10.30
	Economic	3	%3.80
	Computer	2	%2.60
	Other	12	%15.40
	Total	78	%100
Job	Financial Manager	8	%10.30
	Accountant	34	%43.60
	Purchase Employment	3	%3.80
	Cashier	6	%7.70
	Students Accountants	8	%10.30
	Internal Auditor	4	%5.10
	Stores Employee	5	%6.40
	Other	10	%12.80
	Total	78	%100
	Years of Experience	From 1 – 5 years	26
From 6 – 10 years		14	%17.90
From 11 – 15 years		14	%17.90
More than 16 years		24	%30.80
Total		78	%100

Sources: work of the researcher

DISTRIBUTION OF SAMPLE BY AGE

Shown in Table No. (2) that the proportion (41%) of the sample aged (31-40 years), and this is a good sign as this category encourages the inclusion of programs and information systems to work has been numbered (32) individuals, this is followed by a campaign age group (20 - 30 years) and the number (21) members and by (26.9%) and category (41-50 years) and the number (13) by (% 16.7), then category (50 + years) and the number (12) (15.4%), which gives an indication of the reliability of the data obtained.

DISTRIBUTION OF SAMPLE BY QUALIFICATION

Shown in Table (2) that the percentage (65.4%) of the sample were BA. And their number (51) individuals, followed by the less than BA (Community College, High School, etc.) and the number (16) individuals and by (20.5%), followed by a Masters and number (10) by (% 12.8), then Ph.Ds and the number (1) by (1.3%), and this also gives an indication of the possibility of confidence in the data that have been obtained, and it is logical for shareholders (owners Universities).

DISTRIBUTION OF SAMPLE BY SCIENTIFIC SPECIALIZATION

Shown in Table No. (2) that the percentage (67.9%) of the sample of specialty accounting and number (53), and came specialization in Business Administration in second place and the number (8) and by (10.3%), while the specialty economy was accounted for (3.8%) and numbered (3), and then devote the computer where numbered (2) and by (2.6), followed by the other disciplines (public administration, science banking and financial, marketing, etc.) and the number (12), and by (15.4%) , has been regarded as the least this percentage because if has been customized for the proportions were very small. The distribution is as such ratios logical and gives an indication of the possibility of confidence in the data that have been obtained and are consistent with the nature of the work.

DISTRIBUTION OF SAMPLE BY JOB

Shown in Table No. (2) that the majority of respondents are working a job accountant and number (34) and by (43.6%), followed by managers financial and accountants of students in the same proportion as the number (8) and by (10.3%) each, and treasurers (cashiers) have numbered (6) and by (7.7%), followed by staff stores and supplies and the number (5) and by (6.4%), then internal auditors, where they numbered (4) and by (5.1%), then the staff of the purchase employments and the number (3) and by (3.8%), followed by other functions (director of supplies, Head of Accounting Department, Chief, Division of Audit, Accountant salaries etc.) and the number (10) and by (12.8%), has been regarded as the ratio least because if has been customized for the proportions very small. The distribution is as such ratios logical and gives an indication of the possibility of confidence in the data that have been obtained.

DISTRIBUTION OF SAMPLE BY YEARS OF EXPERIENCE

Shown in Table No. (2) that the rank years of experience (1-5) numbered (26) employees and by (33.3%), to pay less salaries when the new employments, followed by a rank that represents years experience of more than 16 years and the number (24) (30.8%), to the need for a people of the owners of expertise in this area, the category (6-10) and (11-15), the number of respondents (14) and (17.9%) for each category. Which gives an indication of the reliability of the respondents answer good because of their expertise and distributed to different age groups.

ANALYSIS OF THE PARAGRAPHS QUESTIONNAIRE

THE FIRST HYPOTHESIS

Table No. (3) showed averages and standard deviations for the paragraphs of the resolution relating to the first hypothesis and the results were as follows:

TABLE (3): A TABLE SHOWING THE AVERAGES AND STANDARD DEVIATIONS FOR THE FIRST HYPOTHESIS QUESTIONS

No.	Paragraphs	Mean	standard deviation
Questions relating to the availability of integrated accounting systems at the university			
1	There is computerized financial accounting system special accounting students	4.63	0.65
2	There is computerized financial accounting system special Purchases	3.71	1.17
3	There is computerized financial accounting system special equipment and supplies	3.82	0.91
4	There is computerized financial accounting system special payrolls	4.38	0.87
5	There is computerized financial accounting system special financial accounting	4.59	0.63
6	There is an internal network connecting all systems above a central database for the University	3.92	1.2

Sources: work of the researcher

We note from the above table that all arithmetical averages were higher than the mean hypothesis which (3), where the top results with paragraph (1) and on the existence of an accounting system computerized financial special accounting students, where he was the arithmetic mean (4.63) and standard deviation (0.65), and less results were with paragraph (2) and on the existence of an accounting system computerized financial particular procurement, where he was the arithmetic mean (3.71) and standard deviation (1.17). This is indicating to that private Jordanian universities systems use accounting information systems in the preparation of the information, reports, and financial statements.

THE SECOND HYPOTHESIS

Table No. (4) showed averages and standard deviations for the paragraphs of the resolution relating to the second hypothesis and the results were as follows:

TABLE (4): A TABLE SHOWING THE AVERAGES AND STANDARD DEVIATIONS FOR THE SECOND HYPOTHESIS QUESTIONS

No.	Paragraphs	Mean	standard deviation
Questions regarding the extent of realization of Accountants and the importance of the use of financial accounting systems to raise the quality of financial information			
7	Objectivity	4,33	0,63
8	Accurate	4,35	0,64
9	Credibility	4,27	0,81
10	Clear	4,24	0,79
11	Comparable	4,23	0,82
12	Flexible	4,07	0,87
13	Low Cost	3,49	1,19
14	Information can be obtained at high speed and at any time	4,27	0,75
15	Provide accounting information systems appropriate information to help in decision-making	4,28	0,75

Sources: work of the researcher

We note from the above table that all arithmetical averages were higher than the mean hypothesis which (3), where the top results with paragraph (8) and related accuracy in accounting information resulting from accounting systems, where the arithmetic mean (4.35) and standard deviation (0.64), and results were less with paragraph (13) of low-cost accounting information systems, where the arithmetic mean (3.49) and standard deviation (1.19). This whole indicates that there is a quality of information learned from the financial accounting information systems in private Jordanian universities.

TESTING HYPOTHESES

THE FIRST HYPOTHESIS

H₀: "The accounting information systems do not help the accountants and financial employees at private Jordanian universities in the working of accounting and financial".

The test was used one sample t-test, and uses this type of tests to judge the moral differences between the sample mean or a specific value or average society, where the results showed that reached through the analysis in Table (5) that the arithmetic average reached (4.175) and the largest of the center hypothesis, and the value of (T) calculated total (55.513), and as the value of significance sig was (0.000), which is less than the significance level 0.05, it is rejected hypothesis nihilism and accept the alternative hypothesis that is, it uses information systems accounting by accountants and financial in Jordanian universities. "

TABLE (5): A TABLE TEST THE FIRST HYPOTHESIS

first hypothesis	Calculated value of T	Sig.	Mean	Result
The accounting information systems do not help the accountants and financial employees at private Jordanian universities in the working of accounting and financial	55.513	0.000	4.175	Rejected hypothesis nihilism

Sources: work of the researcher

THE SECOND HYPOTHESIS

H₀: "The accountants and financial employees at private Jordanian universities do not aware of importance of using accounting information systems, and its impact in raising the quality of financial information and reports".

The test was used one sample t-test, and the results showed that reached through the analysis in Table (6) that the arithmetic average reached (4.172) and the largest of the center hypothesis, and the value of (T) calculated total (41.749), and as the value of significance sig was (0.000), which is less than the significance level 0.05, it is rejected hypothesis nihilism and accept the alternative hypothesis that is, The accountants and financial employees at private Jordanian universities have awareness of importance of using accounting information systems, and its impact in raising the quality of financial information and reports".

TABLE (6): A TABLE TEST THE SECOND HYPOTHESIS

first hypothesis	Calculated value of T	Sig.	Mean	Result
The accountants and financial employees at private Jordanian universities do not aware of importance of using accounting information systems, and its impact in raising the quality of financial information and reports.	41.749	0.000	4.172	Rejected hypothesis nihilism

Sources: work of the researcher

RESULTS AND RECOMMENDATIONS

RESULTS

The study found many of the most important results:

1. Information systems used by accountants accounting and financial employees at private Jordanian universities, and varying degrees of these systems.
2. There are Accounting systems related to accounting students, purchases, stores, supplies, wages and salaries, and the General Accounting.
3. There are Centralized databases and internal communications networks, linking together accounting systems.
4. There is a awareness by the accountants and financial employees in the private Jordanian universities of the importance of the use of accounting information systems, and its positive impact in improving the quality of financial information and reports in the private Jordanian universities.
5. The information provided by the accounting systems as characterized by objectivity, accuracy, speed, reliability, flexible, comparable, and help in decision-making, but there was varying opinions regarding the cost of such systems to the benefit and the size of the financial operations.

RECOMMENDATIONS

The Based on the results that have been reached, the researcher recommends the following:

1. The researcher recommends that the private Jordanian universities have to computerize the financial accounting systems, including suits the sector of the private Jordanian universities, in order to improve the performance of accounting and financial.
2. Must follow technical developments, modern technology, and information communication, and use it to perform various tasks, with the need to link all internal systems to a network of internal and central database, and this would raise the work efficiency and get the reports in a timely manner.

3. The need to train employees on the use of accounting information systems, through the provision of training courses both combining technical education and accounting education for accountants and auditors in the field of the use of accounting software and systems, as well as electronic audit programs.
4. The private Jordanian universities must attention materials that is taught to students, so that there is Applied Materials, help students graduate on practical knowledge alongside theoretical knowledge.
5. The need for further research and studies in the field of the use of the accounting and financial systems, because this field is still in need of a lot of interest and research, especially in the study of the causes and constraints that limit such use.

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THE ROLE OF SNNPRS MARKETING AND COOPERATIVE BUREAU IN THE EXPANSION AND DEVELOPMENT OF COOPERATIVES IN SNNPR REGION, ETHIOPIA, AFRICA

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ABSTRACT

The overall purpose of the study is to investigate the role of Southern National Nationalities Peoples Regional State marketing and cooperative bureau in the expansion and development of cooperatives in Southern National Nationalities Peoples Regional State. This research analyzed in the three ways such as the role of the bureau in co-operatives development in terms of organizational and promotional, to find out what are the problems and what are the gaps associated with the performance of the bureau for the development of cooperatives, and to find how marketing and cooperative bureau has given due emphasis in the expansion and development of cooperatives. The research was based only secondary data which involved interview schedule and document analysis. The study conclude that cooperative bureau plays a vital in the development of cooperatives in different ways such as giving cooperative trainings, cooperative education, providing financial support, accounting and auditing, and capacity building of cooperatives. The study also identified that the bureau has been facing some problems such as, lack of finance, lack of cooperation from society, inadequate human resources, and lack of efficient staff. In view of the problem facing, the bureau has established close collaboration with cooperative support institution.

KEYWORDS

Cooperative Development, Cooperative Expansion, Cooperative Training, Cooperative Development in Africa, Cooperative Training.

INTRODUCTION

Cooperative in many countries, especially in the developing world including Ethiopia, relies considerably on the support given by the state. The government intervenes through designing supply and demand sides support measures to grow this sector and utilizing the existing institutions and programmes available. In Ethiopia there has been and still is a strong move of the Government to give up its involvement in the development of cooperatives. More over the current government highly realized the importance of cooperatives for social and economic development and are being made effort in the development of cooperatives. In attempt to this the government established federal and regional cooperative institutions that facilitate the organization of cooperatives (Bezabih 2009). The Federal Cooperative Agency (FCA) is organized at the federal level to provide support and capacity building services to Regional cooperative institutions. FCA is also the highest government structure for implementing government policy on the establishment and development of cooperatives in the country. At the regional level, cooperative promotion structures are found at the zone and district levels. The regional cooperative promotion institutions are organized as bureaus/ agencies/ commissions, depending on the region. Each regional cooperative government institution is autonomous in its operations. In bigger regions of Ethiopia, such as Oromia, Amhara, Tigray, there are cooperative promotion offices in each zone. The districts are organized under zones, and in some regions they fall directly under regional cooperative promotion agency or office. The district offices organize, register and support primary cooperatives by locality. These zonal offices and regional bureaus/agencies/commissions monitor, regulate, conduct capacity building, register unions and federations, and provide technical backstopping, among others, to cooperatives. SNNPRS has been supportive of cooperative development and for this purpose the Bureau of Marketing and Cooperatives was established to steer the cooperative development and movement. The bureau was originally established in the name of bureau of Agriculture, but it recently transferred to the new independent bureau. The research aims is to assess the role of SNNPRS Marketing and Cooperative Bureau in the Development of Cooperatives.

PROFILE OF SNNPRS MARKETING AND COOPERATIVE BUREAU

The SNNPRS marketing and cooperative bureau was established in 2010 as an independent entity by proclamation number 133/2003. Before this proclamation enacted the bureau had exercised different structure. Previously the bureau had organized as an agency, office, and department under regional agriculture bureau at certain times and regional agriculture and rural development bureau, based on the duties and responsibilities given to it currently, in 14 zones, 136 woredas, in 4 special woredas and in 21 reform cities marketing and cooperative has opened. At zonal level the structure has departmental level, at woreda it has office level and in reform cities the structure has organized as a unit.

VISIONS AND MISSION

VISION

Seeing modern marketing system developed, income of the community enriched and their living slandered improved by 2012

MISSION

Contribute for the development of the region as well as the country by increasing the earning of the community and modern marketing system by organize and promote strong and competent cooperatives and developing their role in improving financial system.

OBJECTIVES

1. To create an integrated cooperative sector capable of contributing towards economic growth, poverty reduction, and employment creation.
2. To create a viable, dynamic, autonomous, self reliant and self sustaining cooperative movement that can play a major role in economic, social as well as cultural development of the region through effective and efficient services extended by cooperative enterprises to their member.

FUNCTION

1. Regional and federal bodies, receives and decides claim of merger, division and dissolution Provide legal book keeping, audit and inspection service and technical support
2. Provide technical support .market network, loan facilitation, promotion and information provide education and training to management bodies of cooperative at all level Employees and professional in order to develop the implementation and Capacity.
3. Cause the organization of member of cooperative societies who are organized as audit Professional, give license to cooperative societies to audit follow up and control.
4. Construct and cause to construct and expand infrastructure for the exchange of agricultural product.
5. Cause the establishment of regional the region's consumer cooperatives association.
6. Provides or cause to provide education and training to management bodies of cooperatives at all level, employees, and professional in order to develop the implementation and execution capacity.
7. Cause the establishment of regional the region's consumer cooperatives association.
8. Facilitate, support, and follow up condition for establishment of bank and insurance of cooperative association.

CONCEPT REVIEW

Co-operative movement has cleared the dynamic character of co-operative activities suiting the local and regional environment, economic and social situation. Co-operation is an activity of the people. It is a self-generated, voluntary and self-sufficient activity. As a modern phenomenon, the co-operative form of business organization originated in England amongst the industrial workers in the mid-nineteenth century. Cooperatives started as an urban consumer stores but soon spread to rural areas amongst farmers. Workers had nothing to sell but their labor, as it was a buyers' market. Those who failed to find work in the factories were forced either to rely on insufficient rural assistance, or to starve. By the early 1800s, food prices were artificially high and wages were being reduced, while much of the population suffered extreme poverty and scarcity. During the latter part of the nineteenth century, the concept enhanced several parts of Europe and North America. The earliest co-operative were established among the weavers, workers in cottage industries, who were suffered by moneylenders and mercantile economy during the industrial revolution. The real co-operative movement can be credited to Rochdale Pioneers who established the co-operative consumer store in North England, which can be called as the first in the co-operative consumer movement. Around this time the cooperative movement was more at a practical level. In Great Britain, Robert Owen (1771-1858) established self-contained semi-agricultural, semi-industrial communities. Owen was sure that working-class people, given the right environment, possibly will form co-operative communities. He put this practice in New Lanark, Scotland, where his own business based. Dr. William King (1757-1865) helped to spread Owens doctrine; his ideas were more reasonable than Owens' and he achieved more results. In France Charles Fourier (1722-1837) published a Treatise on Domestic Agricultural Association in 1822, first time on co-operation and Saint-Simon (1760-1865) worked on various theories of associations. Schulze-Delitzsch (1808-1865) was the promoter of urban co-operatives and co-operatives in handicrafts, while F.W. Raiffeisen (1818-1888) did the same for rural credit co-operatives. Early in the twentieth century, the cooperative movement spread to India and gradually to other Asian and African countries; socialist or communist countries, the cooperative movement also operates in capitalist countries such as the United States of America, Canada, Israel and Australia.

COOPERATIVE DEVELOPMENT IN ETHIOPIA

Cooperation among people has existed since history has been record. Traditional forms of cooperation involved community members voluntarily pooling financial resources through "iqub", which was an association of people having the common objectives of mobilizing resources, especially finance, and distributing it to members on rotating basis. There were also initiatives for labour resource mobilization that were to overcome seasonal labor peaks, known as "Jigie", "Wonfel", among others. Ethiopia has introduced modern types of co-operatives in various areas of endeavor later than the majority of African countries where their co-operatives were established by the Western powers during their colonization period. In fact, the first consumer co-operative was established in Addis Ababa in 1945 (ILO, 1975). However, it was after decree No. 44 of 1960 that modern or 'imported' co-operatives were officially introduced (Haileselassie, 2003).

It was during the imperial government of Ethiopia that the first decree No. 44/ 1960 was declared in order to form the modern "Farm Workers Co-operatives". This co-operative legislation was enacted three years later than the creation of the Ministry of National Community Development in January 1957 in order to achieve the objectives of the following Departments: Community Department, Co-operative, Social Welfare and Labour (Alemayehu, cited in Redie and Hinrichsen, 2002). The decree No 44/1960 was replaced by "Co-operative Society Proclamation No. 241 of 1966". The main objective of this proclamation was improving the standard of living of the farmers, better business performance and improving methods of production. In reality, this proclamation benefited the wealthy commercial farmers who resided in the most potential areas. The cooperatives were not easily accessible to the ordinary and poor peasants. Despite its limitations, Alemayehu (2002) describes that proclamation No. 241/1966 created a favorable situation for the expansion and development of co-operatives in Ethiopia.

At the end of the Third Five-Year development Plan, 50 agricultural co-operatives were set up with about 11, 000 members and a capital of 6 million Birr (Haileselassie 2003). McCarthy (2001) recognizes that the co-operative society proclamation formed the legal corner stone for the promotion of modern agricultural co-operatives; however, he shows the formation of co-operatives in this period was slow and their performance was weak; until the revolution of the 1974, only 165 agricultural co-operatives with a total membership of 33,400 were established. He asserts that the first Ethiopian co-operatives faced serious obstacles in the land tenure system, banks' collateral requirements, inadequate trained manpower, lack of access to market facilities, absence of membership training programme and inadequate agricultural services. In 1974, the Ethiopian Revolution erupted and the military regime (known as the Derge) came into power.

After a while, the Derge enacted Proclamation No. 71 of 1975 to nationalize all land, which provided for the formation of Peasant Association, Agricultural Producer Co-operatives and Agricultural Service Co-operatives. In 1978, "Co-operative Societies Proclamation No. 138/1978 replaced the proclamation of 1966. The crisis of co-operative identity began at the time when the Derge abolished all co-operatives except the housing and saving and credit co-operatives which were organized under Proclamation 241/1966. The co-operatives were not autonomous organizations, but had purely political character. This was clearly reflected in the proclamation of 137/1978 Article 3.5 i.e. "Co-operative shall be organized to conduct political agitation". Besides, Article 3.6 says: "Co-operative is organized to participate in the building of the socialist economy." ILO (1997 as cited by Haileselassie, 2003) clearly states that many co-operatives in Africa are not (were not until recently) "genuine", because they served the state, a political party or individuals instead of their members. When the state 'incorporates' co-operatives, they can become instruments of oppression instead of participation. An example (though now dissolved) is the peasants' associations of Ethiopia, which forced farmers into collective production against their will.

Therefore, the proclamation was enacted on the basis of socialist ideology. They were considered as the extension of state institutions, and almost all lost their co-operative identity. By 1990, there were 3,723 agricultural producer co-operatives with 302,653 members, and 4,052 agricultural service co-operatives with 4.5 million members and combined assets of more than 422 million Birr. In general, co-operatives in the Derge were characterized by corruption and mismanagement, and served as a vehicle for the government mass collectivization policy as well as a forced recruiting ground for fighting for Mengistu's escalating internal conflicts (McCarthy, 2001). Forced by the internal instability and economic crisis along with the world economic situation, the Derge declared the "mixed economy policy" in 1990. This gave an opportunity to the cooperative members to decide on their future. As they were organized without their will and interest, the majority of co-operatives collapsed. Due to unnecessary government interference and compulsion on membership and leadership, people, throughout the country, have developed a negative view about the co-operative movement and reduced their age-old self-help tradition.

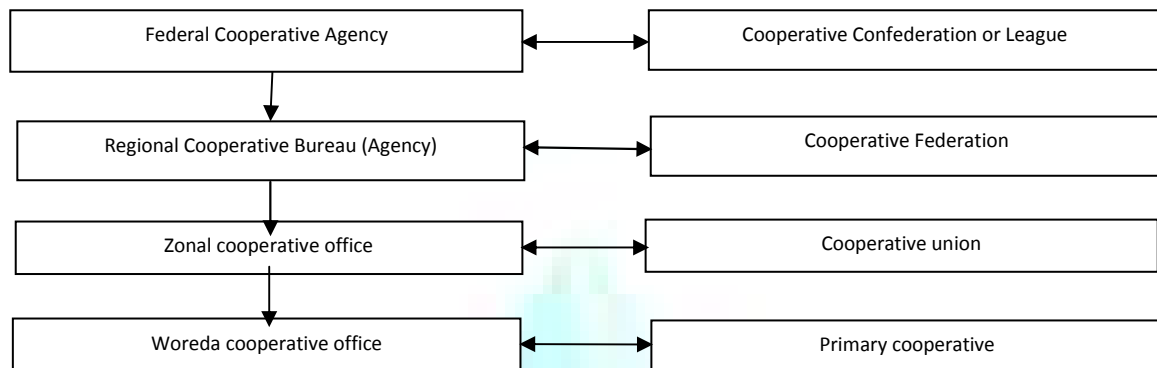
In 1991, the old military regime was defeated in the civil war. The new government embarked on major political and economic reforms. The new constitution provided for decentralization in which substantial political, economic, and social policy power has been devolved to the nine regions and two city council administrations. By abolishing the more centralized economic policy and planning, the new market liberalization policy, which is democratic and decentralized policy, launched the formation of new "Agricultural Co-operative Societies Proclamation No. 85/ 1994". This proclamation restricts the government from negative interference in the internal affairs of co-operatives and initiates the organization of free, autonomous and independent cooperative. For establishment of different types of co-operatives in the country, "Co-operative Societies Proclamation No. 147/1998" replaced the proclamation No. 85 / 1994. This proclamation shall in particular include the following: Agricultural, Consumer, Housing, Industrial and Artisan Producers', saving and Credit, Fishing and Mining Co-operative Societies. Under this proclamation, co-operatives are organized to solve problems collectively, to achieve a better result by coordinating their knowledge, wealth and labour to promote self-reliance, to improve the living standard of members and so on. The Ethiopian government is trying to promote co-operatives with the objectives of developing them into autonomous self-help institutions. This was the main reason for setting up the Cooperative Promotion institution in each region, zone and woreda.

INSTITUTIONAL ARRANGEMENT FOR COOPERATIVE DEVELOPMENT IN ETHIOPIA

In Ethiopian Cooperative policies and strategies are designed by the FCA and approved or enacted by the appropriate legislative body. The policies define how the cooperatives are organized and supported by cooperative promotion institutions. Though functionally they stand as independent institutions, cooperative

organizations are closely linked with the supporting government cooperative institutions. The level of organizational hierarchy varies across regions. The figure below shows the common organizational hierarchy of cooperative organizations and the supporting government structures at different levels

FIGURE 1: INSTITUTIONAL ARRANGEMENT FOR COOPERATIVE DEVELOPMENT IN ETHIOPIA



The Federal Cooperative Agency (FCA) is organized at the federal level to provide support and capacity building services to regional cooperative institutions. The FCA is the highest government structure for cooperative promotion in Ethiopia. FCA has a mandate that includes:

- Overseeing the appropriate implementation of cooperative policy.
- Designing cooperative policy and legal procedure consistent with international convention on cooperatives.
- Ensuring policy coherence between cooperative policy and the broader policy environment.
- Formulate policy and prepare draft laws for the promotion and development of cooperatives, and submit the same to the government and follow up their implementation.
- Encourage that the organization of cooperatives in accordance with international convention on cooperatives.
- Undertake research and study to promote traditional and self help associations to modern cooperatives.
- Organize, register and Issues license of the legal personality.

REGIONAL COOPERATIVE PROMOTION AGENCY

Regional cooperative promotion agency organized at regional level to renders tremendous services to zonal, district level cooperative offices and cooperative organization. The Cooperative Promotion agency provides trainings for cooperatives promoters in order to facilitate cooperative development. The agency allocates budget for trainings to be undertaken by zonal and district level offices experts. The cooperative promotion agency provides material supports to rural saving and credit cooperatives and also providing technical supports in establishing cooperatives. These supports are being rendered directly or indirectly through the organizational structure and regional cooperative promotion agency. Membership drive in cooperatives depends upon the skill, capacity of manpower at district level cooperative offices. In addition to this it depends on the services provided by cooperatives to their members. However the services provided by regional level plays an important role in increasing membership cooperatives. The regional cooperative promotion bureau has a mandate that includes:

- Organize cooperative union and federation
- Promote the dissemination of information to cooperatives
- Encourage the development of cooperatives as autonomous and self managed enterprises Strengthen the competitiveness of cooperatives and gain access to market and investment finance
- Develop business potential including entrepreneurial and managerial capacity
- Promote and protect cooperative value and principles
- Facilitate access of cooperatives to regional and national data such as market information
- Providing legal book keeping, audit and inspection services as well as technical support

ZONAL COOPERATIVE OFFICE

Zonal cooperative promotion office organized to provides support to district level cooperative promotion offices and cooperative societies. The office provides business skill training for cooperative promoters; it also provides technical supports for cooperative organizational and promotion activities; the office provides training for cooperative promoters; provides technical support for preparing training manuals. The organization provides ideas how to improve the cooperative organizational management, it also provides supports to district cooperative offices promoters for establishment of cooperatives during service delivery members are encouraged to become member of cooperatives. Further those who are members of cooperatives have developed their awareness and know how to run business and also members who have participated in training got awareness about the concept of Being member of cooperative can change their life . Generally zone cooperative promotion office has a mandate that includes:

- Follow the organizing activities undertaken in their zones through each woreda's cooperative organizer.
- Register the newly organized cooperatives and provide legal personality.
- Promote cooperative fund in their zones based on their viability.
- Direct woreda cooperative promotion offices and provide them current reform and adjustment made at regional level.
- Supervises and control woreda cooperative promotion offices in returning the loan at primary cooperative societies borrowed from lending institution.
- Supervises the overall operational activities of the union fund in their zone.
- Provide training on current issues and direction to the woreda cooperative promotion office employee.

DISTRICT COOPERATIVE PROMOTION OFFICE

District level cooperative office organized to provides capacity building services, register and technical support to primary cooperative organization. The services are focused on areas of cooperative education for cooperative members and committee members. The district provides monitoring loan repayment. If the loan repayment is not in time, the cooperatives cannot disburse new loan. For that reason the promoters follow the cooperative members to pay the loan in time. The district allocates budget for training and assigns the trainer to conduct training.

COOPERATIVE DEVELOPMENT IN SNNPRS

At regional level before 1994, there were about 750 agricultural cooperatives, 100 carpenters' cooperatives, 64 housing cooperatives and 43 saving and credit cooperative societies at primary level that have been established and giving different services for their members. As a result, up to June 30/2000 E.C including the reorganized ones the number 19increased to 2381 cooperatives and 32 unions. These primary cooperative societies have been organized in 24 different

types of work profession and giving diversified services for their 928,232 members with their capital of 164,809,826 birr. With regard to youth packages, youth have been engaged and organized in more than 49 different work professions and 3496 primary cooperative societies have also been registered and received temporary legal personality certificate. These cooperatives have 109,996 members with their capital of 2,473,540 birr from the share. As a result a lot of job opportunities created. In general, the primary cooperatives societies those have been established and received legal personality certificate at regional level are 5877 having 1,038,230 members. This shows that from 1994 onwards the number of primary cooperatives increased above 6 fold and working in different areas. Among the primary cooperatives about 956 engaged in agricultural marketing and play an important role in providing agricultural inputs and increasing production and productivity to the farmers. Similarly, 935 saving and credit cooperatives have been giving services in rural and town areas by building the capacity of their members being as finance source to solve economic and social problems by developing saving culture of community. In different towns of the region, 125 housing cooperative societies who have 4096 members and many of them has become owner of their houses and the remaining are in progress.

STATEMENT OF THE PROBLEM

Incidentally, cooperative despite its old age is not very popular in Ethiopia. The problem is that many people do not know much about cooperative, its mechanisms and role in economic development, and how it is considered in the world as a Third Force, an alternative and countervailing power to big business. However, the federal and regional governments have realized the contribution of cooperatives to economic and social development, food security and poverty reduction in Ethiopia. As a result, the Government has been committed to the promotion of cooperative development through its cooperative support institutions. These efforts have seen a steady increase in the number of cooperatives in Ethiopia in the recent year moreover, in SNNPRS the regional government through marketing and cooperatives bureau has continued to play a key facilitating role in the expansion and development of cooperatives in SNNPRS region. The bureau has been working on enabling the cooperative sector to become vibrant, strong, by creating linkage between cooperative and government, research institution as well as cooperative support institution such as RUFIP, HABP, USAID, ACIDI VOCA soon. This effort has brought tremendous increase in the number of cooperatives societies and union in the region over the last three consecutive years. Since, the SNNPRS marketing and cooperative bureau facing the following problem to expansion and development of cooperatives throughout the region are inadequate human resource, insufficient funds, wrong attitude of the societies towards cooperative and lack of efficient staff with requisite qualification. These problems hinder the SNNPRS marketing and cooperative bureau in the expansion and development of cooperatives. Hence, the researcher are enforced by these entire problem to assess the role of SNNPRS marketing and cooperative bureau in the expansion and development of cooperatives and finally to suggest possible measure to address the problem and strengthen the role of the bureau in the expansion and development of cooperatives.

OBJECTIVES OF THE STUDY

GENERAL OBJECTIVE

To assess the role of SNNPRS Marketing and Cooperative Bureau in Expansion and Development of Cooperatives.

SPECIFIC OBJECTIVES

1. To analyze the role of SNNPRS Marketing and Cooperative Bureau in Organizing Cooperatives.
2. To assess the Promotional Role of the Bureau in the Expansion and Development of Cooperatives.
3. To suggest possible measure to strengthen the Role of the SNNPRS Marketing and Cooperative Bureau in the Expansion and Development of Cooperatives.

HYPOTHESES OF THE STUDY

1. The SNNPRS Marketing and Cooperative Bureau do not contribute to Expansion of Cooperative movement in the study area.
2. The SNNPRS Marketing and Cooperative Bureau do not contribute to Development of Cooperative movement in the study area.

SIGNIFICANCE OF THE STUDY

The result of the study will serve as a base for future investigation, it will also helps to decision maker and practitioner to analyze the role of the cooperative bureau for cooperative development and its key performance.

LIMITATION OF THE STUDY

The study limited only SNNPRS marketing and cooperative bureau which had very limited sample size. And also it is difficult to getting reliable information from the employees of bureau.

RESEARCH METHODOLOGY

This study is only confined to the role of SNNPRS marketing and cooperative bureau, Hawassa town. Therefore, Case study method was adopted for this study. The data was collected from SNNPRS marketing and cooperative bureau.

SOURCE AND DATA USED

The researcher used only secondary data for this study. The secondary data were collected from the employees of the bureau and report, document, and manual maintained by the bureau and also from various journals, reports, books, and related websites.

TOOLS AND METHOD OF DATA COLLECTION

The required data for the study were collected by using well prepared schedule.

METHOD OF DATA ANALYSIS

The data was analyzed with simple statistical tools such as growth rate and average.

RESULTS AND DISCUSSION

SNNPRS Marketing and Cooperative Bureau since its inception has been working as a key facilitating role in the promotion of cooperatives. The bureau has continued to enable the cooperative sector to become self sufficient, vibrant, strong, effective, nationally and globally competitive by creating linkage between cooperative movement and the government. The bureau of SNNPRS marketing and cooperative has a clear strategy, objectives on the promotion of cooperatives. The strategy document, prepared in 2006, describes the statements of goals and intents of the government for cooperatives of all types in the country. It is the intention of the bureau that when implemented, the strategy framework will facilitate the creation of a vibrant cooperative movement in SNNPRS. It is hoped that cooperatives will represent a major component of private sector enterprise, providing income, and employment opportunities for a significant part of the population, especially in the rural areas of the country. The nature of a vibrant cooperative development will include an autonomous, self reliant and sustainable cooperative structure, effectively and efficiently meeting the need of grassroots and secondary cooperative organizations. The strategy on the promotion of cooperatives incorporates the seven universal principles that are recognized by the international community, including the Statement on the Cooperative Identity as stipulated by the International Cooperative Alliance.

The promotional strategy encourages all categories of cooperatives, including and not limited to savings and credit cooperatives, agricultural production and marketing cooperatives, fishery cooperatives, handicraft. The strategy on the promotion of cooperatives also to promote an autonomous and economically viable cooperative movement, based on cooperative values and principles. The cooperatives will be able to contribute to social integration and the uplifting of the standards of living of the members. The bureau's strategy aims is to creating a conducive environment for the promotion of economically viable, member-based, democratic, and autonomous co-operative business entities in accordance to ILO Recommendation No. 193 of 2002. To these effect cooperatives in the

region has become an important player in the socio economic development of the region .cooperatives in the in SNNPRS cut cross all sector of the economy and provided an important framework. In particular, bureau has been working in the promotion of cooperatives through the following:

- Sustain efforts to generate public awareness of the distinct advantages and strengths of cooperatives and cooperative values, especially member empowerment, in order to foster the creation of cooperatives in new, emerging or traditionally underserved areas;
- Focus support on cooperatives as sustainable and successful business enterprises that contribute directly to employment generation, poverty reduction and social protection, across a variety of economic sectors in urban and rural areas;
- Promote the growth of financial cooperatives in order to attain the goal of inclusive finance by providing access to financial services for all, specifically by adopting policies that expand the span and scope of financial cooperatives and credit unions through appropriate incentives in tax structures and access to services and markets;
- Promote the growth of agricultural cooperatives in order to attain the goal of food security by cultivating comprehensive growth in the agricultural sector, specifically by improving financing options, sustainable production techniques, investments in rural infrastructure and irrigation, marketing mechanisms and the participation of women;
- Intensify and expand the availability and accessibility of research on the operations and contribution of cooperatives, and establish methodologies for the collection and dissemination of comparable global data and the good practices of cooperative enterprises,
- Review and improve legislation on cooperatives and State regulatory capacity, especially by establishing a level playing field for cooperatives as compared with other enterprises.

TABLE 2: NUMBER OF COOPERATIVE UNION PROMOTED BY SNNPR MARKETING AND COOPERATIVE BUREAU

Types of Cooperative Union	No. of union	Percentage
Coffee production and marketing cooperatives	5	12.0
SACCOS	15	30.0
Consumer cooperatives	2	8.8
Irrigation cooperatives	1	4.4
Vegetable and fruit cooperatives	1	4.4
Grain production and marketing cooperatives	17	32.0
Livestock cooperatives	1	4.4
Honey and honey product cooperatives	1	4.4
Total	44	100.00

Source: Data compiled from SNNPRS MCB, 2012.

Table 2 shows that types of cooperative union promoted by SNNPR Marketing and Cooperative Bureau revealed that 17 (32 percent) cooperatives were under the types of Grain production and marketing cooperatives, followed by 15 (30 percent) were SACCOS. Rest of them was only very low percentage. Because in this region the grain production is one of the main cultivation of the people, and also Savings and Credit Cooperatives is improving the living standard of the people especially in rural poor.

TABLE 3: TYPES OF PRIMARY COOPERATIVES BY ACTIVITIES

Type of Primary Cooperatives	No. of Coops	Percentage
Incense and gum	2	0.09
Multipurpose farmers coops	118	5.50
Handloom and handy craft	50	2.33
Irrigation cooperatives	128	5.97
Housing cooperatives	80	3.73
Vegetable and fruit	50	2.33
Coffee production and marketing	10	0.47
Livestock production and marketing	39	1.82
Mining cooperatives forestry	42	1.96
Grain production and Marketing	300	13.99
Milk production and marketing	24	1.12
Forestry cooperatives	163	7.60
Fishery cooperatives	16	0.75
Service cooperatives	200	9.32
Youth cooperatives	240	11.19
SACCOS	242	11.28
Education and training	3	0.14
Honey	90	4.20
Consumer	348	16.22
Total	2145	100

Source: Data compiled from SNNPRS MCB, 2012.

Generally SNNPRS marketing and cooperative bureau has been contributing significantly to improving cooperative performance by facilitating access of cooperatives to support services. In particular, support to cooperative human resource development is considered to be key element. Cooperative success can often be attributed to the success of comprehensive HRD programmes for all stakeholders in cooperatives - members, workers and managers. The bureau has adopted Measures to develop the capacities and knowledge of the values, advantages and benefits of the cooperative movement, and to develop technical and vocational skills, entrepreneurial and managerial abilities, and knowledge of business potential and general economic and social policy skills of cooperative members, workers and managers and improve their access to information and communication technologies. Further the bureau has been promoting education and training in cooperative principles and practices throughout the society. The bureau has also been promoting safety and health, productivity and competitiveness in cooperatives, facilitating access to credit, markets and information, promoting best practice in corporate governance, strengthening gender equality, promoting workers' rights and facilitating vertical and horizontal linkages among cooperatives. In particular the bureau gives the following support in the promotion of cooperatives; Business planning and Technical support, Marketing, Capacity Building, Feasibility studies, financial support, leadership development and cooperative education and training

COOPERATIVE EDUCATION AND TRAINING

SNNPRS marketing and cooperative bureau has provided continuous education and training to cooperatives, especially in changing the attitude of members towards cooperatives. A majority of members understand the general concepts and principles of cooperatives and the members' role. This is the result of a one-day awareness creating training session and discussions with member farmers repeated two or three times per year through the bureau. Frequent training in a

wide variety of topics has been given to board members, executive committee members, and to the accountant. In primary cooperatives, accountants are being groomed to be managers, and they generally attend courses designed for managers. Thus the accountant and the board chairman have attended several courses designed for managers. The specific training offered through bureau of marketing and cooperatives over the last 4 years to participants from the cooperative is shown in Table 4.5.

TABLE 3: TYPES OF TRAINING PROVIDED BY THE BUREAU (in numbers)

Types of Training	2010	2011	2012
Board member training in cooperative development	150	300	400
Accountant training on cooperative accounting	640	765	-
Farm member training	732	342	312
Audit service for cooperative	375	-	-
Financial management	-	328	231
Training of Internal control installation and others	165	732	123
Total	2062	2467	1066

Source: Data compiled from SNNPRS MCB, 2012.

The board members have been given training in general cooperative development, business management, marketing, savings and credit, storage management and grain quality control, as well as internal control systems. The accountant and the board chairman have participated in a variety of training in topics such as cooperative management and accounting, business skill development, financial planning and credit management, savings and credit, grain quality control and post-harvest loss minimization, working capital and warehouse management, and internal control systems. In addition to the local training, the previous chairman and the accountant participated in a study tour of Kenya. For example, the progress made in grain marketing and uninterrupted dividend payment is unique achievements. Even during 2003, when most cooperatives declared a loss due to the depressed agricultural commodity prices, this cooperative managed to pay dividends. While training could have been more frequent and more intense, the impact of the training on improved cooperative management capacity has been impressive. The training in credit and finance has been instrumental in helping members to effectively manage input loans and personal loans, which are significant. Training related to marketing and price information has helped regarding decision making on when and how to buy and sell grains, and in assessing the competition. Prices are determined based on the full costs involved: for example, prices of grains take into account depreciation and interest expenses, per diem and transport expenses, etc. The cost accounting system has helped business planning, though more improvements are necessary. The annual plan essentially focuses on inputs supply and grain marketing (as opposed to other services such as credit services and tractor services). Other activities have also been considered. For example, consumer goods services⁷ has been discontinued because it was found to be unprofitable due to stiff competition with small private retailers. Dividend payments have been properly managed based on the training received. In conclusion, the cooperative's young leadership is responsive to the training by the bureau. Executive members are receptive to new ideas and working hard to make their cooperative dynamic and a role model within their community. They closely monitor the active participation of each member. For example, through the input loans and personal loans, all members are actively participating in the activities of the cooperative. They are exercising owner-user, owner-managed and owner-controlled principles of a primary cooperative learned through the training provided by the bureau.

CAPACITY BUILDING OF COOPERATIVES

Since, the members of cooperatives are the pillars of their business and operation, the process of building their capacities is very crucial for sustainable existence of the SNNPRS marketing and cooperative bureau has been working in building the capacity of cooperatives in areas of membership mobilization and education, organizational development, capital formation in cooperatives, leadership development, business development, market access and sale, and financial services. Specifically the bureau emphasis on:

- Enhancing managerial efficiency by incorporating better management methods and techniques through a process of continuous training and development. This involves: development of appropriate methodology for the training of managers; development of training infrastructure and utilization of existing training infrastructure through appropriate changes and modifications; development of a cadre of well-informed trainers; development of suitable and practical training materials; incorporation of on-the-job learning opportunities for managers; providing exposure to managers to learn;
- Enhancing management leadership capacities and capabilities through a process of intensive training and extension work at the level of committee members, leadership functionaries and key members. This involves: development of appropriate methods and training resources; utilization of existing training infrastructure; and exchange of experiences with a view to take well-considered business decisions and developing a fruitful relationship with the members and managers;
- Enhancing physical capacities of agricultural cooperatives to produce and market safe and fresh farm products with a view to generate earning capacities of the local farmers by making use of the local products. This involves adoption, adaptation and pursuing other methods of enhancing business capacities of agricultural cooperatives e.g. and members in post harvest handling and processing for improved quality product. The following are some of the capacity building service provided to cooperative union and primary cooperatives as well as cooperative federation for the last three consecutive years.
 - Assisted with legal, technical and in business formation, provided start-up capital
 - Training and support on how to operate their business
 - Trained managers, and board members in cooperative principles and basic business and marketing skills. Organized initial tours to other local cooperatives for manager, staff, and board members to learn of their operations. Shared cost of opening office – office rental, furniture, equipment, computers, and training materials.
 - Providing Business, Technical, and Marketing Capacity Building.
 - Provided cooperatives with advanced business skills such as accounting and auditing, warehouse controls and human resource management training.

MARKETING

The markets that the co-operatives have to rely on are generally unstable. The fact that market research is not done, results in the inability of the co-operatives to find sustainable markets for their products. Some of the co-operatives produce enough that is ready for the market, but they are unable to find a stable market. To remedy this problem the bureau has been assisting cooperatives with regard to finding markets and generally to train the producers how to price their products

ACCOUNTING AND AUDITING

Audit of Co-operative Societies is an integral part of the supervisory system. It gives not only financial assessment of the Cooperative Society but also an assessment of the Management of that Society. The Responsibility for conducting audit in SNNPRS rests with the State through bureau of marketing and Co-operative movement in Tripura started in 1964 and over the years there has been a Gradual expansion in size, numbers and volume of operations of Co-operative Societies in the State. Now Co-operative Societies of diversified activities have come up and with the Growth of the Co-operative movement its accounting system also gets complicated. Audit of Co-operatives has become a big job to complete it in time maintaining the quality and Efficiency. With development in the Co-operative movement internal structures and procedures in some areas are required to be strengthened. The Audit of a Cooperative Society is much more elaborate than Audit of a Commercial Undertaking. Besides certifying the correctness of the Balance Sheet and the Profit & Loss Account, the Auditor has also to ascertain how far the Society has achieved the objects for which it has been organized on a cooperative basis. Thus, the amount of Profit available for Distribution is not the only result expected in the Audit of c Cooperative Society. How far the Society has succeeded in furthering the moral and material well being of its members is an important aspect of which the Audit is required to focus. Besides the above, audit of cooperative societies has to take into consideration the Adherence to provisions of the Cooperative Societies Act & Rules and other relevant Act as Well as the Bye-laws of the society. As Co-

operatives are group of enterprises carrying out economic activities and participating in the Market. They are usually run by people without much business experience. Therefore, there is need for internal and external audit, to discover mistakes and to protect members, creditors and the Public. To this effect audit of a cooperative society in SNNPRS at present is being carried out by specially trained cooperative auditor of cooperative promotion bureau. The SNNPRS marketing and cooperative bureau has been providing auditing services to cooperatives to protect against theft and lose, and also to develop and promote transparency, strengths and self sustainable and introduce financial and accounting management system to cooperatives. The following are the some schemes are provided by the SNNPRS Marketing and Cooperative Bureau to Expansion and Development of Cooperatives in the study area.

- a. Provide auditing to all types of cooperatives and farmer associations according to the Cooperative Societies Act.
- b. Prescribe suitable accounting systems for cooperatives and farmer associations.
- c. Provide training in financial and accounting aspects for cooperatives' and farmer associations' members, staff and board members.
- d. Prescribing accounting system for cooperatives and farmer association
- e. Providing training courses for cooperative's grass-root members, committee members and managers in accounting. –
- f. Supervising the performance of Provincial Auditing Offices. -
- g. Auditing all types of cooperatives and farmer associations in provincial areas,
- h. Providing regular counseling for cooperatives' bookkeepers and managers in accounting and financial aspects
- i. Providing training and counseling in basic accounting to the farmer.
- j. Provide audit and supervision services to Co-operative Societies in SNNPRS
- k. Give advice on audit and accounting procedures and to formulate audit and accounting policy for adoption by Societies.

FINANCING

The role of the bureau in financing co-operatives is in the areas of providing loans and credits, subsidies and grants.

A) LOANS AND CREDIT

The bureau provides loans to co-operative with which the societies are expected the use and executes viable projects. The bureau through the appropriate cooperative support institution gives loan to co-operative society to meet its financial obligations to members and the society. For example RUFIP provides loan to saving and credit co-operative.

B) SUBSIDIES AND AIDS

A co-operative society receives grants/aids from government international organizations, etc. The grants are not usually repaid. Related to the giving of grants, the bureau in collaboration with regional government pays for the annual subscriptions of some apex cooperative organization such as cooperative federation which existence is not purely for economic but to provide services to the affiliate members.

PROBLEM OF SNNPRS MARKETING AND COOPERATIVE BUREAU

Even though SNNPRS marketing and cooperative bureau has been playing an important role in the development of cooperatives, it has been facing some problems. It was indicated that the bureau are not fully staffed and that the turnover rate is high, unfortunately, nonprofessionals has undertaken Cooperative promotion activities. It is interesting to note that most of the staff working and managing cooperatives have not been formally trained in cooperatives. For instance, only some staff member has been formally educated in cooperatives. The others are assigned from related fields, such as economics, agriculture, and management. The most notable instability in the Ethiopian public institutions is frequent organizational restructuring. For instance, in the First instance the bureau was restructured and merged with the Rural Development and Agriculture Bureau. For the last four years, the employees of bureau did not receive adequate technical support due to the absence of trained experts in cooperatives in the Bureau. This restructuring has had negative consequences on the development and strength of the cooperative movement. The other problems are financial problem, management problems and etc.

SUMMARY OF THE FINDINGS

1. SNNPRS marketing and cooperatives bureau facilitate the organization of cooperatives in the region .The bureau has been working in the organization of viable, dynamic, autonomous, self reliant and self sustaining cooperative movement that can play a major role in economic, social as well as cultural development of the region through effective and efficient services extended by cooperative enterprises to their member.
2. Since, the establishment of marketing and cooperative bureau the cooperative sector in SNNPRS has grown .This is attributed by the favorable environment created by the bureau. To this end, currently the regional cooperative movement encompasses 8923 primary cooperatives and 44 cooperative unions, which involve in diverse economic and social activities to serve their members. The number of participant members in these primary cooperatives are1, 292,074 out of which 1,212,123 are men and the remaining are women.
3. The SNNPRS marketing and cooperative bureau was organized different economic activities such as Producers' Cooperatives, Marketing Cooperatives, SACCO's, Consumer Cooperatives, Handcrafts Cooperatives, Mining Cooperatives, Housing Cooperatives, Construction Cooperatives, Multipurpose Cooperatives and Services Cooperatives, among others.
4. The SNNPRS marketing and cooperative bureau provided education and training for cooperative development .the emphasis of the training was on areas of cooperative development, cost accounting, cooperative management and cooperative accounting etc.
5. The bureau provides financial support to cooperatives in terms of loan and subsidies in collaboration with cooperative support institution such as RUFIP.
6. The bureau supports cooperatives in marketing of their produces.
7. The bureau provide audit and supervision services, providing regular counseling for cooperatives' bookkeepers and managers in accounting and financial aspects, providing training services for accountant in cooperative accounting.
8. The bureau in collaboration with cooperative support institution has been working in building of the capacity of cooperatives in areas of membership mobilization and education, organizational development, capital formation in cooperatives, leadership development, business development, market access and sale, and financial services.
9. The bureau has facing some problems such as, lack of skilled man power, lack of adequate fund, high employee turnover and less cooperative institution.

RECOMMENDATION

Based on the findings the following recommendations are forwarded.

1. The bureau need to establish partnership with relevant government institution and agencies to overcome the bottleneck problem associated with finance to effectively work in the expansion and development of cooperatives.
2. It is likely that the bureau required to partnership with cooperative support institutions such as NGO.
3. The bureau take necessary action to encourage the development of autonomous and independent cooperatives though it has problems through establishing linkage with government and international cooperative development organization as well as other private business enterprises.
4. The bureau required to increase the working force (number of Employees) that capable the bureau to work effectively in the development of cooperatives.
5. The bureau needs to give special attention to the implementation of government policies, strategies and regulations as well as international conventions on cooperatives to facilitate autonomous cooperatives.
6. The bureau should support cooperatives rather than control.
7. The bureau needs to take special attention in the area of cooperative training.

RECOMMENDATION

Based on the findings the following recommendations are forwarded.

1. The bureau should establish partnership with relevant government institution and agencies to overcome the bottleneck problem associated with finance to effectively work in the expansion and development of cooperatives.
2. It is likely that the bureau required to partnership with cooperative support institutions such as NGOs.
3. The bureau should encourage the development of autonomous and independent cooperatives though it has problems through establishing linkage with government and international cooperative development organization as well as other private business enterprises.
4. The bureau should employ the required working force that capable the bureau to work effectively in the development of cooperatives.
5. The bureau needs to assist cooperatives with regard to finding markets and to train the producers how to price their products.
6. There is urgent need for internal and external audit, to discover mistakes and to protect members, creditors and the Public.

CONCLUSION

The result the study shows that bureau has been working to build the capacity of cooperatives in areas of capital formation, it provided continuous education and training for the last 3 consecutive years, the emphasis of the training was on cooperative accounting, auditing, financial management and marketing. The study also concludes that SNNPRS marketing and cooperative bureau has continued to play as a key facilitating role in the organization of cooperatives, the bureau has been working on enabling the cooperative sector to become competitive as well as efficient by creating linkage between the government and cooperative movement and cooperatives in SNNPRS cut across all sectors of the economy and provides an important framework for the mobilization of both human and capital resources with a membership and capital basis registered cooperative. This growth is attributed through the favorable environment created by the bureau and also the SNNPRS marketing and cooperative bureau provides accounting and auditing services for all types of cooperatives, financial support, business planning, capacity building services and training for the development of cooperatives. The SNNPRS marketing and cooperative bureau has seen cooperative development as an interventionist approach in the fight against regional socio-economic imbalance. At the same time the bureau is seen as one of the inhibiting factors for the development of cooperatives. Since its inception the bureau has been emphasizing the advantage of cooperatives in building social economy and contributing to regional and national economy. The bureau has been extending support to promotion of cooperatives in different forms such as financial support, managerial support and marketing and business planning. The bureau has significantly contributed in the expansion and development of cooperatives still the bureau has been facing a number of problems. These problems among others are human resource problem, financial problem, management problem etc., and the SNNPRS marketing and cooperative bureau has been working to organize cooperatives in to innovative sector in order to diversify the activities of cooperatives.

SCOPE FOR FURTHER RESEARCH

The general objective of the study is to analyze the role of SNNPRS Marketing and Cooperative Bureau in the expansion and development of cooperatives, so it will serve as a base for future investigation to study the different aspects of cooperative expansion, promotion and development in the world. And also this study is only confined to cooperative expansion and development in vertical approach, therefore, the future researcher may study about cooperative expansion and development in horizontal approach.

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APPENDIX

INTERVIEW SCHEDULE

TITLE: THE ROLE OF SNNPRS MARKETING AND COOPERATIVE BUREAU IN THE EXPANSION AND DEVELOPMENT OF COOPERATIVES IN SNNPR REGION, ETHIOPIA, AFRICA

Question related with background profile of the bureau.

1. When the bureau was established?
2. When the bureau started its function?
3. What are the objectives, functions, mission and vision of the bureau?
4. What is the organizational structure of the bureau?

Question related with Organizational activities

5. What types of support the bureau provide in organizing cooperatives?
6. Have the bureau introduced support measures to organize cooperatives into innovative sectors like , formal education, construction and other public policy initiatives such as livelihood creation and security for the disadvantaged etc, to diversify the activities of the co-operatives ?
7. Are the cooperative organized in accordance with ICA principles and proclamation NO.147/98?
8. What are the trends in the organization and growth of various types of cooperatives in the region?
9. Does the bureau collect data on cooperatives?

a. Yes -1 b. No -2

If "yes", please go to Question 10

10. How many cooperatives have been organized and registered in the region?

Types of cooperative union	No.coop	Type of coop union	No.coop
Coffee production and marketing		Livestock	
SACCOS		Others (specifies)	
Consumer			
Irrigation			
Vegetable and fruit			

Agriculture based Cooperatives		Non-Agricultural Cooperatives	
Type of cooperative coops	No. of coop	Types of coop	No. of coop
Sugar cane		Education and training	
Multipurpose farmers cooperatives		Saving and credit	
Livestock production cooperatives		Consumer	
Milk production and marketing		Mining	
Irrigation cooperatives		Hand crafts	
Livestock marketing		Fishery	
Coffee production and marketing		Housing	
Vegetables and fruits		Construction	
Grain production and marketing		Forest products	
Others(specify)		Others(specify)	

Question related with Promotional activities

11. What forms of support does your bureau provide to cooperatives, e.g. marketing, financial support and business planning, etc?
12. Since its inception, the bureau has been extending support to the cooperatives in different forms such as financial assistance and managerial support to promote employment, and income generation.

13. What is the current position of such, support package for cooperatives?

14. Does the bureau provide capacity-building opportunities for cooperatives?

a. Yes -1 b. No -2

If "Yes", on what areas does the bureau focus capacity-building opportunities for cooperatives?

15. What measures have been taken by the bureau to develop innovative strategies for capacity building of co-operatives?

16. Does the bureaus provide education and training opportunity for cooperatives?

a. Yes -1 b. No -2

If "Yes", what types of training provides?

Sl.no	Types of training	2010	2011	2012
1	Farm member training			
2	Accountant training on cooperative accounting			
3	Managers training in cooperative development			
4	Audit service for cooperative			
5	Financial management			
6	Training of Internal control installation and others			

Thanks for taking time to answer this question on the behalf your bureau. Your responses are much valued.

STUDY ON THE HEALTH LIFESTYLE OF SENIOR LEARNERS IN TAIWAN

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ABSTRACT

Taiwan has quickly become an aging society and the dependency burden of the elderly will become increasingly heavy (Statistics Department, Executive Yuan, 2010). This study is the application of "the WHOQOL-BREF on Taiwan version questionnaire to understand the cognitive concept of the central and southern areas senior learners' health lifestyle, and hope that the analysis of the questionnaire collected data to investigate the actual situation of the health lifestyle of senior learners' in Taiwan as important reference in the subsequent study. The study finding that senior learners' generally physical health the domain and the social relationships of the domain of positive awareness level is higher than the psychological domain and environment domain.

KEYWORDS

Health lifestyle, WHOQOL-BREF

INTRODUCTION

As the biotechnology and medical technology progress, human diseases or genetic problems have reached gradual control and solutions, thereby extending our longevity. For this reason, the average life expectancy rises while the aging population from all nations increases accordingly. According to the definitions given by the World Health organization (WHO), the population aged 65 years old or older accounting for 7% of the total population is known as the Aging Society, whereas the population aged 65 years or older accounting for 14% of the total population is known as the Aged Society and the population aged 65 years old or elder accounting for 20% or higher of the total population is known as the Super Aged Society. The Ministry of the Interior statistics showed that by the end of 2009, the aging population was increased to 2,457,648 people, accounting for 10.63% of the total population. Additionally, the Council for Economic Planning and Development estimated that the aging population will reach 20.1% of the total population by 2015 and one out of every 5 people will be an elderly.

Furthermore, the content of important indicators announced by the Department of Statistics, Ministry of the Interior, revealed that the population rate of 65 years old and elder was mounted by 0.15% from 2010 to 2011, whereas the index of aging relatively was increased by 3.56%, as shown in Table 1. We discovered that the rate of aging population in Taiwan society is climbing and continues unabated. It also brings a sounding alarm of the advent of an aging society to the government administration and relevant researchers and scholars. Therefore, how to face the changes with sound preparation and relative to the increase of aging population merit increasing attention and care on the relevant solutions and measures taken on the health-related quality of life in senior citizens.

Nonetheless, as the individual longevity grows, we are facing with increasing aging problems. For example, the weakening of body functions and the torture suffered from chronic diseases at older age frequently lead to inconvenience and discomfort in life, as in terms of the physiological state. In terms of the psychological state, the likely problems to be encountered include the sense of frustration resulted from aging or the sense of loneliness in life after retirement, giving a perception of helplessness and disorientation among the senior citizens. For this reason, the various possible issues brought by aging society should not be neglected and faced with, regardless of the physiological and psychological states or social adaptability in the elderly, are mutually connected with the daily life.

This study discovered from the abovementioned social phenomenon that the elderly live longer due to the progress in the overall medical field and technology. Nonetheless, the quality of life in modern people could not guarantee happiness as the relationship between quality of life and sense of happiness does not necessary appear in positive growth, which then inspired us to get insights into the relevance of the quality and sense of happiness in life in senior citizens. The study started out from this concept and issued the World Health Organization Quality of Life Questionnaire, Taiwan Version (WHOQIL-BREF) to collect samples from central and southern Taiwan with statistical analysis. We intend to contribute to the future relevant academic study and the society with this research results.

The study objects comprised the senior citizens taken from central and southern Taiwan and the study intends to understand the relevance of senior citizen society support and their health-related quality of life through the issuing of Health Organization Quality of Life Questionnaire WHOQOL-BREF. The study purpose includes the following:

1. Understand the current condition of health-related quality of life in senior citizens of Taiwan.
2. The relevance between the variables of senior citizen population and health-related quality of life.

LITERATURE REVIEW**HEALTH LIFESTYLE**

Quality of life is a considerably complex concept which changes according to the different situations. It is generally perceived as comprising subjective adaptability, satisfaction, happiness, and living satisfaction (Wen, 2008). Holtkamp, Kerkstra, Ribbe, Campen Va, and Ooms (2000) suggested that quality of life refers to the subjective judgment of individuals, which could include five dimensions, namely feeling, physiological, psychological/social functions, perceived autonomy, and perceived safety.

Quality of life can be divided into health-related quality of life (HRQOL) and global quality of life. The former term was previously treated as the indicator for cure and life sustainability in quality of life (Meerberg, 1993), which now emphasizes on the health, functioning, and well-being. In other words, it refers to the individual satisfaction for the important part of life subject to health influence, including the following five dimensions: physiological function, social function, character function, psychological health, and global perception of health (Sousa, 1999). The later emphasizes more on the overall perception and is the results of individual satisfaction towards life from general environment, whereas the two differ somewhat (Yao, 2001). The Institute for America's Health suggested that

quality of life is the value given to the existence of life, which differs following the difference in the levels of physical barriers, personal perception and the adjustment in national and social policies, with more preference placed on the personal evaluation on health or/and disease-related situations (Lee, 2005).

The World Health Organization proposed quality of life as the “the degree of perception for personal goals, expectation, standards, and care in the six dimensions of the cultural value system in person life, namely the physiological health, psychological state, degree of independence, social relationships, personal belief.” Such definition emphasizes on the importance perceived through subjectivity of individuals in the environment, which consists of multi-layered concepts (Lin et al., 1997; Yao, 2000). Nonetheless, the personal qualities are closely related to the quality of life, including age, education, gender, marital status, economy, dwelling status, occupational condition, and religion and belief.

WHOQOL-100 TAIWAN VERSION QUESTIONNAIRE

The World Health Organization (WHO) combined the studies from 15 different nations or regions to undergo a series of discussions and researches to complete the “WHOQOL-100 (the WHOQOL Group, 1998a)” in 1995. Such questionnaire includes two questions from general facets (known as Facet G) with a total of 100 questions. The questions are divided into six major domains, including physiological, psychological, degree of independence, social relationships, environment, and spiritual/religious/personal beliefs. The questionnaires comprise 24 facets to test the various cultural commonalities that are used for comparing general health-related quality in life for cross-culture. These questions can also test the perceived objectivity and subjective self-evaluation of the respondents.

Yao et. al., acquired the authorization for WHOQOL-100 Taiwan Version Questionnaire from the World Health Organization in 1997 to conduct a two-year translation and research on the Taiwan version of questionnaire. The questionnaire not only includes the original 100 core questions from WHOQOL-100 but also adds localized questions in line with the local culture that take interview and discussions with the patients, patient family and experts’ focused groups, to collectively prepare 20 questions of health-related quality in life in line with the local culture according to the discussion results. The data underwent in-field implementation, collection and data analysis to screen out the best 12 questions. In particular, two questions were added: To be respected and accepted (dignity and relationship) and diet (Yao et al, 2000), which are attributed to the domain of “social relationship” and the domain of “environment” respectively.

The WHOQOL-BREF Taiwan Version was derived from the WHOQOL-BREF developed by WHOQOL research headquarters. The first 26 questions applied the same questions as WHOQOL-BREF according to the provisions of WHOQOL research headquarters, followed by selecting one question from the two facets newly added to the WHOQOL-100 Taiwan version to constitute the WHOQOL-BREF Taiwan Version with a total of 28 questions. The questionnaire comprises four major domains: physiological and health domain, psychological health domain, social relationship domain, and environment domain. Each question is scored on the basis of 5 points, whereas the higher the score, the better the quality of life.

WHOQOL contains the following three characteristics: 1. Emphasis on the personal perception of quality of life, including objective perception (i.e. material resource) and subjective self-evaluation (i.e. satisfaction to resources). 2. The questionnaire content is divided into multi-dimensional concepts such as the domains and facets. 3. Quality of life includes positive (i.e. functional roles, satisfaction and vitality) and negative (negative perception, medical reliance, fatigue and pain) evaluations (WHO, 1995). The answering and scoring to the questions can be filled out by respondents, assistance from interviewers or interviewers filing out one third of the questionnaire (Lee, 2008).

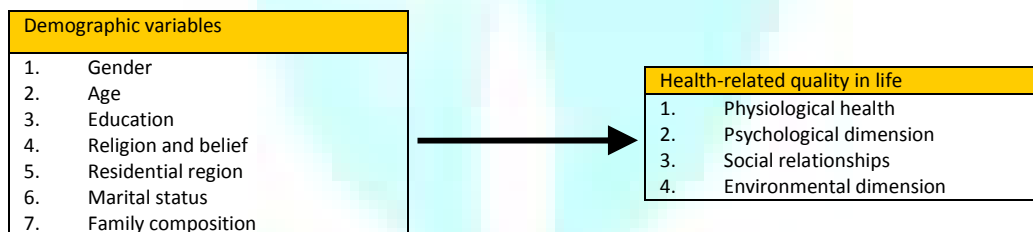
METHODOLOGY

The study analyzes relevant research on the social support and health-related quality in life for senior citizens. The study adopts convenience sampling as research methods.

RESEARCH FRAMEWORK

The aforementioned description for the research design shows that the study applies the basic demographic variables and the independent variables and discusses the relevance and impact on the social support constitute and health-related quality in life constitute in senior citizens in central and southern Taiwan. The research framework is shown in Figure 1.

FIGURE 1: RESEARCH FRAMEWORK



RESEARCH DESIGN

The research adopted convenience sampling and issued the WHOQOL-BREF Taiwan Version Questionnaire to understand the overview of the quality of life in implemented objects. The objects consisted of the senior citizens aged 65 years old from the central and southern Taiwan who were interviewed using questionnaire survey and assistance of implementation through team members. In such manner, senior citizens who were illiterate or had poor sight could also answer the questionnaire without trouble. Seniors were also given instruction over some doubts to facilitate the recovery rate of the research survey.

The questionnaire content is divided into two parts. The first part was applied with the WHOQOL-BREF Taiwan Version developed by Yao, K.P. (2005_ as the measurement of questions on the health-related quality in life for senior citizens (such questionnaire has acquired the letter of authorization on September 10th, 2010). The second part consists of the basic demographic variables of the respondents.

RESEARCH RESULTS

CHARACTERISTICS OF SAMPLING DISTRIBUTION

This research focuses on senior learners who participated in the “university for the elderly” subsidized by the Ministry of Education in 2011. Participants have to be at least 55 years old in good health condition (ability to move without assistance or nursing care needs) who live in central and southern Taiwan. Here used convenience sampling method to issue on-site questionnaires and online survey, in attempt to increase the questionnaire recovery. A total of 300 Taiwanese people from different regions responded and the total valid questionnaires were 236 (valid recovery rate is 78.67%). The data derived from the sample distributions as shown in Table 1 reveals that the majority of respondents of the questionnaires were between 60~65 years old, followed by the national population aged between 50~55 years old. The data analysis on the senior citizens aged 65 years old considerably care for their own health-related quality in life, in particular, the aspect of education “Elementary/Primary School” accounted for the majority.

TABLE 1: CHARACTERISTICS OF SAMPLING DISTRIBUTION

Gender	number	%
Male	106	44.9%
Female	130	55.1%
Age		
More than 65 years of age to under 70 years of age	116	49.2%
More than 70 years of age to under 75 years of age	64	27.1%
More than 75 years of age to under 80 years of age	47	19.9%
More than 80 years of age	9	3.8%
Education		
Illiterate	38	16.1%
Elementary school	88	37.3%
Junior high school	40	16.9%
Senior high school	56	23.7%
University	14	5.9%
Religion and belief		
No	5	2.1%
Buddhism	89	37.7%
Taoism	114	48.3%
Christian	2	0.8%
Catholic	1	0.4%
Atheism	2	0.8%
Islam	1	0.4%
Other	22	9.3%
Total	236	100%

QUESTIONNAIRE ANALYSIS

This part analyzes the content of questionnaire survey designed by the study and describes the data generated from the results of questionnaire recovery based on the questionnaire content and the overview on the health-related quality in life in senior citizens (Table 2).

In the item "How satisfied are you with your health?", there are 41.9% perceive "moderately satisfied" for their health, followed by "satisfied." It is also noted that the majority of respondents used pertinent answers to their own physical conditions, which also indicates that the answers of the respondents to their physical health are conservative. In the question "To what extend do you feel do you feel that physical pain prevents you from doing what you need to do?", the study results reveal that 114 respondents (48.3%) suggest that physical pain could "prevent" them from doing the things they want while 48 people (20.3%) choose the "moderately preventing" We discovered that most respondents suggest that the physical pain could prevent them from doing what they need to do, which further indicates that the inconvenience resulted from physical pain and the considerable impact on their quality of life.

TABLE 2: QUESTIONNAIRE ANALYSIS

item	μ	s	item	μ	s
How would you rate your quality of life in general?	3.88	.473	How healthy is your physical environment (including pollution, noise, climate, and landscape)?	3.71	.504
How satisfied are you with your health?	4.22	.397	To what extend do you have the opportunity for leisure activities?	3.75	.567
To what extend do you feel do you feel that physical pain prevents you from doing what you need to do?	4.20	.562	How well are you able to get around?	3.65	.612
Do you need medical treatment to help you function in everyday life?	3.40	.450	How satisfied are you with your ability to perform your daily living activities?	3.74	.531
How much do you enjoy life?	3.23	.521	How satisfied are you with your capacity for work?	3.10	.543
Do you consider your life meaningful?	3.33	.650	How satisfied are you with your sex life?	3.21	.632
How well are you able to concentrate?	2.71	.675	How satisfied are you with the support you get from your friends?	3.11	.733
			How satisfied are you with the conditions of your living place?	3.34	.662
How safe do you feel in your daily life?	3.08	.795	How satisfied are you with your access to health services?	3.89	.752
Are you usually able to get the things you like to eat?	3.82	.452			

In the question "Do you need medical treatment to help you function in everyday life?", the results indicate that 85 respondents (36%) think that they "highly need" medical assistance to cope with daily life, followed by 79 respondents (33.5%) choosing "extremely in need". We know that most respondents rely on health medical treatment, which also reflects that the public considerably relies on medical treatment in terms of physical and mental state. Most seniors need to take nearly 3~4 medicines daily to control the condition of chronic diseases. For example, insulin dependents need regular and quantitative insulin injection everyday in order to preserve life and safety. In the question "How much do you enjoy life?" the results show that 121 respondents (51.3%) choose "moderately enjoying" for how much they enjoy life, followed by the 56 respondents (23.7%) choosing "enjoy a little." The results of the questionnaire reveal that most of the people are particular about their life. In other words, most respondents are willing to pay for enjoyment in life due to the certain economic capability today. As the social movement progresses, more people pay attention to "enjoy life," which also indicates that more people place importance on health-related quality in life.

The study results reveal that 103 respondents (43.6%) consider their life meaning with answers in "very," followed by 82 respondents (34.6) choosing the option on "moderate" in the item "Do you consider your life meaningful?". We know that most people perceive meaningful existence of their life, indicating that the respondents consider their life meaning and important for themselves. The advent of aging society and the analysis of the questionnaire help us better understand that the seniors consider their life as highly meaningful and they need to be respected. The results reveal that 112 respondents (47.5%) choose "moderate" for their ability to concentrate, followed by 82 respondents (34.7) choosing "good." This shows that most respondents choose "moderate" for concentration, conveying that many seniors can still control their physical condition and are quite self-confident.

In the question "Do you feel reputed respected by others?", the results show that 127 respondents (53.8%) feel "moderately" reputed and respected, followed by 75 respondents (31.8%) choosing "highly." It is noted that most respondents pay considerate attention to reputation and respect, which also indicates that respondents tend to draw more attention or respect after aging to a certain extent. The personal opinion of expression also becomes considerably important. Only 23 respondents feel "a little" respected. Giving more respect and feedback to the seniors will build up more confidence and vitality of the respondents. On

the other hand, the question "Are you usually able to get the things you like to eat? ", the results show that 117 respondents (49.6%) "Frequently" eat the food they like, followed by 80 respondents (33.9%) choosing "half of the time." We know that most respondents like to eat things they usually have access to. The data shows that only 17 respondents choose "infrequently" because of their living place or dieting habits (carnival and vegetable" that lead to inaccessibility to the things the respondent like to eat.

The results of the "Comprehensive self-evaluation "show that the total score for comprehensive self-evaluation is 16,876 points and the average score is 71.5 points. The table shows that 56 people choose the option with score of 70 points, followed by the option with score of 60 points, as selected by 32 people. We discover that the respondents from the average score of 71.5 points are moderately satisfied with their satisfaction for health-related quality in life, indicating that 236 respondents from the questionnaire find poor satisfaction for health-related quality in life. They also are particular about the health-related quality.

CONCLUSION AND SUGGESTION

The study discover the cognition of senior citizens (aged 65 years old or elder) from central and southern Taiwan towards health-related quality in life and whether if they are satisfied with current life through the issuance of World Health Organization Quality of Life Question, Taiwan Version (WHOQOL-BREF, Taiwan Version) . We find out from the data questionnaire data that the Taiwanese people are particular about their life and will find the channel for stress relief timely, who then enjoy the happiness in life. Although the results show a positive trend, the government administration also needs to pay considerable attention to the living environment, transport convenience and information accessibility of the public, which may bring different view for the health-related quality in life. The respondents will perceive more respect and care if they could receive supports from friends and family.

The social context and economic grow play important part in the post-war baby boomers. The public in this stage must also prepare for the second stage in life and the arrangement of leisure life. The foundation of financial support allows the retiring crowd to enjoy life well while the creation of a good environment for the public use is yet another challenge for the government.

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EFFECT OF INFORMATION TECHNOLOGY ON CORPORATE FINANCIAL REPORTING IN NIGERIA

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ABSTRACT

This study examines the effect of information technology on corporate financial reporting in Nigerian Banking Sector. The study employed correlation survey research design to investigate the relationship between information technology and corporate financial reporting. One hundred questionnaires distributed to staff of Zenith Bank Nigeria Plc were analysed using coefficient of correlation, while the two hypotheses were tested for significance using the t- test. The result revealed that information technology is critical in ensuring the credibility of corporate financial reports. The main recommendations include that management of banks should invest in modern information technology in the interest of the banking public and the shareholders; and that the regulatory authorities especially the Central Bank of Nigeria (CBN) should stipulate minimum standards of information technology infrastructure for banks so as to avoid making Nigerian Banking Sector a dumping ground for outdated technological infrastructures.

JEL CODE

G30

KEYWORDS

Banking Sector, Credibility of financial Reports, Information Technology.

INTRODUCTION

The effect of Information Technology (IT) has been felt all over the world across all fields of life (Choi, Yoo & Lee, 2010). Particularly over the past twenty years, it has changed the world we live in and redesigned the way we perform our daily activities. IT has definitely made a dramatic impact in the business world. Businesses use IT for a number of several uses in the workplace (Chari, Devarai & David, 2008).

REVIEW OF LITERATURE

Nowadays the business world is changing at a faster pace. The reasons given for this is globalization, high IT investments and the rapid pace of technological changes in combination with escalating costs of research and development (Frishamar, 2002). The role of information technology (IT) has shifted over the last decades to become an important part of how companies manage and control their resources (Dong, Xu & Zhu, 2009). Organizations are responding in different ways and at different rates to the wide range of IT based opportunities and pressures. Decisions regarding the building of technical IT architecture should be closely linked to decisions made in designing the IT organization that should be linked to the organizational design of the company itself (Turban, Leidner & McLean, 2008). As a result, Information Technology plays a critical role in modern business, especially regarding the accounting function. IT has radically transformed the nature of business and accounting practice (Hunton, 2002; Efendi, 2006).

The initial interest in the relationships between accounting and information technology was at first taken for granted. However, it was discovered later that accounting was simply not possible without information technology, and the assumption appears to be that information technology is the platform for accounting data and it allow certain sophisticated queries to be performed (Granlund & Mouritsen, 2003). Thus, IT and accounting systems would be a major component of accounting research. While it is widely acknowledged that IT plays an important role in the field of accounting, only limited studies have been carried out on the relationship between IT and accounting reports (Granlund, 2007).

Based on a literature review of earlier research and empirical studies we conclude that there is a very limited knowledge about the impact of the most recent IT developments in the accounting field (Granlund, 2007). Although IT clearly plays an important role in accounting and management control (Efendi, 2006), this relationship has not been studied enough. Existing research has focused mostly on the relation between IT investment and company performance (Melville, 2004; Huang, 2006), notably in studies that attempt to measure the level of IT investment and company productivity (Dedrick, 2003) or even the financial return on IT investments (Dehning & Richardson, 2002).

Moreover, empirical studies examining the relationship between IT and performance have reported mixed findings (Dedrick, 2003; Melville, 2004). As well as conflicting results suggest that there is no direct relationship between IT investments and firm performance (Yongmei, 2008). So, the relationship between IT and firm performance seems to be more complex than previously theorized (Stoel & Muhanna, 2009).

IMPORTANCE OF THE STUDY

The world we live today is changing at an unprecedented rate. This could be attributed to several factors although, however, the influence of information technology ranks prominent among them. Particularly, the accounting functions in organizations have been affected in various manners by information technology. However, information technology would affect financial reporting differently in various economies due to variation in the level of social and technological development. Thus, it becomes necessary to investigate how the advancement in information technology has affected financial reporting in Nigeria (a developing economy) in recent times.

STATEMENT OF PROBLEM

Africa is so far behind the rest of the world with regards to the appropriate information technology infrastructure, that it may well find it difficult to participate effectively in the emerging information super-highway (Matthew, 2007). Effective implementation and exploitation of information technology systems to meet strategic objectives of an accounting system in terms of providing financial reports for decision making is a challenging task and corporate business in Nigeria

seems not to have fully exercised their strategic information technology options. Therefore this study seeks to examine the effect of information technology on corporate financial reporting in Nigeria.

OBJECTIVES

The main objective of this study is to investigate the nature of relationship that exists between information technology and corporate financial reporting in Nigeria. Specifically, the study seeks to:

1. Determine how information technology affects corporate financial reporting in Nigeria.
2. Identify the problems encountered as regards the implementation of IT on financial reporting in the Nigerian banking sector.
3. Investigate whether or not IT has any effect on financial report in the banking sector.
4. Ascertain whether or not information technology enhances the credibility of financial reports.

HYPOTHESES

H_{0i}: Information Technology has no significant relationship with corporate financial reporting

H_{0ii}: Information Technology does not significantly enhance the credibility of financial reports.

The hypotheses formulated were tested for significance using the students' 'T' test thus:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where r represents coefficient of correlation and n connotes sample size.

RESEARCH METHODOLOGY

The study employed the correlation survey design in order to confirm the relationship that exists between information technology and corporate financial reporting. Questionnaire was used as data collection instrument. Five-point rating scaled questionnaire starting from strongly agreed (SA), agreed (A), undecided (U), disagreed (D), and strongly disagreed (SD) was used to collect data from randomly selected firms in Nigeria. The questionnaire was designed in such a way that every question in the questionnaire was related to the research questions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	7.0	7.0	7.0
	Indifferent	8	8.0	8.0	15.0
	Agree	31	31.0	31.0	46.0
	Strongly Agree	54	54.0	54.0	100.0
	Total	100	100.0	100.0	

RESULTS AND DISCUSSION

The perceptions of the respondents on the various statements put forward in the questionnaire are analyzed as follows:

TABLE 1: ANALYSIS OF RESPONSES TO STATEMENT 1 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY AFFECTS CORPORATE FINANCIAL REPORTING

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	7.0	7.0	7.0
	Indifferent	8	8.0	8.0	15.0
	Agree	31	31.0	31.0	46.0
	Strongly Agree	54	54.0	54.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 1 reveals that 54% of the respondents strongly agreed that information technology affects corporate financial reporting while 31% of the respondents simply agreed to the statement. Meanwhile, 8% and 7% of the respondents are indifferent and strongly disagreed to the statement respectively. It could be observed therefore that information technology affects corporate financial reporting.

TABLE 2: ANALYSIS OF RESPONSES TO STATEMENT 2 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY ENHANCES THE INTERPRETATION OF FINANCIAL REPORT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.0	2.0	2.0
	Disagree	8	8.0	8.0	10.0
	Indifferent	18	18.0	18.0	28.0
	Agree	39	39.0	39.0	67.0
	Strongly Agree	33	33.0	33.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 2 reveals that 39% of respondents agreed that information technology enhances the interpretation of financial report, while 33% of the respondents strongly agreed to the statement. Meanwhile 18%, 8% and 2% the respondents are indifferent, disagreed and strongly disagreed to the statement that information technology enhances the interpretation of financial report. Thus, it could be concluded that IT enhances the interpretation of financial reports.

TABLE 3: ANALYSIS OF RESPONSES TO STATEMENT 3 IN THE QUESTIONNAIRE: INVESTMENT IN INFORMATION TECHNOLOGY HAS POSITIVE EFFECT ON FINANCIAL REPORTING

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	4.0	4.0	4.0
	Disagree	6	6.0	6.0	10.0
	Indifferent	18	18.0	18.0	28.0
	Agree	34	34.0	34.0	62.0
	Strongly Agree	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 3 reveals that 38% of the respondents strongly agreed, while 34% of the respondents simply agreed that investment in information technology has positive effect on financial reporting. Meanwhile 18%, 6% and 4% of the respondents are indifferent, disagreed and strongly disagreed respectively to the statement that investment in information technology has positive effect on financial reporting. Thus, it could be concluded that information technology has a positive effect on financial reporting.

TABLE 4: ANALYSIS OF RESPONSES TO STATEMENT 4 IN THE QUESTIONNAIRE: INVESTMENT IN INFORMATION TECHNOLOGY ENHANCES THE FINANCIAL REPORT IN THE BANKING SECTOR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	10.0	10.0	10.0
	Disagree	6	6.0	6.0	16.0
	Indifferent	12	12.0	12.0	28.0
	Agree	27	27.0	27.0	55.0
	Strongly Agree	45	45.0	45.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 4 reveals that 45% of the respondents strongly agreed, while 27% of the respondents simply agreed that investment in information technology enhances the financial report in the banking sector. Meanwhile 12%, 6% and 10% of the respondents are indifferent, disagreed and strongly disagreed respectively to the statement that investment in information technology enhances the financial report in the banking sector. Thus, it could be concluded that investment in information technology enhances the financial report in the banking sector.

TABLE 5: ANALYSIS OF RESPONSES TO STATEMENT 5 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY EASES THE TRACKING AND RECORDING OF FINANCIAL TRANSACTION FOR REPORTING PURPOSES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.0	2.0	2.0
	Disagree	8	8.0	8.1	10.1
	Indifferent	14	14.0	14.1	24.2
	Agree	30	30.0	30.3	54.5
	Strongly Agree	45	45.0	45.5	100.0
	Total	99	99.0	100.0	
Missing	9.00	1	1.0		
Total		100	100.0		

Source: Field Survey, 2012

Table 5 reveals that 45% of the respondents strongly agreed, while 30% of the respondents simply agreed that information technology eases the tracking and recording of financial transaction for reporting purposes. Meanwhile 14%, 8% and 2% of the respondents are indifferent, disagreed and strongly disagreed respectively to the statement that information technology eases the tracking and recording of financial transaction for reporting purposes. Thus, it could be concluded that information technology eases the tracking and recording of financial transaction for reporting purposes.

TABLE 6: ANALYSIS OF RESPONSES TO STATEMENT 6 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY HAS IMPROVED THE TIMELINESS OF FINANCIAL REPORT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	4.0	4.0	4.0
	Disagree	5	5.0	5.0	9.0
	Indifferent	9	9.0	9.0	18.0
	Agree	17	17.0	17.0	35.0
	Strongly Agree	65	65.0	65.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 6 reveals that 65% of the respondents strongly agreed, while 17% of the respondents simply agreed that information technology has improved the timeliness of financial report. Meanwhile 9%, 5% and 4% of the respondents are indifferent, disagreed and strongly disagreed respectively to the statement that information technology has improved the timeliness of financial report. Thus, it could be concluded that information technology has improved the timeliness of financial report.

TABLE 7: ANALYSIS OF RESPONSES TO STATEMENT 7 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY ENSURES THE ACCURACY OF COMPUTATION OF FINANCIAL STATEMENT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	12.0	12.0	12.0
	Disagree	7	7.0	7.0	19.0
	Indifferent	13	13.0	13.0	32.0
	Agree	34	34.0	34.0	66.0
	Strongly Agree	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 7 reveals that 34% of the respondents strongly agreed, while 34% of the respondents simply agreed that information technology ensures the accuracy of computation of financial statement. Meanwhile 13%, 7% and 12% of the respondents are indifferent, disagreed and strongly disagreed respectively to the statement that information technology ensures the accuracy of computation of financial statement. Thus, it could be concluded that information technology ensures the accuracy of computation of financial statement.

TABLE 8: ANALYSIS OF RESPONSES TO STATEMENT 8 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY WILL MAKE IT POSSIBLE FOR THE BANK TO GIVE A MORE RELIABLE REPORT TO STAKEHOLDERS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	15	15.0	15.2	15.2
	Disagree	7	7.0	7.1	22.2
	Indifferent	12	12.0	12.1	34.3
	Agree	28	28.0	28.3	62.6
	Strongly Agree	37	37.0	37.4	100.0
	Total	99	99.0	100.0	
Missing	9.00	1	1.0		
Total		100	100.0		

Source: Field Survey, 2012

Table 8 reveals that 37% of the respondents strongly agreed, while 28% of the respondents simply agreed that information technology will make it possible for the bank to give a more reliable report to stakeholders. Meanwhile 12%, 7% and 15% of the respondents are indifferent, disagreed and strongly disagreed

respectively to the statement that information technology will make it possible for the bank to give a more reliable report to stakeholders. Thus, it could be concluded that information technology will make it possible for bank to give a more reliable report to stakeholders.

TABLE 9: ANALYSIS OF RESPONSES TO STATEMENT 9 IN THE QUESTIONNAIRE: INFORMATION TECHNOLOGY ENHANCES THE CREDIBILITY OF FINANCIAL REPORT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	9.0	9.0	9.0
	Disagree	1	1.0	1.0	10.0
	Indifferent	7	7.0	7.0	17.0
	Agree	17	17.0	17.0	34.0
	Strongly Agree	66	66.0	66.0	100.0
	Total	100	100.0	100.0	

Source: Field Survey, 2012

Table 9 reveals that 66% of the respondents strongly agreed, while 17% of the respondents simply agreed that information technology enhances the credibility of financial report. Meanwhile 7%, 1% and 9% of the respondents are indifferent, disagreed and strongly disagreed respectively to the statement that information technology enhances the credibility of financial report. Thus, it could be concluded that information technology enhances the credibility of financial report.

HYPOTHESES TESTING

For the testing of the hypothesis, we chose the product moment correlation coefficient. The product moment correlation test is a statistical test that can be used to determine the strength of relationship between variables. R can be positive or negative in nature. If regression slope is negative, it slopes downwards and positive if it slopes upward. Thus a 0.0-0.04 shows a weak positive or negative correlation, 0.4-0.6, shows an average positive or negative correlation. As in other statistical tests we begin by starting a null hypothesis and an alternative hypothesis. Based on the outcome of the product moment correlation coefficient, we will either reject or fail to reject the null hypothesis.

HYPOTHESIS 1

- H₀: information technology has no significant relationship with corporate financial reporting.
- H₁: information technology has a significant relationship with corporate financial reporting.

TABLE 10: CORRELATIONS

		Information technology affects corporate financial reporting	Investment in information technology has positive effect on financial reporting
Information technology affects corporate financial reporting	Pearson Correlation	1	.051
	Sig. (2-tailed)		.613
	N	100	100
Investment in information technology has positive effect on financial reporting	Pearson Correlation	.051	1
	Sig. (2-tailed)	.613	
	N	100	100

*correlation is significant at the 0.01 level (2-tailed).

Table 10 reveals that there is an average positive correlation between information technology and corporate financial reporting. The test value is statistically significant given that the p-value is above 0.05%, therefore the null hypothesis (H₀) is rejected while the alternative hypothesis (H₁) is accepted. Thus, it could be concluded that information technology has a significant relationship with corporate financial reporting.

HYPOTHESIS 2

- H₀: information technology does not significantly enhance the credibility of financial reports.
- H₁: information technology significantly enhances the credibility of financial reports.

TABLE 11: CORRELATIONS

		Information technology will make it possible for the bank to give a more reliable report to stakeholders	Information technology enhances the credibility of financial report
Information technology will make it possible for the bank to give a more reliable report to stakeholders	Pearson Correlation	1	.301(**)
	Sig. (2-tailed)		.002
	N	99	99
Information technology enhances the credibility of financial report	Pearson Correlation	.301(**)	1
	Sig. (2-tailed)	.002	
	N	99	100

** Correlation is significant at the 0.01 level (2-tailed).

Table 11 reveals that there is a strong relationship between information technology and credibility of financial reports. The test value is statistically significant; therefore we reject the null hypothesis (H₀) and accept the alternative hypothesis (H₁). Thus, it could be concluded that there is a positive relationship between information technologies and credibility of financial report.

FINDINGS

This study examines critically the effect of information technology on corporate financial reporting. The study revealed that information technology affects corporate financial reporting; it enhances the interpretation of financial reports and has a positive effect on financial reporting. It also revealed that investment in information technology enhances the financial report in the banking sector; eases the tracking and recording of financial transaction for reporting purposes; and ensures the accuracy of computation of financial statement. Finally, information technology has a significant relationship with corporate financial reporting and the credibility of financial report.

RECOMMENDATIONS

This study revealed that information technology is critical in ensuring the credibility of corporate financial reports. Thus, it is recommended that management of banks should invest in modern information technology in the interest of the banking public and the shareholders. Regulatory authorities especially the Central Bank of Nigeria (CBN) should stipulate minimum standards of information technology infrastructure for banks so as to avoid making Nigerian Banking Sector a dumping ground for outdated technological infrastructures.

CONCLUSION

This study examines the effect of information technology on corporate financial reporting in Nigeria. From the review of related literature and data analysis, it could be concluded thus: that information technology has a significant relationship with corporate financial reporting; and that there is a positive relationship between information technology and credibility of financial reports.

SCOPE FOR FURTHER RESEARCH

This study focuses on the effect of information technology on corporate financial reporting in Nigeria only. The implementation and application of information technology could also affect other areas of business operations such as customers' satisfaction and loyalty, employees' efficiency and effectiveness. These other areas could be investigated by future researchers.

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DIAGNOSTIC STUDY ON INTERACTIVE ADS AND ITS RESPONSE TOWARDS THE FM RADIO

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ABSTRACT

Interactive Ads is the commercial part for the radio stations. It is a value added services for the radio station. Radio is a learning bridge. Radio has been found to be an effective medium, which can cover large population packets within low cost and in short span of time (Li, Hairong; Leckenby, John D. 2004) Its use in educational settings has been reported by many researchers. It can act as a community telephone, fostering information exchange at community level, and as an effective catalyst towards formal and non-formal education. Owing to the usefulness of radio in education, entertainment and other sectors of life, it has shown good signs of growth in developing countries as well, if compared to access to telecom or internet (Cross, R., & Smith, J. (1997). Radio reaches a wider audience than any other medium. For example there are an estimated 94 radios per thousand people in the least developed countries, ten times the number of televisions. Off late, the FM radio has been gaining momentum in the developing countries. Many developed countries such as the USA and India have set up specialized FM Radio Stations exclusively for Education. The research objectives include: To know about the listening habits of FM radio in Chittagong, to know about profile of respondents for interactive ads in leisure activities with the demography of listeners in Chittagong and also the language in which the respondents prefer the interactive ads.

KEYWORDS

Ads, FM Radio.

INTRODUCTION

FM Radio is a broadcast technology invented by Edwin Howard Armstrong that uses frequency modulation to provide high-fidelity sound over broadcast radio. FM radio is distributed primarily through broadcast reception of FM radio signals; although it is also possible to distribute FM signals via cable FM, either by using an adapter to plug analogue cable wires directly into an FM receiver, or through the use of television channel allocations on a digital cable service. FM channels play important role in promoting the interactive ads. The goals of interactive advertising are usually akin to the traditional objectives of advertising, i.e. to sell a product. This in turn means that many of the traditional elements of advertising impact and effectiveness remain relevant, even within the scope of interactive media. However, according to the *Journal of Interactive Advertising* 2001, interactive advertising also has some properties that expand the range of potential objectives and that improve advertising effectiveness. Interactive advertising also has the potential to decrease the losses associated with poorly coordinated advertising, to reduce the difficulties commonly encountered in clearly communicating an advertising message and to help overcome new product hurdles, such as a consumer rejection (Rodgers, S. 2001. *The Interactive Advertising Model*)

At present there are six FM radio stations in Bangladesh viz., radio today, radio foorti, radio amar, ABC radio, BBC bangle and radio2fun. In Chittagong only two stations are aired viz., radio today and radio foorti (http://en.wikipedia.org/wiki/List_of_Bangladeshi_television_and_radio_channels) Bangladesh has total 26 radio stations and the number of radio receivers is 6150000. Radio receivers per 1000 is 46.9% (Source: Press reference, Bangladesh)

RADIO ADVERTISING

Commercial radio stations make most of their revenue selling "airtime" to advertisers. Of total media expenditures, radio accounts for 6.9%. Radio advertisements or "spots" are available when a business or service provides valuable consideration, usually cash, in exchange for the station airing their spot or mentioning them on air. Radio accounts for a small share of total advertising expenditure (just under 4%) following consistent increases in radio's share of total display advertising expenditure in the late 1990s. Statistics show that between 1995 and 2005, radio advertising revenues more than doubled, growing from 296 million to 579 million.

([Brandingstrategysinsider.com](http://brandingstrategysinsider.com))

TYPES OF RADIO ADVERTISING

There are two principal routes to market for advertisers seeking to purchase radio Advertising airtime.

Direct Advertising: where an advertiser approaches the sales team at each individual station, separately station by station. The industry typically refers to this type of purchase as "local advertising" as it is the approach generally used by local advertisers who wish to advertise on one or a small number of specific local stations.

Indirect Advertising: where an advertiser employs the services of a media buying agency to manage its purchases of advertising on individual stations or clusters of stations, purchasing this airtime through a single point of sale (the radio group's advertising sales house). This is called "national advertising" by the industry.

FM radios in Chittagong:

1. Radio Today 89.60
2. Radio Foorti 88.00

LITERATURE REVIEW

Little research has directly investigated interactive advertising processing and how its comprehension might be different from traditional mass media. The limited capacity information-processing model has been successfully used to help explain how the mediated messages of television are processed, including encoding (basic comprehension), and storage and retrieval (e.g. Collins 1982; Lang 1995; Lang 2000; Lang and Geiger 1993; Lang, Newhagen, and Reeves 1996;

Lang et al. 1999; Lang et al. 2000; Thorson and Lang 1992), and is applied here as a potential theoretical framework for investigating the effects of interactivity on the information processing of interactive advertising Web sites.

RESEARCH DESIGN

PROBLEM STATEMENT

There are no studies done to understand about interactive ads in FM and its responses in Chittagong city. The habit of listening to FM Radio differs from one age group to another age group. It also varies with education, nature of job, habits, hobbies etc. It is important that the radio stations know their clients listening habits to interface.

RESEARCH OBJECTIVES

1. To know about profile of respondents for interactive ads in leisure activities with the demography of listeners in Chittagong.
2. To know about the listening habits of FM radio in Chittagong.
3. To know in which language the respondents prefer the interactive ads.
4. To measure the extent of popularity of interactive ads.

SCOPE OF THE STUDY

The study covers the effectiveness of the interactive ads of the FM radio and response towards the FM radio in Chittagong. It covers the study of the listening habits of the listeners, their attitudes towards the programs of the FM radios in Chittagong.

PLAN OF ANALYSIS

1. By using Tally bar method separate tables are formulated
2. Each table is analyzed properly and separate title is given for each classified table by using percentile technique the classified tables have been depicted using bar diagrams, and pie charts.
3. Mean is found for the collected data.
4. SPSS package is used to conduct chi square test for the variables.

RESEARCH METHODOLOGY

The populations have been categorized according to different age groups, the nature of the jobs and their qualifications. The sample size (respondents) is 300 from total population in Chittagong. In the research study the topic calls for a *Descriptive* and *Casual* type of research. The data have collected from both primary and secondary sources. The primary data has been collected through questionnaires and secondary data have been collected from the data achieve of the radio stations, newspapers and different print media.

SCALING TECHNIQUES

The Questions comprising of following types:

- a. Dichotomous Questions i.e. YES/NO (5 Questions)
- b. Multiple Choice Questions i.e. with choices (12 Questions)
- c. Open ended questions i.e. where 2 or 3 lines are provided (3 Questions)
- d. Likert Scale i.e. 1 to 5 scales question, where 1=Strongly Disagree and 5=Strongly Agree (3 Questions)
- e. Ranking Scale i.e. Ranks 1, 2, 3, 4, 5, 6.(1 Question) The study required a market research, which involved a field work during research feedback was gathered through Questionnaires from 300 respondents who were selected randomly from all the different areas of the Chittagong.

RESEARCH LIMITATIONS

- a. The sample size of only 300 was selected and the study was based only on these samples
- b. Finding the respondents was difficult since many of them did not have sufficient time
- c. This project required analysis of different areas but due to time constraint it was difficult to carry out the study in depth.

DATA ANALYSIS AND INFERENCE

TABLE 1: AGE IN YEARS

Age	Total respondent	Percentage
Below 10	5.00	1.67
10 -18	65.00	21.67
18 -30	135.00	45.00
30 -50	60.00	20.00
50 -75	25.00	8.33
75 & above	10.00	3.33
Total	300.00	100.00

INFERENCE: In the survey conducted 2% respondents are less than 10 years age, 22% belong to age group of 10-18 years, 45% belong to age group of 18-30 years, 20% belong to age group of 30-50 years, 8% belong to age group of 50-75 years and 3% belong to age group 75 years and above. Majority of the respondents belong to the age group of 18-30 years.

TABLE 2: SEX

Sex	Total respondent	Percentage
Male	195	65
Female	105	35
Total	300	100

INFERENCE: In the survey conducted 65% are male and 35% are female. Majority of the respondents surveyed are male.

TABLE 3: EDUCATIONS QUALIFICATIONS

Qualifications	Total respondent	Percentage
Below SSC	65.00	21.67
HSC	30.00	10.00
UG	90.00	30.00
PG	65.00	21.67
Diploma	35.00	11.67
If others specify	15.00	5.00
Total	300.00	100.00

INFERENCE: In the survey conducted 22% respondent's qualification is below SSC, 10% respondents studied up to HSC, 12% are diploma holders, 30% are under graduates, 22% are Post Graduates, 5% have done other courses. Majority of the respondents are under Graduates.

TABLE 4: NATURE OF JOB

Nature of job	Total respondent	Percentage
Private service	50.00	16.67
Business	85.00	28.33
Consultants	8.00	2.67
Students	152.00	50.67
Others	5.00	1.67
Total	300.00	100.00

INFERENCE: In the survey conducted 17% respondents belong to private service 28% of respondents are business people, 3% of respondents are Consultants, 50% of respondents are Students and remaining 2% respondents belong to other professions like Bank sector, Teachers, Labor etc. Here, majority of the respondents are Students (152).

TABLE 5: HOBBIES

Particulars	Total respondent	Percentage
Watching movies	35.00	11.67
Listening to music	140.00	46.67
Reading newspaper	50.00	16.67
Shopping	10.00	3.33
Others	65.00	21.67
Total	300.00	100.00

INFERENCE: In the survey conducted 12% of respondents watch movie in their leisure time, 47% of respondents listen to music, 17% likes to read newspaper, 3% go for Shopping, and rest have different hobbies like, going to park, driving, dancing, knitting, spending time with family, taking rest etc. In the study conducted majority of the respondents' hobbies listening to music in their leisure time activities

TABLE 6: HABIT OF LISTENING TO MUSIC

Particulars	Total respondent	Percentage
Yes	225	75
No	75	25
Total	300	100

INFERENCE: In the survey conducted 75% of the respondents have the habit of listening to radio and 25% of respondents don't have the habit of listening to radio. In the survey conducted majority of the respondents have the habit of listening to radio.

TABLE 7: RADIO STATION THAT I LISTEN MOST

Channel	Total respondent	Percentage
Radio Today	297	49.5
Radio Foorti	303	50.50
Total	600	100

INFERENCE: The popularity of both the channel is almost same. Each respondent liked both the channels.

TABLE 8: KNOWLEDGE ABOUT INTERACTIVE ADS

Particulars	Total respondent	Percentage
Yes	160.00	53.33
No	140.00	46.67
Total	300.00	100.00

INFERENCE: In the survey conducted 53% respondents know about Interactive Ads and 47% don't know about it. Majority of the respondents know about Interactive Ads.

TABLE 9: I LIKE INTERACTIVE ADS

	Total respondent	Percentage
Yes	211.00	70.33
No	89.00	29.67
Total	300.00	100.00

INFERENCE: In the survey conducted 70% respondents likes interactive ads and 30% doesn't like it. Majority of the respondents likes interactive ads.

TABLE 10: I PARTICIPATED IN INTERACTIVE ADS

	Total respondent	Percentage
Yes	204.00	68.00
No	96.00	32.00
Total	300.00	100.00

INFERENCE: In the survey conducted 68% respondents participates in interactive ads and 32% does not. Majority of the respondents participate in the interactive ads.

TABLE 11: IF "NO" THE REASON IS

Particulars	Total respondent	Percentage
No time	29.00	30.20
Not interested	18.00	18.75
Timing not suitable	5.00	5.21
No proper response	44.00	45.83
Total	96.00	100.00

INFERENCE: In the research conducted the reason for nonparticipation in Interactive Ads is: 30% don't have time, 19% are Not Interested, 5% felt Timing is not suitable and remaining 46% for the No proper response. The major response is No proper response i.e. 46%.

TABLE 12: THE FREQUENCY OF PARTICIPATION IS

Particulars	Total respondent	Percentage
Daily	8.00	3.92
3 – 4 days	28.00	13.73
Weekly	36.00	17.65
Only on holidays	45.00	22.06
Rarely	87.00	42.65
Total	204.00	100.00

INFERENCE: In the research the study describes that the frequency of participation of respondents is: 4% Daily, 14% three to four days, 17% for the Weekly, 22% for only on holidays, and 43% rarely. The Major participation in the interactive ads are rarely i.e. 43%.

TABLE 13: I PARTICIPATED THROUGH

Particulars	Total respondent	Percentage
Call	38.00	18.63
SMS	142.00	69.61
Email	20.00	9.80
Post mail	4.00	1.96
Total	204.00	100.00

INFERENCE: In the research the respondents are participating in interactive ads as follows: 19% through phone calls, 69% through SMS, 10% through emails and 2% through post mail. Marjory the respondents participated throw SMS.

TABLE 14: I GOT RESPONSE FROM INTERACTIVE ADS

Particular	Total respondent	Percentage
Yes	67.00	32.84
No	137.00	67.16
Total	204.00	100.00

INFERENCE: In the research it is seen that significant number of respondents do not get response from interactive ads (68%).

TABLE 15: ALONG WITH THE MESSAGE, I WOULD LIKE TO DISCLOSE

Particulars	Total respondent	Percentage
Name	67.00	32.84
Place	27.00	13.24
Contact no.	61.00	29.90
Address	2.00	0.98
Email	26.00	12.75
All of them	21.00	10.29
Total	204.00	100.00

INFERENCE: In the table clearly describes that 33% of respondents would like to disclose their Name, 13% Place, 30% Contact numbers, 1% Address, 13% Email, 10% of all forms. From the survey conducted most of the respondents would like to disclose their name along with the message they send.

TABLE 16: THE MESSAGE THAT I OFTEN SEND ARE (a)

	Birthday message		Love message		Opinion on famous personality	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	98	32.67	121	40.33	86	28.67
Rarely	30	10	63	21	79	26.33
Sometimes	97	32.33	78	26	98	32.67
Frequently	70	23.33	35	11.67	30	10
Very frequently	5	1.67	3	1	7	2.33
Total	300	100	300	100	300	100

INFERENCE: The survey reveals that maximum people do not send birthday message and love message and sometimes like to send message on famous personality.

TABLE 16: THE MESSAGE THAT I OFTEN SEND ARE (b)

	Patriotic message		Real Happiness		Heartfelt feelings	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	105	35	101	33.67	108	36
Rarely	92	30.67	57	19	83	27.67
Sometimes	74	24.67	82	27.33	79	26.33
Frequently	23	7.67	59	19.67	23	7.67
Very frequently	6	2	1	0.33	7	2.33
Total	300	100	300	100	300	100

INFERENCE: The survey indicates very insignificant portion of listeners are very regular in sending patriotic message and seriously reluctant to share personal happiness and rarely share heartfelt feelings with others on radio.

TABLE 16: THE MESSAGE THAT I OFTEN SEND ARE (c)

	Helping message		Jokes		Puzzles		Few words about dear one	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	41	13.67	142	47.33	97	32.33	143	47.67
Rarely	12	4	61	20.33	100	33.33	81	27
Sometimes	189	63	56	18.67	74	24.67	32	10.67
Frequently	48	16	32	10.67	23	7.67	39	13
Very frequently	10	3.33	9	3	6	2	5	1.67
Total	300	100	300	100	300	100	300	100

INFERENCE: Here we see, maximum people sometimes send helping message and never shared jokes and rarely participate in puzzle game and tremendously reluctant to wish on dear one's occasions.

TABLE 17: I PREFER INTERACTIVE ADS IN LANGUAGES

	Bengali		English		Chittagonian (local)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Not at all	12	4.00	18	6.00	198	66.00
Sometimes	79	26.33	236	78.67	79	26.33
Always	209	69.67	46	15.33	23	7.67
Total	300	100.00	300	100.00	300	100.00

INFERENCE: In the survey, it is very clear that Bengali should be the main mode of communication. Sometimes English is okay but surprisingly Chittagonian has been disliked by those people who are all time Chittagonian speakers.

TABLE 18: THROUGH INTERACTIVE ADS I WOULD LIKE TO TALK TO

Particulars	Total respondent	Percentage
Actors	64.00	21.33
Doctors	57.00	19.00
Singers	93.00	31.00
Politicians	54.00	18.00
Corporate personality	5.00	1.67
Others	27.00	9.00
Total	300.00	100.00

INFERENCE: The survey report depicts that maximum people like to talk to singers followed by actors and doctors.

TABLE 19: I USUALLY PREFER TO LISTEN TO RADIO IN/AT.....

Particulars	Total respondent	Percentage
Morning	28.00	9.33
Afternoon	22.00	7.33
Evening	24.00	8.00
Night	99.00	33.00
Anytime	127.00	42.33
Total	300.00	100.00

INFERENCE: Most of the people like to listen to radio as and when they get time and large number of them likes to listen at night.

TABLE 20: IN MY OPINION THE IDEAL DURATION FOR INTERACTIVE ADS

Particulars	Total respondent	Percentage
Half an hour	65	21.67
One hour	68	22.67
Two hours	22	7.33
Several times in a day	145	48.33
The whole day	0	0.00
Total	300	100.00

INFERENCE: Not a single person expects whole day interactive ads and most of them think it should be several times in a day so that people can participate in their convenient times.

TABLE 21: THE THING WHICH I LIKE IN INTERACTIVE ADS (a)

	Music		Anchoring		Timing	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Not at all	50	16.67	50	16.67	38	12.67
Sometimes	50	16.67	190	63.33	160	27.67
Always	200	66.67	60	20.00	102	26.33
Total	300	100.00	300	100.00	300	66.67

INFERENCE: Music is highly expected in interactive ads, sometimes anchoring is not bad but people are very sensitive about timing.

TABLE 21: THE THING WHICH I LIKE IN INTERACTIVE ADS (a)

	Conversation		Equal opportunity	
	Frequency	Percentage	Frequency	Percentage
Not at all	199	66.33	3	1.00
Sometimes	86	28.67	90	30.00
Always	15	5.00	207	69.00
Total	300	100.00	300	100.00

INFERENCE: Majority listeners hate conversation during interactive ads and expressed strong support for equal opportunity as far as participation is concern.

TEST OF HYPOTHESIS

H₀: Preference of interactive ads is not dependent on language

H₁: Preference of interactive ads is dependent on language

TABLE 22

				Observed (O)	Expected (E)	(O-E) ² /E
Bengali	12	79	209	403	583.3333*	55.74876
English	18	236	46	572	583.3333	0.22019
Chittagonian	198	79	23	775	583.3333	62.97619
		Total		1750		ψ ² Cal= 118.9451

* Expected Value = $\frac{\text{Observed Total}}{3} = \frac{1750}{3} = 583.3333$

Level of significance: 5% Degree of freedom: (3-1) = 2 ψ² tab: 5.991 Since ψ² Cal > ψ² Tab

H_0 is rejected.

So, we can say that preference of interactive ads is dependent on language.

MAJOR RESEARCH FINDINGS

1. In the survey conducted 2% respondents are less than 10 years age, 22% belong to age group of 10-18 years, 45% belong to age group of 18-30 years, 20% belong to age group of 30-50 years, 8% belong to age group of 50-75 years and 3% belong to age group 75 years and above. Majority of the respondents belong to the age group of 18-30 years.
2. In the survey conducted 65% are male and 35% are female. Majority of the respondents surveyed are male.
3. In the survey conducted 22% respondent's qualification is below SSC, 10% respondents studied up to HSC, 12% are diploma holders, 30% are under graduates, 22% are Post Graduates, 5% have done other courses. Majority of the respondents are under Graduates.
4. In the survey conducted 17% respondents belong to private service 28% of respondents are business people, 3% of respondents are Consultants, 50% of respondents are Students and remaining 2% respondents belong to other professions like Bank sector, Teachers, Labor etc. Here, majority of the respondents are Students (152).
5. The popularity of both the channel is same. Each respondent liked both the channels.
6. In the survey conducted 53% respondents know about Interactive Ads and 47% don't know about it. Majority of the respondents know about Interactive Ads.
7. In the survey conducted 70% respondents likes interactive ads and 30% doesn't like it. Majority of the respondents likes interactive ads
8. In the survey conducted 68% respondents participates in interactive ads and 32% does not. Majority of the respondents participate in the interactive ads.
9. In the research the study describes that the frequency of participation of respondents is: 4% Daily, 14% three to four days, 17% for the Weekly, 22% for only on holidays, and 43% rarely. The Major participation in the interactive ads are rarely i.e. 43%.
10. In the research the respondents are participating in interactive ads as follows: 19% through phone calls, 69% through SMS, 10% through emails and 5% through post mail. Majority the respondents participated through SMS.
11. The survey indicates very insignificant portion of listeners are very regular in sending patriotic message and seriously reluctant to share personal happiness and rarely share heartfelt feelings with others on radio.
12. In the survey, it is very clear that Bengali should be the main mode of communication. Sometimes English is okay but surprisingly Chittagonian has been disliked by those people who are all time Chittagonian speakers.

RECOMMENDATIONS

1. In the survey conducted significant portion of respondents are not aware of Interactive Ads so it should adopt promotional campaigns like public advertisements in TV, Magazines news papers to create awareness among public about these ads.
2. From the survey it is found that majority of the respondents are not participating in Interactive Ads as they did not get proper response for their messages in the past. So the programmer should respond to the listeners specially the ones who are participating by sending messages and requesting songs, so that public gets motivated to participate in the future.
3. In the survey conducted 32% of respondents did not participate in Interactive Ads as the program timing is not suitable for them. So the radio station should arrange these Participative programs based on the conveniences of the listeners.
4. Many of the respondents prefer to listen to radio in the night. So such programs should be arranged during night at 10pm to 12am.
5. In this program 'music is very popular. The other ways like Sending Flowers, Gifts, and Wishing etc should also be organized and popularized.
6. 93% of respondents want to talk to singers. So in such programs singers should be invited often during some special occasions like festivals, national holidays etc, so that audience get chance to talk to them. This is one way of making Interactive Ads popular.
7. In the survey conducted, respondents prefer Interactive Ads in Bengali Language rather than English and Chittagonian.
8. Few of the respondents don't like the way of anchoring in Interactive Ads. So the programmers should improve the anchoring style and make it attractive.
9. In Chittagong, the FM Radio Stations should give more importance on outdoor advertising to attract new listeners.

CONCLUSION

Bangladesh has huge untapped radio market and has the potential to grow as the most viable medium of advertisement over the next few years, UK media and Bangladesh media have their own respective target audience but radio is more effective as it is portable. The potential to advertise through radio is exponential. At the rate at which Bangladesh is growing, radio should command an advertising market share of 10-12 percent. Britain has more than 300 radio stations, of which almost all are going digital. We have online radio listening, listening through television and radio device. And we believe Bangladesh should learn from UK how effectively the medium can be used and also understand from the mistakes we committed. Stressing on the lessons for Bangladesh, sometimes ago Britain relied heavily on national advertising. This is something Bangladesh can follow. Stating the benefits of radio as a useful tool of advertising, Radio is a national medium with flexibilities of a local medium. Radio is unique and Bangladesh needs to understand the way people use it.

SCOPE FOR FURTHER RESEARCH

We considered FM channels based in Chittagong city only. Researchers can do the similar type of research on other important metro cities in Bangladesh to know the taste, choice and the reactions of listeners, and their interactive attitudes towards FM based ads.

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ACCOMMODATION OF ETHNIC QUEST FOR SELF-GOVERNANCE UNDER ETHNIC FEDERAL SYSTEM IN ETHIOPIA: THE EXPERIENCE OF SOUTHERN REGIONAL STATE

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ABSTRACT

This study explored the ethnic quest for self-governance and their management under Ethiopian federal system by focusing on experience from the Southern Regional State. The FDRE constitution has created a positive interrelationship between practicing the right to self-determination and ethnic identity thereby recognizing this right to ethnically defined groups. Therefore, it is justifiable and legitimate for all ethnically defined groups to claim the right to self-determination. The main objective of this study was to examine the ethnic claims for self-governance in multi-ethnic Southern Regional State within the context of Ethiopian ethnic federal system. This study was based on qualitative method approach and the study employed a number of data collection methods such as data from primary and archival sources and secondary literature. The finding of the study revealed that by merging very diverse ethno-linguistic groups into one federated unit, the Southern Nation Nationalities and Peoples Regional State, the existing political system has created minority-within-minority. As a result, those ethnic groups who have been given their own sub-regional administrative units have acquired political majority over the subsumed ethnic groups. This, in turn, has created a feeling of being dominated and marginalized by the subsumed ethnic groups. This is the basic cause for continuing dynamics of ethnic claims for self-governance at Regional, Zonal and Woreda status in this Regional State. The study recommended that the Southern Regional State should be restructured to accommodate continuing dynamics of ethnic claims for self-governance.

KEYWORDS

EPRDF, FDRE, PDRE, SNNPRS, TGE, self governance.

INTRODUCTION

Reorganizing the Ethiopian state structure along ethnic federal model was an immediate agenda of EPRDF which successfully secured state power by overthrowing military regime in May 1991. New Government's commitment to establish a new society based on equality, rule of law and the right to self-determination all nation, nationality and people, including secession was evidenced in the transitional period Charter, which was ratified in 1991, as a clear departure from its predecessors (Charter, 1991). Once the new charter paved the way for decentralization, Ethiopia has no longer a unitary but a federal state since 1995. The new FDRE constitution created a landmark in the history of the country as far as ethnic questions are concerned. This constitution, for the first time, formalized an ethnic-based federal state structure model which gave autonomous right to federated units. This federal arrangement is basically demarcated on the basis of "settlement patterns, identity, language and consent of the people concerned" (Art. 46/2).

The federalization of Ethiopia represents a huge rupture in the country's political history in that the hitherto marginalized ethnic groups are now entitled to the right to self-determination including secession. It is this rapturous move that made Ethiopia a federal democratic republic consisting of nine federated units (art.47/1), namely Afar, Amhara, Benishangul, Gambella, Hareri, Oromia, SNNPRS, Somali and Tigray.

The SNNPRS is one of the nine federated units currently divided into fourteen administrative zones and three special woredas. It is the most multi-ethnic regional state. It was established after the merger of the five regional units (kilil 7-11) organized in today's South during transitional period. This merger has provoked political mobilization in the South. The quest for re-establishment of Regional status by Sidama and Zonal status by Wolayita, inter alia, were prominent cases in point in the South (Aalen, 2008). However, such similar ethnic claims for self-governance have continued to become significant political factors in the region, which is the issue this study aspires to grapple with.

THEORETICAL APPROACHES AND REVIEW OF RELATED LITERATURE

This sub-section is dedicated to discussing theoretical approaches on federalism as an option for managing ethnic conflicts. Its aim is to establish theoretical frameworks upon which continuing dynamics of ethnic quest for self-governance in SNNPRS is explored and analyzed.

FEDERALISM AS AN OPTION FOR MANAGING ETHNIC CONFLICT IN MULTI-ETHNIC STATE

The federal idea is getting popularity in the world. There are several reasons for this increasing interest in federalism. One of the reasons, as argued by Kymlicka (2005:269), is that federalism provides the most appropriate mechanism for accommodating ethnic diversity. He further states that since federalism is a notoriously flexible system, it can accommodate diversified interests and intensifies democracy. For Alemante (2003:56), even though federal system is inherently fragile, it has the potential for accommodating ethnic diversity and fostering the values embedded in ethnic community.

Federalism, which aims at achieving self-rule and shared rule, greatly attracted multi-ethnic states as a means of managing ethno-linguistic diversity (Elazar, 1987 quoted in Asnake, 2004:53). Federalism seems to provide the closest institutional solution combining shared rule for some commonly shared purposes and self-rule for other purposes of regional interests. Kymlicka (2005:270) argues that even if many federal systems arose for reasons unrelated to ethno-linguistic diversity, federalism is increasingly considered as a solution to the problems of multi-nation states. Thus, to manage inter-ethnic tensions and conflicts in multi-ethnic states, no other medicine could work other than federalism. For instance, introduction of ethnic-based federal model in multi-ethnic state of Ethiopia is primarily as a mechanism of conflict resolution (Vaughan, 2003:36) or as a means of maintaining unity and averting disintegration (Aalen, 2001:53).

Even if many scholars increasingly advocate for the use of federalism as a mechanism of handling ethno-linguistic diversity, there are also scholars who reveal their doubts about the use of federal option as device for managing this diversity. Some oppose federal device for fear of fragmentation. Hecter (2000), one of the advocates of federal device, states that federalism increases self-government or it meets the claims for autonomy by concession and hence, the demand for secession or the threat of fragmentation is correspondingly reduced (quoted in Aalen, 2001:19). In stark contrast, Kymlicka (2005) argues that federalism does not prevent secession, rather the presence of regional autonomy in multi-ethnic federal states increases the desire for more autonomy, and this leads to the proliferation of ethno-nationalism which is probably the strongest force against federalism. Some scholars like Kimenyi propose ethnic based federalism as a model of harmonizing ethnic claims (ibid). If federation is ethnically based like in the Ethiopian system, the country is divided into sub-units whose borders are drawn in a way that ensures that various ethnic groups will form a local majority in one or more of the sub-units (Kymlicka, 2006). By controlling their own areas, minorities may feel a sense of security and be enabled to promote their own culture and identity.

And yet, in accepting or offering the federal bargain as an instrument of managing ethno-linguistic diversity, emphasis must be given to the manner of approaching federalism as an option. This is because there are no universally accepted principles of federalism to follow. In addition, the operation of the federal system requires an analysis of more than formal institutional structures. It requires an analysis of the interaction of societies, structures and processes. Elazer (1994) argues that federalism is congenial to pluralism is too obvious to argue (as quoted in Tsegay, 2001). But the manner of institutionalizing the pluralism constitutionally determines the durability of federal arrangements (ibid). Unlike Kimenyi who proposes ethnic based federal model for multi-ethnic states, for

Elazer, multiethnic federal system can succeed only if the basis of state formation is anything other than ethnicity. Alemante (2003), one of the skeptical about federal option, argues that federal system is inherently fragile even without adding ethnicity into its mix.

To sum up, theoretical discourse on federalism as well as contending views reviewed here concerning the use of federal option as a device of managing ethno-linguistic diversity, reflect the potential problems of designing the state structures.

THE ROUTE TO ETHNIC FEDERALISM IN ETHIOPIA

When EPRDF came to power as a new government, the change was not merely of political power; it also ushered an absolutely new perspective into the political landscape of the country by re-engineering the Ethiopian state on an entirely new foundation. EPRDF has adopted, as its ideological bedrock, ethnic-based federal model around Marxist-Leninist principle of the 'right to self-determination of nations, nationalities and peoples', including secession as one in a series of approaches to 'national questions' (Vaughan, 2003). A new EPRDF perspective immediately manifested itself in the 1991 Charter. The transitional government was disintegrated after the coming into effect of the country's fourth new EPRDF constitution in 1995.

The FDRE Constitution, which gives the ownership to nations, nationalities and peoples of Ethiopia, has established a federal state structure (Art.1). By reducing the number of self-governing regions by five, the constitution enumerates nine states constituting the FDRE in Art.47/1.

Theoretically, ethnic federalism is expected to address the questions of decentralization of power and resources. This by implication would give autonomous power to the regional states. Practically, however, several inconsistencies and mutually incompatible policies and implementation procedures have prevailed so far even though the admirers have hailed it as an aspect of democratization of the state and even as a model for other multi-ethnic states in Africa (Dereje, 2006; Young, 1996). As indicated in Article 47/1, the current ethnic-based federal model established only nine states as the members of the federation, a reduced number compared to 14 regional states of the transitional period. Only five major ethnic groups (Oromo, Tigray, Amhara, Somali and Afar) have been granted their own 'mother states' designated by their own name as a core nationality (Merera, 2003). Only a few major ethnic groups were accorded the regional status even if the sub-national states were organized on the basis of ethno-linguistic criteria (Akililu, 2003).

While constitutionally entitling the right to self-determination including secession for all ethnically defined groups, the EPRDF regime has conflated five regional units of the transitional period into one unit in the South. As a result, 56 diverse ethnic groups of the former five regional units have been lumped together in a single federated unit. The implementation of the federal model on the basis of ethnicity and language brought a number of anomalies. Now, let us see the dynamics of continuing ethnic claims for self-determination in the SNNPRS.

SIGNIFICANCE OF THE STUDY

By analyzing the continuing dynamics of ethnic claims for self-determination in SNNPRS, the study may have the following significances:

- It may contribute to the understanding of the continuing dynamics of ethnic claims for self-governance in the South.
- It may help to understand the extent to which the existing EPRDF policy initiatives such as federal state structure and recognizing the right to self-determination have virtually addressed ethnic claims for self-determination in Ethiopia in general and the SNNPRS in particular.
- It may provide concrete evidence for policy makers, formal government institutions and other concerned bodies responsible in handling and resolving this and other similar cases in SNNPRS.
- Finally, this study may serve as a base for future further research in the area

STATEMENT OF THE PROBLEM

The FDRE constitution in article 39(1) clearly stipulates the right to self-determination up to secession for ethnically defined groups in the country. As a result, a positive interrelationship between practicing the right to self-determination and ethnic identity has been created. Therefore, it is justifiable and legitimate for all ethnically defined groups to claim the right to self-determination.

Despite this extensive right, the constitution established only nine federated units, a reduced number by five as compared to the transitional period (1991-1995). They were carved on the basis of settlement patterns, language, identity, and consent of the people concerned. The SNNPRS, which is one of nine federated unit in Ethiopia, is a unique development within the Ethiopian federal system as over 56 diverse ethno-linguistic groups are consolidated. Under this federated unit. As a result, this federal arrangement has created minority-within-minority (Akililu, 2003 and Aalen, 2008).

Given the multi-ethnic nature of SNNPRS, it is expected that there exists a room for the establishment of sub-national levels of administration that are meant for the self-determination of smaller ethnic groups. Currently, there exist only 21 sub-regional units in the region. In SNNPRS, more than 50+ ethno-linguistic groups do not have zones or special woredas designated by their own names (Beken, 2008). These ethno-linguistic groups either live in multi-ethnic Zones such as Debub Omo or are a minority group in a zone or special woreda dominated and designated by the names of other groups (ibid). This study is, therefore, aspires to examine the continuing dynamics of ethnic claims for self-governance and how these ethnic claims have been causing inter-ethnic tensions and conflicts in this Regional State within the context of Ethiopian federal system.

OBJECTIVES OF THE STUDY

Objectives of this study are:

- To explore how far the ethnic federal model and concomitant right to self-determination has virtually addressed ethnic claims for self-governance in the SNNPRS.
- To investigate the causes for continuing dynamics of ethnic claims for self-governance in SNNPRS.

RESEARCH HYPOTHESIS

Even though ethnic quest for self-governances in the SNNPRS are fundamental issues and are deep-rooted in the empire building of the modern Ethiopian state, the new Ethiopian Experiment of ethnic Federal state structure and concomitant right to self-determination for all ethnically defined groups seems to have aggravated ethnic claims for self-governance as the government failed to materialize its policies on the practical ground as per constitutional provision. The assumption, as I will try to demonstrate in this article, is that the self-contradictory nature in implementing ethnic federalism and the right to self-determination could have ignited ethnic quest for self-governance in Ethiopia.

RESEARCH METHODOLOGY

This research is based on qualitative method approach mainly with Peace and Security, and to some extent historical orientations. For this research, non-probability sampling techniques, particularly of convenience and judgmental were employed. The primary and secondary data were collected by using different instruments. Primary data collated through interview, focus group discussions, legal documents and official letters. The legal documents include transitional period charter, federal and SNNPRS constitutions and proclamations. The official letters include those letters ethnic groups in the SNNPRS have written to or received from any concerned government bodies so as to analyze the continuing dynamics of ethnic claims for self-governance. This study also makes use of secondary sources. As long as data analysis is concerned, this study makes use of concurrent methods of data analysis. To maintain the reliability, credibility and validity of the research, different strategies such as in-depth understanding of the study issue, cross-checking the gathered data with other sources and triangulation of the data using thematic analysis were designated.

RESULTS AND DISCUSSION**DYNAMICS OF ETHNIC GROUPS' QUEST FOR SELF-GOVERNANCE IN SNNPRS****INTRODUCTION**

In the feudal regime, ethnic groups in the Southern Ethiopia had long been totally marginalized and they were hardly recognized for their existence (Merera, 2003 and Aalen, 2008). The coming of EFRDF in the hitherto socially, economically and politically marginalized and peripheral area (south) of Ethiopia represented both far reaching radical political changes and continuities from the past. Watson (2002) states that the first years after the demise of the *Derg* were nevertheless described as a honeymoon for the peoples previously marginalized ethnic groups in southern Ethiopia. Under existing regime, ethnic groups of the south have thus come into contact with a new socio-economic and political changes and continuities from the past.

During the initial part of the transitional period, ethnic claims had been encouraged by the EPRDF in the South for self-determination by its rhetoric of "liberating the oppressed nationalities" (Vaughan, 2003). This became apparent when five regional units (kilil 7-11) were organized in the areas comprising today's SNNPRS by the Proclamation no.7/1992 that established a total of 14 National/Regional self-governing Regions (kilils). Ethnically defined groups within these five Regional units also managed to gain the status of self-governance. It appears that this administrative arrangement fitted well with the government rhetoric of "liberating the oppressed nationalities" of the South. Consequently, the then TGE's policy initiatives managed to accommodate the basic self-governance aspirations of both larger, which had been administrative units in the past (like, Sidama) and smaller ethnic groups, which achieved a newly won administrative status, in the South at the time. This honeymoon of the transitional period, however, waned when the five regional units of transitional period consolidated into one federated unit-the SNNPRS.

In the feudal as well as the *Derg* era, however, the southern region never was a unified area in economic, cultural or political terms (Abbink, 1998). In the past, ethnic groups in the south were divided into different provinces and they were never under one administration. Therefore, there is no any historical, geographic, linguistic and other justification to merge together 56 ethno-linguistic groups in a single federated unit.

In stark contrast to Ethiopia's constitutional engineering, the FDRE constitution entitled ethnically defined groups the right to self-determination including secession (Art.39/1). While entitling ethnic groups of the south to this higher right, the government has merged together diverse ethno-linguistic groups into one federated unit from the previous five Regional units. It seems that this merger is not only contradicting with principles of the new constitution but also equally depriving their right to self-determination that they had already accorded.

Due to EPRDF's desire to sustain its control of state power, the party has gradually put efforts into administrative integration instead of national self-determination in the South, even if the national constitution gives ethnically defined groups a universal right to self-rule (Aalen 2008:190).

Following increasing violence and persistent ethnic quest, particularly Welayta, for self-governance in multi-ethnic Simen Omo zones in 2000, the government allowed the disintegration of this zone into five units: three zones- Dawro, Welayta and Gamo-Goffa zones and two special woredas- Basketo and Konta. Thus, pressing ethnic claims for self-governance at different levels and their resort to violence at times show that the merger was not the manifestation of their expressed consent of the ethno-linguistic groups of SNNPRS. Unlike a de-concentrated zone, for instance, in Oromiya regional state, the zones and special woredas in the SNNPRS are ethnically defined but multi-ethnic in nature which is an evidence for creating *minorities-within-minorities*. Demands for recognition of self-governance by many ethnic groups, namely Oyda, Goffa, Wolayita, Silte, Majangir and Sheka, except Sidama, in this regional state has not been for regional status but for the zonal or special *woreda* status that reflect their separate ethnic identity and provide, at least in principle, the opportunity of self-government. By consolidating diverse ethnic groups, the government has thus created *minority-within-minority* which is the main cause for increasing ethnic assertions, inter-ethnic tension and conflict in SNNPRS.

CREATING MINORITY-WITHIN-MINORITY: MAIN CAUSE BEHIND ETHNIC QUEST FOR SELF-GOVERNANCE

Article 45/1 of SNNPRS constitution provides a four-tier of internal administrative structure: the Regional/State level, zonal/special woreda, woreda and finally the kebele level. Currently, it is administratively divided into seventeen administrative units. From this territorial administrative arrangement, one can observe clear similarities with the national level. Those larger ethnic groups in the region have given their own "mother zone" or "special woreda" while other ethnic groups constitute a minority within one of these entities.

In the SNNPRS, only a few ethnic groups have exercised the rights to zonal or special woreda level of administration.

Most of the Southern State's 50+ ethnic groups do not have their own Zone/Special Woreda. These groups either live in a multi-ethnic zone or are a minority group in a zone dominated by another group (Beken, 2008:23).

An astonishing fact is not only the merger of 56 ethno-linguistic groups but the government's disinclination to organize many sub-Regional units even within this one federated unit in a manner that enables these diverse ethnic groups to realize their right to self-determination.

As a result, many ethnic groups were made to form a minority within one of ethnically defined zones or special woredas or made to live together in a multi-ethnic zone like Gamo Goffa zone without establishing institutional mechanism that enable them to realize their socio-economic and political interests. It is not surprising if there is resentment and at time resort to violence and conflicts by some ethno-linguistic groups, such as the Ale, Goffa, Tembaro and Danta against their minority status in the sub-Regional units dominated by another groups.

Despite the existing and increasing ethnic groups claims for self-governance in the region, the disinclination of the government to adequately address these claims and their resort to violence and conflicts have raised a considerable doubt about the wisdom of substantive autonomy rights recognized in the constitution. The continuing dynamics of ethnic claims are adversely affecting a long period of mutual inter-dependence and co-existence among diverse ethnic groups in the region. In addition, it is also evidence for the fact that till then marginalized and dominated ethnic groups in the south have not yet fully empowered. And yet, it is an evidence for the fact that the communities that have defined themselves along ethnic lines are denied the right to self-rule that creates a difference between the principles promised in the constitution and practice that produce violence, inter-ethnic tensions and conflicts in the SNNPRS.

INCONSISTENCY IN IMPLEMENTING THE RIGHT TO SELF-DETERMINATION AND FEDERAL FORMULA

As a remedy to past injustice and inequality, EPRDF regime legally guaranteed ethnically defined groups the right to self-determination. While the goal of these substantive autonomy rights stated in the constitution is to find solution for ethnic claims for self-governance through legal means, some ethnic groups in the multi-ethnic SNNPRS are still battling with the state peacefully as well as violently for these legally sacred rights. This is because the rights promised for them have not yet been fully implemented.

EPRDF's power politics is in itself conflict producing: when communities that have defined themselves along ethnic lines are denied the right to self-rule in the south, it creates a difference between the principles and practice that produce anger and discontent (Aalen, 2008:190).

As a major positive departure from the past, EPRDF regime adopted ethnic-based federal formula perhaps to enable ethnic groups to administer themselves by devolving power along ethnic lines. Practically, however, some inconsistencies and mutually incompatible policies and implementation procedures have prevailed so far. This is due to the problem either inherent in the model itself or thrown up during its execution. As a result, its record has met with a varying degree of success in accommodating ethnic quest for self-governance. Accordingly, it has faced some how challenges related with emergent and existing ethnic assertions.

There emerged a number of anomalies in operationalising the federal formula on the basis of ethnicity and language. In some cases, a number of ethnic groups with sizeable population were not considered within the national federal formula, whereas the Hareri minority group, for example, was accorded the status of a "regional-state" while a large number of ethnic groups were amorphously conglomerated under the "SNNPRS" creating a further anomaly (Akliu, 2003:38).

However, the admirers have hailed this ethnic federal model as an aspect of democratization of the state and even as a model for other multi-ethnic states in Africa (Dereje, 2006; Young, 1996).

According to the 2007 Population and Housing Census, only 10 ethnic groups have a population of one million and above in Ethiopia. From these 10 major ethnic groups, five of them, namely Guragie, Hadiya, Welayta, Gamo and Sidama are from the SNNPRS. In the same census, the Hareri have a total of 31,869 or 0.04% of population of the country which is one of the smallest in the country but allowed to have their 'own mother state'. If the Hareri merit the status of a regional state, why would these five major ethnic groups choose to be in the second order "zone" rather than have their own 'mother state'?

If the population of the Hareri warrants the status of a regional state, then all language groups that have the same or higher population size must have states (Mesfin, 1999:161).

However, this comparative perspective should not be considered as the Hareri would not have a region, it is rather to show the mixed results of ethnic-based federal model and concomitant right to self-determination in addressing ethnic demands for self-governance in the south. The continuing dynamics of ethnic quest for self-governance in the south are thus not only the result of lack of respect for constitutionally fledged rights to self-determination but also inconsistency in implementing them. Thus, the FDRE constitution has bestowed substantive autonomy rights for all ethnically defined groups as a remedy for past injustice and inequality. However, some ethnic groups in the south are still battling with the state peacefully as well as violently for these legally sacred rights.

CONCLUSIONS AND RECOMMENDATION

This study has dealt with the quest for self-governance in Ethiopian federal system by taking the experience of the some of the subsumed ethnic groups of the SNNPRS. In stark contrast to Ethiopia's constitutional tradition, FDRE constitution entitled ethnically defined groups the right to self-determination including secession (art.39/1). While the EPRDF regime entitling ethnic groups of the South, the government has merged together these diverse ethnic groups without any institutional mechanisms that enable them to realize their right to self-determination. The continuing dynamics of ethnic claim for self-governance is adversely affecting the long established mutual inter-dependence and co-existence among ethnic groups in the region. From the overall conclusions, one can draw that there is a gap in the way how the constitutional provisions protect the rights of ethnic groups of the South. The self-determination right recognized in the constitution is not yet fully implemented. As a result there is continuing dynamics of ethnic claims.

RECOMMENDATION

In this article, the following two policy options are presented as viable solutions.

In the feudal as well as the Derg era, diverse ethnic groups of today's south were never under a single administration and a unified area in their socio-economic and political history. During its transitional phase, the EPRDF regime had organized five regional units (killil 7-11) by proclamation no.7/1992. Therefore, by taking into account the political, historical, linguistic and geographic contexts, including EPRDF's administrative arrangement during the transitional period, restructuring SNNPRS in a manner which reflects the essential attributes of the existing ethnic diversity is a point which is worth emphasizing in a more open-minded ways. This restructuring should be with the objectives of:

- A. Virtually ensuring the right to self-determination;
- B. Bringing administrative convenience and political symmetry;
- C. Providing diverse ethnic groups with institutional avenues at different levels of decision-making and
- D. Abating possible threat to peace and security emanating from increasing ethnic assertiveness.

Let me end on an optimistic note, in the realm of peace and security dealing with ethnic demand for recognition of ethnic identity and self-government would be important for sustainable peace and security to prevail. Whenever ethnic group demands are securitized, ethnic relations will eventually settle into a stable and peaceful pattern. However, refusing to accommodate ethnic claims through legal means can play into the hands of the lack of good governance and broken down of the mutual interdependence and co-existence in the inter-ethnic relations. This is because the feeling of being deprived and excluded by ethnic groups will clearly reinforce inter-ethnic tensions and violence. Thus, to accommodate ethnic claims in multi-ethnic southern region, federal system should be continuous and dynamic process rather than being reduced to static and permanent administrative structures.

SCOPE FOR FURTHER RESEARCH

This study was specifically focused on bottom up approach for exploring ethnic quest for distinct ethnic identity and self-governance in the study regional State. As this Regional State is the most complex and diverse in terms of ethno-linguistic groups, there are several unstudied subsumed ethno-linguistic groups in the region which demands recognition for separate self-administration. Specifically, the impact of continuing dynamics of ethnic quest for self-governance on regional and national effort of realizing peace, impact on inter-ethnic relation and co-existence, socio-economic interaction and inter-dependence has remained not explained in detail in this article. These are some of the areas for further research in the study area.

ACKNOWLEDGEMENTS

Several people have contributed to the completion of this article in one way or another. The successful completion of this article would be difficult without constructive feedbacks of Tadesse Berisso (PhD). Therefore, I would like to express my endless indebtedness to him. My special thanks also go to all my informants and the local government authorities and the higher officials of SNNPRS. Likewise, I am very much grateful to and proud of my families, whose advice helped me a lot. I am also indebted to all my field assistants.

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UNIVERSITY PERFORMANCE MEASUREMENT USING THE BALANCED SCORECARD METHOD – SPECIAL FOCUS TO THE LEARNING AND GROWTH PERSPECTIVE

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ABSTRACT

The performance measurement is important aspect within the higher education system in Sri Lankan and all over the world. When considering education, quality of educational service and stakeholder satisfaction can be taken as more important. Most of the performance measurement systems are fails to address and consider the entire stakeholder needs after considering the importance and contributions of all stakeholders to the organization. Robert Kaplan and David Norton (1992) present the Balanced Scorecard (BSC) is widely used method to improve on an organizations performance. It is a management tool that translates an organization's mission and strategy into a comprehensive set of performance measure that provide a framework for strategic management and measurement system. In this paper with consideration of BSC strength in strategic evaluation, it is used for analyzing the Management Faculties in Sri Lankan Universities and study based on the 11 universities out of 15 universities with selecting of 46 departments. The data collection through the questioner and it consist of 28 questions relating to the Learning and Growth Perspective as well as Mission and Strategies in universities and analysis done through the SPSS statistical package. In today's knowledge based economy and dynamic environment, it is essential for universities as the center of education, knowledge creation and knowledge worker evolution. The findings could be used in developing strategic plans for the management faculties in each universities and encourage to achieving organizational objectives and creating highly performed academic and research centered organization through the Learning and Growth Perspective. The results of correlation analysis that the: coefficient between Learning and Growth Perspective has a significant positive influence on the Mission and Strategies.

KEYWORDS

Balanced Scorecard (BSC), Learning and Growth Perspective (LGP), Mission and Strategies (MS)

1. INTRODUCTION

A new approach to strategic management was developed in the early 1990's by Drs. Robert Kaplan (Harvard Business School) and David Norton. They named this system the 'Balanced Scorecard'(BSC). Recognizing some of the weaknesses of previous management approaches, the BSC provides a comprehensive methodology as to what organizations should measure in order to 'Balance' the each organizational perspective.

The BSC retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age organizations for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age organizations must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation. The BSC suggests to reviewing of organization from four perspectives, to develop metrics, collect data and analyze it relation to each of these perspectives (Givens, 2000).

The development of the BSC can be broken down into three distinct generations (Cobbold and Lawrie, 2002). The 1st generation BSC was initially described as a simple one with four perspectives. In this generation, Kaplan and Norton primarily focused on the selection of a limited number of measures in each perspective (Kaplan and Norton, 1992). The concept of strategic objectives and causality was highlighted in the 2nd generation BSC. In this generation, the BSC was described as an element of a strategic management system (Kaplan and Norton, 1996). The concept of the 'strategy map' was also introduced in this generation (Kaplan and Norton, 2001). The concept of the destination statement was introduced in the 3rd generation BSC. The BSC describes the consequences of implementing the strategic objectives at a particular future date (Cobbold and Lawrie, 2002). It assists in the process of selecting strategic objectives, the design of causality between those objectives, and the setting of the targets.

This study mainly connected that the university performance measurement using the BSC concept with emphasis on the LGP and it apply to the management faculties performance measurement. In Sri Lankan context there were no proper mechanisms to evaluate academic performance. The framework proposed was based on an extensive review of the literature pertaining to BSC and performance evaluation in the management faculties in Sri Lankan universities. The framework is therefore able to elicit elements and factors relating to the use BSC to enhance performance evaluation process in management faculties. The results of study conducted indicate that the factors posed in the questionnaire have content validity as they high alpha and therefore, well received.

2. LITERATURE REVIEW

2.1 OVERVIEW OF THE ORGANIZATIONAL PERFORMANCE

The BSC is a widely used method to diagnose and improve on an organization's performance. It is a management tool that translates an organization's mission and strategy into a comprehensive set of performance measures that provide a framework for a strategic management and measurement system. Developed by Robert Kaplan and David Norton in 1992 (Kaplan and Norton, 1992), the BSC methodology is a comprehensive approach that analyses an organization's overall performance from four perspectives: Financial, Customer, Internal Business Processes, and Learning and Growth. As a structure, the BSC cascades an organization's mission and strategies into objectives, measures, targets and initiatives within each perspective. Links are established between each perspective in the BSC to represent causal relationships. For example, improvement in learning and growth may lead to better internal business processes, resulting in customer satisfaction, which in turn, leads to good financial performance.

The concept of applying the BSC to a university is increasingly popular among researchers. There are many studies related to such application, including the uses of the BSC for university management (Stewart and Carpenter-Hubin, 2000; Lawrence and Sharma, 2002; Ruben, 1999), for academic departments (Haddad, 1999; Bailey et al., 1999; Chang and Chow, 1999), for university research (Pursglove and Simpson, 2000), for university teaching (Southern, 2002), and for internal service providers in a university (Purslove, 2002). Not only is the concept of the BSC widely praised among academic researchers, but it is also being increasingly applied in universities.

2.2 STRATEGIC EVALUATION IN HIGHER EDUCATION INSTITUTIONS

The higher education sector is one area of the public sector where the introduction of the performance measurement (PM) poses dilemmas (Ulrich, 2006). Even though human resources are the most valuable asset of higher education institutions, many universities and colleges have established procedures and rules for the administration of personnel, however not for 'managing' their human resources (Shelley,1999). There are various reasons for the restricted presence of HRM in higher education institutions. Higher education institutions are being described as loosely coupled systems (Weick, 1976) or organized anarchies (Cohen and March, 1974) with weak regulation and control mechanisms: indicators which predict low PM impact. On the other hand, the last decade we have seen a growing institutional autonomy and so higher education institutions are given more and more responsibility for managing their employees. Moreover, PM

principles in higher education institutions encounter important implications for the management of these organizations and have certainly changed the internal management of the higher education institutions and the role and everyday existence of the academic manager in far-reaching ways (Deem, 2004).

2.3 BSC IN PERFORMANCE EVALUATION

Organizational performance is always measured in the minds of stakeholders. The mental measurement may be informal or formal by customers, employees or other stakeholders. For example, in the university /faculty level students have opinions about the teaching effectiveness of their teachers and faculty has perceptions about the instructional effectiveness of their peers. Every person's work and every organization's output are measured somehow, someway, by someone. The biggest problem for many people and organizations is that they do not know or understand how their performance is measured, and because they do not understand how they are measured, they do not understand the outcome of their work, how to improve, or how to stay competitive in the future.

The BSC, used as a strategic management system, will accomplish the following critical management processes: (Kaplan and Norton, 1996)

1. Clarify and translate vision and strategy
2. Communicate and link strategic objectives and measures
3. Plan, set targets, and align strategic initiatives
4. Enhance strategic feedback and learning.

2.4 THE LEARNING AND GROWTH PERSPECTIVE (LGP)

This perspective of the balanced scorecard addresses the organization's ability to sustain high performance levels over time. Here it is examine the more subjective factors that contribute to high performance, such as workplace climate, employee morale, skill alignment, professional development strategies, quality of planning, quality assurance and effective use of technology (the University of California, business areas increasingly recognize the value of assessing these factors as they contribute to business unit or department performance).

The BSC has proven effective in resolving the inability of traditional management systems to link long-term strategy to short-term actions. Most importantly, performance measures are helping us establish and support a continuous process of self-evaluation and correction at all levels of the organization.

2.5 MISSION AND STRATEGIES (MS)

According to the various deployments of BSC mentioned in strategic management of education sector, in this study BSC is used for the phase of strategic analysis in strategic planning. *Vidyasagar University Journal of Commerce* 61 addresses the reporting and analysis needs of executives, managers and staff through all levels of an organization, as well as vendors, suppliers and partners. There are a number of performance measurement tools, which could be clubbed into two broad groups like i) Traditional measures and ii) Non - traditional measures. Traditional measures which indicate the financial strengths, weaknesses, opportunities and threats are Return on Investment (ROI), Residual Income (RI), Earning per Share (EPS), Dividend Yield, Price Earning Ratio, Growth in Sales, Market Capitalization etc. But it is found that some users of financial statements are interested on non-financial performances of the corporate bodies beside financial performances. In such cases some non-traditional measurement tools are to be used like Economic Value Added, Balanced Scorecard etc.

2.6 UNIVERSITY PERFORMANCE EVALUATION

Under the performance evaluation system, mainly consider the exiting performance system, knowledge of the BSC, need for new evaluation system and need for awareness of BSC.

3. STATEMENT OF THE PROBLEM

Many higher education institutions are trying to do stakeholders expectations. When attempting to implement their strategies, they give students only limited description of what they should do and why those tasks are important. Without clear and more detailed information, it's no wonder that many universities failed in executing their strategies.

The universities were mainly focused on the academic centered activities; such as teaching and learning process, academic and non academic development, student and other related party satisfactions and financial activities. Within the traditional evaluation techniques were concentrated only the financial related aspects and those were suitable for the profit making organizations. So that there were no good performances evaluation methods can be applied the universities or faculties other than the financial tools. In this connection, the BSC model is the suitable model to evaluate faculties as well as universities strategic evaluation including financial and non financial activities. In addition to BSC is a well recognized strategic management and performance evaluation technique and it is proved that by applying this management technique, higher education institutions can improve its efficiency.

Therefore, the research is aimed at performance evaluating in the Management Faculties in Sri Lankan Universities. Accordingly, the research problem is defined as,

'How does the concept of Balanced Scorecard can use as a University Performance Measurement of the Management Faculties in Sri Lankan Universities' with emphasis on the LGP?

4. METHODOLOGY

The current study used a correlation research design in order to explore relationship between LGP and MS. The populations of this study were head of the Departments in Management Faculties in Sri Lankan Universities. The sample was selected from 46 departments under Management Faculties in Sri Lankan universities.

One questionnaire was used to collect the data. The questionnaire which was prepared for the head of the department measures the all perspectives and knowledge of the BSC. Five point Likert scale was used as the scaling method to measure all the variables. The measurement scale for independent and dependent variables were interval.

In this study the descriptive statistics was used for the univariate analysis and inferential statistics was used for the bivariate analysis.

4.1 OBJECTIVES OF THE STUDY

1. To evaluate the relationship between Learning and Growth Perspective (LGP) with Mission and Strategies (MS).
2. To identify whether perception level of the management staff in the Management Faculties in Sri Lankan Universities on the BSC.

4.2 HYPOTHESIS

- H1. The Learning and Growth Perspective (LGP) has a positive influence on the Mission and Strategies (MS).
- H2. Employees at management level in Management Faculties in Sri Lankan Universities are knowledgeable of the BSC.

4.3 CONCEPTUALIZED MODEL



4.4 OPERATIONALIZATION OF LGP

Based on the literature different dimensions of LGP can be identified.

- a) Quality Assurance
- b) Quality of Planning
- c) Quality of Academic Staff Development
- d) Quality of Management Staff and Teamwork

4.4.1 QUALITY ASSURANCE

The components in the quality assurance are satisfied with level of the department quality assurance/ received grades and completed the curriculum revisions within last years.

4.4.2 QUALITY OF PLANNING

Introduced new courses incorporating with new opportunities in the department, new plans/projects that follow the university to overall development, each academics and academics supportive activities are planning before starting the academic years and unavoidable circumstances within academic calendar including the quality of planning.

4.4.3 QUALITY OF ACADEMIC STAFF DEVELOPMENT

These are the including components to quality of academic staff development; Papers presenting to the conference, facilities and chances are provides to academic staff, teaching innovation projects conducted by staff development centre (Workshop, conferences, seminars), education development activities organized by the faculty or department. (Public lectures organized, academic exhibitions), department publications. (Books, Journals, and Magazines etc.), the organizations (universities or other entities) are involved in joint or a collaborative activity, the levels of department human resources development., Reading PhDs and Masters, process of academic internal promotions system.

4.4.4 QUALITY OF MANAGEMENT STAFF AND TEAMWORK

University or faculty conducting sufficient workshop to increase workers job related skills and knowledge, process of management staff internal promotions system, develop ways to solve problems and quality of management staff development.

4.5 OPERATIONALIZATION OF MS

For the purpose of this study, the following dimension was selected.

1. Mission, Objectives and Strategies

4.6 DEFINITION OF VARIABLES AND MEASUREMENTS

In order to measure the BSC perspectives for the departments under the management faculties, according to the hypotheses and study consist of twenty eight (28) questions. Statements formulated on a 5 point Likert scale were similarly evaluated and a mark assigned according to the degree of sophistication of the operational activity.

4.7 SAMPLE

This study is limited to Management Faculties (Rajarata University of Sri Lanka, Wayamba University of Sri Lanka, Ruhunu University, Kelaniya University, Jaffna University, Colombo University, Sri Jayawardenapura University, Eastern and South Eastern University, Vavuniya Campus and Sabaragamuwa University) of eleven universities out of Fifteen (15) universities therefore generalization of the finding may have a limited value.

5. REASERACH FINDINGS**5.1 SAMPLE COMPOSITION AND RESPONSE RATE**

There are 31 higher educational institutes comes under University Grant Commission of Sri Lanka (UGC). As mentioned earlier total no of universities in Sri Lanka were fifteen (15) and selected sample sizes were eleven (11) universities. The University of Moratuwa, University of Peradeniya and University of the Visual and Performing Arts have not taken in to consideration because they have not conducting management faculties. The Uva Wellassa University not taken into consideration because as per questionere, under customer perspective there was a dimension call quality of graduate. It mainly consider data related to pass out students from the management faculty. But in Uva Wellassa University there were no pass out students (senior students in the third year in their academic programme).

Forty six (46) departments selected for this and response rate were thirty nine (39) departments from each universities. The overall response rate is 84.78%. Most of the universities response rate reached to 100% except University of Colombo, University of Sri Jayewardenepura and Sabaragamuwa University of Sri Lanka. The University of Sri Jayewardenepura has recorded 63.64 %. (Response 07 departments out of 11)

5.2 RELIABILITY

An exploratory study to test the reliability of the instrument of the proposed BSC framework in Sri Lankan Universities was conducted. This study was based on 39 departments in Management Faculties in each University out of 46 departments. The internal consistency was measured using the Cronbach's alpha coefficient (Cronbach, 1990) to test separately all the items of each criterion. Table 5.1 displays the result that consists of the reliability values. The alpha values range from 0.723 to 0.840 indicating that all scales are acceptable. All factors reflect values greater than 0.7 which can be suggested as being adequate for testing the reliability of the criteria.

TABLE 5.1 - INTERNAL RELIABILITY OF THE PERFORMANCE INDICATORS IN SRI LANKAN UNIVERSITIES

Performance Indicators Criterion	Reliability
Learning and Growth Perspectives	0.879
Quality Assurance	0.727
Quality of Planning	0.713
Quality of Academic Staff Development	0.840
Quality of Management staff Development	0.725
Mission and Strategies	0.723
Mission and Strategies	0.723

5.3 UNIVERIAIATE ANALYSIS**5.3.1 LEARNING AND GROWTH PERSPECTIVE (LGP)**

The LGP of the BSC is important aspect relate each others. If university education is to remain relevant in a changed and changing their environment.

The quality assurance, quality of planning, staff development and management staff development were included the dimensions of learning and growth variable. Also it measures the importance of the LGP to entire university performance.

TABLE 5.2 - MEAN AND STANDARD DEVIATION ON EACH DIMENSION IN THE LGP

Performance Indicators Criterion	Mean	S.D
Learning and Growth Perspectives	3.7115	0.54585
Quality Assurance	3.6581	0.98968
Quality of Planning	3.9231	0.70514
Quality of Academic Staff Development	3.7550	0.59080
Quality of Management staff Development	3.4423	0.75972

As per table 5.2, taken as a whole the overall mean and standard deviation from the analysis were representing the 3.7115 and 0.54585 respectively. According to the each dimension, the highest mean value represented by the quality of planning the mean value was 3.9231 and the lowest value in the quality of management staff development it was 3.4423. The new courses incorporated, new plans/ projects, academic activities and making provisions on unavoidable circumstances are included in Quality of Planning dimension.

The highest mean value represented in university of Jaffna, it was 4.60 and the lowest value in University of South Eastern, it was 3.3333. The calculated mean values on each dimension under LGP in University of Jaffna are as follows.

TABLE 5.3 - MEAN VALUES ON EACH DIMENSION IN THE LGP – UNIVERSITY OF JAFFNA

Performance Indicators Criterion	Mean
Quality Assurance	4.5000
Quality of Planning	5.0000
Quality of Academic Staff Development	4.3889
Quality of Management staff Development	4.7500

The ANOVA statistics there were no difference between LGP in each university. (F = 2.068, P = 0.064)

5.3.2 MISSION AND STRATEGIES (MS)

This perspective was used to identify critical process in achieving objectives. These objectives include both faculty and university level mission, work priorities based on the mission and strategies develop to achieving said mission. The calculated Mean values and S.D are given below.

TABLE 5.4 - MEAN AND STANDARD DEVIATION ON MS

Name of the question	Mean	S.D
Mission and Objectives	4.5128	0.55592
Work Priorities	4.0000	0.97333
Department Strategies	4.1026	0.88243

Table 5.4 indicates the measures that heads of the departments in eleven (11) universities to consider how their departments have perceived mission, objectives and strategies. Also it measures the importance of the MP to entire university performance.

5.4 BIVARIATE ANALYSIS

The Bivariate Correlations procedure computes Pearson's correlation coefficient. Correlations measure how variables or rank orders were related. Pearson's correlation coefficient measure of linear association with two variables can be perfectly related.

Under this section, by using the Pearson's correlation coefficient evaluated linear association with two variables according to designed conceptual framework, in addition to relationships between dimensions included each variable.

5.4.1 RELATIONSHIP BETWEEN LGP AND MS

The hypothesis in this study the coefficient between LGP and the MS is $r = 0.571$ (p value < 0.01) which means that the LGP has a positive influence on the MS. Therefore, hypothesis H1 is supported. (Table 5.5)

TABLE – 5.5 RELATIONSHIPS BETWEEN LGP AND MS

	Mission Perspective
LGP	0.571

The highest relationship recorded between Quality of Academic Staff Development and MS ($r = 0.582$, p value < 0.01). Also there were lowest relationship between Quality Assurance and MS ($r = 0.253$, p value < 0.01). Other relationship mention in table 5.6 were $r = 0.491$ and $r = 0.330$.

TABLE - 5.6 RELATIONSHIP BETWEEN KEY DIMENSIONS OF LGP AND MS

Dimensions	Mission Perspective
Quality Assurance	0.253
Quality of Planning	0.491(**)
Quality of Academic Staff Development	0.582(**)
Quality of Management Staff and Teamwork	0.330(*)

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

5.4.2 THE PERCEPTION OF THE MANAGEMENT LEVEL IN MANAGEMENT FACULTIES IN SRI LANKAN UNIVERSITIES

According to the table 5.7 given below the management staff in the management faculties; are perceived only 15.4% of the BSC model, so that we can reject the H2.

TABLE - 5.7 PERCEPTION LEVEL OF THE BSC

Topic	Questionnaire Results
Knowledge of the concept of the Balanced Scorecard	15.4% Know it very well
	41.0% Know only part of it.
	43.6% Do not know what it is

6. CONCLUSION & RECOMMENDATION

6.1 CONCLUSION

The BSC of Kaplan and Norton is a useful framework for strategic evaluation in the management faculties in Sri Lankan universities. Each faculty in university must design a faculty BSC framework in the light of its own stages of development.

The framework proposed was based on an extensive review of the literature pertaining to BSC and strategic evaluation in the management faculties in Sri Lankan universities. The framework is therefore able to elicit elements and factors relating to the use BSC to enhance strategic evaluation in management faculties. The result of study conducted indicates that the factors posed in the questionnaire have content validity as they high alpha and therefore, well received. It indicates a strong reason to believe that the variables chosen for this study are appropriate. The study found that the management faculties in Sri Lankan Universities in strategic evaluation use performance indicators. The head of the departments believe that these indicators are used by their departments as well as overall faculty for strategic evaluation and are key variables for the enhancement of the performance system of their universities.

Heads of the each department under Management faculties surveyed, indicated that they were reasonably positive about benefits of the BSC for the educations environment. In most causes, the heads of the departments agreed with the measures that were provided. It is an indication that it would be meaningful to include these goals and measure in the construction of an effective BSC for a strategic evaluation in the management faculties.

The methodology, and collection and analysis of data should be transparent and the selection of indicators must have scientific approach, reliability and validity. A performance system should emphasis on all educational process (LGP: quality assurance, quality of planning, quality of academic staff development and quality of management staff and teamwork.) and infrastructure and categorize indicators to inputs, processes, outputs and outcomes.

The Employees at management level in management faculties are knowledgeable of the BSC and its direction and purpose of the organization. Through the analysis part, measure the perception of the management staff (department heads) of the BSC concept and its applications. Most of them were not familiar with the term of BSC and suggested that they need awareness programme according to the BSC applications. Under different research conducted by the overseas researches related to the HEI this percentage was differ from their research findings, because they were very familiar the term of BSC. According to the past research this percentage was around 12%.

Most of the universities give priority to research and other academic related activities. (Learning and Growth Perspective: academic and management staff development), quality assurance activities, planning; According to the overall mean values showed in learning and growth is 3.7115.

6.2 RECOMMENDATION

The effectiveness of the higher education sector can be defined generally by, the degree to which the goals and objectives specified in higher education policies, plans, projects and programs are achieved to the satisfaction of the stakeholders. The ultimate objective of improving higher education effectiveness is the overall improvement in specifically the nation's human capital and generally, in national development while making the most efficient use of resources.

For application in the public universities, in order to improve the effectiveness of service delivery system for improved graduate employability rate, initiatives should be promoted to ensure that graduate gets jobs when they completed their studies in the public universities. The literature has highlighted that the most important strategic goals for an institution of higher education are academic excellence, service excellence, managerial enrolment growth, strategic partnership, organizational development, and cost effectiveness and balance budget. The achieving particular goals each universities should identify their program and procedures that are needed to develop to meet these requirements.

This study mainly connected that the BSC use as a strategic instrument to evaluation of the management faculties performance. In Sri Lankan context were no proper mechanism for evaluate academic performance activities run by the each universities. Also the performance methods including BSC, recorded the very poor (H2). For overcoming this, suggesting recommendation is to implementing BSC process with following steps (California Performance Management Process), should be reviewed periodically with necessary amendments and conduct awareness programme on strategic evaluation.

7. LIMITATION OF THE STUDY

1. All higher educational institutes (31) were not taken in to consideration. This study is limited to eleven (11) universities out of fifteen (15) universities and there management faculties therefore generalization of the finding may have a limited value.
2. Most of the employees (department head) disclosed the facts and information under busy in their work conditions.
3. Even if there is a possibility of testing the BSC technique, isolating the results of such an application well prove difficult as the application cannot be done in a control environment.
4. Regarding the data collection, the numbers of questionnaires were not respondents (39 respondents out of 46 – 85%).The small sample size might cause a deviation in research assumptions; therefore it cannot represent the whole. Consequently, I suggest that researches conduct more comprehensive investigation in the future in order to obtain more accurate results.

8. FURTHER RESERACH

This study is limited to management faculties. The university or other similar institution there were several functions and operations, in addition to there were many supporting services which included in the process, such as library, student services, establishment unit, maintenance, medical centers, physical education, computer center., English language unit, carries guidance, cultural center, examination unit, audit branch, postal unit, payment branch, supply branch, each faculty functions ,other than the registrar and vice chancellor office activities. In the hierarchy on university, academic as well as nonacademic activities were carried out and these were covered all university activities, in future there will be a approach to conducted research on each faculty level as well as corporate level to evaluate the performance in university.

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INDEPENDENT DIRECTORS IN LISTED INDIAN PUBLIC SECTOR ENTERPRISES: AN ANALYTICAL STUDY

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ABSTRACT

Board of Directors in a company comprise of executive and non-executive directors. Executive directors are full-time employees of the company. They are responsible for managing the affairs of the company. However, given the day to day pressures it can be sometimes extremely difficult for executive directors to remain independent and ensure necessary accountability. Non-executive directors on the other hand bring balance and credibility to the management decisions. The attributes of a non-executive director are independence of mind, integrity and the courage to question the executive members. Non-executive directors can add value to the Boards of companies of all size by ensuring transparency in the operations of a company, maintaining independent checks and balances on the authority of executive directors and CEO, bringing in specific skills and expertise, providing strategic vision, participating in the Audit and Nomination Committees and carrying out other responsibilities assigned from time to time. In order to objectively monitor, non-executive directors must be independent. This implies that non-executive directors are not connected with the company or its promoters or directors on the basis of family relationship and do not have any other relationship, whether pecuniary or otherwise, with the company or its directors or related parties. To be able to effectively monitor, it is imperative that independent directors are given significant representation on the Board.

KEYWORDS

Checks and Balances, Fair Boardroom Practice, , Investor Protection , Transparency & Watchdog.

1. INTRODUCTION

The subject of Corporate Governance has drawn a considerable amount of attention and interest in the recent times both in India as well as all over the globe. The concept primarily rests on basic principles of corporate governance i.e. fairness, integrity, transparency and accountability of the management with an increased focus on investor protection and maximizing of shareholders' wealth.

The acid test of good governance lies in managing a company in a transparent manner ensuring investor protection and maximizing long-term worth of the investments. A key element of good governance remains in maintaining transparency which incorporates a system of checks and balances between key players like Boards, Management, Auditors, investors and other prominent stakeholders.

In this context, the role of Independent Directors has come to be viewed as significant since they are expected to bring an element of objectivity and independence in the boardroom practices and management decisions. The subject of Independent Directors has shot into prominence ever since the courts in India ruled in Satyam saga that the Independent Directors are equally to share the burden of negligence of duties⁴ same as for the functional directors. .

2. A BRIEF REVIEW**BOARD OF DIRECTORS**

i. Board of Directors is a team of professionals at the highest level of hierarchy in a company, working full time or part time and entrusted to make business decisions with a view to ensure that the company succeeds in achieving its predetermined goals while surviving and prospering as a perpetual entity.

ii. Directors comprise the Board as its members. They are trustee managers of a company who are entrusted to keep the business going with a view to ensure that the outfit survives to stay in business and grows to prosper and diversify to succeed in the long run to accomplish the goals set by the promoters. Section 2(13) of the Companies Act, 1956⁵, defines a Director as "any person, occupying the position of Director, by whatever name called. They are professional men, hired by the company to direct its affairs. But, they are not the servants of the company. They are rather the officers of the company". The Directors are of two types-

a. Executive Directors also called Functional / Full time Directors.

b. Non-Executive Directors are also called Non-functional / Part time Directors. In the corporate circles such individuals are termed as "Independent Directors"⁶ if they are not nominated by FIIs and do not have any other relationship with the company or any member of its management. The officers in the Ministries concerned nominated by the Government on the Board of the listed PSEs as well as the listed Joint Ventures under the administrative control of the respective Ministries are not to be considered as Independent Directors.

INDEPENDENT DIRECTORS

The term 'Independent Directors' became a part of the Indian corporate glossary subsequent to release of the Kumar Mangalam Birla Committee Report⁶ in 2000 which resulted in introduction of the concept. Three years later the Naresh Chandra Committee⁸ gave governance further thought. Finally, in 2004 the Narayana Murthy Committee⁹ recommendations lead to inclusion of clause 49 in the listing agreement¹⁰. As at present, the existing company law does not mention the term "independent directors".

IDs are appointed with an objective to bring a fresh and independent orientation coupled with transparency in the decision making by the board. Further, this is done with a view to ensure investor protection as well as taking the business forward. The guidelines¹⁰ on the subject prescribe that a company headed by an executive chairman shall have not less than 50% independent directors. A company with a non-executive Chairman should have 1/3 rd of its Board constituted of independent directors.

The Independent Directors are looked upon as agents of change in the field of corporate governance and considered to be cornerstones of good governance¹⁴. The institution of Independent Director seeks to bring credibility to the Board of directors. The attributes of IDs are independence of mind, integrity and the courage to question the decisions in the broader interest of stakeholders and the company itself¹⁶.

As per the recent guidelines¹⁵ released by the Department of Public Enterprises, Government of India it is mandatory to have 50% of the Board strength constituted by Independent Directors for a public sector company to be classified as Maharatna i.e. the top rank in the classification for the PSEs.

3. STATEMENT OF THE PROBLEM

It is to be examined whether the much hyped institution of Independent Directors has been able to deliver any value both to the corporate hiring them and to the common investors by bringing about a sense of investor protection. For the common investors good governance lies in ensuring transparency, investor protection and maximizing long-term worth of their investments. Have the IDs made any difference in the scenario?

4. AN ANALYTICAL STUDY

I. OBJECTIVES OF THE STUDY

- i. The study has been carried out to delve deeper into the psyche of a key segment of stakeholders with a view to get a broader perspective on the Independent Directors, their appointments, qualifications, training, role, functioning, compensation, and value addition in raising the level of corporate governance.
- ii. To make suitable recommendations to bridge the shortcomings with a view to enhance the value addition by the Independent Directors.

II. RESEARCH METHODOLOGY

- a) Data Collection: A structured questionnaire was designed incorporating issues relevant to appointment and functioning of Independent Directors. The responses were obtained accordingly.
- b) Sample: CPSEs i.e. Public Sector companies owned and managed by the Government of India and listed under NIFTY-50¹¹ in the National Stock Exchange were chosen as the target sample for the study. The respondents were chosen at random. Since the total population of stakeholders of these companies could run into a huge figure, only a sample of 75 individuals who are employees cum shareholders and working in the corporate offices of these companies based in the National Capital Region(NCR) of Delhi were administered the questionnaire. Only 40 valid responses were received back which makes a 53.33%.
- c) Target Respondents: It was felt that the employees cum shareholders employed in the NCR based corporate offices of the PSUs covered in the sample are in a good stead to give a realistic picture on the functioning of IDs. Accordingly, they were approached to respond to fill up the questionnaires.

5. DATA COLLECTED

Sr No	Statement	SA	A	NC	D	SD	Total
A. Appointments							
1	IDs are appointed purely on professional considerations	2	4	6	13	15	40
2	Persons appointed IDs are not relatives or friends of promoters	3	3	10	9	15	40
3	Women get a fair representation in appointment of IDs	1	1	1	12	25	40
4	Individuals appointed as IDs are not too old for the Job	12	13	5	5	5	40
5	After the vacancy arises, IDs are appointed without much of a delay	3	7	6	11	13	40
6	Independent Directors should be appointed for a fixed tenure	26	12	2	0	0	40
7	50% of Board should comprise of IDs like in Maharatna PSEs	8	8	8	8	8	40
B. Qualifications							
8	IDs should possess a certain minimum qualifications	15	13	9	2	1	40
9	No of directorships held by one individual should be restricted	29	8	2	1	0	40
10	Suitably qualified & experienced professionals are appointed as IDs	9	7	6	9	9	40
11	IDs possess integrity and do not seek any favors to endorse decisions	8	8	8	8	8	40
C. Training							
12	IDs do not take too long and start appreciating the nuances of business	2	2	8	14	14	40
13	Independent Directors should be imparted appropriate training.	16	16	4	2	2	40
D. Role							
14	IDs bring definite value addition to decision making in the Board	16	11	8	3	2	40
15	IDs help improve networking with various stakeholders	20	10	5	4	1	40
16	Presence of IDs leads to accuracy & timeliness of disclosures	5	6	9	8	12	40
17	Presence of IDs encourages well deliberated decisions by the Board	3	4	4	12	17	40
18	Legal compliances by the company improve with IDs on the board	7	4	5	8	16	40
19	Presence of IDs makes a company more sensitive to environmental issues	2	3	8	12	15	40
20	Companies with IDs do not conceal material information	3	3	4	10	20	40
21	IDs regularly seek information on reasons of non-performance	5	2	9	12	12	40
22	IDs devote sufficient and quality time to company matters	3	4	8	11	14	40
23	IDs should share the onus for failures with other directors	13	11	9	5	2	40
E. Compensation							
24	Present rate of compensation to IDs is quite reasonable.	20	10	5	4	1	40
25	Compensation to IDs from one single company should be restricted	27	11	2	0	0	40
F. Contribution							
26	IDs on the board of a company enhance its corporate image	13	12	8	5	2	40
27	Corporate Governance improves substantially with IDs on the board	10	10	12	5	3	40

6. ANALYSIS AND DISCUSSIONS

Abbreviations: SA- Strongly Agree, A=Agree, NC-No Comments, D-Disagree, SD-Strongly Disagree.

S.No	Statement	SA	A	NC	D	SD	Total
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A. Appointments

1	IDs are appointed purely on professional considerations	2	4	6	13	15	40
<p>Explanation: 70% of the respondents have answered in negative. About 15 % are non-committal on the subject. About 15% agree with the statement. The pre-dominant negative response supports the common belief amongst the investors that IDs are appointed by promoters merely with the objective to comply with the statutory definition of independence. This contention is also supported by Market analyst Prithvi Haldea² in his paper titled "Independent directors or insiders?"</p>							
2	Persons appointed IDs are not relatives or friends of promoters	3	3	10	9	15	40
<p>Explanation: 61% of the respondents have rejected the statement. 25% opinions are neutral. Only 14% agree with the statement. It is practically seen over the years that even in the highly rated professional managed companies IDs are appointed from among acquaintances especially from among the acquaintances of the promoters. This trend has been deliberated at length by Haldea³ in his article on the subject</p>							
3	Women get a fair representation in appointment of IDs.	1	1	1	12	25	40
<p>Explanation: Only 4% agree while 3% are non-committal. 93% have rejected the contention. In this regard data available from secondary sources¹³ shows that the representation of women as IDs is extremely low and merely 2.5% of the total.</p>							

4	Individuals appointed as IDs are not too old for the Job	12	13	5	5	5	40
<p>Explanation: 62% of the respondents support the statement and find that the IDs appointed are not too old for the job. 26% disagree with the statement. 12% refuse to commit their views on the subject. There appears to be a conflicting situation in this context as the secondary data¹³ reveals that 48% of total Independent Directors in India are above the age of 60, 1380 above 70, 199 are above 80 and 8 are even above 90 years.</p>							
5	After the vacancy arises, IDs are appointed without a delay	3	7	6	11	13	40
<p>Explanation: Only 26% respondents agree to the statement. 59% have negated the same. 15% offer no comments on the subject. Guidelines¹⁰ on the subject provide 180 days to fill up a vacancy which is rather too long a period and there is a possibility of exploiting the gap.</p>							
6	Independent Directors should be appointed for a fixed tenure.	26	12	2	0	0	40
<p>Explanation: As many as 95% believe that Independent Directors should have a defined tenure in the Board. The remaining 5% have taken neutral stance. Some argue that IDs should retire after a reasonably long period say 6 or 9 years as by then too much familiarity may start creating ineffectiveness. As per indications available from the Ministry of Corporate Affairs¹² (MOCA), the new companies' bill is likely to restrict the appointment period to 6 years.</p>							
7	50% of Board should comprise of IDs, as in Maharatna PSEs	8	8	8	8	8	40
<p>Explanation: 40% agree, 40% disagree and 20% take a neutral stance on whether the IDs should comprise half strength of the Board like it is mandatory for being recognized as a Maharatna¹⁵ PSE. Not surprisingly, the Boards of Maharatna PSEs have been empowered by the Government of India with greater autonomy in decision making as compared to other PSUs.</p>							

B. Qualifications

8	IDs should possess a certain minimum qualifications.	15	13	9	2	1	40
<p>Explanation: 69% recommend that Independent Directors should possess a certain minimum qualifications for the task whereas 23% take a neutral stance. In this context Indian Institute of Corporate Governance under MOCA can take a positive initiative. The Institute of Company Secretaries of India (ICSI) and Indira Gandhi National Open University (IGNOU) jointly started a PG Diploma course in Corporate Governance sometime back.</p>							
9	No of directorships held by one individual should be restricted.	29	8	2	1	0	40
<p>Explanation: 92% respondents feel that the number of directorships held by any one individual should be restricted. 5% are neutral on this. With a view to increase the effectiveness it is being proposed in the new Companies Bill that the number of directorship should be restricted¹¹ to a maximum of three as the IDs have a huge responsibility on their shoulders.</p>							
10	Suitably qualified & experienced professionals are appointed as IDs	9	7	6	9	9	40
<p>Explanation: Opinion is quite divided here with 40% responding in affirmative while 45% disagree. 15% have not committed and do not offer comments. SEBI has issued only non-mandatory guideline stating that IDs should have the requisite qualifications and experience. Some minimum qualifications and experience are yet to be prescribed on mandatory basis. As per data available¹³, it is seen in Indian context that as many as 198 of them are non-graduates, of which nearly 75% have not gone beyond schooling, About 3,500 are only graduates.</p>							
11	IDs possess integrity and do not seek return favors to endorse decisions	8	8	8	8	8	40
<p>Explanation: 40% agree, 40% disagree and 20% take a neutral stance on whether the IDs possess integrity and do not seek favors to endorse decisions. The opinion is evenly divided.</p>							

C. Training

12	IDs do not take too long and start appreciating the nuances of business	2	2	8	14	14	40
<p>Explanation: 70% respondents rejected that IDs start appreciating the nuances of business soon. 20% have no comments. Only 10% agree to the idea. It is fairly well known that each business has its own intricacies and the IDs suffer from lack of technical expertise in the specialized activity. It definitely takes a lot of interest and time of an individual to start understanding specialized business activities.</p>							
13	Independent Directors should be imparted appropriate training.	16	16	4	2	2	40
<p>Explanation: 80% respondents have endorsed that Independent Directors should be given related training on their appointment while 10% are non committal. While 10% disagree in varying degrees. It is imperative that at least those IDs who are not qualified professionals e.g. CA, CS should undergo proper training before they assume the responsibilities. IICG, ICSI, ICAI, ICWA etc could take a lead in this direction.</p>							

D. Role

14	IDs bring definite value addition to decision making in the Board.	16	11	8	3	2	40
<p>Explanation: About 67% respondents find definite value coming from the Independent Directors in the Board decisions. 20% are neutral on this aspect. In a redeeming feature, more than 2/3rd respondents find value coming from the Independent Directors in the management decisions. At the same time 20% are not very sure on this aspect. This could construe that IDs do participate actively in decision making once they are available for the board meetings.</p>							
15	IDs help improve networking with various stakeholders.	20	10	5	4	1	40
<p>Explanation: A majority of 75% find it rewarding for the companies to have IDs on the boards for their networking capabilities. 12% preferred a neutral stance. 13% do not agree. With the celebrity directors it is networking that comes in as strength and it is not surprising to see that even PSU majors also have celebrities as IDs on the Board.</p>							
16	Presence of IDs leads to accuracy & timeliness of disclosures.	5	6	9	8	12	40
<p>Explanation: Only 27% agree that the presence of Independent Directors improves the frequency and accuracy of information disclosures; interestingly 50% have rejected the contention and about 23% are non-committal in this regard.</p>							
17	Presence of IDs encourages well deliberated decisions by the Board.	3	4	4	12	17	40

Explanation: About 73% respondents disagree to the statement. Only about 17% agree while 10% are non-committal to this prime reason for appointment of IDs. This negative result may be an outcome of the perceived shortage of time spent by IDs in official engagements of a company.							
18	Legal compliances by the company improve with IDs on the board.	7	4	5	8	16	40
Explanation: 27% respondents find that the presence of IDs help ensure compliance of the legal requirements. As many as 60% rejected the statement. It is sometimes argued that they hardly get the time to look into compliances since they barely get the time for details beyond the Board and Committee meetings.							
19	Presence of IDs makes a company more sensitive to environment.	2	3	8	12	15	40
Explanation: 12% respondents find that presence of IDs make a company environment sensitive. While a majority of 68% have rejected this and 20% have no comments to offer. In this regard it would indeed be interesting to carry out a specific study of different companies for their comparative environmental sensitiveness.							
20	Companies with IDs do not conceal material information.	3	3	4	10	20	40
Explanation: Only 15% respondents agree that with IDs around, the companies do not conceal material information. 75% have rejected this idea. It is argued sometimes that IDs should have access to all information rather than what is provided to them in the well planned Folders.							
21	IDs regularly seek information on reasons of non-performance.	5	2	9	12	12	40
Explanation: 60% respondents do not agree to this. Only 17% agree and 23% are neutral. This, once again, appears to be dependent on the time available with IDs for a particular company.							
22	IDs devote sufficient and quality time on company matters	3	4	8	11	14	40
Explanation: Only 17% respondents find that the IDs spend sufficient and quality time on the company matters. 63% disagree with the statement. 20% have preferred no comments. In this context, SEC Chairman in US Arthur Leavitt, cautioned the IDs against shortage of time ⁴ "I don't care how talented you are, you can't be a good watchdog if you're only on patrol three times a year" he is quoted to have said.							
23	IDs should share the onus for failures with other directors.	13	11	9	5	2	40
Explanation: About 59% of the respondents agree that IDs should share the burden of corporate failures along with the full time directors. This appears to be the influence in the aftermath of the court directions ¹ in Satyam case. 18% disagree with the statement while 23% do not wish to commit themselves.							

E. Compensation

24	Present rate of compensation to IDs is fairly reasonable.	20	10	5	4	1	40
Explanation: A majority of 75% respondents find the present structure of remuneration fairly reasonable. Only 13% disagree while 12% offer no comments on the subject.							
25	Compensation to IDs from one single company should be restricted.	27	11	2	0	0	40
Explanation: A majority of 95% respondents agree that compensation paid to IDs from one company should be limited. The remaining 5% have taken a neutral stance on this statement. Prithvi Haldea ³ in his article on the subject has opined that a cap on remuneration may not be a good idea, and should be left to each case. However, remuneration earned by an ID from any single company should not exceed a basic percentage say 15% to 20% of his income, in order to reduce individual's dependence on the company.							

F. Contribution

26	IDs on the Board of a company enhance its corporate image	13	12	8	5	2	40
Explanation: In an approval of sorts 62% respondents opined that IDs on the board of a company enhance its corporate image. 20% responses are non-committal while 18% have disagreed to the statement.							
27	Corporate Governance improves substantially with IDs on Board.	10	10	12	5	3	40
Explanation: 50% respondents have opined that the corporate governance improves with IDs on the Board. 30% non-committal. About 20% do not agree with the statement. This response, by and large, points to the present level of acceptance of the concept of IDs in Indian companies.							

Abbreviations: SA- Strongly Agree, A=Agree, NC-No Comments, D-Disagree, SD-Strongly Disagree.

7. LIMITATIONS OF THE STUDY

- i. The subject of research is in a preliminary stage and the concept itself is rather new to the Indian industry.
- ii. There is a paucity of previous research and references for any valid comparisons.
- iii The sample taken is very small.

8. RECOMMENDATIONS

On the basis of the findings it is recommended that-

- i. A certain minimum age, qualifications and experience should be prescribed as eligibility conditions for appointment of Independent Directors.
- ii. Keeping into consideration the crucial role of IDs for transparency, investor protection and professionalization of management, it is recommended that an independent agency like Indian Institute of Corporate Governance (IICG) should set up and maintain a pool of suitable candidates for appointment as Independent Directors. This shall facilitate suitable and timely appointments.

9. CONCLUSION

Based on the responses to the questionnaire and their analysis this study concludes that the functioning of IDs in the Indian companies has a long way to go. The findings from the study reveal that the concept is still in a nascent stage after more than a decade of the seeding. In fact the results of this study in a way seem to reinforce the findings of an earlier study by Umakanth Varottil¹⁷ in his research paper entitled "Evolution and Effectiveness of Independent Directors in Indian Corporate Governance". Varottil had come out in his study that the concept of IDs was originally ushered in countries with diffused ownership structures

in order to operate as a monitoring mechanism over managers in the interest of large number of shareholders. However, a transplantation of the concept in India with insider ownership structure without factoring the prevalent corporate structures and other associated factors is not likely to yield the same results.

10. SCOPE FOR FURTHER RESEARCH

The mandated role of Independence Directors is under the prying watch of billions of investors, both prospective and present employees and several other key stake holders. Further dedicated research could be taken up on how the induction of IDs shall make a difference and add value to the companies, investors and different stakeholders and benefit economic development of a resurgent economy like India on a sustainable basis.

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RELATIONSHIP BETWEEN EMOTIONAL & SOCIAL COMPETENCES AND TRANSFORMATIONAL LEADERSHIP STYLE

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ABSTRACT

The objective of this paper is to examine the relationship between Emotional Intelligence and Transformational leadership style. The study hypothesizes that the Emotional and social competencies of emotional intelligence positively affect the supervisors' Transformational leadership style. This study's hypotheses are empirically tested using a survey of supervisors of Indian Software organizations. The empirical findings show that Emotional and social competencies of supervisors are significantly positively related with their transformational leadership. Practical implications of the findings are discussed together with limitations and ideas for future research.

KEYWORDS

Emotional Intelligence, Emotional & Social Competencies, Transformational leadership Style.

INTRODUCTION

Organizations spend huge resources on leadership development. But these have not given results as per expectations. This asks us to review the overall leadership development process in Indian software industry. Understanding the relationship between emotional intelligence and transformational leadership style in this industry may help us in relate its outcome with leadership development in the industry. This understanding may provide a pathway for more making leadership development process more effective. The purpose of the quantitative correlational study was to determine to what degree a relationship exists between emotional & social competences and transformational leadership style in Indian software industry. A total of 240 subordinates completed the ESCI Rating Version for measuring emotional & social competences of their supervisors. They also completed 20 items from MLQ5x rater form for measuring transformational leadership styles of their supervisors. Correlational statistical analysis of data revealed positive relationship between emotional & social competences and transformational leadership styles. The conclusion was that a supervisor's emotional & social competences are related to his/her leadership style. The result might be used for leadership development in the software industry.

LITERATURE REVIEW

EMOTIONAL INTELLIGENCE

Emotional Intelligence (EI) was described formally by Salovey and Mayer (1990). They defined it as 'the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions' (p. 189). The term 'emotional intelligence' was mostly unfamiliar to researchers and general public until Goleman (1995) wrote the best selling book, Emotional Intelligence: Why it can matter more than IQ. He described emotional intelligence as "abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to empathize and to hope" (Goleman, 1995).

Over the last decade considerable attention has been paid to the issue of definition, independence, measurement and impact on organizational outcomes (Goleman, 1995, 1998; Chreniss, 2000; Cooper and Sawaf, 1997; Mayer and Salovey, 1997; Mayer et al., 2000; ryback, 1997; Weisinger, 1998). Two models of EI have been suggested over the last decade (Ciarrochi et al. 2001). The first of these models is an "ability" model, which combines emotion with intelligence, and the second is a "mixed model", which combines traits with social behaviors and competences. The ability model has largely evolved from Salovey and Mayer's (1990) original definition of EI. The mixed model largely arises from the work of Bar-On (1997), an approach embraced and advocated by Goleman (1995, 1998).

TRANSFORMATIONAL LEADERSHIP

Transformational leadership theory is based primarily on Bass's work (1985), although Burn's earlier work (1978) influenced the thinking behind its development. The dynamics of transformational leadership involve strong personal identification with the leader, joining in a shared vision of the future, or going beyond the self-interest exchange of rewards for compliance. Transformational leaders, therefore, aim at reaching followers' emotional drivers to achieve results (Bass and Avolio, 1993). An effective transformational leader understands the needs and motivations of others and tries to help them reach their full potential (Bass and Avolio, 1994). The factors of transformational leadership are idealized influence attributed, idealized influence behavior, inspirational motivation, individualized consideration, and intellectual stimulation (Bass, 1998; Bass & Riggio, 2006)

Each of these five dimensions of transformational leadership is explained as follows:

- (1) Idealized influence: Transformational leaders exhibit confidence and instill emotions, a sense of selflessness, and respect in their followers.
- (2) Idealized behavior: These leaders are goal oriented and they encourage the completion of work based on a collective sense of beliefs, values, purpose, and mission.
- (3) Individualized consideration (IC): They recognize the needs of their followers and provide them with personal guidance and development.
- (4) Inspirational motivation (IM): It refers to the way leaders articulate and communicate shared organizational goals and a mutual understanding of what is right and important. They provide a vision of what is possible and how to attain organizational goals.
- (5) Intellectual stimulation: It relates to the way transformational leaders approach problems and encourage innovation and creative problem solving.

EMOTIONAL INTELLIGENCE AND TRANSFORMATIONAL LEADERSHIP

Researchers have emphasized that Emotional Intelligence positively affects the supervisors' transformational leadership styles. Daniel Goleman (1998) find that truly effective leaders are distinguished by a high degree of emotional intelligence. It was found a significant positive relationship between EI skills and transformational leadership style (verba, 2007). Lisa Gardner and Con Stough (2002) conclude that Emotional intelligence is correlated highly with all components of transformational leadership, with the components of understanding of emotions and emotional management the best predictors of leadership style. Mandell and Pherwani (2003) conducted a small study consisting of 13 male and 19 female managers in mid- to large-size companies, with the goal of

examining gender differences in the relationship between EI and transformational leadership. There was an overall significant positive relationship between the total EI scores and transformational leadership scores of the managers. Duckett and Macfarlane (2003) examined emotional intelligence and transformational leadership relationships in the managers of 21 retail stores of UK, and found a "strong" relationship.

Leban, Zulauf (2004) studied 24 project managers and their associated projects in six organizations from varied industries. The results of the study found that a project manager's transformational leadership style has a positive impact on actual project performance, that emotional intelligence ability contributes to a project manager's transformational leadership style and subsequent actual project performance. Butler and Chinowsky (2006) found a strong relationship between total Emotional Intelligence and leadership. Srivastava and Bharamanaikar (2004) examined leadership effectiveness with a unique population of 291 Indian army officers. EI was measured using a self-report measure, the Work Profile Questionnaire Emotional Intelligence version (WPQEI) and Leadership style was measured by the 5x-short version of the MLQ (Bass & Avolio, 1995). The results significantly supported the connection between emotional intelligence and all of the components of the transformational leadership. Singh (2007) studied a sample of 210 male and 130 female software professional to investigate the relationship of EI with organizational leadership. The results indicated positive and significant relationships of EI and organizational leadership for both the genders.

Taking lead from these contributions, we hypothesise that emotional intelligence is positively associated with supervisor's transformational leadership.

H1: Emotional Competencies as perceived by followers are positively related to perceived Transformational leadership

H2: Social Competencies as perceived by followers are positively related to perceived Transformational leadership

RESEARCH METHODOLOGY

SAMPLE AND POCEDURE

The present research investigated how emotional and social competencies are associated with supervisor's transformational leadership. In particular, this study investigates subordinates' perceptions regarding their supervisor's emotional & Social skills and transformational leadership in Indian organizations.

The participants in the study must be organizational managers who have at least two or more direct report employees. The manager and the manager's direct report employees must have working together from at least 6 months.

The HR department of each organization made a pool of managers, who fit in to the above requirement. All the managers of the pool were invited to participate in the study and give the names of minimum 2 subordinates who could rate their managers. The managers' and subordinates' participation is voluntary. 120 supervisors participated in the study.

All the managers and their nominated subordinates were invited to participate in the study. The managers were given the demographic surveys, which were returned by them along with names of two of their subordinates. The subordinates of each manager were given two surveys, one for emotional intelligence, and one for transformational leadership style. The Emotional and Social Competence Inventory (ESCI) rating version was used for measuring the manager's emotional intelligence. The Multifactor Leadership Questionnaire (MLQ) 5x rater form was used for measuring the manager's transformational leadership style. Paper-pencil version of ESCI and LMQ 5x were used in the study.

Both the research instruments were given to the subordinates of the managers for rating emotional intelligence and leadership style. The instruments were given to the participating subordinates in envelopes by the HR department in each organization. The participants were requested to put the completed questionnaires in the same envelope and seal envelopes and return to HR. This was done to ensure participant confidentiality.

MEASUREMENTS

EMOTIONAL & SOCIAL COMPETENCE INVENTORY (ESCI)

Emotional Intelligence was assessed with the Emotional and Social Competence Inventory (ESCI; Boyatzis & Goleman, 2007). The ESCI is multi-rater ("360 degree") measure in which the person's boss, peers, and subordinates are asked to rate the person on a variety of dimensions. Thus it measures the extent to which people actually demonstrate emotional and social competence in their work settings. For each of the 68 items, subordinates of the executives described how frequently he or she demonstrated the behavior described in the item. The test has been shown to have desired reliability and validity (Wolff, 2007). The test also has been shown to have good model fit, and convergent and divergent validity at the scale level (Boyatzis & Gaskin, 2010).

The ESCI measures 12 competencies organized in to four "clusters" (Table 1). Competency clusters are behavioral groups of the competencies. With the ESCI, two clusters are focused on a person's awareness, namely awareness of self (self-awareness) and the awareness of others (social awareness). The other two clusters assess the competency of a person to use their level of awareness to manage self (self management) and one's relations with others (relationship management).

MULTIFACTOR LEADERSHIP QUESTIONNAIRE (MLQ5x)

The Multifactor Leadership Questionnaire (MLQ-5x short) (Bass & Avolio, 1997) is considered widely accepted measurement of transformational, transactional, and laissez-faire leadership styles. However, only the 20 item scale for transformational leadership style was used for measuring the managers' leadership styles as perceived by their subordinates. The MLQ5x is a 360-degree instrument consisting of two parts. One component is a self-assessment for leaders in regards to their leadership style and the second assessment is for subordinates/peers/boss to report on their perceptions of the behaviour and attributes of the behaviour and attributes of their immediate supervisor/peer/subordinate. These two components can be used separately, as part of a 180-degree or a full 360-degree assessment. Both instruments have identical scales and items, except that the item stems refer to the supervisor in one case and the self in another.

The MLQ 5x is a 45-question assessment that contains a 5-point Likert-type scale for each of the questions, with possible answers ranging from *Not at all* to *Frequently, if not always*.

To determine which leadership style a manager uses, a total of 9 factors are measured across three different leadership styles. The factors and leadership styles measured were: (a) transformation leadership; idealized attributes, idealized behaviours, inspirational motivation, intellectual stimulation, individualized consideration; (b) transactional leadership; contingent reward, active management-by-exception; (c) passive/avoidant; passive management-by-exception and laissez-faire.

Transformational leadership consists of four factors as measured by the MLQ5x (Bass & Avolio, 1997); (a) intellectual stimulation, (b) individualized consideration, (c) charisma (idealized attributes and idealized behaviors), and (d) inspirational motivation. Intellectual stimulation gets followers to question the status quo and encourages them to question their methods and seek ways to improve them. A sample item is: "seeks differing perspectives when solving problems". Individualized consideration is where the leader focuses on the unique needs of each follower and works continuously to help them to reach their full potential. Charisma involves gaining respect, trust, and confidence towards the leader and transmitting a strong sense of mission and vision of the desired future to the followers. A sample item is: "Instills pride in me for being associated with him/her". And finally, inspirational motivation is communicating an energizing sense of purpose.

In the present study, to assess transformational leadership style, 5 factors of transformational leadership are measured from MLQ (5x) Rater form. Subordinates rated their supervisors on these five factors are (a) Idealized attributes, (b) Idealized behaviors, (c) Intellectual stimulation, (d) Inspirational motivation, and (e) Individualized consideration.

RESULTS

The correlations among variables are described in Table 2. Emotional competencies and Social competencies are highly positively related to the transformational leadership style. Correlations between transformational leadership and emotional competencies, and social competencies were also significant. We computed two multiple regression analysis with transformational leadership as the dependent variable and the emotional competencies as the independent variables and transformational leadership as the dependent variable and the social competencies as the independent variables. Regression results are shown in Table 3 and Table 4.

Out of emotional competencies, Self management competence was positively associated supervisor's transformational leadership that provided full support to H1. It appears that self management competencies are a very good predictor of supervisor's transformational leadership ($\beta=0.763$, $p<0.01$). Social skills and

relationship management competences of social competences were also positively associated with supervisor's transformational leadership that provided support to H2. It appears that social skills and relationship skills are good predictors of supervisor's transformational leadership ($\beta=0.457$, $p<0.01$) and ($\beta=0.486$, $p<0.01$).

DISCUSSION

Scholars and writers in management emphasise the importance of emotional and social skills on leadership effectiveness. It has been argued that it has been argued that supervisors' beliefs, values and interpersonal competence are of importance to adoption of leadership style.

This study investigated the relationship between emotional and social competences and transformational leadership in Indian organizations. In particular, this study investigates subordinates' perceptions regarding their supervisors' emotional and social competences as well as transformational leadership. The study contributed to the understanding of the linkage among emotional and social competences and transformational leadership. The results provided support for the model, which suggests that supervisors' emotional social competences are positively associated with transformational leadership. According to research findings, supervisors in Indian software organizations try to lead effectively using emotional and social competences. Finding of the study were in line with the expectations. In general the implications of the study are that supervisors need to acquire and use their emotional and social competences to enhance their transformational leadership.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Data were collected from software organizations from national capital region of India. Representative sample from different software hubs of India is required to further investigate the relationship between emotional and social competences and transformational leadership. The analysis also suffers from small sample size, which could be increased by collecting more data from other software hubs of India.

While collecting data for emotional and social competences and transformational leadership responses from subordinates were collected. Further research may be conducted in which data is collected from peers and supervisors as well.

Besides, the use of a cross-sectional design in the present study restricts inferences being drawn regarding the causal relationship between emotional and social competences and transformational leadership. It is suggested that future research might use a longitudinal design. Such an attempt may facilitate the drawing of casual inferences. Further studies may use a research approach that allows emotional and social competences to be assessed first and transformational leadership to be assessed some time later.

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TABLES

TABLE 1: EMOTIONAL & SOCIAL COMPETENCES FRAMEWORK

CLUSTER	COMPETENCIES	COMPETENCY DESCRIPTION
Self-Awareness	Emotional Self-Awareness	Recognizing one's emotions and their effects
Self-Management	Emotional Self-Control	Keeping disruptive emotions and impulse in check
	Adaptability	Flexibility in handling change
	Achievement Orientation	Striving to improve or meeting a standard of excellence
	Positive Outlook	Persistence in pursuing goals despite obstacles and setbacks
Social Awareness	Empathy	Sensing other's feeling and perspectives, and taking an active interest in their concerns
	Organisational Awareness	Regarding a group's emotional currents and power relationships
Relationship Management	Coach and Mentor	Sensing others' development needs and bolstering their abilities
	Inspirational Leadership	Inspiring and guiding individuals and groups
	Influence	Wielding effective tactics for persuasion
	Conflict Management	Negotiating and resolving disagreements
	Teamwork	Working with others towards shared goals, creating group synergy in pursuing collective goals

Source: Hay Group (2011)

TABLE 2: CORRELATION ANALYSIS: EMOTIONAL & SOCIAL COMPETENCES CLUSTERS AND TRANSFORMATIONAL LEADERSHIP

		Self Awareness	Self Management	Social Awareness	Relationship Management
Transformational Leadership	Pearson Correlation	.455**	.690**	.704**	.700**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	120	120	120	120

** . Correlation is significant at the 0.01 level (2-tailed).

TABLE 3: REGRESSION ANALYSIS: EMOTIONAL COMPETENCES AND TRANSFORMATIONAL LEADERSHIP

	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	-.635	.358	-1.775	.079
Self Awareness	.093	.067	1.388	.168
Self Management	.763	.096	7.924	.000

Note: Dependent Variable: Transformational Leadership

TABLE 4: REGRESSION ANALYSIS: SOCIAL COMPETENCES AND TRANSFORMATIONAL LEADERSHIP

	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	-1.005	.337	-2.980	.004
Social Awareness	.457	.100	4.553	.000
Relationship management	.486	.111	4.397	.000

Note: Dependent Variable: Transformational Leadership

ICT DEVELOPMENTS IN HIGHER EDUCATION IN INDIA: THE ROAD MAP AHEAD

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ABSTRACT

ICT come as a revolutionary effect on the educational sector in particular and higher education in general. It makes the world a small village. It bridges the gap between teaching, learning and research. Use of ICT resources make education widely available at reduced cost. This paper focuses on how ICT impact on higher education sector in India in terms of infrastructural requirements, funding requirements, organizational change, acceptance by teachers, students and university administration, and performance. The government is spending a lot of money on ICT. In the higher education sector, the National Mission on Education is emphasizing on the role of ICT in increasing the enrolment ratio in higher education. India is developing as a knowledge economy and it cannot function without the support of ICT. The gap between demand and supply of higher education has necessitated the governments and institutions to formulate the policies for the better use of ICT.

KEYWORDS

Information and Communication Technology, Higher Education, Gross Enrollment Ratio, Five Year Plan, E-Infrastructure.

INTRODUCTION

ICT act as a potentially powerful tool to realize the objective of providing education whether formal or informal to each and every section of the society which includes rural populations, groups which excluded from education due to cultural and social reasons such as ethnic minorities, girls and women, person with disabilities and others for a reason of cost and time at a reduced cost. ICT can be use of the following:

- ICTs for Information Processing- Computers and Related Technology
- ICTs for Information Dissemination- Internet, Television, Radio, Mobile Phones, I-Pad, Telecommunication
- ICTs for Information Delivery- Computers, Internet, Multimedia, Television, Radio, Telecommunications

Education is one of the vital sectors of Indian economy and for the development of this sector ICT come up as an important tool. ICT is one of the major developments in the area of education in particular and higher education in general. ICT has changed the prevailing system of education in India by E-learning and modern instructional methods in place of traditional instructional methods. ICT plays a transformational role in achieving the key socio-economic objective of the government pertinent to education. Education sector is the foundation for the development of human capital and industrial growth. ICT helps for augmenting growth in this sector. Keeping this objective in mind govt. of India brought out major policy changes to provide a boost to higher education sector through ICT initiative NME-ICT to increase gross enrollment ratio (GER) in higher education. ICT has changed the infrastructure requirements of higher educational institutions. This paper highlights the role of ICT in higher education as a driver of change and likely challenges behind use of ICTs, ICT policy in higher education, the road map ahead and the conclusion and recommendations for the policy makers and heads of the institutions.

NEED FOR ICT IN EDUCATION

- 1) **Literacy Rate:** The overall literacy rate in the country, as per the 2011 census, was 74.04%. This implies that we do not even have the formal means to know about the talents of the remaining 25.96 % of the population, let alone try to nurture their talents. This is a very high under utilization of the nation's human resources.
- 2) **Rate of Growth in the Number of Educational Institutions:** Indian higher education system is one of the largest in the world. There were only 20 universities and 500 colleges with 0.1 million students at the time India attained independence. This has increased to 634 universities and university-level institutions and 33,023 colleges as on December 2011. But still this number is not able to meet the growing demand of education. ICT acts as an enabler to make available knowledge resources to every learner as per his/her convenience.
- 3) **Enrolment of Students:** The growth of student enrolment in higher education from 8399 ('000') in 2000-01 to 16975('000') in 2010-11. At this rate of growth, to achieve the objective of optimum utilization of human resources it is better to adopt ICT model of teaching and learning.

ROLE OF ICT IN HIGHER EDUCATION

- It improves the quality of teaching through or by the use of word processing tool.
- It enables access to real world information through the web.
- It facilitates collaborative learning.
- It encourages independent learning by removing the hindrance of place and time. We can also called it convenient learning.
- It also provides reliable and up-to-date information.
- It allows students as well as teacher to produce high quality research by use of ICT tools.
- It develops communication skills and motivated students to participate in learning activities.
- It makes teaching and learning interesting and effective.

ICT INITIATIVES IN EDUCATION IN INDIA

- **NATIONAL MISSION ON EDUCATION THROUGH ICT**

Ministry of Human Resource & Development, Govt. of India has launched the National Mission on Education through Information and Communication Technology (NME-ICT) Project. The vision is to convert India's demographic advantage into a knowledge powerhouse by nurturing and honing our working

population into knowledge or knowledge enabled working population. Under this project, MHRD wishes to impart training to more than 1 lakh teachers from 20,000 colleges across India on basic Information and Communication Technology (ICT) tools and build capacity for use of IT in day to day teaching.

The objectives of the National Mission on Education through ICT shall include:

- Building connectivity and knowledge network among and within institutions of higher learning in the country with a view of achieving critical mass of researchers in any given field;
- Spreading digital literacy for teacher empowerment;
- Development of knowledge modules having the right content to take care of the aspirations of academic community and to address to the personalized needs of the learners;
- Standardization and quality assurance of e-contents to make them world class;
- Research in the field of pedagogy for development of efficient learning modules for disparate groups of learners;
- Making available of e-knowledge contents, free of cost to Indians;
- Experimentation and field trial in the area of performance optimization of low cost access devices for use of ICT in education;
- Providing support for the creation of Virtual Technological University;
- Identification and nurturing of talent;
- Certification of competencies of the human resources acquired either through formal or non-formal means and the evolution of a legal framework for it; and
- Developing and maintaining the database with the profiles of our human resources.

COMPONENTS

The Mission has two major components:

- (a) Providing connectivity, along with provision for access devices, to institutions and learners;
- (b) Content generation

It aims to extend computer infrastructure and connectivity to over 18000 colleges in the country including each of the departments of nearly 400 universities/deemed universities and institutions of national importance as a part of its motto to provide connectivity upto last mile. Therefore, the Mission, in addition to utilize the connectivity network of BSNL/MTNL and other providers, shall explore the possibility to provide connectivity utilizing Very Small Aperture Terminal (VSAT), Very Personal Network (VPN) and EduSat channels.

MICROSOFT INITIATIVE TOWARDS NME-ICT "SAKSHAM"

Ministry of Human Resource & Development, Govt. of India has launched the **National Mission on Education through Information and Communication Technology (NME-ICT)** Project. The vision is to convert India's demographic advantage into a knowledge powerhouse by nurturing and honing our working population into knowledge or knowledge enabled working population.

Under this project, MHRD wishes to impart training to more than 1 lakh teachers from 20,000 colleges across India on basic Information and Communication Technology (ICT) tools and build capacity for use of IT in day to day teaching. Aligning with the objectives of NMEICT, Microsoft is implementing a pilot ICT training program, Saksham, at six universities across India. Microsoft is conducting a FREE "Microsoft Saksham – Teacher Empowerment" program for the teachers. These teachers have been selected across various disciplines and shall be groomed to be a Champion on ICT skills.

As an end result, the teachers would be motivated to build a content repository that would allow them to share their ideas, research projects leverage all the available knowledge resources for finding useful examples and case studies and enable them to collaborate with other teachers and with their mentors.

The SAKSHAM Portal www.saksham-ms.in, is an online resource which allows the SAKSHAM champions to access content, form communities, build content repositories, leverage knowledge and actively share ideas and projects. Champions also have the facility to create their own training batches on Saksham portal and thus extend the online community of new ICT champions. Microsoft plans to recognize those ICT champions who successfully reach out and mentor other educators and students. Microsoft welcomes the educators from University into its fold and the SAKSHAM fraternity, which represents an empowered, critical mass of dedicated experts in every field, working in a networked manner to bridge the digital divide and accomplish MHRD's NME-ICT vision.

- Eklavya initiative: Uses Internet and television to promote distance learning (EKLAVYA Technology Channel, India, 2007).
- IIT-Kanpur has developed Brihaspati, an open source, freeware e-learning platform that is available to all for enhancing existing learning environments in their institutions through their campus networks (Bhattacharya and Sharma, 2007).
- One Laptop per Child (OLPC) in Maharashtra (One Laptop per Child, 2007).
- IIT-Bombay has started the program of CDEEP (Centre for Distance Engineering Education Program) as emulated classroom interaction through the use of real time interactive satellite technology (Centre for Distance Engineering Education Programme, India, 2007).
- Premier institutions like IIM-Calcutta have entered into a strategic alliance with NIIT for providing programmes through virtual classrooms.

E-INFRASTRUCTURE DEVELOPMENTS IN INDIA

E-Infrastructure will be the key enabler for the information and knowledge society. E-Infrastructure comprises tools, facilities and resources that are needed for advanced collaboration and includes integration of various technologies such as Internet broadband channels, computing power, bandwidth provisioning, data storage, grid based resource sharing etc. To sustain the growth of Information & Communication Technologies (ICT) and to meet the challenges of globalization leading to highly competitive markets, there is a continuing need to invest in quality infrastructure, promote R&D efforts, create intellectual property in communications, Internet and broadband technologies, and address the related policy issues.

SOME OF THE INITIATIVES OF DIT IN THIS AREA INCLUDE

ESTABLISHMENT OF BIO IT PARK

The E-infrastructure Division is striving to promote Bio-IT activities in the country, Professional manpower creation in Bio IT field, R&D development in Bio-IT area, Knowledge sharing with national & international companies. So far, only two States Karnataka and Tamil Nadu have expressed interest to set up Bio-IT Facility. Process is currently underway to set up a Bio-IT facility in Bangalore.

INFORMATION TECHNOLOGY INVESTMENT REGIONS (ITIR)

Information Technology Investment Regions (ITIR) scheme has been notified in the Gazette of India under which each State in India can set up an integrated township for facilitating growth of IT/BPO and Sunrise Industries with world class infrastructure in India.

TRANS EURASIA INFORMATION NETWORK - PHASE 3 (TEIN3) UNDER EU CO-OPERATION

Trans Eurasia Information Network Phase-3 (TEIN3) is being set up under India EU Cooperation on Information Society Technologies (IST) Programme, to link ERNET India with European Research Network GEANT Network in Europe through collaboration between ERNET and Delivery of Advanced Network Technology to Europe Limited (DANTE) to produce a reliable and efficient connectivity between the two research communities so that the various network resources can be shared.

ICT VOCATIONAL CENTERS FOR SKILL CREATION FOR THE CHILDREN WITH DISABILITIES IN THE AREA OF INFORMATION TECHNOLOGY

20 ICT Vocational Centers for training the physically challenged children were set up in Phase-I. The less privileged children in the proximity of these centers have learnt ICT skills enabling them to seek employment and earn livelihood. The infrastructure at schools is connected to LAN and Internet to explore the World Wide Web (www) also. In the Phase II, the centers set up in Phase I are being maintained as well as the project has been launched for setting up 100 ICT Vocational Centers in different parts of the country. 50 ICT centers have already been identified in consultation with States/UTs and are under implementation through ERNET India.

The remaining 50 ICT Vocational Centers would also be set up by December 2010. Ministry of Social Justice & Empowerment would be requested to carry forward up the scheme.

SETTING UP OF ICT BASED DISTANT TRAINING FACILITY FOR SPECIAL EDUCATION

For providing distance training to the special educators, parents and teachers of children with special needs, a project has been initiated in E-Infrastructure Division with the following main objectives:-

- To provide infrastructure facility for imparting distance training for the Teachers and other rehabilitation professionals in the field of special education coming in the region of EDUSAT southern foot print.
- Design and implement innovative programmes for the parents of differently abled persons and introduce the use of ICT in the process of programming the children with Mental retardation and associate disabilities.
- The project envisages setting up of 20 Satellite Interactive Terminals (SITs) and 80 Receive Only Terminals (/ROT) at special/SSA schools and institutions selected in the State of Kerala, Tamil Nadu and Karnataka at a total budget outlay of Rs. 442.72 lakhs over a period of 3 years. After receiving the equipment for SITs & ROTs, installation, commissioning is to be carried out to start the training work.

CREATING KNOWLEDGE DATA CENTRE (KDC) AT ANNA UNIVERSITY, CHENNAI

The project envisages establishment of a Knowledge Data Centre to provide services like e-education, digital library & technology resource centre for students and community of Tamilnadu. The project is in early stage of implementation Anna University is collaborating with Sun Microsystems to execute the project on turnkey basis. Infrastructure and web content development for educational content access for 50,000 100,000 students in first phase and then provide resources to tie up collaborative e- content courses for students and community.

NATIONAL KNOWLEDGE NETWORK (NKN)

BACKGROUND

The Government's decision to set up National Knowledge Network was announced in the Budget Speech, 2008-09. An initial amount of Rs. 100 crore for FY 2008-09 was allocated to the Department for establishing the National Knowledge Network. A High Level Committee (HLC) was set up under the Chairmanship of Principal Scientific Adviser to the Government of India to coordinate and monitor the establishment of the National Knowledge Network.

Government has approved the project on Establishment of National Knowledge Network in March, 2010 with an outlay of Rs. 5990 Cr. over a period of 10 years. National Informatics Centre (NIC) is the implementing agency.

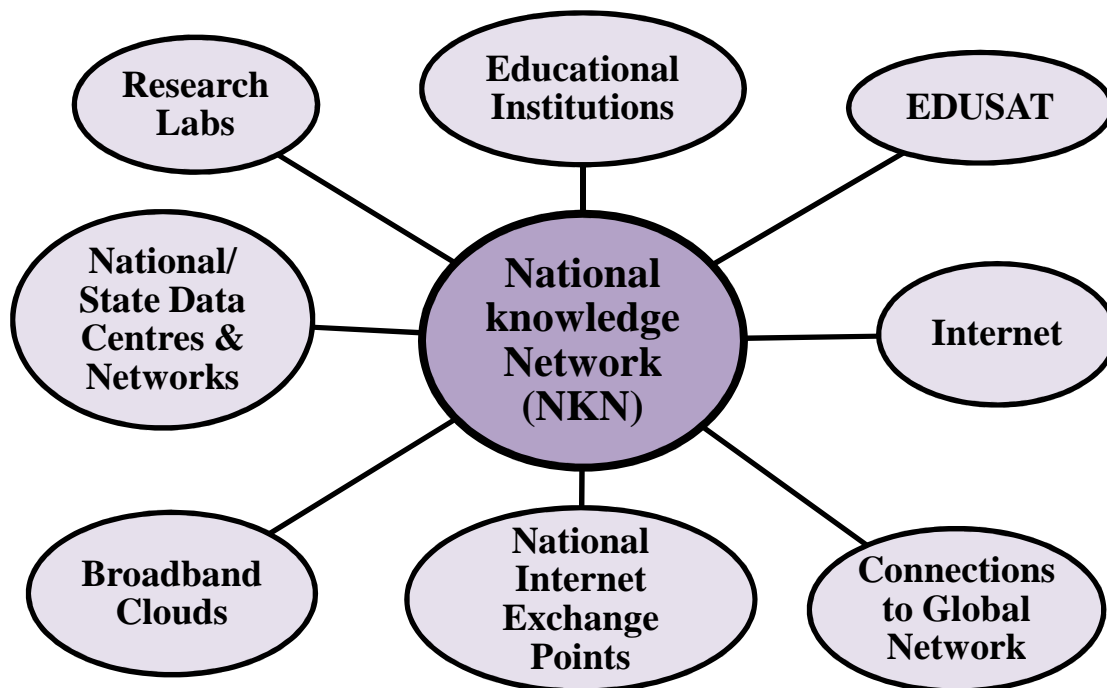
OBJECTIVE

The objective of the National Knowledge Network (NKN) is to interconnect all institutions of higher learning and research with a high speed data communication network to facilitate knowledge sharing and collaborative research. It will bridge the existing knowledge gap in the country. It will help the country evolve as a Knowledge Society and spur economic activities in the Knowledge domain. Under this Network, it is proposed that the core and associated links to around 1500 institutions shall be established in 2-3 years time.

CURRENT STATUS

As on 31st March, 2012, around 681 institutions (This includes 200 links to Institutions under NMEICT, MHRD which have been migrated to NKN) of higher learning and advanced research have been connected to the network and 52 virtual classrooms have been set up.

FIG NO. 1: NATIONAL KNOWLEDGE NETWORK



Easy access to internet and to E-resources is the key to enhance the quality of teaching and learning process. The Government of India's scheme to promote 1 GB connectivity to some select colleges and universities through NKN and NMB-ICT is a significant initiative. In the 12th FYP, this connectivity should be extended to all the colleges under Section 12B and to all the state and centrally funded institutions. The present condition of part payment by the universities/colleges and also payment for the cost of Router should be removed and in the 12th FYP, it should be fully supported by the Government of India.

AAKASH LOW COST ACCESS CUM COMPUTING DEVICE

Aakash is a project sponsored by the Indian Government, to design, manufacture, and distribute low cost Android-based tablet computers to Schools and Universities in India. The Ubiplate is produced by British company DataWind. It is manufactured by the India-based company Quad, at a new production centre in Hyderabad, under a trial run of 100,000 units. The tablet was officially launched as the Aakash in New Delhi on 5 October 2011.

The Aakash is a low-cost tablet computer with a 7-inch touch screen, ARM 11 processor and 256 MB RAM running under the Android 2.2 operating system. It has two universal serial bus (USB) ports and delivers high definition (HD) quality video. For applications, the Aakash will have access to Getjar, an independent market, rather than the Android Market. The device was developed as part of the country's aim to link 25,000 colleges and 400 universities in an e-learning

program. Originally projected as a "\$35 laptop", the device will be sold to the Government of India at US\$50 until further orders are received to obtain the \$35 committed price, and will be distributed to university students for free. A commercial version of Aakash is currently marketed as *UbiSlate 7+* at a price of \$60. The Indian HRD ministry projects introduction of an upgraded second-generation model called Aakash 2 in April 2012.

ICT INTEGRATION IN HIGHER EDUCATION

ICT INTEGRATION

Now, more than ever, moving vast amounts of information quickly and efficiently across great distances is one of the most pressing needs. With the advent of optical fibre, cellular telephony, Internet, voice over internet etc, distances have essentially disappeared in the global scenario. With the Internet, faster communication medium is available to reach large number of people at a very low cost. Through the application of information and communication technology, institutions will acquire the ability to diminish the impact of space, time and distance and spread across the country to any remote areas. Advanced technologies like computers and information technology can be used to educate large number of students at all levels of education who are useful to themselves and to the society globally. This requires the development of advanced information and communication infrastructure development envisaged and supported by EDUSAT.

INITIATIVES FOR ICT INTEGRATION INTO 11TH FIVE YEAR PLAN PERIOD (2007-12)

- 1) Digital Repository in Universities & Colleges
- 2) Internet Connectivity in Universities and Colleges
- 3) ICT for Universities
- 4) E-Content Development
- 5) Digitization of Doctoral Theses

TABLE NO. 1: OVERSIGHT COMMITTEE – SECTOR-WISE EXPENDITURE (Amount in Crores)

S.No.	Sector	No. of Institutions	Total Expenditure
1.	Agriculture	5	133
2.	Central Universities	17	3298
3.	Management	7	285
4.	Medical	11	1877
5.	Engineering	39	6746
	Total	79	12338
6.	Merit Scholarship Scheme	–	1680
7.	Research Fellowship	–	1500
8.	IT Infrastructure	–	1752
	Grand Total	79	17270

Source: Eleventh Five Year Plan, Planning Commission, Govt. of India

ICT achievements in the 11th plan period for promoting quality and excellence

1. **Launching the National Mission on Education through ICT (NMEICT)** – For digitization and networking of all educational institutions.
2. **National Knowledge Network (NKN)** and Connected Digital Campuses.
3. **Governance & Efficiency Improvement** - E-Governance of Higher Education & UGC
4. **Establishment or Up-grading of Computer Centres in Universities** - To keep pace with the developments in ICT, 32 universities have been benefited; of them, 20 Centres have been upgraded and 12 new Centres have been established.
5. **UGC-Infonet Digital Library Consortium and UGC-Infonet Internet Connectivity** - 374 Institutions have been provided with 12 Mbps connectivity to access approximately 7,500 e-journals in various disciplines of higher education.
6. **E-content Development** - 650 Universities/Colleges are availing the facility of E-content.
7. **Digital Repository in Universities and Colleges (e-Journals Scheme)** - 182 universities have been provided with 12 Mbps connectivity to access approximately 7,500 e-journals in various disciplines of higher education.

The New Schemes Proposed for the 12th Five Year Plan (2012-2017)

ICT Integration

- ❖ Digital Repository in University & College Libraries
- ❖ Internet Connectivity and NKN Portals to Universities and Colleges
- ❖ E-content Development
- ❖ Digitization of Doctoral Theses
- ❖ Strengthening the E-Initiatives
- ❖ Expand E-Resource Availability
- ❖ Automation of Administration and Examination to Achieve E-Governance
- ❖ Networking of Universities and Colleges through Setting up a National Educational Resource Portal
- ❖ ICT - Based Monitoring and Evaluation

The overall **budgetary provisions in 12th five-year plan** period in respect of initiatives to be launched for achieving the stated goals and objectives in respect of Access, Equity and Quality are outlined in Table No. 2.

TABLE NO. 2 AREA WISE BUDGETARY PROVISIONS

S.No.	Sector/Schemes	Proposed Allocation (in Crores)
1.	Enhancing Aggregate Access	1,44,350
2.	Equity	16,260
3.	Quality and Excellence	11,140
4.	Research Projects	5,350
5.	Relevance and Value Based Education	1,240
6.	ICT Integration	4,450
7.	Governance & efficiency improvement	1,950
	Total Projected Requirements	1,84,740

Source: Inclusive and Qualitative Expansion of Higher Education 12th Five-Year Plan 2012-17, UGC, New Delhi

ICT Initiatives in 12th Five Year Plan (2012-17) of Information Technology Sector

E- LEARNING

- 1) **Tools for information processing** in local languages are developed and made available for wider proliferation of ICT. This would benefit the people at large and thus pave the way towards 'Digital Unite and Knowledge for All' and bridging the Digital Divide.
- 2) **Creation of E-Infrastructure** for e-Learning is a very important aspect, essential to promote this mode of learning that can also supplement the traditional method of learning.

- 3) There is a need to **integrate formal and non-formal system of education** by introducing the concept of Virtual University or Central University with multiple campuses and blended learning mode.
- 4) **As a Part of Skill Development Initiatives**, the capacities of DOEACC and C-DAC would be enhanced to generate 10 million skilled manpower by the year 2022 starting from the diploma level right up to doctoral level and in line with the emerging industry/market/society needs. The Central Government scheme for providing financial assistance for setting up of ICT Academy in each State/UT under PPP mode by respective State Governments/UTs along with industry/industry associations.

E-INCLUSION

In order to achieve the vision of e-Inclusion in Twelfth Five year Plan an enabling and empowering strategy along with intervention and a focus on specified target groups and areas is proposed.

- ❖ The **target groups** identified for e-Inclusion are SC, ST, minorities, Gender, differently abled, senior citizens and BPL households.
- ❖ The **target areas** are North East Region; SC and ST concentration areas, the backward districts of India, etc.

It is proposed to initiate key programmes and projects in identified components of e-Inclusion as part of a major government programme modelled along the lines of NeGP. A study team will be constituted to examine and set the monitorable targets in consultation with all the stakeholders. It will also identify ICT indicators for e-Inclusion and propose policy and programme evaluation mechanism for the projects in the 12th Five Year Plan.

BARRIERS OF ICT

- 1) Lack of adequate infrastructure like PCs, Projectors, and other equipments
- 2) Lack of skilled and trained manpower
- 3) The lack of training and orientation program on computer literacy
- 4) The low rate of academic participation
- 5) Due to inadequate financial requirements
- 6) Due to improper working environment
- 7) The absence of student teacher interaction
- 8) Security problem due to viruses attacks on data and information
- 9) Interruption in electricity and server creates problems at the time of teaching, examinations and transmission of important materials
- 10) The faculty members generally reluctance to use computers in education
- 11) Lack of proper budget to equip the classrooms with ICT resources

CHALLENGES POSED BY ICT

Inadequate Infrastructure: Due to lack of adequate ICT infrastructure like Personal Computers (PCs), specialized softwares, multimedia Projectors, Interactive White Boards and mobile devices to effectively tap into the opportunities offered by the cyberspace.

Inadequate Skilled Manpower: Inadequate ICT technical personnel are a major problem in higher educational institutions. The reason behind this can be the lucrative job opportunities available to ICT professionals outside the academics.

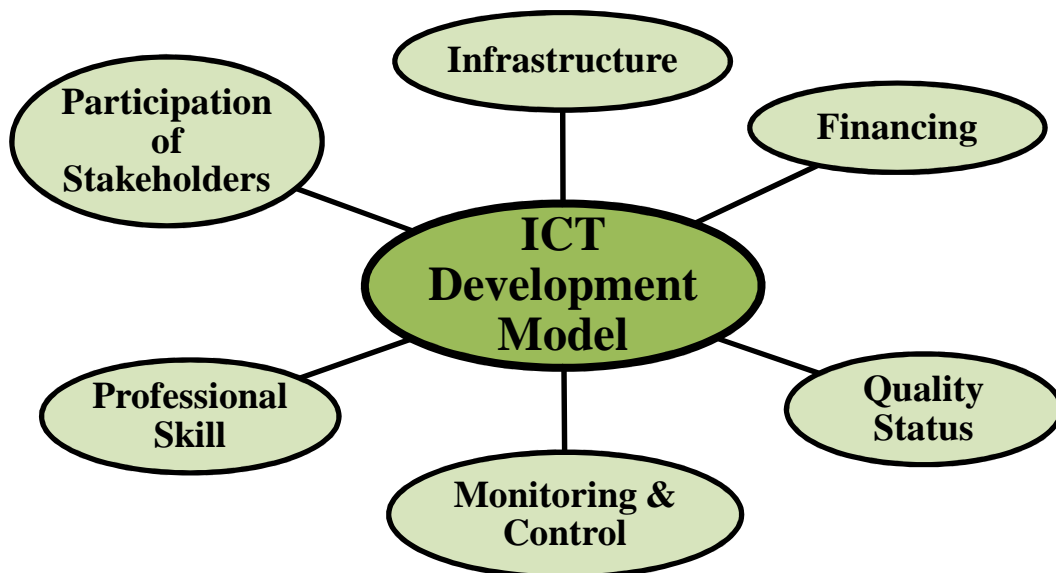
Resistance to Change: Faculty members not willing to adopt the ICT approach of teaching and learning rather they want to stick to the traditional approach as per (OECD report 2005).

Inadequate Funding: This challenge concerned with the acquisition and utilization of ICT in higher education sector. Lack of adequate funds leads to ineffective and inefficient utilization of ICT resources.

Strong Management Information System: The another challenge is to have a strong management information system and performance monitoring system to track progress, ensure quality of delivery, identify weak spots and gaps in the system.

Development Model for ICT in Universities and Colleges

FIG NO. 2: ICT DEVELOPMENT MODEL



This model provides a framework for the successful implementation of ICT in order to take advantage of technological advancements and for the development of education.

CONCLUDING REMARKS

Development of ICT in higher education in India depends upon the participation of all stakeholders. By integrating ICT in education requires new kinds of skills, capabilities and attitudes for this a proper ICT environment is the need of the hour. For this purpose, there needs to be an ICT plan, support and training to all the stakeholders involved in the integration. ICT integration in to higher education has changed the infrastructural requirements of higher education institutions in India. Teaching and learning by or through the use of ICT tools has a greater impact on students. ICT should be introduced in a systematic manner so that everyone can avail the advantage of this technique. Adequate infrastructural development is the major challenge behind ICT development in higher education institutions which leads to low penetration rate. There is so much growth potential in this sector. ICT enabled continued and sustainable growth of an economy. ICT is one of the fundamental ingredients of economic progress to utilize its full potential. Government has taken so many initiatives to enhance delivery and

quality of higher education despite of that sector faces so many challenges in its implementation. In nut shell, the vision of ICT is to create a competitive, sharp India which is resplendent with knowledge, research, creativity and innovation.

THE ROAD AHEAD

ICT can be used as a potent tool to achieve the following objectives such as:

- ❖ Higher education institutions must address the growing demand of ICT Literacy
- ❖ There should be a integration of ICT in education and develop a curriculum accordingly
- ❖ For a successful implementation of ICT there is a need to influence and empower teachers about ICT rather than acquiring computers and softwares.
- ❖ There should be proper control and licensing to ensure accountability, quality assurance, accreditation and consumer protection.
- ❖ We may have to take the advantages of ICT enabled learning in order to improve the quality and to reduce cost of higher education
- ❖ ICT expand the pool of teacher by or with technology-facilitated learning which extend the teaching pool beyond the specialist and set to include many more people.
- ❖ Expanding pool of students by ICT which ultimately creates a need to educate and aware them about the ICT tools and techniques which requires attention of concerned ministry to deal with this issue in a holistic way for the development of a knowledge economy
- ❖ ICT embedded in many of the government programs and enhanced its reach but there is still large scope to augment initiatives being run by the government and agencies. The government will require private sector participation to maximize the outcomes in programs.
- ❖ Policies should be designed in such a way that enables to increase penetration and the effective use of ICT in programs.

RECOMMENDATION

- ICT plays a very important role in overcoming infrastructural, quality and employment challenges, so it should be taken as a challenge to overcome these barriers.
- ICT has changed the way of learning imparted in educational institutions. The key stakeholders which include students, teachers, administrators, regulatory authorities, content development companies and in all parents also play a very significant role in ICT development so their roles and responsibilities should be clearly determined and fixed then their accountability can be fixed and ensured.
- Improving the management and administrative tasks which helps in realizing the overall objectives of education.
- To bridge the socio-economic divide prevalent in the country ICT act as an important tool.
- To increase penetration of ICT in higher educational institutions
- To create new dynamics in research requires national policies for ICTs in higher education and the establishment of joint information systems linking all higher education institutions.
- High bandwidth should be the key priority because it allows computer power to be aggregated by linking computers. Enhance bandwidth/connectivity through the acquisition of suitable hardware, software, and the establishment of LANs, WANs, and Virtual Private Networks for effective coordination and efficient utilization of resources.
- Advancements in IT and Communication Technologies Boost to Exponential Growth in ICT Networks and Applications
- Establishment of new higher education institutions to boost the higher education sector to meet the growing demand of education.
- There is a need to educate and aware the masses about the ICT and its usefulness then the objective of quality and access to higher education can be achieved.

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CONSUMER SENSITIVITY TOWARDS PRICING OF COSMETIC PRODUCTS: AN EMPIRICAL STUDY**DR. D. S. CHAUBEY****DIRECTOR****ROORKEE COLLEGE OF MANAGEMENT &. COMPUTER APPLICATIONS****ROORKEE****LOKENDRA YADAV****RESEARCH SCHOLAR****UTTRAKHAND TECHICAL UNIVERSITY****DEHRADUN****HARISH CHANDRA BHATT****ASST. PROFESSOR****ROORKEE COLLEGE OF MANAGEMENT &. COMPUTER APPLICATIONS****ROORKEE****ABSTRACT**

The increasing market size is the direct result of the changing socio-economic status of the Indian consumers, especially women. Higher paying jobs and increasing awareness of the Western world and beauty trends there have served to change the tastes and customs of the middle class and higher strata of the society, with the result that a woman from such social strata now is more conscious of her appearance and is willing to spend extra cash on enhancing it further. With the permutation and combination of different element of marketing mix, Cosmetic manufacturer tries to attract customers in their favour. Present paper analyse the consumer sensitivity towards pricing of cosmetic product. The study reveals that more number of consumer are price sensitive and they adjust their consumption either by reducing consumption or by changing the brand. Few suggestions are also given to position thir product effectively.

KEYWORDS

Price sensitivity, demography, marketing mix, product positioning, etc.

INTRODUCTION

In the present socio economic environment, Marketing has become a fundamental part of any company. This is the method by which a company promotes its products and services to the public. Success of companies is no more directly related with their production capabilities. There are more than one approach to product marketing, however, and choosing the most effective approach for company is key to developing a marketing campaign that succeeds. Pricing and its various combination is an important consideration in the marketing planning process. Pricing decisions are based on the costs of producing and delivering the products and services, but also on considerations related to desired brand image and how a specific target audience might respond to various price points. Of all the aspects of the marketing mix, price is the one, which creates sales revenue - all the others are costs. The price of an item is clearly an important determinant of the value of sales made. In theory, price is really determined by the discovery of what customers perceive is the value of the item on sale. Researching consumers' opinions about pricing is important as it indicates how they value, what they are looking for as well as what they want to pay. An organisation's pricing policy will vary according to time and circumstances. Crudely speaking, the value of water in the Lake District will be considerably different from the value of water in the desert.

The increasing market size is the direct result of the changing socio-economic status of the Indian consumers, especially women. Higher paying jobs and increasing awareness of the Western world and beauty trends there have served to change the tastes and customs of the middle class and higher strata of the society, with the result that a woman from such social strata now is more conscious of her appearance and is willing to spend extra cash on enhancing it further. According to Indian Personal Care Industry 2012, Gyan Research and Analytics Pvt. Ltd., 2012, Today increasing numbers of women, especially from the middle-class population, have more disposable income leading to a change in cosmetic and skin care product consumption. This actually has fuelled a growth in certain product categories in the market that hardly were experiencing it earlier. Two such categories are colour cosmetics and sun care products that have shown growth rates of 46% and 13% respectively over the past two years, according to International Research Agency Indian beauty and cosmetic market size currently stands at US\$950 million, The men's personal care market is valued at \$165 millions. Gillette is the largest player in this segment. Other major players in this segment are HLL, Godrej, and J.L. Morison and HL. The overall beauty and wellness market that includes beauty services stands at about US\$2,680 million.

The Indian economy, Asia's third-largest, has been growing briskly at above 8 percent for the last couple of years. Indian cities dominate a new catalog of the world's fastest-growing 100 cities in terms of urbanization, with three cities in top the 10. Globally, despite the worldwide economic slump, the personal care market in India has been growing at 13 percent per annum. The personal care product market is valued at USD 5.7 billion; its wellness service market was assessed at USD 2.9 billion in 2010. The personal care industry is directly aligned to the demographics of the region that it serves. With the median age at 25 years, India is among the world's youngest nations, as compared to 43 years in Japan and 36 years in the US. In addition, the country's population base of 1.2 billion is estimated to rise to 1.5 billion by the end of 2030. Urbanization will also increase by 45 percent in the next 30 years. In recent times, Indian consumer have been looking for newer shopping experiences and products.

According to some researchers the Indian personal care industry will witness 25 percent growth rate in the next few years. The Emerging Market Forum declared that the per capita income of India is expected to increase about 18 times by 2039, while disposable income for households is estimated to grow three times by 2025. Globalization, rise in incomes, greater awareness about self needs and a change in consumption patterns of households are the accelerating factors behind this rapid growth. However, even with double-digit growth rates, penetration of cosmetics and toiletries products is very low.

Current per capita expenditure on cosmetics is about USD 1, compared to USD 36.65 in the other Asian countries. This low market penetration for cosmetics and personal care products offers an immense opportunity. India's B and C class towns have mass-market product users and are yet to see much focused approach from vendors. This is a segment that presents a big opportunity for brands both national and international. Further, there is a huge scope for international and national Spa chains as most of the spas are concentrated in the Southern part of the country.

Use of cosmetics is not latest trend, it has its roots deep within the annals of history. The word cosmetic has been given this modern name lately. Through regular and formal use of cosmetics has gained momentum now, it has been in some form or other since a long time. The cosmetics industry, which started glowing in the early 1990s, is expanding exponentially. With more women and men becoming conscious of their and willing to spend on their grooming, this industry has been growing at 20-25 percent the last few years. No wonder then that the shelves are stocked with a plethora of products and brands, targeted at

various segments, catering to the various needs of customers. Indian has not remained far behind in the development and frequent usage of cosmetics. Household utility like haldi, chandan, basan uptoona have been used centuries to preserve the natural beauty of skin. The reason for their usage was adequate availability of pure material, apt knowledge of natural formulation and virtually zero effects. Penetration of most cosmetics and toiletries is still quite low in India. Current consumption of many products is well below that of many countries in Asia. The low market penetration of many cosmetics and personal care products offers room for growth. The Indian toiletries market is well developed and dominated by major multinational companies and a few large Indian players. The urban population with increasing purchasing power is the major force driving demand for cosmetics and toiletries. India is a very price-sensitive market and mass-market products constitute the major part of the cosmetics and toiletries market. As per ASSOCHAM – an industry body - the per capita consumption of cosmetics in India is approximately US\$ 0.68 cents as compared to US\$ 40 in Hong Kong, US\$ 12 in Japan, and US\$ 1.5 in China. Consumption of personal care products centers on young women, with the age group 15-44 years accounting for about 70% of the market. Consumption begins in the teens and tapers off after 45, and declines substantially after 55.

All the customers are always cost sensitive and concentrate basically to buy products on cheap rates. However, cost sensitivity of a customer substantially depends on condition of the market. For example if a product becomes extraordinarily famous and demanding in market and every company is tending towards capturing this product then it becomes necessary to focus on technological aspects rather than focusing on the cost. If they do so then the cost sensitivity of these customers is least. Similarly if a product becomes common in market due to emerging competitors coming up with similar but more prominent products, then in this competition the value of the product decreases and the companies become rarely bothered for them. In this scenario the customers have the right to become highly cost sensitive as they know that they can negotiate with the suppliers to a greater extent. This is when the customers are called as high cost sensitive customers. Price is also central to marketing where it is one of the four variables in the marketing mix that business people use to develop a marketing plan. While choosing a product or service, current conscious customers want not only to satisfy his needs, but also to experience more in low expenditure. For that reason today, marketing specialists try to find out how to customer behave towards pricing.

REVIEW OF RELATED LITERATURE

The Indian cosmetics industry is growing in terms of product development and marketing. The preference of Indian consumers is changing from the 'merely functional' products to more 'advanced and specialized' cosmetic items. Price is a thing that is specified to buy and acquire some manufactured goods. The buying behavior of females for cosmetics is usually affected by the price. Solomon (2007) has said in respect of customers that they usually view a firm attitudes and opinions between price and value of a product. A lot of consumers consider that products have a high price are of better value, particularly in that situation when they have fewer or no knowledge about the quality of product Evan et al (1996).

Raj Sethuraman and Geraj J. Telus examine an important influence on the price-advertising tradeoff, the ratio of price and advertising elasticities. Their theoretical analysis stresses the Empirical analysis of 262 observations from published studies indicates that the price elasticity is "on average" 20 times the advertising elasticity. The elasticity ratio is higher for mature products than for products in the early stage of the life cycle, and for nondurable goods than for durable goods. These findings suggest that price discounting may be more profitable than an advertising increase for nondurable goods and mature products.

Briney (2004a) describes an interesting trend among Indian cosmetic consumers, while other global countries are taking to the traditional Indian herbal and ayurvedic applications for beauty solutions, Indian consumers are increasingly looking to international personal care brands as lifestyle enhancement products, in the belief that the association with and use of an international brand confers one with a sophisticated and upper class image.

Over recent years, India has seen increasing literacy levels, penetration of satellite television, growing urbanization and greater beauty awareness among Women, which has resulted in rewarding growth opportunities to cosmetics and toiletries manufacturers. Around 44% of value sales (2005) of cosmetics & toiletries market in India are with two market leaders i.e. Hindustan Lever & Colgate Palmolive. The rest is very fragmented with hundreds of companies trying to get into the market. The presence of a large grey market and many counterfeits also enhanced this trend.

Malhotra (2003) describes the main reasons for boom in cosmetic industry as increasing fashion and beauty consciousness coupled with rising incomes and focus on health and fitness. To complement this, beauty culture or cosmetology has emerged as a major occupational avenue with significant commercial potential. New scientific developments, techniques, products and media hype, has contributed the Indian fashion industry in generating mega revenues and this has

in turn added to the growth of cosmetic industry. Rising hygiene and beauty consciousness due to changing demographics and lifestyles, deeper consumer pockets, rising media exposure, greater product choice, growth in retail segment and wider availability are the reasons reported by (Euromonitor International, 2006).

PRICE & INDIAN COSMETIC CONSUMERS

There is high maturity and price competition in established mass market toiletries such as bar soap and toothpaste. Since the average Indian household continues to be highly price sensitive, these popular mass-market products will have the lion's share of cosmetics and toiletries sales. This will offer high growth prospects of the overall market over the coming years. The cosmetics and toiletries market are also facing competition from other consumer durables (computers, mobile phones, home theatres and automobiles) as well as the housing sector. The drop in interest rates has led to a boom in housing loans and real estate purchases. Being value conscious, there is a limit to the amount that the average consumer will spend on luxury items such as fragrances.

INDIAN MALE CONSUMERS WILLING TO PAY MORE FOR MALE-ORIENTED BEAUTY PRODUCTS

In a new study from market research company Kuick Research, it was found Indian male consumers are willing to pay higher prices for male-specific cosmetic products. According to the study, more than 80% of the men surveyed by Kuick said they would pay up to 10–15% more for cosmetic products oriented specifically to men. And although Indian male consumers are more price sensitive than their counterparts in Western countries, the report also notes that they don't hesitate to pay premium for cosmetic products when it comes to feeling good and looking attractive.

"India Male Cosmetics Market—Consumer Insight 2012" notes how the consumption of cosmetic products by Indian males has witnessed an upward trend in recent years and finds that Indian males are now coming up to par with female Indian consumers when it comes to using cosmetic products such as, according to Kuick, "fairness creams, anti-dark circle creams or even anti-wrinkle products." In fact, in the research firm's results, most of the surveyed men were found to be using cosmetic products even if these products were oriented for female consumers.

A target for growth, the male-oriented cosmetic market in India is still young, and although the market is yet to be structured, the Kuick report notes that early entrants are more likely to achieve a higher degree of product acceptability among male Indian consumers. The market is expected to see double-digit growth in the coming years, driven by increased spending and the changing lifestyle among male consumers, making analysis of cosmetic product usage, purchasing and consumption patterns of particular note for this region.

INDIAN MEN & WOMEN COSMETIC USERS

Both male and female consumers form a major segment of buyers of beauty products in India. (Monteiro, 2003). Indian women are becoming increasingly more beauty conscious. Reports of Consumer Graphics revealed that in 2003, Indian women aged 15-24 years accounted for 29.8% of all Indian makeup sales

The increased purchasing ability of women households helped them to spend more on personal grooming. Colour cosmetics emerged as the fastest growing area of the cosmetics and toiletries market over the review period. Experimentation among teen and young adult Indian women was one reason cited for the increase in makeup use. According to Monteiro (2003), there is a tremendous increase in the female cosmetic consumers. This is due to increasing number of women becoming the earning members of the family due to their increased level of literacy and growing influence of the media. More males in India are becoming conscious about the way they look and are increasingly looking to grooming products to spruce up their physical appearance. This newfound male

grooming consciousness was encouraged by men's active participation in prominent fashion shows, such as the popular Fashion TV channel, and in beauty pageants exclusively for men especially in the forward-looking and cosmopolitan cities of Mumbai, Bangalore and New Delhi.

The demand for men's hair care and deodorants has gone up and razors and blades have contributed to the men's grooming value sales. This particular segment which is at its early stage of its development with a growth of only 6% remains a nascent niche. Barson, (2004) suggests that men cannot simply be classified as *metro-sexuals* or *non-metrosexuals*. There are other categories in between those two ends of the spectrum. Motivations and type of products purchased should be different depending upon the segment of guys targeted.

OBJECTIVES OF THE STUDY

Objectives are the route map of any research. Without setting objectives any research would be meaningless and all the efforts of the researcher will go in vain. The main purpose of this action is to describe the need to investigate them pricing of cosmetic product from the perspective of the consumer Sensitivity. Brand is one of the basic motives for the customer's choice of a cosmetics product. The product brand has a primary impact on the choice of consumers. In short the present researcher work has been taken up with the following objectives.

- To assess the brand awareness of consumer towards cosmetic product by the customers of Utrakkhand
- To measure the pricing and its impact on the uses pattern of cosmetic product
- To assess the level of customer satisfaction with the pricing of cosmetic product.
- To assess how price influences the Purchasing pattern of cosmetics.

HYPOTHESIS

Hypothesis 1: means of different factors influencing consumers motives towards purchase of cosmetics product does not differs significantly across the gender category

Hypothesis 2: The influence of price change in cosmetics does not differs significantly across level of income of respondents.

To attain these objectives and test the hypothesis, a random survey 280 respondents located in Dehradun District of Utrakkhand state were administered. To collect the necessary information, various parameters were developed with the help of literature. The responses to these parameters were gathered, coded, tabulated and analyzed. To measure the intensity of parameters open ended and close ended questionnaire (Ref: Annexure 1) was used. To test the reliability of the scale , reliability test using SPSS -20 version was carried out. Reliability value (Alpha) of the present scale was found to be 0.688 which seems to be good (Note that a reliability coefficient of 0.60 or higher is considered "acceptable" in most social science research situations. To test the hypothesis Factor analysis , chi square test , mean and ANOVA tests were carried out. Table 1 present the demographic characteristics of the respondents.

TABLE 1: DEMOGRAPHIC CHARACTERISTIC OF RESPONDENTS

	Categories	Count	Percentage
		280	100
Age	upto 18Years	8	2.9
	18 to 25 Years	138	49.3
	25to 32 years	38	13.6
	32 to 40 years	56	20.0
	above 40 years	40	14.3
Gender	Male	148	52.9
	Female	132	47.1
Marital Status	Married	138	49.3
	Unmarried	142	50.7
Family Size	Upto 2 Members	40	14.3
	Upto 4 Members	121	43.2
	4-6 Members	94	33.6
	More than 6 members	25	8.9
Education Level	upto 12th	32	11.4
	Upto Graduation	79	28.2
	Professionals and others	169	60.4
Monthly Income	Upto Rs20000PM	151	53.9
	Rs. 20000 to Rs30000PM	48	17.1
	Rs. 30000PM to Rs.40000 PM	23	8.2
	From Rs. 40000 to Rs50000PM	39	13.9
	Above Rs50000PM	19	6.8
Occupational Categories	Students	48	17.1
	Job	121	43.2
	Professional	63	22.5
	Businessman	24	8.6
	Housewives	24	8.6
Residential Background	Urban	100	35.7
	Semi urban	156	55.7
	Rural	24	8.6

The data presented in the above table indicates that sample is dominated by respondents in the age group of 18-25 Years as it was indicated by 49.3% respondents in the sample. 52.9% respondent belongs to for male categories and remaining are female respondent. Sample is dominated by unmarried category respondents as it account for 50.7% respondents in the sample. The information related to educational qualifications of the respondents indicates that majority of the respondent falls in those categories who are educated upto post graduation or having professional degree to their credit. Majority of the respondents indicated that they belong to a larger family containing more than 4 members. Information pertaining to the income status of the respondents reveals that majority of the respondents falls in the income group upto Rs20000PM. Surevey reveals that sample is dominated by job category respondents belonging from semi urban region.

TABLE 2: PERCEIVED IMPORTANCE OF PRICING

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	205	73.2	73.2
	Some Important	36	12.9	86.1
	Little Important	23	8.2	94.3
	Not important at all	16	5.7	100.0
Total	280	100.0	100.0	

In general most of the handbooks on marketing tell that “price” is an important component of the marketing-mix. Consumer give more importance to pricing of the product because of the various socio psychological reasons attached with the pricing . In general it is said, that the technique might be especially important to researchers at the present time because of the more central role played by pricing-strategies as part of the marketing-mix, and the scarcity of practical instruments in this field. It is seen that almost 73.2% respondent in the sample are of the opinion that pricing is the most important for them. In comparison to this 12.9% respondents say that it is some important. Very few respondent (5.7%) indicated that pricing is not important for them.

TABLE 3: CUSTOMERS EXPECTATION OF CHANGE IN THE COSMETICS PRODUCT

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Change in quality of the product	31	11.1	11.1	11.1
Change in price of the product	122	43.6	43.6	54.6
Maintain the price by reducing the quantity	103	36.8	36.8	91.4
Others	24	8.6	8.6	100.0
Total	280	100.0	100.0	

Over the last few decades, a large number of studies have been conducted on pricing from the different perspective like economics, marketing, operational research, decision making, and consumer behavior. The aim behind these studies are to optimize pricing and to maximize profits by enhancing brand loyalty. Analysis indicates that majority of the customers are of the opinion that company should change the price of the product to remain with the same brand. This was indicated by 43.6% respondents. Another 36.8% respondents reveals that company should maintain price by reducing the quantity of the product. Very few respondents projected that company should compromise with quality by maintaining price.

TABLE 4: BRAND LOYALTY TOWARD COSMETIC PRODUCT

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Always	87	31.1	31.1	31.1
frequently	89	31.8	31.8	62.9
Occasionally	95	33.9	33.9	96.8
Rarely	9	3.2	3.2	100.0
Total	280	100.0	100.0	

In the present scenario many players in the field are competing aggressively to capture more and more markets. The intention behind this question was to know the influence of brand loyalty on cosmetics buying behavior of consumers in the Uttarakhand. The question was asked how often the customer are rigid to a particular brand while purchasing cosmetic product. The findings of this study indicated that 31.1% respondent always rigid to a particular brand while 31.8% frequently rigid to a particular brand while purchasing cosmetics. In comparison to this 33.9% occasionally rigid to a particular brand. Very few respondent (3.2%) indicated that they rarely rigid to a particular brand.

TABLE 5: CUSTOMER ACTION WHILE PURCHASING COSMETICS PRODUCT IN CASE OF INCREASE IN PRICE OF THE PRODUCT

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid I stick to a particular brand	8	2.9	2.9	2.9
I adjust my purchase by reducing consumption	74	26.4	26.4	29.3
I adjust by changing the brand	96	34.3	34.3	63.6
I adjust my budget by reducing other expenditure.	86	30.7	30.7	94.3
others	16	5.7	5.7	100.0
Total	280	100.0	100.0	

It is possible that the price for a product may increase or decrease between the time to manage the inflationary situation. The customer reaction to price fluctuation is volatile. With this in mind an attempt was made to know the Customer action while purchasing cosmetics product in case of increase in price of the product . it is seen in the survey that more than one third (34.3%) customer adjust their budget by changing the brand. 26.4% respondent adjust their budget by reducing consumption. 30.7% respondent adjust their budget by reducing other expenditure. Very few customer are stick to a particular brand. Further an attempt was made to know the degree of stickiness to a particular brand in case of change in pricing in the following products

TABLE 6: DEGREE BRAND LOYALTY OF CUSTOMER AMONG DIFFERENT COSMETIC PRODUCT CATEGORIES

	N	Mean	Std. Deviation
Facial Cream & lotions	280	2.07	1.307
Sunscreen lotions (UV protection)	280	2.14	1.317
Face Foam / Gel	280	2.19	1.464
Facial Masks	280	1.40	.732
Face Powder	280	1.94	1.199
Fairness Cream	280	2.45	1.535
Scrubs	280	1.95	1.245
Eye cream	280	1.49	.884
Anti - ageing cream	280	1.47	.950
Moisturizer	280	2.38	1.256
Aromatherapy Products	280	1.94	1.340
Shaving Foam	280	2.39	1.477
After Shave	280	2.71	1.522
Lip Balm	280	2.45	1.311
Cleanser	280	2.16	1.278
Valid N (list wise)	280		

Mean and standard deviation among the various product categories of cosmetic brand fairness cream and lip balm has scored equal mean and give equal rigidness to a particular brand. Higher standard deviation (1.477) of saving foam indicates that customer response to this product is heterogeneous.

FACTOR ANALYSIS

Factor analysis was carried out to identify the important factors influencing customers in favour of cosmetic products under different pricing conditions. The purchase behavior of customer is affected by the marketing mix strategies opted by firms well as other factors like economy condition and government policies, and market interaction among the major players like consumer, manufacturer and government. The empirical study indicates that consumers are very much sensitive towards pricing and their decision are affected by a large number of pricing related issues. These components are viewed together since they are highly interdependent and together represent forces that influence how the consumer will react to the different pricing conditions. Keeping these into

consideration, an attempt was made to identify the factor influencing in favour of their purchase. For this respondent were asked to rate their views on the following statement such as I purchased Hair care product which is advertised expensively, Frequently change in price affects my purchase, I give more preference to price than the brand, Body image of the model projected in the model influence my decision in adapting cosmetics, Body image of the advertisement creates dissonance in my mind., Frequently advertised Hair care product influence me most in favor of particular brand of Hair care product, Changing social trend influence me most to go for branded product, I stick to the brand in spite of change in pricing of cosmetics, Growing prices of cosmetics mostly affect my consumption., Body image in advertising influences me to purchase branded products., Projected body image in advertisement influences me to keep myself slim and trim., I associate myself with the body image of the model projected in the advertisement of cosmetics products., I always prefer the economic product irrespective of the advertisement of fashion products., Sales discounts influence me most, Price discounts suit me most in favor of particular Hair care product, Company should focus on pricing of these product to remain in competition, Projected body image in advertisement is most helpful in bringing social change, Body image of the opposite gender used in advertisement influenced me most., Small sachets influence me most in favour of the cosmetics product, I purchased Hair care product which is advertised expensively, respondents were asked to rate the various statement on a scale of 1 to 5 in order of their preference. The exploratory factor analysis was used in order to identify the various motivational factors influencing customer in favour of cosmetic product. Principal Component analysis was employed for extracting factors and orthogonal rotation with Varimax was applied. As latent root criterion was used for extraction of factors, only the factors having latent roots or Eigen values greater than one were considered significant; all other factors with latent roots less than one were considered insignificant and disregarded. The extracted factors along with their Eigen values are shown in table 6. The factors have been given appropriate names on the basis of variables represented in each case. The names of the factors, the statements, the labels and factor loading have been summarized in Tables 6. The KMO measure of sampling adequacy for the items was 0.558 (that is, > 0.5), indicating sufficient inter-correlations of the factors. Bartlett's Test of Sphericity, which was found to be significant (Chi-square = 2196.942, < 0.005). Thus, the sample size of 280 was adequate and satisfactory in this study. The Cronbach alpha for each factor was 0.688. Cronbach alpha for all the factors were greater than 0.6 which means that the scale scores for each of the dimensions were reasonably reliable (Hair et al., 1998). There are six factors each having Eigen value exceeding one for motivational factors. Eigen values for six factors are 3.629, 2.562, 2.117, 1.600, 1.498, and 1.221 respectively. The index for the present solution accounts for of the total variations for the motivational factors. It is a pretty good extraction because we are able to economize on the number of choice factors (from 20 to 6 underlying factors), we lost 33.542 % of information content for choice of variables. The percentages of variance explained by factors one to eight are 19.0977%, 13.483%, 11.144%, 8.421%, 7.884% and 6.428% respectively. Large communalities indicate that a large number of variance has been accounted for by the factor solutions. Varimax rotated factor analysis results for motivational factors are shown in table which indicates that after 6 factors are extracted and retained the communality is .771, for variable1, .619 for variable 2, .518 for variable 3 and so on. It means that approximately 77.1% of the variance of variable1 is being captured by extracted factors together. The proportion of the variance in any one of the original variable which is being captured by the extracted factors is known as communality (Nargundkar, 2002).

TABLE 7: PRINCIPAL COMPONENT ANALYSIS WITH ROTATED COMPONENT AND ASSOCIATE VARIABLE

	1	2	3	4	5	6	Communalities
I purchased Hair care product which is advertised expensively	.728						.771
Frequently change in price affects my purchase	.713						.619
I give more preference to price than the brand	.602						.518
Body image of the model projected in the model influence my decision in adapting cosmetics		.816					.796
Body image of the advertisement creates dissonance in my mind.		.710					.640
Frequently advertised Hair care product influence me most in favor of particular brand of Hair care product		.553					.570
Changing social trend influence me most to go for branded product			.814				.746
I stick to the brand in spite of change in pricing of cosmetics			.731				.804
Growing prices of cosmetics mostly affect my consumption.			.583				.575
Body image in advertising influences me to purchase branded products.			.539				.577
Projected body image in advertisement influences me to keep myself slim and trim.				.742			.640
I associate myself with the body image of the model projected in the advertisement of cosmetics products.				.714			.733
I always prefer the economic product irrespective of the advertisement of fashion products.				.510			.597
Sales discounts influence me most					.848		.850
Price discounts suit me most in favor of particular Hair care product					.779		.670
Company should focus on pricing of these product to remain in competition						.680	.566
Projected body image in advertisement is most helpful in bringing social change						-.638	.779
Body image of the opposite gender used in advertisement influenced me most.						-.553	.640
Small sachets influence me most in favour of the cosmetics product						.511	.536
Initial Eigenvalues	3.629	2.562	2.117	1.600	1.498	1.221	
% of Variance	19.0977	13.483	11.144	8.421	7.884	6.428	
Cumulative %	19.093	32.580	43.724	52.146	60.030	66.458	

TABLE 8: PRINCIPLE COMPONENTS AND ASSOCIATED VARIABLES

Factor	Name of Dimension	Statement	Factor
F1	Economic motives	I purchased Hair care product which is advertised expensively	.728
		Frequently change in price affects my purchase	.713
		I give more preference to price than the brand	.602
F2	Body image projected in advertisement	Body image of the model projected in the model influence my decision in adapting cosmetics	.816
		Body image of the advertisement creates dissonance in my mind.	.710
		Frequently advertised Hair care product influence me most in favor of particular brand of Hair care product	.553
F3	Brand power	Changing social trend influence me most to go for branded product	.814
		I stick to the brand in spite of change in pricing of cosmetics	.731
		Growing prices of cosmetics mostly affect my consumption.	.583
		Body image in advertising influences me to purchase branded products.	.539
F4	Imitating motives	Projected body image in advertisement influences me to keep myself slim and trim.	.742
		I associate myself with the body image of the model projected in the advertisement of cosmetics products.	.714
		I always prefer the economic product irrespective of the advertisement of fashion products.	.510
F5	Discount motives	Sales discounts influence me most	.848
		Price discounts suit me most in favor of particular Hair care product	.779
F6	Economic and gender appeal in advertisement	Company should focus on pricing of these product to remain in competition	.680
		Projected body image in advertisement is most helpful in bringing social change	-.638
		Body image of the opposite gender used in advertisement influenced me most.	-.553
		Small sachets influence me most in favour of the cosmetics product	.511

Principal components & associated Variables indicate that first factor (F1 Economic motives) indicating that the customer are price sensitive due to their economic motives. This is the combination of variable like I purchased Hair care product which is advertised expensively Frequently change in price affects my purchase I give more preference to price than the brand and accounting 19.0977% variance of the total variances. The second Factor (F2) is the Body image projected in advertisement which is the combination of variable like, Body image of the model projected in the model influence my decision in adapting cosmetics Body image of the advertisement creates dissonance in my mind. Frequently advertised Hair care product influence me most in favor of particular brand of Hair care product and accounts 13.483% variance of total variance. Third factor(F3) is the Brand power indicating that brand power affect customer sensitiveness. This is the combination of factor like, Changing social trend influence me most to go for branded product I stick to the brand in spite of change in pricing of cosmetics Growing prices of cosmetics mostly affect my consumption. Body image in advertising influences me to purchase branded products. and account 11.144% variance of the total variances. Fourth factor (F4) is the imitating motives of the customers which denotes that customer tries to imitate the celebrity or model projected in the advertisement and is the combination of variable like, Projected body image in advertisement influences me to keep myself slim and trim. I associate myself with the body image of the model projected in the advertisement of cosmetics products. I always prefer the economic product irrespective of the advertisement of fashion products. And account for 8.421%. fifth factor (F5) is the Discount motives and is the combination of variable like, Sales discounts influence me most Price discounts suit me most in favor of particular Hair care product And account for 6.072% of variance. Sixth factor (F6) is the Economic and gender appeal in advertisement factor which is the combination of variable like Company should focus on pricing of these product to remain in competition Projected body image in advertisement is most helpful in bringing social change Body image of the opposite gender used in advertisement influenced me most. Small sachets influence me most in favour of the cosmetics product And account for 6.428% of variance.

TABLE 9: MEAN OF DIFFERENT FACTOR OF CONSUMER SENSITIVITY TOWARDS PRICING ACROSS GENDER CATEGORY OF RESPONDENTS

Gender Categories	Economic motives	Body Image projected in advertisement	Brand Power	Imitating motives	Discount Motives	Economic and gender appeal in advertisement
Male	2.8739	3.2207	3.1115	3.2748	2.6284	3.1689
Female	2.9975	2.8308	2.9848	3.0455	2.4318	3.0985
Total	2.9321	3.0369	3.0518	3.1667	2.5357	3.1357

As is evident from the mean ratings of various factors of consumer sensitivity towards pricing, mean rating of Imitating motives is highest among respondents of all gender categories. However significant difference is existing in the factor like influence of brand power among the gender category.

TABLE 10: ONE WAY ANOVA WITH THE GENDER CATEGORY OF RESPONDENTS

		Sum of Squares	df	Mean Square	F	Sig.
Economic motives	Between Groups	1.066	1	1.066	1.436	.232
	Within Groups	206.423	278	.743		
	Total	207.488	279			
Body image projected in advertisement	Between Groups	10.607	1	10.607	15.759	.000
	Within Groups	187.122	278	.673		
	Total	197.730	279			
Brand Power	Between Groups	1.119	1	1.119	1.695	.194
	Within Groups	183.505	278	.660		
	Total	184.624	279			
Imitating motives	Between Groups	3.669	1	3.669	5.195	.023
	Within Groups	196.331	278	.706		
	Total	200.000	279			
Discount motives	Between Groups	2.696	1	2.696	2.515	.114
	Within Groups	297.947	278	1.072		
	Total	300.643	279			
Economic and gender appeal in advertisement	Between Groups	.346	1	.346	1.166	.281
	Within Groups	82.497	278	.297		
	Total	82.843	279			

After comparing the mean one way ANOVA was carried out to test the hypothesis that mean of different factor of price sensitivity does not differ significantly across the different gender categories respondents. From the table it is clear that calculated value of significance is less than .05 in case of factor like Body image projected in advertisement and imitating motives hence there is significant differences in the mean rating of different factor of price sensitivity across the gender category. Hence null hypothesis is rejected indicating that there is significant difference in the mean of different factor across the gender category of respondent except in the case of Economic motives, Brand power, Discount motives and Economic and gender appeal in advertisement.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1.(Constant)	-1.844	.383		-4.821	.000
Economic motives	1.046	.061	.719	17.207	.000
Brand image projected in advertisement	.008	.072	.005	.113	.910
Brand Power	-.057	.070	-.037	-.812	.417
Imitating motives	.165	.071	.112	2.313	.021
Discount motives	.180	.051	.149	3.545	.000
Economic and gender appeal in advertisement	.274	.104	.119	2.640	.009

a. Dependent Variable: Frequently change in price affects my purchase

A regression analysis was carried out to have a relationship of all the factor of price sensitivity with the customers purchase pattern of cosmetics. On the basis of information presented in the table 16 it can be expressed as

Frequently change in price affects my purchase= -1.844+1.046+Economic motives+.008 Body image projected in advertisement-.057Brand power+.165 Imitating motives+.180 Discount motives+.274 Economic and gender appeal in advertisement

CONCLUSIONS

The cosmetic industries has witness the phenomenal growth in last few decade. The large number of competitor has entered into the market with new and innovative marketing strategies. Price has become one of the important toll to influence customers and enhance the sale. With the permutation and combination of different element of marketing mix, Cosmetic manufacturer tries to attract customers in their favour. Present paper analyse the consumer sensitivity towards pricing of cosmetic product. The important factor such as Economic motives, Body image projected in advertisement, Brand Power of the product, Imitating motives of the customers, discount motives and Economic and gender appeal in advertisement make the customer sensitive towards product. The study reveals that more number of consumer are price sensitive and they adjust their consumption either by reducing consumption or by changing the brand.

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CONVENIENCE YIELD: EMPIRICAL EVIDENCES FROM INDIAN CHILLI MARKET

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ABSTRACT

The paper examines the convenience yield to explain the future prices of chilli in Indian markets. The concept of Convenience yield is widely used to explain the market backwardation. We have seen Convenience Yield widely used concept in market backwardation helps in better understanding of Chilli Futures Prices.

JEL CODE

G1, G13

KEYWORDS

Convenience Yield, Future Prices, Spot Prices.

1. INTRODUCTION

Commodity price determination has long been an important aspect of investigation by academic researchers as well as market players. At the centre of the rationality of commodity pricing (Kaldor -1939) laid the concept of convenience yield and Working (1949) provided the first evidence of the existence of it in U.S. wheat market. He observed that stocks were held even when the inter-temporal spread within Chicago markets were inverted. It is now conventional wisdom that the convenience yield drives a wedge between commodity futures and spot prices (Gibson and Schwartz, 1990; Schwartz, 1997; Chambers and Bailey, 1996, to mention a few). Even though some theories of storage do not agree with this logic (Khoury and Martel, 1989; Brennan et al., 1997), the convenience yield is found to be economically logical and significant, especially when commodity prices are in backwardation (e.g., Considine and Larson, 2001a,b; Milonas and Henker, 2001). Despite various theoretical discussions of convenience yield the empirical evidence regarding the theories is scant (Pindyck (2001), Considine and Larson (2001b), Schwartz (1997), and Pilipovic (1998)).

The paper is organized as follows. The next section briefly introduces the Indian Chilli Futures Market and explains various theoretical relationships among the future and spot Prices. We have also explained the theoretical determination of the convenience yield. Third section forwards data and methodology used to estimate the relationship between Future and Spot Price. The Fourth section provides empirical results of Indian Chilli's Market and last and the fifth section concludes the study.

2. FUTURE PRICE, SPOT PRICE, AND CONVENIENCE YIELD**2.1 THE CHILLI FUTURES MARKET**

Global production of chilli stands at about 20.00 lakh MT to 25.00 lakh MT per annum. India is the largest producer and contributes about 10.00 lakh MT to 12 lakh MT annually followed by China, Nigeria, Peru, Bangladesh, Hungary. Domestically, Andhra contributes 49 % of total production followed by Karnataka (14 %), Orissa (7 %), Maharashtra (5 %), West Bengal (5 %), Rajasthan (5 %) and Tamil Nadu (4 %). The major trading centre in India is Guntur (AP). The future prices in the study have been analysed based on price trends in Guntur Market.

2.2 CONVENIENCE YIELD

The convenience yield, C , refers to a stream of implicit benefits that accrues to the owner of a physical stock but not to the owner of a contract for future delivery. Stockholders earn the convenience yield because stocks on hand allow them to respond more flexibly and efficiently to unexpected supply and demand shocks. Where stocks are held, regular customer demands can be met, and sudden and unexpected increases in demand can be accommodated without disrupting production schedules. The convenience yield may be thought of as a negative price of storage in that it reflects the benefits rather than the cost of stockholding. These benefits are most significant when stocks are scarce. When stocks are abundant, the convenience yield approaches zero because the scarcity value of stocks is minimal. Empirical evidence presented by Working (1949, 1949), Telser (1958), Fama and French (1987, 1988), and Brennan (1991) also suggest that the convenience yield is a decreasing (convex) function of stocks. It declines with increasing stocks but at a decreasing rate; $\frac{\partial C}{\partial X} < 0$ and $\frac{\partial^2 C}{\partial X^2} > 0$, Where X is the amount of stocks held.

If the market is efficient, then there should be no arbitrage profit between Spot and Future Prices. Holding a unit of commodity (chilli in our case) for one period has the return of $(P_{t+1} - P_t) + CY_t$, where P_t is the price of chilli for the current month, and CY_t is the marginal convenience yield net of storage cost. At the same time, assuming that one also takes a short position using the future contract, the return is then the difference between the future price and the next month's spot price, $F_{t+1} - P_{t+1} = F_t - P_{t+1}$, where F_t is the future price. The total return therefore is

$$P_{t+1} - P_t + CY_t + F_t - P_{t+1} = F_t - P_t + CY_t \quad (1)$$

Since the positions are covered, there is no risk involved in the transaction and the total return is non-stochastic. The returns should be the same as the return of a risk-free investment with price P_t . Assuming the risk-free rate of return is r , then the no arbitrage condition would give us the relationship:

$$F_t - P_t + CY_t = rP_t \quad (2)$$

This equation defines the net marginal convenience yield as the difference between the adjusted spot price and the forward price:

$$CY_t = (1+r)P_t - F_t \quad (3)$$

The convenience yield is the benefit of holding the storage commodity. Theoretically, it depends on several factors. For example, after deriving such a relationship, Pindyck (2001) argues, based on his structural model, that the convenience yield depends on the current price level, the price volatility, and the level of storage. A high spot price (relative to the equilibrium price) reflects the imbalance between supply and demand. As the shortage of supply increases, the demand for storage will increase, driving up the value of storage. When market volatility is higher, the demand for storage is higher as well due to the greater need to buffer fluctuations in production and consumption. The amount of storage is also important in determining the marginal value of storage. The lower the

storage level is, the higher the value will be for the marginal storage. A variant of the last argument is that the lower the level is of storage relative to the average storage level, the higher the marginal convenience yield will be.

2.3. THE FUTURE AND SPOT PRICES

The forward and spot prices of a storable commodity are expected to be different, as the forward prices are not usually equal to the expected spot prices. In general, the future or forward price should be less than the expected future spot price. The intuition is that holders of the commodity bear risks by purchasing the commodity at time t. As a reward for bearing risks, investors expect to see the spot prices rise above the current futures or forward prices over the commodity-holding period. Therefore, we can formulate the idea in the following equation:

$$F_t = E_t P_{t+1} - RP_t \tag{4}$$

where E is the expectation operator conditional on information available at time t and RP is the risk premium factor.

The theories of commodity price determination suggest that the risk premium depends on several factors. Pindyck (2001) ties the risk premium to the current spot price of the commodity. Considine and Larson (2001b) suggest the risk premium to be positively related to price volatility. Schwartz (1997) and Pilipovic (1998), in their two/three-factor models, offer that the risk premium should be negatively related to the risk-free rate and positively to the convenience yield. In addition, Schwartz (1997) also recommends that the risk premium should be positively related to the variability in the convenience yield as well as the time-varying interest rate, and the co-variances between the convenience yield and interest rate.

3. DATA AND METHODOLOGY

3.1. DATA

Data on future prices and spot prices have been taken from NCDEX for delivery at Guntur. Daily Closing Prices of the near month contract for last 5 years from 2006-2010 has been used in the study. The risk-free rate of interest (364 days T-Bill) is obtained from the Reserve Bank of India database.

3.2. EMPIRICAL METHODS

We have employed the simple OLS to test the chilli future price specified as follows:

$$FP = \alpha_1 + \alpha_2 SP + \mu \tag{5}$$

$$FP = \beta_1 + \beta_2 SP + \beta_3 CY + e \tag{6}$$

Where FP is the Future Price, SP is Spot Price and CY is the Convenience yield [as defined in equation (3)].

4. EMPIRICAL RESULTS

Fig.1 shows the movement of future and spot prices from 2006 to 2010. In Fig. 2 we see that Convenience Yield is highly varying over a period of time. Table 1 gives the descriptive statistics of the variables. All the variables are stationary at level. Table 2 and 4 show the results of ADF test. Table 5 and 6 shows the regression results before and after Convenience Yield. We see that Convenience Yield is significant (5% level) and both R squared and Adjusted R squared improve after the introduction of Convenience Yield, which means that convenience yield is helpful in explaining the prices of chilli.

5. CONCLUSION

In this paper we have investigated the empirical relationships between a commodity's future price and spot price. We have considered herein chilli market. We first defined and measured the convenience yield and then modelled the relationship between the future and spot prices based on conventional theories. Our findings suggest that the convenience yield behaves largely as economic theories suggest and is explaining the future price.

FIG. 1: MOVEMENT OF CHILLI FUTURE AND SPOT PRICES

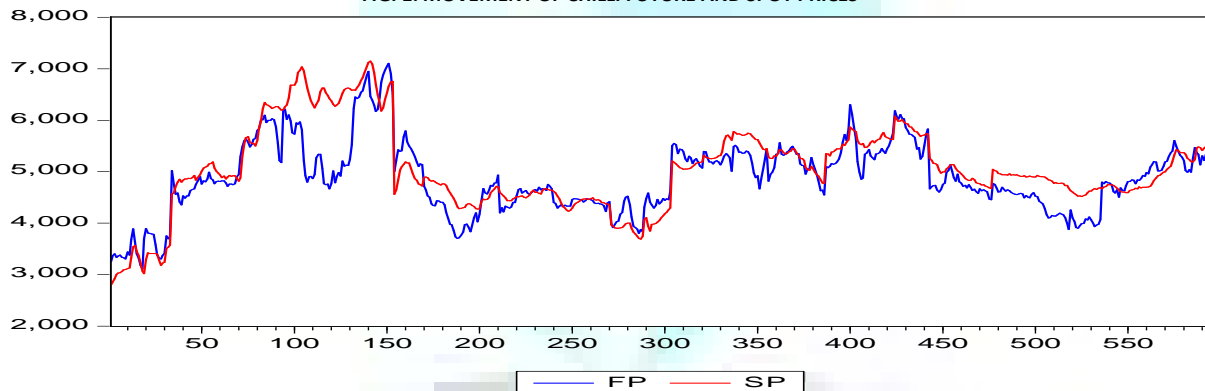


FIG.2: TIME VARYING CONVENIENCE YIELD

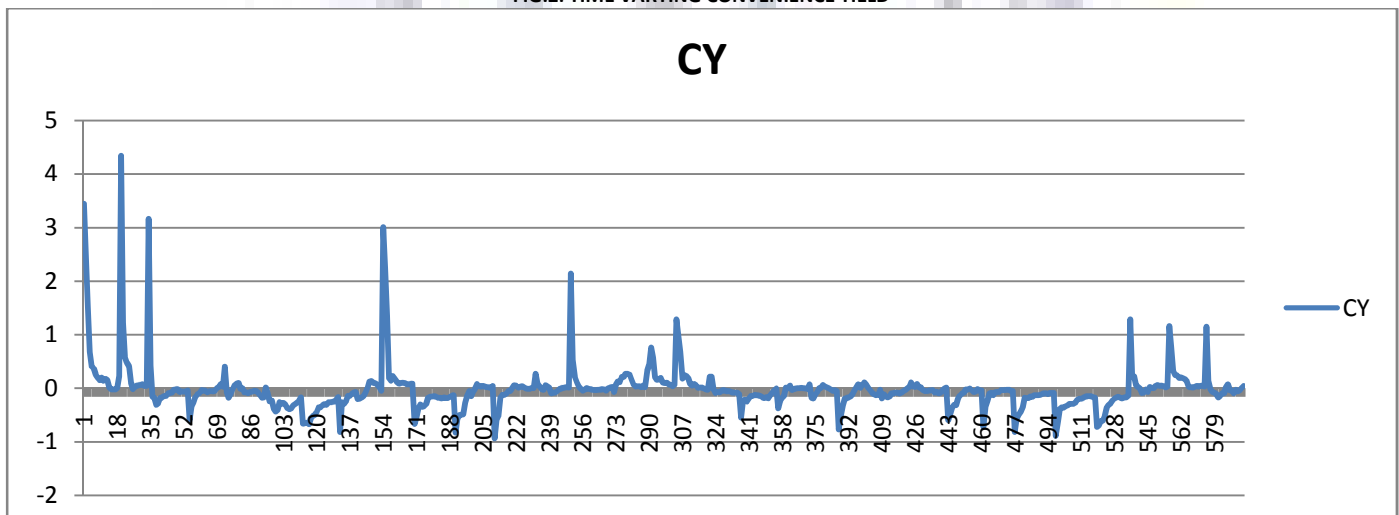


TABLE 1: DESCRIPTIVE STATISTICS

Descriptive	Future Prices	Spot Prices	Convenience yield
Mean	4869.983	5035.052	-0.02448
Median	4804.5	4931.2	-0.04748
Maximum	7109	7148.4	4.339733
Minimum	3109	2802.85	-0.93645
Standard Deviation	701.635	817.1314	0.42727
Kurtosis	0.401783	0.369512	38.51179
Skewness	0.274823	0.099404	5.036249
Observations	596	596	596

TABLE 2: ADF TEST FOR CONVENIENCE YIELD

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-13.73721	0.0000
Test critical values:	1% level	-3.441185	
	5% level	-2.866212	
	10% level	-2.569317	
*MacKinnon (1996) one-sided p-values.			

TABLE 3: ADF TEST FOR FUTURE PRICE

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.700755	0.0043
Test critical values:	1% level	-3.441129	
	5% level	-2.866187	
	10% level	-2.569304	
*MacKinnon (1996) one-sided p-values.			

TABLE 4: ADF TEST FOR SPOT PRICE

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.985040	0.0369
Test critical values:	1% level	-3.441129	
	5% level	-2.866187	
	10% level	-2.569304	
*MacKinnon (1996) one-sided p-values.			

TABLE 5: REGRESSION RESULTS OF EQUATION (5)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
α_1	2.080274	0.363091	5.729344	0.0000
α_2	0.752024	0.042987	17.49427	0.0000
R-squared	0.752236	Mean dependent var	8.480404	
Adjusted R-squared	0.751819	S.D. dependent var	0.145367	

*Results are corrected for standard errors using Newey & West (1987) HAC Matrix

TABLE 6: : REGRESSION RESULTS EQUATION (6)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
β_1	1.822842	0.369784	4.929477	0.0000
β_2	0.782280	0.043751	17.88017	0.0000
β_3	0.035335	0.016902	2.090529	0.0370
R-squared	0.780149	Mean dependent var	8.480308	
Adjusted R-squared	0.779406	S.D. dependent var	0.145471	

*Results are corrected for standard errors using Newey & West (1987) HAC Matrix

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CELLULAR PHONES: THE HUB OF MODERN COMMUNICATION - AN ANALYTICAL STUDY

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ABSTRACT

The communication process is complete once the receiver has understood the sender. The information technology has been successful in building a super high way for communication and people resort to more advanced communication strategies like fax, e-mail, and cellular phones. Telecommunication companies talk of their customers being their most important asset, just like companies in other business domains. But this is rarely reflected in a company's strategy operations. The customer is the theme of all business functions. The purpose of business is to create and retain customers. The customers should be put at the center of all business activities, cutting across function and hierarchical boundaries. Customer satisfaction is a must in business. Satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product perceived or a performance in relation to his or her expectations. The customers of telecom service like cellular telephony are moving ahead with times and have started carrying cellular services just like daily households.

KEYWORDS

Cellular phones, modern communication.

INTRODUCTION

Communication plays a vital role in creating, building, developing relationships and business values. Communication service is growing by 20 to 40 per cent every year. India is the world's fastest growing wireless market with 752 million cellular phone subscribers as on February 2011. It is also the second largest telecommunication network in the world in terms of number of wireless connections next to China. As the fastest growing telecommunications industry in the world it is projected that India will have 1.159 billion cellular phone subscribers by 2013. Cellular phone services have achieved great commercial success, because the users recognise that the cellular phone access can improve productivity and enhance safety. Increase in the demand and the poor quality of existing telecommunication services have led the cellular phone service providers to find out ways to improve the quality of service and to support more users in their systems.

STATEMENT OF THE PROBLEM

Cellular phone is a mass media channel. The popular companies are competing to introduce new range of cellular phones each and everyday. Cellular phones are now regarded as a basic necessity by most of the people and they provide a means to achieve a level of freedom and convenience to communicate with others from anywhere. Cellular phone is one of the greatest innovations in the telecom sector and the current world cannot be imagined without communication technology.

Hence, the study is made to evaluate attitude of the customers towards cellular phone services rendered by the service providers.

SCOPE OF THE STUDY

Cellular phones are so common now that they hardly attract one's attention. People have started understanding the value, convenience and ease of owning a cellular phone. Rapid growth and competition among the handset companies and service providers have decreased the rates for cellular handset as well as service providers.

The present study is confined to study the attitude of consumers towards cellular phone services.

OBJECTIVES

The objectives of the study are

- To measure the level of satisfaction of the respondents towards cell phone services.
- To examine the socio economic profile and level of satisfaction.
- To analyse the factors influencing the purchase of cellular phone.
- To offer suitable suggestions on the basis of findings of the study.

METHODOLOGY

The present study is based on both primary and secondary sources. The primary data has been collected from 250 cellular phone users through a well structured questionnaire. Convenience sampling technique has been adopted for the selection of 250 respondents and 15 dealers. The secondary data has been collected from various standard text books, journals, magazines, newspapers and websites.

STATISTICAL TOOLS

After completing the collection of primary and secondary data, the collected data has been properly tabulated. The tabulated data has been properly analysed by using the statistical tools viz., Percentage analysis, Ranking method and Chi-square test.

ANALYTICAL FRAME WORK

The level of satisfaction has been classified into three categories namely low, medium and high for analytical purpose. Arithmetic mean and standard deviation have been used to determine the level of satisfaction, which is compared with socio economic profile of the cellular phone users. If the score values are greater

than $\bar{X} + S.D.$ it has been taken as high level of satisfaction. If the score values are less than $\bar{X} - S.D.$, it has been classified as low level of satisfaction. If the score values lie between $\bar{X} + S.D.$, and $\bar{X} - S.D.$, it is classified under medium level of satisfaction.

Here \bar{X} - Arithmetic mean and
S.D. - Standard Deviation

In order to analyse the relationship between respondents' socio economic variables and their level of satisfaction, chi square test has been employed.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Degree of freedom = (r-1) (c-1)

Where,

O = Observed frequency

r = number of rows

E = Expected frequency

c = number of columns

The calculated value of chi square test is compared with the table value of chi square test at 5 per cent level of significance. If the calculated value of chi square test is more than the table value, the null hypothesis is rejected or otherwise it is accepted.

LEVEL OF SATISFACTION

The level of satisfaction is measured at three levels viz., high, medium and low level. The respondents who scored 57 and above come under high level of satisfaction. When the score of the respondents fall between 57 and 45, they are said to have medium level of satisfaction. If the score obtained is 45 and below, it is understood that the respondents have low level of satisfaction.

TABLE 1: LEVEL OF SATISFACTION

Level	No. of Respondents	Percentage
High	63	25.20
Medium	132	52.80
Low	55	22.00
Total	250	100

Source :Primary data

Table 1 explains that out of 250 respondents, 132 (52.8%) have medium level of satisfaction, 63 (25.2%) have high level of satisfaction and 55 (22%) have low level of satisfaction.

RELATIONSHIP BETWEEN SOCIO ECONOMIC VARIABLES AND LEVEL OF SATISFACTION

In this section, an attempt is made to analyse the relationship between customers' socio economic variables and their level of satisfaction by using chi-square test.

TABLE 2: RELATIONSHIP BETWEEN SOCIO ECONOMIC VARIABLES AND LEVEL OF SATISFACTION

Socio economic variables	Level of Satisfaction			Chi square test results	
	High	Medium	Low		
Gender	Female	32 (27.59)	53 (45.69)	31 (26.72)	Not significant
Age (in years)	Below 20	16(24.24)	33(50.00)	17(25.76)	Significant
	20-40	31(27.68)	47(41.96)	34(30.36)	
	40-60	6(14.63)	32(78.05)	3(7.32)	
	Above 60	10(32.26)	20(64.51)	1(3.23)	
Education	School level	18(21.18)	46(54.12)	21(24.70)	Significant
	College level	24(21.05)	68(59.65)	22(19.30)	
	Others	21(41.18)	18(35.29)	12(23.53)	
Occupation	Student	13(25.00)	20(38.46)	19(36.54)	Significant
	Home maker	13(20.00)	34(52.31)	18(27.69)	
	Businessman	5(12.82)	27(69.23)	7(17.95)	
	Employer	12(28.57)	25(59.53)	5(11.90)	
	Others	20(38.46)	26(50.00)	6(11.54)	
Marital status	Married	31(24.22)	59(46.09)	38(29.69)	Significant
	Unmarried	32(26.23)	73(59.84)	17(13.93)	
Monthly income (in Rs.)	Below 5000	3(18.75)	8(50.00)	5 (31.25)	Significant
	5000-10000	38(27.54)	83(60.14)	17(12.32)	
	10000-15000	14(29.17)	21(43.75)	13(27.08)	
	15000-20000	5(31.25)	9(56.25)	2(12.50)	
	Above 20000	3(9.38)	11(34.37)	18(56.25)	

Source: Primary data

By applying chi-square test, there is no significant relationship between gender and level of satisfaction. There exist relationships between age, education, occupation, marital status, monthly income with level of satisfaction.

REASONS FOR USING CELLULAR PHONE

Now-a-days, cellular phones have become necessity for many people. They are used for several reasons like cheap to communicate, status symbol, business usage, touch with friends and relatives. Table 3 lists the reasons for using cellular phones as follows

TABLE 3: REASONS FOR USING CELLULAR PHONE

Reasons	No. of Respondents	Percentage
Cheap to communicate	74	29.60
Status symbol	16	6.40
Business usage	37	14.80
Touch with friends and relatives	106	42.40
Others	17	6.80
Total	250	100

Source : Primary data

It is clear that out of 250 respondents, 106 (42.4%) of the respondents use cellular phones to keep in touch with friends and relatives. 74(29.6%) of the respondents use them for economical communication. 37(14.8%) of the respondents use the cellular phones for business whereas 17 (6.8%) respondents use for other purposes. It is found that 16(6.4%) respondents use cellular phones to maintain their status.

BRAND NAME

There are many varieties of handsets available in the market. Table 4 shows the brands name of the handsets used by the respondents.

TABLE 4: BRAND NAME

Brand Name	No. of Respondents	Percentage
Nokia	131	52.40
Sony Ericsson	47	18.80
LG	15	6.00
Samsung	16	6.40
Videcon	8	3.20
Tata Indicom	17	6.80
Others	16	6.40
Total	250	100

Source: Primary data

Out of 250 respondents, 131(52.4%) respondents use Nokia, 47(18.8%) respondents use Sony Ericsson and 17 (6.8%) respondents use Tata Indicom. 16(6.4%) respondents use Samsung, 16(6.4%) respondents use various others brands of cellular phones (i.e., Korean mobiles, G' Five etc.), 15 (6%) respondents use LG, and 8 (3.2%) respondents use Videcon.

NAME OF THE SERVICE PROVIDERS

There are several service providers. The customer selects the service provider by their schemes. Table 5 presents the details about the service providers.

TABLE 5: SERVICE PROVIDERS

Service Providers	No. of Respondents	Percentage
Aircel	36	14.40
Airtel	71	28.40
Reliance	20	8.00
BSNL	37	14.80
Tata Docomo	42	16.80
Vodafone	22	8.80
Idea	11	4.40
Uninor	9	3.60
Others	2	0.80
Total	250	100

Source: Primary data

Out of 250 respondents, 71(28.4%) respondents use Airtel, 42 (16.8%) respondents use Tata Docomo, 37 (14.8%) respondents use BSNL, 36 (14.4%) respondents use Aircel, 22 (8.8%) respondents use Vodafone, 20 (8%) respondents use Reliance, 11 (4.4%) respondents use Idea, 9 (3.6%) respondents use Uninor, and 2 (0.8%) respondents use other service providers.

NATURE OF PLAN IN SIMCARD

The simcard is available on two plans such as postpaid and prepaid. Table 6 shows the nature of plan adopted by the respondents.

TABLE 6: NATURE OF PLAN IN SIMCARD

Simcard Plan	No. of Respondents	Percentage
Postpaid	27	10.80
Prepaid	223	89.20
Total	250	100

Source: Primary data

Out of 250 respondents, 223 (89.2%) respondents use prepaid simcard and 27 (10.8%) respondents use postpaid simcard.

AMOUNT OF RECHARGE PER TIME (in ₹)

The cellular phone users recharge based on their need and their financial position. Table 7 shows the amount of recharge per time.

TABLE 7: AMOUNT OF RECHARGE PER TIME

Amount (in ₹)	No. of Respondents	Percentage
Below 100	88	39.46
100-200	69	30.94
200-300	42	18.53
300-400	9	4.04
Above 400	15	6.73
Total	223	100

Source: Primary data

It is clear from the table 7 that out of 223 respondents, 88 (39.94%) respondents recharge less than ` 100. 69 (30.94%) respondents recharge around ` 100 - ` 200, 42(18.53%) respondents recharge for an amount of ` 200- ` 300, 15 (6.73%) respondents recharge more than ` 400, and 9 (4.04%) respondents' recharging amount is roughly ` 300 - ` 400 for their cellular phones.

SCHEMES OF RECHARGE

There are several schemes introduced by the service provider. The customers recharge under the following schemes is as shown in the table 8.

TABLE 8: SCHEMES OF RECHARGE

Schemes	No. of Respondents	Percentage
Life time validity	85	34.00
Add one card	41	16.40
Free talk time	49	19.60
Group simcard	50	20.00
Others	25	10.00
Total	250	100

Source: Primary data

Out of 250 respondents,85(34%) respondents prefer life time validity scheme, 50 (20%) respondents prefer group simcard, 49 (19.6%) respondents prefer free talk time scheme, 41(16.4%) respondents prefer add one card and 25 (10%) respondents prefer some other schemes.

FACTORS INFLUENCING THE PURCHASE OF CELLULAR PHONE

There are various reasons for preferring cellular phones like features, pricing, brand image, advertisement, quality, dual sim facility, touch screen, etc. The factors ranked by cellular phone users are shown in the table 9.

TABLE 9: RANKS GIVEN BY THE RESPONDENTS

Factors	I	II	III	IV	V	VI	VII	VIII	Total
More features	34	41	89	39	23	14	3	7	250
Cheap pricing	27	74	34	21	28	17	24	25	250
Brand image	42	24	27	97	30	15	5	10	250
Advertisement	34	27	26	15	29	78	30	11	250
Quality	90	35	32	31	21	16	15	10	250
Dual sim facility	15	25	24	24	87	26	34	15	250
Touch screen	6	14	13	7	5	71	75	59	250
Others	2	10	5	16	27	13	64	113	250
Total	250	250	250	250	250	250	250	250	

Source: Primary data

Weighted ranking technique has been applied to analyse the factors influenced to buy a particular brand and the results are shown in the table 3.23.The ranks are scored and multiplied by the weight assumed as 8, 7,6,5,4,3,2,1.

TABLE 10: WEIGHTED RANKING TECHNIQUE

Factors	I	II	III	IV	V	VI	VII	VIII	Total	Rank
More features	272	287	534	195	92	42	6	7	1435	II
Cheap pricing	216	518	204	105	112	51	48	25	1279	IV
Brand image	336	168	162	485	120	45	10	10	1336	III
Advertisement	272	189	159	75	116	234	60	11	1113	V
Quality	720	245	192	155	84	48	30	10	1484	I
Dual sim facility	120	175	144	120	348	78	68	15	1068	VI
Touch screen	48	98	78	35	20	213	150	59	701	VII
Others	16	70	30	80	108	39	128	113	584	VIII

Source: Primary data

Most of the respondents consider the quality of the cellular phone as their first preference with score 1484 followed by more features which gets II rank with a score of 1435. The factor, brand image gets III rank with score of 1336. The least score is 584 for other factors.

SUGGESTIONS

On the basis of the findings of the study the following suggestions are made to the dealers and customers.

- The dealers have to make arrangements for display of cellular phones in their shop.
- The dealers have to be updated of the technologies used in cellular phone services.
- The advertisement has to give correct information to the customers to entice the new customers and to retain existing customers.
- The dealers have to inform customers regularly regarding the schemes introduced by the service provider.
- The service provider has to improve their network coverage in rural areas.
- The customers are suggested that before buying cellular phone he/she should get a thorough knowledge about cellular phone through dealers, internet, catalogs, magazines, etc.
- Malpractices through cellular phones are to be strictly prohibited.
- It is suggested that customer care service centers have to function effectively in providing prompt response to the customers.
- The dealers have to be alert in framing innovative marketing strategies to compete with the increase in the competition in cellular phone industry.
- The dealers have to make the available services like Mobile banking, Mobile ticketing etc. possible for the customers' access.

Public have to aware of the misuse consequences in cellular phone

CONCLUSION

The cellular phone companies have to study the behaviour of the consumers while marketing their products and services. When they estimate the preferences of the customers in a right manner, they can stand in the market. Otherwise they are likely to be washed out from the market. At the same time, they have to concentrate on the activities of the competitors too. Effective strategies have to implement to face the competitions. Hence, if the cellular phone companies understand the behaviour pattern of the consumers and face the competition, they are sure to have a bright and prosperous future.

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WOMAN LEADERSHIP IN AXIS BANK: A COMPARISON OF WOMAN AND MAN LEADER USING CAMEL MODEL

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ABSTRACT

The banks, predominantly staffed by men saw the spurt of women in the sector since 1950s and steadily and gradually the journey has been fruitful. In other words, women have broken the glass door ceiling and have entered in the esteemed league of board members and few have become managing directors and CEOs of the banks. The objective of the paper is find out whether the woman leadership has made significant impact on the financial performance of the bank over man leadership by studying the financial statements of the bank. A comparison is being done in two different time periods of the same bank to draw meaningful conclusion with respect to woman leadership. The paper uses CAMEL (Capital, Asset, Management, Earning, Liquidity) analysis to determine the financial performance of a bank and it is used by the apex bank to monitor the performance and overall condition of domestic banks This paper analyses whether the CAMEL score of Axis bank has improved or not after the leadership of the bank has been overtaken by a woman. The CAMEL score of the Axis bank from the financial year 2006-07 to 2011-12 has not improved per se but the management efficiency ratios have shown a tremendous surge. It is worth mentioning that the time when the leader of the bank changed in the year 2009, the entire globe was caught in the recession and banks were no exception. It is credible for a bank not to succumb to the level when other banks and financial institution have suffered a major loss.

JEL CODE

G21

KEYWORDS

CAMEL Model, , Financial statement analysis, Woman CEO.

INTRODUCTION

The Indian banking industry has been undergoing a tremendous change since last two decades. The changes are in the pattern of shareholding of banks' shares, emergence of new banks, private as well as foreign banks, expansion of the branches and business/services by bank, to name a few. The banks have also seen the increase in the number of female employees in last few years, which is no more a male dominated sector/industry. The year 2009 had a special meaning for the banking sector as it is in this year the two private sector banks, one of which is the largest private sector bank, appointed their CEOs who were women. It is one of the rarest scenes in the history of Indian Banking scenario. Many women were heading the finance companies such as Insurance, venture capital, securities and investment. The rise of woman to the leadership position is not a state prevailing in India rather it is a phenomenon which is prevailing across the globe. Many banks and financial service companies were having woman as their leaders such as JP Morgon Treasury and securities services, BNY Mellon, Citi group to name a few.

There are many factors which are conducive for the woman in the banking sector e.g. the job does not demand too much of labour work, women are more sincere and less prone to unions and frauds. Recognising these reasons many banks have started recruiting more and more females during 1970s and 1980s and this trend was more common of late when there was the entry of private sector bank, which relied more on the young girl and one can see many counters in the bank were positioned by the female.

The women have broken the glass ceiling today and have entered into the board rooms to become the board member. This is not the end rather a starting. The entry of women into BFSI and to the boardroom in a country like India has special meaning. Gender equality may not be seen in a developing and old-fashioned country. Things have not stopped here only and now the women have climbed the ladder and have become the head of the banks. It is not only that the banks are headed by women; the entry of women is also visible in the whole BFSI sector which includes financial services companies among others.

The following private banks are headed by woman in India, currently:-

ICICI bank Ms. Chanda Kochhar , MD & CEO
 Axis Bank Ms. Shikha Sharma, MD & CEO

This paper focuses only on the Axis bank, which is led by Ms. Shikha Sharma. An attempt is being made, by studying the financial statements, to determine as to woman is better leader than man or not.

AXIS BANK

Axis Bank was the first of the new private banks to have begun operations in 1994, after the Government of India allowed new private banks to be established. The Bank was promoted jointly by the Administrator of the specified undertaking of the Unit Trust of India (UTI - I), Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC) and other four PSU insurance companies, i.e. National Insurance Company Ltd., The New India Assurance Company Ltd., The Oriental Insurance Company Ltd. and United India Insurance Company Ltd. The Bank as on 30th September, 2012 is capitalized to the extent of Rs. 414.53 crores with the public holding (other than promoters and GDRs) at 53.80%.

The Bank's Registered Office is at Ahmedabad and its Central Office is located at Mumbai. The Bank has a very wide network of more than 1600 branches (including 169 Service Branches/CPCs as on 30th June, 2012). The Bank has a network of over 10000 ATMs (as on 30th June, 2012) providing 24 hrs a day banking convenience to its customers. This is one of the largest ATM networks in the country.

The Bank has strengths in both retail and corporate banking and is committed to adopting the best industry practices internationally in order to achieve excellence. The bank received the following awards and recognition during the year 2011:-

- Bank of the Year – India (The Banker)
- Brand Excellence Award 2011 in the BFSI category (Star News)
- Most Productive Private Sector Bank (FIBAC 2011 Banking Awards)
- 3rd Strongest Bank in Asia-Pacific Region (Asian Banker)

- The Best Domestic Bank – India; The Best Bond House – India (The Asset Triple A country Awards 2011)

AWARDS & RECOGNITION RECEIVED BY THE BANK DURING THE YEAR 2012

- Best Bank in the Private Sector Bank category (CNBC-TV18's India Best Bank and Financial Institution Awards)

Axis bank has been growing regularly since its inception and as on March, 2012 the bank had 1,606 branches which makes the bank third largest bank in the private sector. The bank has been continuously innovating and making the products and services available to the consumers e.g. privilege banking, women's saving account, Ladies first card to name a few.

REVIEW OF LITERATURE

1. Hussein A Hassan Al-Tamimi and Husni Charif (2011) in a research paper titled, "Multiple approaches in performance assessment of UAE commercial banks" performed research for a period of 1996-2005 and concluded that large banks perform better than small banks. They also found that there was statistical difference between the small and large banks regarding bank performance indicators. The results also revealed that the ratio of total equity to total assets which reflected the importance of capital adequacy to commercial banks was the most important performance indicator taking into the account the bank size.
2. O. Felix Ayadi, Arinola O. Adebayo, Eddy Omolehinwa (1998) in a research paper titled, "Bank performance measurement in a developing economy: an application of data envelopment analysis" found that the weakness of the Nigerian banks were attributed mainly to the poor management which manifested in the excessive credit and liquidity risk, poor loan quality and sluggish availability to generate capital internally. They also found that the powers granted to commercial banks as a result of the deregulation posed threat to the safety of the system by placing heavier demands on the regulatory and supervisory authorities. They also found that the relative efficient bank were those which existed for a long period of time.
3. Nimalathan (2008) in an article titled, "A Comparative Study of Financial Performance of Banking Sector in Bangladesh- an Application of CAMELS Rating System" found that out of 48 banks only 3 banks were rated "strong" using CAMELS rating system and as many as 31 banks were rated "satisfactory". He also found out that one nationalised commercial bank had "unsatisfactory" rating and other 3 nationalised commerce banks had "Marginal" ranking..
4. Deborah Dahlen Zelechowski and Diana Bilimoria (2003) in a short paper titled, "The experience of women corporate inside directors on the boards of Fortune 1,000 Firms", studies 6 women directors who were holding the dual roles in a corporation in an exploratory study. They found that the relevance of the two aspects of women inside director's top functioning at the top organisations: First at the individual level influencing factors which affect the performance and contribution of women inside directors and second the board level, inclusion factor of the treatment of the women executive directors that impact their overall leadership and governance.
5. Prof. Dr. Mohi-ud-Din Sangmi & Dr. Tabassum Nazir (2010) in their article titled, "Analysing Financial Performance of commercial Banks in India: Application of CAMEL Model" found that, Punjab national bank and Jammu and Kashmir Bank, had been able to maintain capital adequacy ratio well above the minimum ratio prescribed by RBI. They also found that J & K bank was more efficient in maintaining its net NPA to net advances. The spread management showed that PNB had received more interest income in comparison to J & K Bank, while the liquidity position of J & K bank was better than the PNB. The period of their study was 2001-2005
6. Singh V, Terjesen S, Vinnicombe S (2008) in a research paper titled, "Newly appointed directors in the boardroom: how do women and men differ?" found that men had more previous executive director experience but female appointees were not less likely than males to be business experts. They used the data of 2001-2004 and appointees to the boards of FTSE 100 companies. The papers demonstrated that the female board appointees, and by inference, potential appointees, had accumulated similar human capital to male counterparts.
7. Dr. K. Sriharsha Reddy (2012) in an article titled, "Relative Performance of commercial banks in India using CAMEL approach" found that public sector banks had significantly improved which indicated the positive impact of the reforms in the liberated interest rates, rationalised directed credit and investment increased competition. The author has used the CAMEL approach to evaluate the relative performance of banks after the first phase of reform (i.e. 1999) and after the second phase of reforms (i.e. 2009)

IMPORTANCE OF STUDY

This paper is useful for the bank under study i.e. Axis bank to gauge their performance. This is also useful to other banks to understand their competitive position. This paper also opens another area of research in the banking sector for the researchers.

STATEMENT OF THE PROBLEM

There has been a surge in the women workforce in the banking sector which was dominated by the men employees. There is a need to study whether women are more efficient than men and that too in the BFSI (banking and financial service industry) as leader.

OBJECTIVES

- To study the financial performance of the Axis bank for the period 2006-07 to 2011-12
- To analyse whether the gender of the leader has any impact on performance of the bank

HYPOTHESIS STATEMENT

- Ho: There is no significant relationship between the financial performance of the bank and the gender of the leader of the bank
- H₁: There is a significant relationship between the financial performance of the bank and the gender of the leader of the bank

RESEARCH METHODOLOGY

The research is being done to study the financial performance of the Axis bank to judge the impact of woman leadership which is analysed using the CAMEL model to determine the impact of the executive leadership on the performance of the bank.

The research is divided into two parts:-

1. Financial year starting from 2006-2007 to 2008-2009 when the bank was headed by male leader i.e. Mr. P. J. Nayak
2. Financial year starting from 2009-2010 to 2011-2012 when the bank was headed by female leader i.e. Ms. Shikha Sharma

SOURCES OF DATA

The research is based on the secondary source of data. The final accounts, balance sheet, shareholding pattern etc. are taken from the capitaline.com for the financial years starting from 2006-2007 till 2011-2012. The website of the Axis bank has also been referred and used.

RESEARCH TOOL

The CAMEL rating is done to determine the bank's overall condition w.r.t. financial and operating and managerial efficiencies. The CAMEL rating gives weights to the ratios and ranks the banks according to the score of all the components of CAMEL. Once all the components and the ratios are calculated, the final score is arrived at by adding all the components of CAMEL model. Higher the score better is the bank. This paper analyses whether the CAMEL score of Axis bank has improved or not after the leadership of the bank has been overtaken by a women. The financial performance is analysed using the ratios and which is grouped under the CAMEL Model.

CAMEL is the acronym where:

- C stands for Capital Adequacy;
- A stands for Asset Quality,
- M stands for Management Efficiency,
- E stands for Earnings Capacity,
- L stands for Liquidity

Each group contains the 4-5 ratios which are calculated for the year 2006-07 to 2008-2009 (three years) when the bank was headed by man. Similarly the same ratios are calculated for the financial years starting from 2009-2010 to 2011-2012 (three years) when the bank was headed by woman. It would be seen whether the ratios have shown a positive growth in the later period to conclude that the woman leadership has made an impact.

TABLE 1: CAMEL CATEGORY AND RATIOS

Category	Ratio
Capital Adequacy	Capital adequacy Ratio
	Debt-equity ratio
	Advances to assets ratio
	Securities to total investments
Asset Quality	Gross NPA to Net Advance
	Net NPA to Net Advance
	Total loans to total assets
	Net NPAs to total loans
Management Efficiency	Return on Net worth
	Total advances to total deposits
	Business per Employee
	Profit per Employee
Earnings Capacity	Operating profit to Avg. Working funds
	Interest spread
	Net profit to Avg. Assets
	Interest income to total income
	Non-interest income to total income
Liquidity	Liquid assets to total assets
	Govt. Securities to total assets
	Approved securities to total assets
	Liquid assets to demand deposits
	Liquid assets to total deposits

The weights have been assigned according to the importance of the ratio e.g. capital adequacy ratio which consists of Tier I and Tier II capital is most important ratio of capital and is therefore given weight of 0.50. The same principle has been applied to all other ratios in all other categories.

RESULTS & FINDINGS

The data has been taken from the capitaline.com using the profit & loss account, balance sheet and shareholding pattern among others. The data has been collected from the financial year 2006-2007 till 2011-2012, in total six financial years. The research has been divided into two parts as to when the bank was headed by a male and when the bank is being headed by female, to study the impact of gender of leader on the performance of the bank.

The first part of the research analyses the financial information for three years, (2006-07, 2007-08 and 2008-09). These were the three years preceding immediately to women leader and were the years when the bank was headed by a man i.e. Mr. P. J. Nayak. The researchers have taken the three year's financial information (2009-10, 2010-11, 2011-12) where Ms. Shikha Sharma has taken over the post of CEO of the bank. This was done to analyse whether the executive leadership has made any significant impact on the financial performance of the bank.

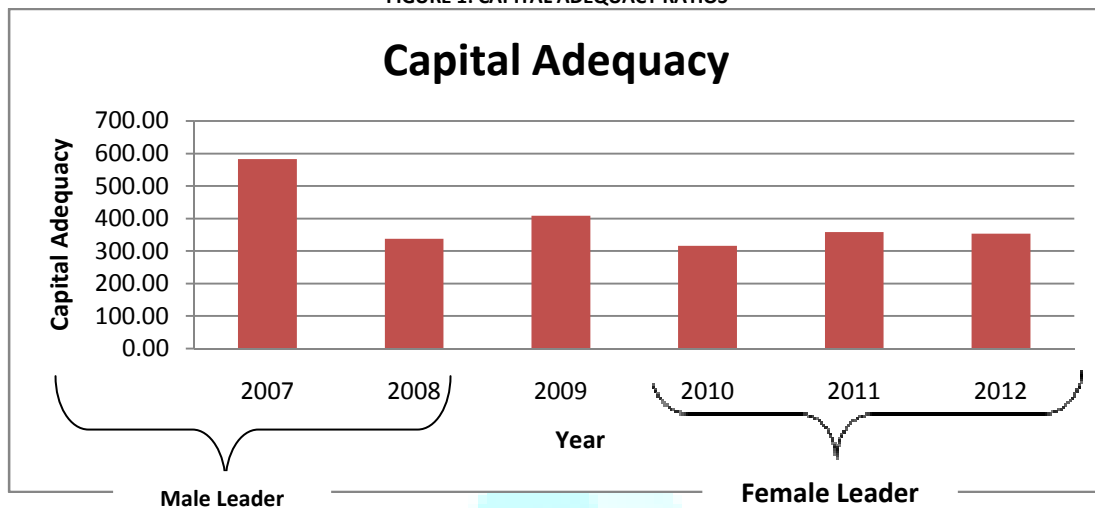
TABLE 2: CAPITAL ADEQUACY RATIO

Ratio/Year	2007	2008	2009	2010	2011	2012
Tier 1	6.42	10.17	9.26	11.18	9.41	9.45
Tier 2	5.15	3.56	4.43	4.62	3.24	4.21
Capital Adequacy Ratio (%)	11.57	13.73	13.69	15.80	12.65	13.66

Table 1 shows the capital adequacy ratio for Axis bank for the year starting from 2006 till 2012. The table shows the way in which the capital adequacy ratio has been calculated. In the similar manner all the other ratios have been calculated for all the six financial years. After calculating all the ratios under the head, Capital, summation is being done in order to arrive at the total of capital ratio.

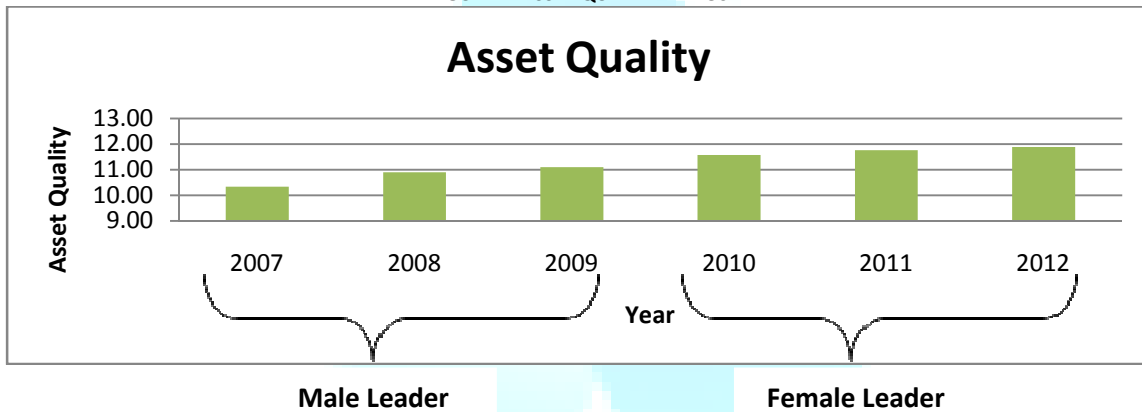
The same method is used for calculating all other ratios under the different heads viz. Asset quality, Management efficiency, Earnings capacity and Liquidity. Finally the score of all the categories are used to prepare the graphs which are shown below.

FIGURE 1: CAPITAL ADEQUACY RATIOS



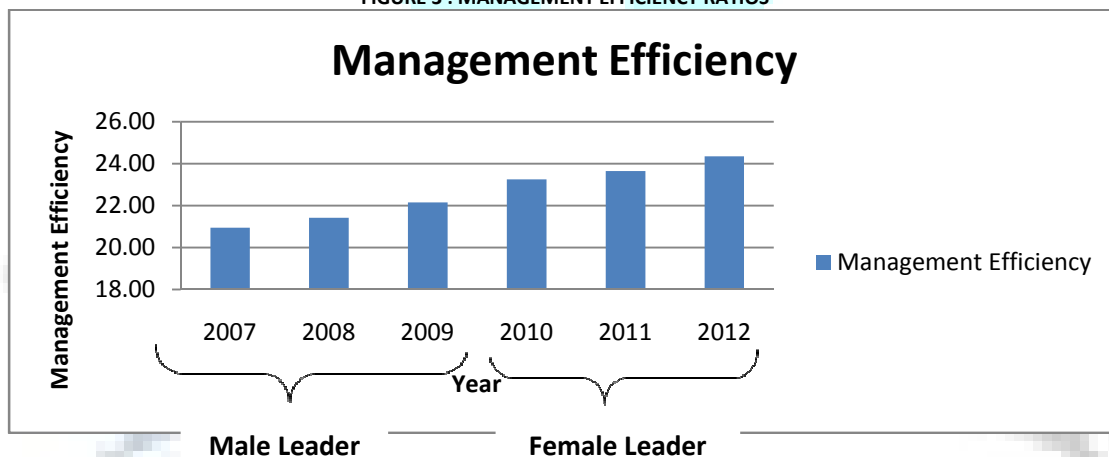
The above graph shows the capital adequacy ratios and there are 4 ratios which were calculated under capital category. The overall capital ratio has gone down. It went down drastically in the year 2008, where the bank was headed by Mr. Nayak. It is the year 2009 in which ratio picked up and again went down in 2010 (this is the first F.Y. of Ms. Shikha Sharma) and thereafter the ratio has shown the increasing trend.

FIGURE 2: ASSET QUALITY RATIOS



There are four ratios for asset quality ratio. It can be seen that there is a continuous increase in the asset quality and which more significant post 2009 and it is a very good sign and there was slow down across the globe during 2008-2009 and banks were severely affected by the same. The Axis bank has been able to manage its assets well and shows the greater strength of the bank.

FIGURE 3 : MANAGEMENT EFFICIENCY RATIOS



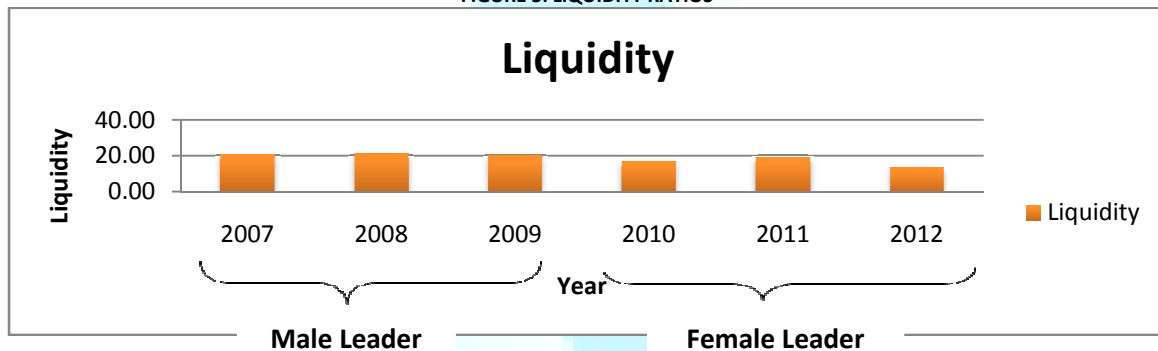
The above graph shows the management ratios which include the business per employee and profit per employee (in percentage), significant ratios for any bank. The management ratios have shown a considerable increase since 2009 which can be interpreted as the management of the bank has the significant impact on the performance of the bank.

FIGURE 4: EARNING CAPACITY RATIO



The above graph shows the earnings capacity of the bank which includes four ratios. There was a sudden decrease in the earning where the total of earning dropped to 34 from 37 in the year 2010. The interest earned grew more than 660% in the year 2011-12 but the interest coverage ratio remained at the same level. The interest income to total income ratio also remained at the level of year 2007. The bank has started showing the signs of recovery and the earnings have almost touched the level of 2007 in the year 2012, though it is not something to boast after six years, but a figure to console during the bad times.

FIGURE 5: LIQUIDITY RATIOS



The above graph shows the various liquidity ratios for the bank for the year starting from 2007 to 2012. Though the level of liquidity has not shown the great signs but the bank has been able to maintain the level of the liquidity in the times when the bank around the globe were greatly impacted.

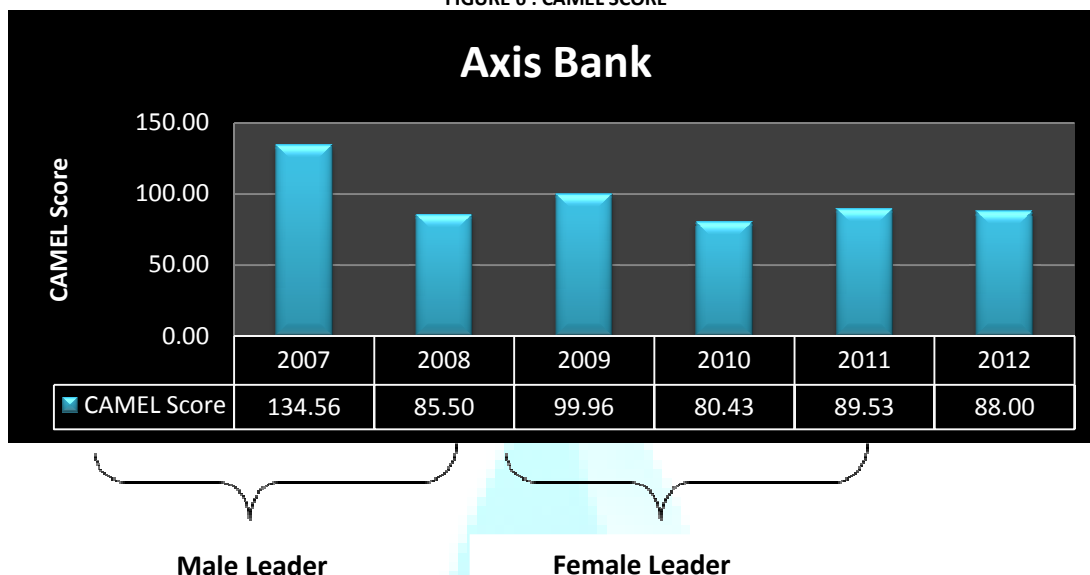
CAMEL MODEL

The CAMEL model is widely used in the analysing the performance of a bank. The CAMEL rating found its place first in United States where supervisory rating of the bank's overall condition used to classify the US banks which primarily uses the financial information of the banks. The score are given where the 1 being strongest and 5 being the weakest. The ratings are not revealed to the general public but conveyed to the banks to help them know their relative position in the industry.

Later on, the other country's apex banks have been using the same. In India, RBI started using the CAMEL rating from the year 1995 on the recommendation of Mr. Padmanabhan, Governor, RBI. The bank uses on-site inspection and Off-site monitoring to supervise the performance of Banks.

The Annual Financial Inspection (AFI) focuses on statutorily mandated areas of solvency, liquidity and operational health of the bank. It is based on internationally adopted CAMEL model modified as CAMELS, i.e., capital adequacy, asset quality, management, earning, liquidity and system and control. While the compliance to the inspection findings is followed up in the usual course, the top management of the Reserve Bank addresses supervisory letters to the top management of the banks highlighting the major areas of supervisory concern that need immediate rectification, holds supervisory discussions and draws up an action plan that can be monitored. All these are followed up vigorously. Indian commercial banks are rated as per supervisory rating model approved by the BFS (Board for Financial Supervision) which is based on CAMELS concept.

FIGURE 6 : CAMEL SCORE



The above graph shows the overall CAMEL score for the Axis bank for the year starting from 2006 to 2012. The overall CAMEL score though has gone down from the year 2006-07 where it was close to 134. After 2008 the score is under 100 and it is being maintained in the range of 80 – 100. Though this is not the good sign or a figure to be happy about that but considering the size of the bank and the global crisis of 2008-09, this might be a satisfactory figure.

DISCUSSION

The Axis bank is the third largest private sector bank in India and it is the fastest growing bank also. Recently the Enam financial service limited has been overtaken by Axis capital Ltd. (subsidiary of Axis bank Ltd.) a move to reach out to more locations, is a testimony of the constant growth of Axis bank. The bank, under the leadership of Mrs. Shikha Sharma, has been aggressive to establish itself without compromising on the risk management.

On analysing the performance of the bank, the capital adequacy ratio which consists of Tier 1 and Tier 2 capitals has been increasing since 2007 and it reached to its highest in the year 2010 which is remarkable. The capital ratio then started declining slightly but still much ahead of the norm of RBI. The other ratios under the capital category have also shown the continuous and gradual increase since 2007. The debt-equity ratio of the bank has also reduced reducing the dependence of the bank on the debt.

The primary concern of any bank is to keep the NPAs under control and the Axis bank has been quite aggressive on managing the risk of NPAs. The NPAs can be reduced either by tightening the norms for granting the loan or by having the proper monitoring of the loan. The bank is primarily a wholesale bank where more than 50% of the loans are given to the corporate and approximately 19% to the retail customer. The bank has managed its assets very well and the ratio of net NPAs to net advances has reduced to 0.28 % in the year 2011-12 from 0.99% in the year 2006-07, a figure to boast.

The management efficiency ratios show the impact of the management on the performance of the bank which consists of 4 ratios including the return on net worth and business and profit per employee. The return on net worth has been increasing since 2006-07 so is the total advances to total deposits. The business per employee and profit per employee has been showing a downward trend as due to the expansion policy of the bank the operating expenses are increasing and it will take some time for the investment to show the results or one can say that gestations period is going on for the bank where the bank need some time to come up to record profit on the investment made.

The interest spread, another important ratio for judging the efficiency of a bank was close to 62% in the year 2006-07 and which around 63% in the year 2011-12. This means the business has increased as shown by other ratios but the interest spread has not much increased. The net profit ratio has increased to a satisfactory level and since then, the net profit to average assets has been increasing. Post 2009, the proportion of interest income to total income has been increasing, this shows that the bank is focussing, more on the core business and is able to derive roughly 80% of its income from the interest.

On the liquidity front the ratios have shown a decreasing trend, one can analyse this from the view point that the liquidity is going down for the bank but a good finance manager would not like to keep the fund idle and therefore the ratios may not be always bad. This can be interpreted in a way that the efficient utilisation of the liquid assets where the firm is able to move its idle liquid assets to the most productive utilisation. So the bank is able to optimise its earnings while maintaining the satisfactory level of liquidity

RECOMMENDATION & SUGGESTION

The Axis bank has been doing well under the leadership of Ms. Shikha Sharma. The bank is primarily a wholesale bank and is required to move towards a corporate bank and retail bank. The necessary steps have been taken by the bank in this regard, which will show the results in the times to come.

There is an increase in the non performing assets, a cause to worry and for that the bank needs to be cautious while lending the loan and should be more vigilant during the term of the loan. The bank needs to improve upon its investment strategies so that the bank can have a diversified portfolio where the risk is minimised without compromising the returns.

CONCLUSION

The Axis bank has demonstrated a greater strength and is occupying the third position among the private sector banks after ICICI bank and HDFC bank. The bank is continuously improving the methods and processes and also trying to woo the retail customer, which constituted a meagre percentage in the total customer base of the bank up to now.

This research shows that though the CAMEL score has been maintained in the range of 80-100, but it has not increased substantially where one can draw the conclusion that the woman leadership has made a huge impact on the overall performance of the bank. Therefore the alternate hypothesis is rejected.

The capital adequacy ratios have gone down during the period of study while asset quality, management efficiency ratios have increased substantially. Earnings ratios have gone down and liquidity ratios are maintained at more or less at the same level but the overall impact on the CAMEL score is not positive.

The bank has been quite aggressive in its approach be it opening ATMs or approaching customer or opening overseas branches to name a few. The bank is quickly running on the expansion programme to widen its length and breadth and few mergers have also taken place for the same strategy. The fact is that the expansion requires investment in the long term assets as well as investment in the operational expenditure, which will start reaping benefits for the bank after some time. The bank has been able to retain its third position in the private sector bank despite of turbulent times and the stiff competition.

Mrs. Shikha Sharma was awarded the banker of the year for year 2012. More and more women are joining the club by heading the firm and this phenomenon is not limited to BFSI in India. Ms. Chitra Ramakrishna will be heading the NSE (National stock exchange) from the April, 2013. It won't be exaggeration to say that the day is not far when the central bank of our country will be headed by one of these woman.

LIMITATIONS

- The time period of study is short i.e. only 6 financial years (starting from 2006-07) are being studied
- The macroeconomic factor may have changed during the comparison period
- The study uses the data given in the balance sheet and profit & Loss account
- The study relies only on the quantitative data not on the qualitative information

SCOPE FOR FURTHER RESEARCH

There is a scope for further research in this sector where one can use the other statistical tools to validate that whether the woman has been effective as a leader of the bank. The research can be carried out using the qualitative factors such as leadership style, support from family, educational qualification, experience etc. Further, the research can be taken a step forward by having interbank comparison.

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A STUDY OF ANTS TEAMBUILDING TECHNIQUES AND ITS APPLICATION IN ORGANIZATIONAL WORK TEAMS

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ABSTRACT

Ants represent one of evolution's most successful and instructive developments. They are one of the nature's most effective biological team. The most inspiring aspect of ants is their cooperative and collective behavior and their ability to work together with amazing efficiency. Ants based team is looked at because today's modern organizational teams are sometimes successful and sometimes unsuccessful in their performance. Teams are not consistent and effective for several reasons. The reasons for the failure of teams, among others, are inappropriate models used to build teams. The study of ants social organization and key characteristics reveal a useful set of principles and can act like guidelines on how teams need to operate to be truly successful, consistent and adaptable to changing environment. Based on the insights from ants behavior and its social organization, selective ants teamwork techniques have been applied in teams and its impact on the team performance as reflected in team synergy and effectiveness is evaluated. The devolved but integrated strengths of the nature's team with the directive and strategic abilities of human can enable organizational team to transform itself into high performing and responsive team, meet the organizational goals effectively and serve the society efficiently at large.

KEYWORDS

Ants, Colony, Team, Team Building, Self-organization, Swarm Intelligence, Synergy, Effectiveness, Altruism.

INTRODUCTION

Man from time immemorial is learning many things from nature. To quote a few examples what man has learnt from nature are: how to fly like birds; camouflage technique from Chameleon; Climbing walls like Geckos using most advanced dry-adhesive technology found in nature; routing calls efficiently in communication network using Ant-based foraging technique and emulation of engineering marvels of termite mounds (Eric Bonabeau and Meyer, 2001); from robot design to material science and as well as in the areas of nanotechnology engineers and scientists are borrowing mechanism from nature (Ken Thompson, 2008); in the field of medicine pioneers have searched through the rich diversity of plants in jungles to discover the special properties that, once discovered, can be synthesized (Meredith Belbin, 1998); and such other insights have come from observing the natural world around us. Nature offers us an invaluable wisdom learned and tested over the course of millions of years. One such area for learning from nature is to look at nature's most successful living biological teams like ants organization which can provide useful guidelines on how teams need to operate to be truly successful. Ants based biological team is looked at because today's organizational teams don't work consistently and effectively for several reasons.

REVIEW OF LITERATURE

Eric Bonabeau and Christopher Meyer (2001) illustrates an application of Ants foraging technique to find efficient routes to food source using pheromones. This technique has been successfully used in some organizations like Southwest Airlines (improved freight transfer rates); Unilever (to efficiently schedule factory equipments in one of its production facilities); Hewlett-Packard laboratories (developed a computer program based on ant-foraging principles that routes telecom calls effectively); France Telecom, British Telecom, and MCI World Com have taken an early lead in designing such ant-based telecom routing methods; Institute Dalle Molle di Studi sull'Intelligenza Artificiale –IDSIA (has developed an ant-based program that Pina Petroli organization uses to direct its fleet of vehicles in distribution) University of Chicago (has applied the ants "bucket-brigade" technique to order pickers in a large distribution center of a major retail chain).

Meredith Belbin (1998) states the behavior of the eusocial insects like ants has been explained by postulating a 'selfish gene'. It is shorthand for saying that the whole genetic complex of an individual creates a body and drives its behavior with the ultimate purpose of protecting and propagating its own genetic complex. The theory holds that the life of an individual is devoted to the perpetuation of his/her genes if necessary at the expense of his/her life.

Harvey Robbins and Michael Finley (2000) mainly discuss about team intelligence, team benefits and causes for team failures. Team intelligence is defined as the intelligence about working together. The author explains how to maintain the highest level of team intelligence with required skills, attitudes and emotional flexibility needed to overcome team's inherent differences.

Jon R. Katzenbach and Douglas K. Smith (2003) the author discusses eight best practices approach in team-building. These are: to establish urgency and direction, selecting members based on skills (technical and functional, problem-solving and interpersonal); Paying particular attention to first meetings and actions; Setting some clear rules of behavior; set and seize upon a few immediate performance-oriented tasks and goals; challenge the group regularly with fresh facts and information; spending lots of time together; exploiting the power of positive feedback, recognition, and reward which helps to shape behaviors critical to team performance and gives positive reinforcement that encourages continued contributions and commitment.

Patrick Lencioni (2006) states the true measure of a team is that it accomplishes the results that it sets out to achieve. To do that on a consistent, ongoing basis, a team must overcome the five dysfunctions – absence of trust, fear of conflict, lack of commitment, avoidance of accountability and inattention to results. The author also provides a framework for building the team using the tools and exercises to overcome dysfunctions.

Barrie G Dale et al (2009) points out that teamwork is a key element in getting people involved in improving organizational performance. There are different teams like Quality Circle, Project team, Yield improvement teams and others. Each type of team has its advantages and differ with characteristics in terms of membership, autonomy, scope of activity, problem selection and others.

Roger Thorson (2005) provides insights into the realm of effective team building. If an individual is unconscious of their own actions and typical responses to different facets of their life, they are not being as effective in a team setting as they could be; and if individuals are unaware, do not appreciate, or do not understand where the diverse strengths are within the working group, personnel simply do not work optimally as a group. The author explores the connection between individual and group awareness of how an individual deals with situations and how this will connect to improve team building within an organization using MBTI tool. The MBTI has been used to assess an individual and team functioning. a) how an individual prefer to respond to circumstances of gathering information (b) one's attitude towards the outer world (c) personal values, subjectivity, logic and objectivity and (d) whether an individual is predisposed to pay more attention to the outer world of people and activities or inner world of ideas and feelings.

Steven L McShane (2011) illustrates the model of team effectiveness. A team is said to be effective when it benefits the organization, its members, and its own survival. Team exists to serve some organizational purpose hence effectiveness is partly measured by the achievement of those objectives. Also, team effectiveness relies on the satisfaction and well-being of the members, and its ability to maintain the commitment to the organizational objectives. The model integrates the main components of team effectiveness – Organizational and Team Environment (rewards, communication, structure, leadership, spatial), Team Design (task characteristics, size, composition), Team Processes (team development, team norms, cohesion, trust) and Team Effectiveness (task accomplishment, satisfy member needs, maintain team survival).

Ramesh Budani (2011) state that teams are used for high performance results. All teams must function effectively to contribute positively. Teambuilding consists of two tasks – to create a team carefully, and to make team operate effectively. Enhancing team effectiveness involves four approaches: Teambuilding, Collaboration, Team leadership and Understanding cultural values. Teambuilding demands right members and right type of efforts and establishes a sense of partnership and emotionally intelligent.

Charles Larry Garner (1998) the literature contains many views about how teams develop. An early stage, the linear model is the Schultz group development model – this model described the three stages where the interpersonal needs of inclusion, control, and affection area addressed within the group context, by the process of receiving from and giving these three needs areas. Charrier described a five step process or ladder group development. These rungs were politeness, goal setting, bid for power, cooperation, and esprit de corps. The classic stage of group model is Tuckman's four stages of small group development – forming, storming, norming, and performing. Gibson model depicts the following stages in the group development process – mutual acceptance, communication & decision making, motivation & productivity, and control & recognition. Mink's model of group development is patterned on the lines of linear process – First is the development of trust. This enables the development of norm of acceptance of individual differences, giving feedback and problem solving.

Sigmund A. Lavine (1960) states the reason for the great for number of ants are their abilities to adjust themselves to almost any environmental conditions like temperature and nesting materials and to eat a wide variety of food. The ants live in communities where each individual does a definite task, working for the common goal. Ants find their way handily by means of their sense of touch and smell which are located in their antennae. When they tap food with their antennae, they actually taste it, for ants not only recognize air-borne smells, but also sense of chemicals, by touch just as human taste buds. Ants recognize both nest mates and intruders. Each species has its own odor.

Oster and Wilson (1978) highlights the important distinction of ants is its capacity to conduct all of its operations concurrently instead of sequentially. The system is efficient and reliable as the specialized caste status of each colony member tends to match the contingency to which it responds.

John H. Sudd and Nigel R. Franks (1987) discusses about the eusociality or truly social nature of ants society, where individuals of the same colony cooperate in caring for the brood, more or less non-reproductive individuals work for the colony and also exists overlapping of adult generations. The trait of sterility in the case of nonreproductive workers in the ant colonies has been reasoned through the propositions of kin selection and parental manipulation. Kin selection hypothesis states that, by reducing personal survival and reproduction workers nevertheless increases the survival and reproduction of genes they share with other members of the colony by common descent. Individuals suffer but the colony flourishes. The theory of Parental manipulation explains that in ants, the queen is able to neuter (sterilize) and control some of their offspring so as to produce a larger total number of offspring. The parents' personal fitness is raised even though that of some of the offspring is lowered.

Stephen Olariu and Albert Y. Zomaya (2006) provides an insight on Swarm Intelligence principles and its applications like ant colony optimization to control of large group of cooperating autonomous agents. Ant colony optimization algorithm based on foraging behavior of real ants has been applied successfully to large number of optimization problems like travelling salesman, scheduling, vehicle routing, networks and others. An Ant algorithm is a multi-agent system, where agents solve required tasks through local interaction, cooperation and combined efforts of agents using emergent property of the ants.

RELEVANCE OF THE STUDY

The effectiveness and efficiency of the team depends on the synergy. If the coordination and cooperation is high, the synergy level is high, if it is less the synergy is less. The level of synergy affects the productivity and effectiveness of the team. Today, the organizational teams are sometimes successful and sometimes not successful. There is no consistency in their performance due to various dynamic factors like organizational, social, technological, and others on the functioning of the team. The organizational teams are confronted with several problems like lack of cohesiveness, co-ordination, information, communication, cooperative learning, rewards and recognition, motivational and leadership issues leading to conflicts, turnover, inefficiencies and productivity. Also, it is becoming difficult for a team to adapt itself to the changing external environment. These issues have an impact on the overall performance and effectiveness of the team and the organization as well. In order to address the team issues and to build more cohesive, mutually supportive committed team with high standards of performance this study focuses on nature's most successful and efficient ants teams, as their organization represents the pinnacle of social evolution with their colony resembling similar to human organizations. It is the nature that has made them successful and efficient through millions of years of evolutionary process. By studying the ant colonies cooperative, cohesive and collective behavior and their organization structure we are actually learning the wisdom of the nature and applying it in the team building activities in human based organization. This statement has been crystallized into the following objectives.

OBJECTIVES OF THE STUDY

- To study the Ants team building behavior and its application in building organizational teams.
- To give suggestions to implement the findings in the organizations and improve the effectiveness of teambuilding activities.

ORGANIZATIONAL TEAMS AND TEAM BUILDING

Organizations throughout the world have increasingly adopted team based work structures. Teams are used for multiple organizational functions to address small and specific organizational task to complex and self-managed work Teams. There are many benefits to using teams in workplace. The Key benefits of work teams include shared goal and responsibilities, innovative and effective problem solving, better decision making, improved communication, better social relations and use of resources, higher productivity and better quality goods and services. Studies reveal that while teams achieve good outcomes, they often fail for one reason or another. Some of the reasons of team failures are misplaced goals, leadership failure, lack of empowerment, trust, communication, rewards and recognition, people problem, wrong policies, unresolved roles, conflicts and others (Harvey A. Robbins and Michael Finley, 2000; Katzenbach and Smith, 2003; Patrick Lencioni, 2006; Barrie G Dale et al, 2009). As a result teams are sometimes successful and sometimes unsuccessful. Hence the performance is not consistent and not effective. The failure rate for work teams is high. The studies indicate that 80 percent of Fortune 500 Companies have half their employees on teams. Many of these teams are of the self-directed nature with estimates of the failure rate at around 50 percent (Keith Denton, 2007). Only a third of change initiatives achieve their objectives and 74% of projects are unsuccessful observes (Ken Thompson, 2008). Academics and management consultants quote team failure rate of 50 percent, and in that half of work teams fail to achieve their goals (Todd Harris, 2008). Roger Thorson (2005) observes that the failure rate of team change efforts is 55 percent. One of the key factors that improve the team performance is by using effective teambuilding methods. Teambuilding is defined as any formal activity intended to improve the development and functioning of a work team (Steven L McShane et al, 2011). Teambuilding is the process

of planning, molding, and guiding a group of individuals into a unified team cited by Terri D Farrar (2009). Teambuilding is a family of organizational development intervention designs and these interventions seek to support work teams improve the way they accomplish the task, work together and enhance interpersonal and problem-solving skills Charles Harry Garner (1998). The main types of teambuilding interventions commonly found are based on goal setting, role definition, interpersonal processes and problem solving. According (R B Rudani, 2011) teambuilding consists of two tasks, to create team carefully and to make team operate effectively. Studies suggest that many teambuilding interventions fail to build an effective team. This calls for exploring new teambuilding techniques to build more effective, consistent and successful teams. One way in which humans have always endeavored to learn, when confronted with barriers, is to see what nature can tell us.

ANTS TEAMWORK: BIOTEAMING

Ants are one of the nature's most effective team. The most inspiring aspect of Ants is their cooperative and collective behavior and their ability to work together with amazing efficiency. Ants live and work together in communities, and an ant community is called a colony. In their colony, there are three distinct types of members – males, queens and workers (L Huge Newman, 1967). These three groups are called castes (Sigmund A Lavine, 1960). A caste is defined as any set or group of individuals that performs specialized labor in the colony for sustained periods of time (Oster and Wilson, 1978). Holldobler and E.O Wilson (1990) define caste as a group that specializes to some extent on one or more roles. The queen, workers, males of the colony plays different roles. The queen plays an important role in the formation of a colony in the beginning and subsequently engages in the task of creation of workforce for the colony. Despite her title, a queen does not rule (Sigmund A Lavine, 1960). Males live in the colony and play a reproductive role temporarily. The worker ants are non-reproductive female and play very important for the survival of the colony. The worker ants build the nest, forage for food, take care of young, fight predators and carry out other colony activities. Workers even switch jobs to meet the ever-changing needs of the colony.

A colony can solve problems unthinkable for individual ants and colonies respond quickly to their environment. Ants collectively carry out cooperative tasks, such as building nests, finding shortest path to food source, bringing food into the colony, allocating workers to different tasks, defending a territory from neighbors, combining forces to move a large unwieldy object, tending their broods, and perform other functions crucial to colony's well-being. The collective behavior that emerges from a group of social insects has been commonly referred to as Swarm Intelligence (Eric Bonabeau and Meyer, 2001).

The key characteristics of Swarm Intelligence reveal a useful set of organizing principles and can act like guidelines in the application of building work teams in human based organizations. Some of the important principles of swarm intelligence according to Stephan Olariu et al (2006) are: members are autonomous; collective behavior can be performed irrespective of number of individuals; any individual can be added or removed or replaced; robust due scalability and flexibility; massively parallel and its functioning is distributed, that is tasks performed by each individual within its group are the same; and members are self-organized, that is, the intelligence exhibited is not present in the individuals, but rather emerges out of the swarm.

The organizational principles that have evolved to give Ants certain superiority in their organizational behavior can be extracted and adapted in human based organizational work teams. Ant colonies in several respects resemble to human based organizations along with few differences. A comparison between ants colony and human based organization has been given by Sudd and Franks (1987). An organization using economic inputs such as land, labor and capital tend to produce outputs such as goods and services. The translation of these to ants colony means land and labor are equivalent to territory and workers respectively. Capital represents stored resources such as food and the like. The profitable output in case of ants is purely the colony's offspring. An ant colony producing more sexual offspring than its neighbor is effectively increasing its market share, just a profitable company might do.

ANTS TEAMBUILDING TECHNIQUES AND APPLICATION

The key elements of ants social organization, behavior and their organization principles are broadly classified into (a) Social Factor (b) Task Factor (c) Member Factor and (d) System Factor.

- (a) **Social Factor** – The techniques covered under this factor are Eusocial, Inclusive fitness and Genetic Bonding. Ants are said to be Eusocial or truly social since the individuals of the same colony cooperate in caring for the brood, exhibit division of labor where non-reproductive or sterile individuals work for the fertile individuals within the colony, and there exist an overlap of at least two generations enabling the offspring to assist the adults at least for some period during their lifetime. Genetically, the workers of the colony strongly integrate the colony. They are highly related to each other and the degree of relatedness is 75 percent (Sudd and Franks, 1987). The idea of inclusive fitness is that an organism's fitness depends not only on its own survival and reproduction but on the productiveness of its relatives. By reducing personal survival and reproduction, as in the case of sterile workers, increase the survival and reproduction of genes they share with other members of the colony by common descent. Individuals suffer, but the colony flourishes and so do the genes, including the altruistic genes (Holldobler and Wilson, 1990).
- (b) **Task Factor** – The important areas cover under this factor are caste specialization, Adaptive division of labor, Swarm rules, mutual monitoring and task allocation. Caste Specialization and Adaptive Division of Labor is the foundations of Ants. In an ant colony there are different castes like queen, sterile workers and male performing different tasks. Workers play an important role in the integration of the colony and performing all colony activities except reproduction. Queen's role is to engage in reproduction. There are two propositions in respect of allocation of tasks or division of labor; they are referred to as continuous caste system for flexibility in task allocation and the other discrete caste system for an efficient system with role clarity. The ants follow very simple swarm rules when working in group. The collective and cooperative behavior in ants emerge based on following such simple rules resulting in greater efficiency, flexibility and robustness for carrying out colony tasks. Mutual Monitoring and Task Switching is an important aspect of social design when under certain colony situations workers behavior is either precocious or over aged. Task Allocation in ants organization consists of one or more combination of Task Fixation, Temporal Polytheism, Physical Caste and Genetic Design (Markus Waibel et al, 2006; John H Sudd and Nigel R Franks, 1987). Task Fixation is based on stimulus and positive feedback system, more the stimulus to do the particular activity more the response or work will be done. In the Temporal Polyethism allocation is age-based and different individuals have different roles at different times in their lives. In the Genetic Design system, the response threshold of workers to various tasks is determined based on artificial evolution. Overall, it shows that the type of mapping between genotype and individual behavior greatly influences the dynamics of task specializations and colony productivity, and also between the mapping system and level of colony relatedness and colony perturbations.
- (c) **Member Factor** – The key traits grouped under this factor are Altruism, Behavioral Elasticity and Homogeneous nature. The workers in ant colony exhibit altruism or social donorism which is the single most important feature of social behavior of ant. The altruistic actions of workers integrate the colony tightly and make possible advanced forms of labor specialization. Behavioral Elasticity is another important trait exhibited by ants and one aspect of social design. Ant colonies show great resilience through the measured response of their members through behavioral elasticity. Ants respond to sudden catastrophes based on mutual monitoring and exhibiting flexibility in carrying out additional tasks in the demanding situation.
- (d) **System Factor** – The techniques classified under this factor are Structure, Self-organized, Communication, Recognition, and Collective Leadership. The ant organization is a special kind of hierarchy, which is called a dense hierarchy (Holldobler and Wilson, 1990). The colony is dense in which each individual can communicate with any other. The colony is hierarchy, a hierarchy-like system in which two or more levels of units with activity in the lower units feeding back to higher levels. Ants are self-organized. Their activities are neither centrally controlled nor locally supervised. The system functions and through contextual local interactions via direct or indirect, the latter type is referred to as Stigmergy in which communication takes place between individuals via the environment. Information plays two major roles. They are 'cohesion' and 'coordination' roles (John H Sudd and Nigel R Franks, 1987). Cohesion helps members to know and identify each other, maintain the relationship and share the benefits among its members. This way it increases the individual inclusive fitness. Coordination helps workers to coordinate in colony activities. The techniques for the purpose of application in human based organizational are selected based on the feasibility. The techniques applied are Eusocial, Genetic Bonding, Inclusive Fitness, Swarm Rules, Caste Specialization, Behavioral Elasticity and Mutual Monitoring.

SUGGESTIONS

The suggestions are given below:

- The Ants based teambuilding techniques is an innovative and effective method that provides the work team and organization an enabling structure without destroying autonomy and intelligence unlike centralized leadership and hierarchical structure.
- The combining of the devolved but integrated strengths of the ants teambuilding techniques with the directive and strategic abilities of human can make organizational work teams more efficient, adaptive and successful.
- Ants based techniques needs to be applied with an integrated approach like appropriate structure, resources and enabling norms for better results.
- Management and members support are important for successful implementation of Ants based teambuilding techniques.
- Team Building is not a "one-time cure" for sustaining team Synergy and Effectiveness. It is an on-going process.
- Centralized leadership and hierarchical structure can be replaced by a flat team structure and cooperative leadership.
- Transferring decision making away from a centralized leader to a co-operating leadership team through autonomy and empowerment improves transparency, communication, decision making and execution.
- Management to take initiative on providing team based rewards and recognition to the team members equally for working collectively to achieve the team goals. This will be improve and develop inclusive fitness.
- Team to collectively create norms or swarm rules on consensual basis to deal with the team activities like team values, task allocation, task management, conflict resolution, sharing of benefits, team development and others. This will develop robust and resilient team
- Improving the degree of interpersonal relations of team members to make team more sociable and mutually supportive. Guiding and support by the mentors.
- Improving emotional intelligence of members through training and bringing transparency along with helps in creating better mutual understanding, trust and emotional bonding. This is in turn help build a better cohesive team.

CONCLUSION

Work teams are increasingly used by many organizations in almost every segment of the economy. Teams are formed for multiple benefits in the workplace. Teams are sometimes successful and sometimes unsuccessful. Hence the performance is not consistent. There is a need for innovative solutions to make teams more successful, consistent and responsive to changes. Nature's most successful living biological teams like Ants can provide useful guidelines on how organizational teams need to operate to be truly successful, consistent and adaptable to change. Application of some selective Ants based teambuilding techniques namely Eusocial, Genetic Bonding, Inclusive Fitness, Swarm Rules, Flat Structure and, Collective Leadership on a sustainable basis enables teams to become more effective and efficient.

SCOPE FOR FURTHER RESEARCH

This study only represents a first step within a broader research program about organizational learning and the identification of supportive and enhancing organizational tools. Organizational learning has been studied from a wide variety of perspectives, and it has been generally acknowledged that the phenomenon is of increasing importance for survival in uncertain and turbulent environments. Still, our understanding is limited, and the different research traditions remains splintered. Organizational theory, cognitive psychology, strategy and information systems are approaching learning from different points of view, concentrating on particular issues. Recently, some integrative efforts have been made, but I believe that there is still a long way to go. I have been participating in other in-depth studies similar to this one. The comparison of the findings of each of the studies will hopefully help to verify and refine the propositions of this research, further elaborating on the findings that have emerged from this study. In particular, more work has to be done to deepen our understanding about supports to individual and collective learning processes.

- Behavioral models of social insects or other animal societies that can stimulate new algorithmic approaches.
- Empirical and theoretical research in swarm intelligence.
- Application of swarm intelligence methods, such as ant colony optimization or particle swarm optimization, to real-world problems in management and other areas.
- Theoretical and experimental research in swarm robotics systems.

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BASEL II AND INDIAN CREDIT RATING AGENCIES – IMPACT & IMPLICATIONS

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ABSTRACT

With Basel II implementation in India, the bank borrowers are rushing to get themselves rated by the credit rating agencies. The business of the rating agencies is growing in multiples. The individual size of these new clients is small and the credit profile is perceived to be weak. The structure of the client portfolio of rating agencies has deteriorated with the dominance of low rated clients from AA to BB. Rating agencies opine that influx of low grade clients would redefine transition probabilities of these grades. This means rating agencies are perhaps assigning conservative ratings which would improve the rating stability at low levels. Low client ratings adds cost to the banks in terms of higher risk capital and increased borrowing costs to their clients. Under this scenario, due to the differential of risk weights prescription for BB ratings and 'no ratings' at 150% & 100% respectively, banks do not gain by insisting external ratings to their clients, albeit external ratings protect the bank managers for their lending decisions! The quality of ratings is failing on the test of ordinality for both Cumulative Default Rates and stability.

JEL CODE

G210, G240, G280

KEYWORDS

Basel II, bank, rating agencies, risk capital, rating transition.

INTRODUCTION

Basel Committee of Banking Supervision (BCBS) formulated banking regulations have been religiously and zealously implemented by RBI on Indian banks, irrespective of their size of operations abroad; though these regulations are primarily meant for Internationally active banks, as defined in BCBS (1988).

Under recently implemented BCBS banking regulations - 2004 (Basel II), the risk weights of bank loan assets are linked to the external credit ratings, under standardised approach, for the determination of risk capital of the banks. This necessitated obtaining the credit rating for most of the loan asset portfolio of the banking industry. And, with implementation of Basel II in India, the Indian credit rating agencies (CRAs)¹ are flooded with unprecedented number of rating assignments and the client portfolio size of CRAs increased in multiples². The increasing volume of business for the CRAs is reflected in the growth of number of outstanding ratings over this period (see fig.1b). The number is still growing. CRAs collaterally gained from the implementation of Basel II !

With the implementation of Basel II in India, not-so-strong and small sized entities too are pressurised to seek ratings, just for being bank borrowers. Though the client portfolio of CRAs is swelling, the revenue per client has declined. The difference between growth in number of rated entities and growth in revenue overtime is a good indicator of the decline in per client revenue.

CRISIL (2013) reported 10,542 rated firms as on Sept.30, 2012 against 783 rated firms four years ago, registering above 133% CAGR. In contrast, its rating revenue increased from Rs.188 cr in CY08 to Rs.313 cr in CY11, registering a CAGR of mere 18%. Though comparative period is not exactly same, large commonality in the period does exist to draw suitable inferences. Further, it is not very clear from the fragmented data collected from various publications of CRISIL that the above rated firm statistics include SME ratings³. And, if it does not, then the fall in per client rating revenue must have been steep. It is noteworthy that CRAs charge rating fee on the basis of size of each of the rated instrument, instead of per rated entity basis. This means the growth in number of rated instruments must have been more than that of rated entities and in effect, the fall in revenue per rated instruments must have been steeper.

Under this scenario, there can be two unwarranted possibilities –

(i) CRAs are aggressively competing for larger share of the new business and assigning higher ratings⁴; or

(ii) CRAs are exercising caution and assigning conservative ratings without conducting adequate due diligence and with low analyst input.

In both the cases, the banks would be the affected party. The banks would not know the actual credit risk of their loan portfolio and either they would provide low risk capital or high risk capital. In the second case, the clients too would be affected with higher borrowing costs incorporating higher risk premium.

Further, the stability of these ratings is important from bank's angle. The fluctuating ratings would lend similar fluctuation to the risk capital requirements of the banks. The higher the credit risk of the loan portfolio, the higher would the risk capital that the bank would need to provide.

Hence, it is pertinent to study the impact and implications of Basel II on Indian CRAs, including whether the rating quality of Indian CRAs has suffered. Here, we have attempted to bridge some of this knowledge gap. In the following sections, the relevant research literature, methodology of the present research and analysis, followed by conclusions is discussed.

LITERATURE SURVEY

Like in India, Basel II induced business must be accruing to the CRAs in other countries as well, wherein these regulations have been implemented. During literature survey, we have not come across any research touching upon this aspect of Basel II either for India or abroad. For India, there could perhaps be two reasons –

(i) Indian rating industry is not too big to catch the attention of global financial researchers; and

(ii) the financial research originating from India is low and is largely focussed on stock markets and mutual funds.

At international level, the key research issues pertaining to credit ratings and banking regulations are non-standardisation of rating definitions, risk assessment differences among CRAs, complacency of CRAs and over-reaction, pro-cyclicality, internal versus external ratings, and impact of inclusion of ratings for banks' risk capital determination.

• *No standardisation:* There is no single quantitative definition of any rating class which is followed by CRAs. The probability of default and expected loss pertaining to a rating class are not standardised. There are instances of differences of ratings assigned by two or more CRAs to the same entity. Such

ratings differences are sometimes to the extent of two notches, according to Moody's (2001). Roy (2005) says that the summary statistics of the three CRAs (S&P, Moody's and Fitch) shows the disagreement in ratings to the extent of 18% for corporates, 15% for banks and 13% for sovereign. Further, he concluded that one CRA was systematically more conservative than the others. Moody's (2001) believes that using non-standardised definition for ratings would create confusion in the market when the rating is used for risk capital determination of banks. Entities with higher ratings would be benefited under Basel II, with the linking of external ratings with the risk capital of the banks. Low rated entities would be penalised in terms of low availability of finance and/or higher cost of finance.

- *No superior information, complacency and over-reaction:* Creighton *et al* (2006) conclude that the CRAs are not perceived to possess superior information than what is there already in public domain. The financial markets reaction is just minimal to the rating actions. Similarly, Elkhoury (2008) concluded that credit ratings tend to be sticky, lagging behind the market and then over-react. This behaviour of over-reaction might have aggravated the financial crisis in the past contributing to the financial instability and cross-country contagion.
- *Pro-cyclicality of ratings:* Amanto & Furfine (2003) believe that though CRAs don't react to the same changes in the risk profile of the firms but when rating agencies do make a change, they over-react relative to present conditions, and the nature of this over-reaction is positively correlated with the state of the aggregate economy. This could be the consequence of excessive optimism (pessimism) during economic upturns (down turns) on the part of the rating agencies. In effect, the capital determination based on external ratings too would be pro-cyclical.
- *Internal versus External ratings:* The banks may have better knowledge about their customers by being in their regular touch, but they would have vested interest in their risk assessment. Kirstein (2002) suggests the local supervisors may impose higher equity requirements on the banks indulging in such irregularities, to do away with any incentive therein. In the absence of such correspondence between such vested divergence and imposition of equity capital requirements, Basel II objectives would be served by external CRAs. But, CRAs have proved to be on the wrong side time and again in the event of a crisis.

METHODOLOGY

The rating quality is determined by the stability of the outstanding ratings of the credit rating agency's portfolio. The stability of the ratings is determined by the philosophy of ratings agencies and the rating portfolio character. The rating philosophy means whether credit ratings are assigned keeping in view the current stage of economic cycle and the likely economic behaviour over the maturity of the rated financial instrument⁵ or the forecasting is done assuming continuation of the current scenario (extrapolation). The rating portfolio character is reflected in the distribution of the ratings in the CRA's rated portfolio. Concentration of the 'live' ratings towards high rating categories would lend more stability to the portfolio and vice versa. The higher rated entities are more likely to survive the economic down turns and low category ratings have high mortality rates.

The stability is indicated by the ratio of the number of ratings remaining unchanged as a proportion to the outstanding ratings (of that rating class) within one year. A matrix drawn for the migration of a rating class to various rating classes within one year is drawn. This matrix is known as one year rating transition matrix. The ordinality in the rating stability and the cumulative default rates (CDRs) of the rating spectrum is used here for examining each CRA's rating quality. To study the impact and implications of Basel II induced business on Indian CRAs, the trends in growth in rating portfolio, portfolio character, default rates, rating philosophy and rating ordinality are examined.

DATA AND ITS LIMITATIONS

There are serious issues concerning the data, with respect to the rating transition matrices of various CRAs in India. The CRAs explicitly refused to furnish the annual rating transition matrices for the past years, citing either policy matter or non-availability of data. Only ICRA, the third largest CRA in India is furnishing one year transition matrix, but ICRA's rating transition matrix too does not give the stability rates of 'BB and lower' ratings, where the current concentration of rating portfolio lies. Other CRAs are publishing 1-year average transition matrices for erratic time periods. The averaging, by nature, eclipses the cyclical variations as well as, pattern of deterioration or improvement in ratings stability. The periodic changes in averaging period further impede the quality of the data for any meaningful analysis and conclusions, both from rating stability of individual CRA viewpoint and for inter-CRA comparisons. The averaging smoothens out the fluctuations in the rating transition, which though affects the banks and their clients.

The difference between 1-year annual transition data and 1-year average transition data is reflected in the table-1:

TABLE:1. CRISIL RATINGS – 1-YR STABILITY RATES (%)

Ratings	1-year annual stability rates*				1-year average stability rates			
	2002	2004	2005	2006	1992-02	1992-04	1992-05	1992-06
AAA	96.10	100.00	100.00	100.00	95.50	96.64	97.24	97.6
AA	90.80	91.10	94.90	93.60	86.50	89.26	89.66	89.9
A	75.00	88.50	81.80	100.00	82.80	82.40	82.37	82.6
BBB	75.00	66.70	75.00	100.00	75.50	73.27	73.26	73.6

*Published on one-off basis. CRISIL declined to give data for other years citing policy matter.

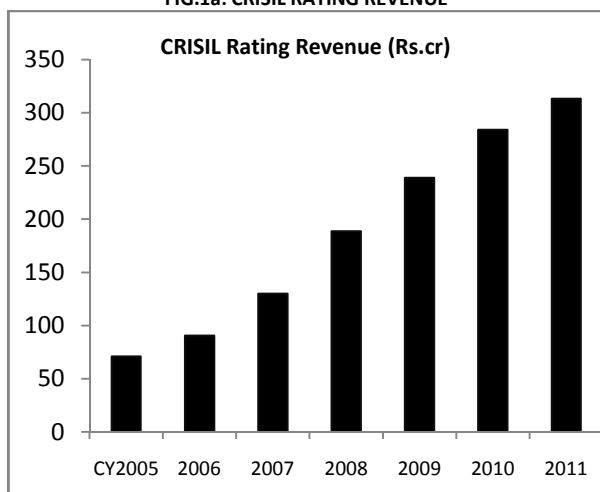
Source : CRISIL

The fluctuations in the annual rating data are discernible, which get smoothen out by the averaging in each rating class. In this context, the following analysis is constrained by the availability of quality data. Consequently, the study relied on the fragmented, unstructured and inconsistent data published by the CRAs. CRISIL, though in the same league, but its data are relatively more comprehensive than that of others, which is largely used for this study.

INTERPRETATION AND ANALYSIS

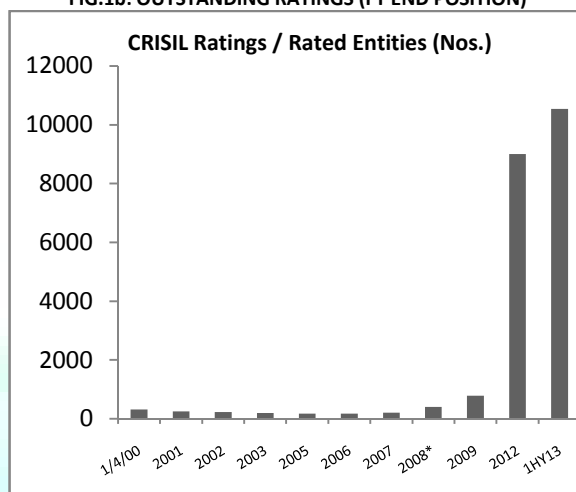
As already stated, the Indian CRAs are experiencing phenomenal rating business growth since the implementation of the Basel II in India. CRISIL (2012) states "CRISIL's portfolio of outstanding ratings has continued to expand in recent years, both in numbers and rating composition. The outstanding ratings increased to around 9000⁶ entities as on March 31, 2012, up from around 400 entities, four years ago." Further, CRISIL reported 10,542 rated entities as on Sept.30, 2012. In six months, it rated 1500+ new entities (perhaps excluding SME ratings)! (see fig.1b). CRISIL is the largest CRA in India and hence may be treated as representative for the industry business growth.

FIG.1a: CRISIL RATING REVENUE



Source : Crisil Annual Reports

FIG.1b: OUTSTANDING RATINGS (FY END POSITION)



*Data upto 1/4/2007 pertains to number of ratings and after that the data relates to rated entities (excluding SME ratings).

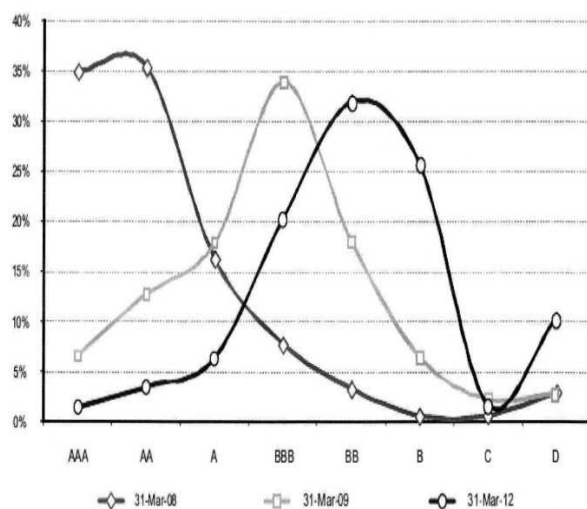
Source : CRISIL

- Shifting rating portfolio character:** With the rise in number of rated entities, the character of the rated entity portfolio has undergone massive change. The majority of the ratings as on March 31, 2008 pertained to AA category which shifted to BB or lower class as on March 31, 2012! This trend is common to both CRISIL and ICRA for which this data is available (see fig.2). Higher rated (AA and above) entities are more likely to withstand the macro-economic downturns than lower rated entities. According to the CRISIL (2011), over the period 1988-2011, the 3 yr cumulative default rate (CDR) of AA is 1.09% against a high of 24.58% for BB. Fitch Ratings (2012) reported better 3 yr CDR of 16.67% during 2000-2009. Significantly, India Ratings (formerly, Fitch India) reported 100% CDR for BB category in 4 year period.

The deterioration in quality of concentration of rated portfolio of both these CRAs (CRISIL & ICRA) is very significant, with more than 60% of its rating portfolio relates to speculative grade (BB or below) as on March 31, 2012. And further, the portfolio is deteriorating fast such that as on Sept.30, 2012, CRISIL reported rise in share of 'BB or below' rated entities to 74% of its portfolio up from 13% four years ago (see fig.3).

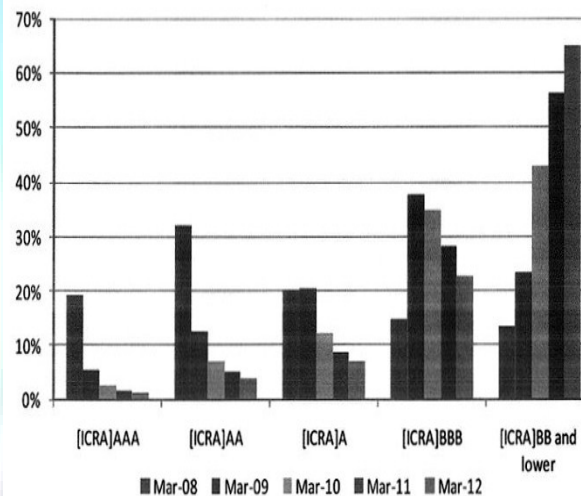
In the absence of information about number of outstanding ratings at the end of year for various rating categories, it is not possible to deduce if the portfolio concentration shifting is due to actual downgrades or addition of new ratings directly to speculative grades⁷.

FIG.2a : DISTRIBUTION OF RATING PORTFOLIO OF CRISIL



Source : Crisil

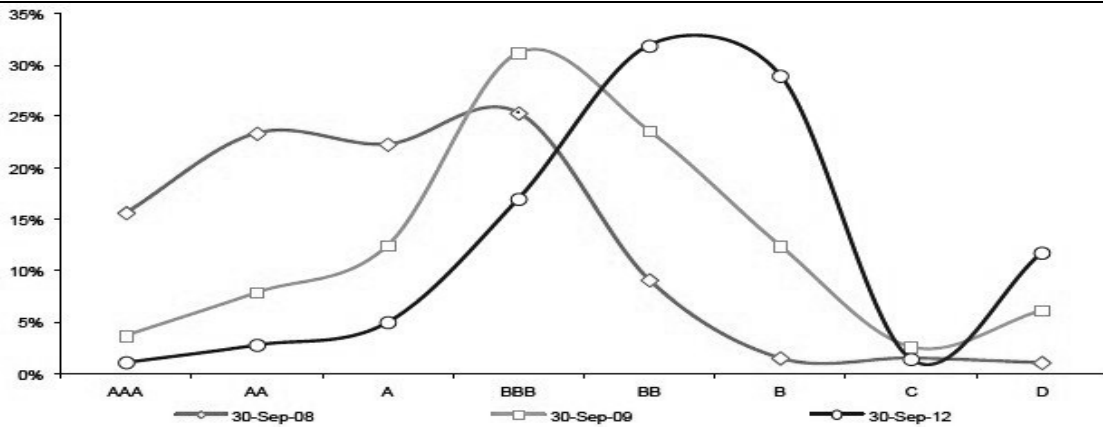
FIG.2b : DISTRIBUTION OF RATING PORTFOLIO OF ICRA



Source : ICRA

There are some peculiar aspects of the rating business in India. During the initial phase of credit rating industry, the strong and big business entities which were eligible to get high ratings got themselves rated during first 20 years of rating history of India. These high rated entities have been active borrowers in fixed income markets so they require mandatory credit ratings. CRAs too targeted those entities as these are high margin clients, as the rating fee is dependent upon the size of the instrument rated. Also, there is prestige issue involved to have impressive client portfolio with low probability of default.

FIG.3: RATING DISTRIBUTION OF CRISIL AS ON SEPT.30, 2012



Source : CRISIL

Another important fact of Indian credit rating business is that once a rating is assigned, it needs the acceptance of rated entity for it to go public. Non-accepted ratings die their own death and never come in public domain. Earlier, the acceptance rate of speculative grade was almost nil. But with Basel II induced solicited ratings coming in speculative categories, the newly rated entities are not giving too much importance to the rating grades, as it is just a formality for them to seek ratings on banks' insistence and there is no possibility for better rating through *rating shopping*. The acceptance of speculative grade ratings was unseen before, which has now skewed the rating portfolio of the CRAs.

The weakening character of the rating portfolio may adversely affect its overall rating migration record. The default may rise in the coming years for the overall rating portfolio.

It is noteworthy that under Basel II guidelines, loans to BB rated entities carry 150% risk weights against 100% risk weight for unrated entities. This is against the Basel I stipulations of 100% risk weights for all types of private loan assets. With high proportion of rated entities figuring in, BB or below categories, the purpose of obtaining credit rating is lost for both bank and its clients, in view of the risk weight structure of the regulations. Banks have to provide more capital if a loan is rated BB than would have to, if it remains unrated.

It can be better understood by an illustration. For a loan asset of Rs.1,000, the risk capital requirements would be as under :

TABLE:2. CAPITAL REQUIREMENTS UNDER VARIOUS RATING CATEGORIES

Ratings →	AAA	AA	A	BBB	BB & Below	Unrated
Risk weight	20%	30%	50%	100%	150%	100%
Capital Required (Rs.)*	18	27	45	90	135	90

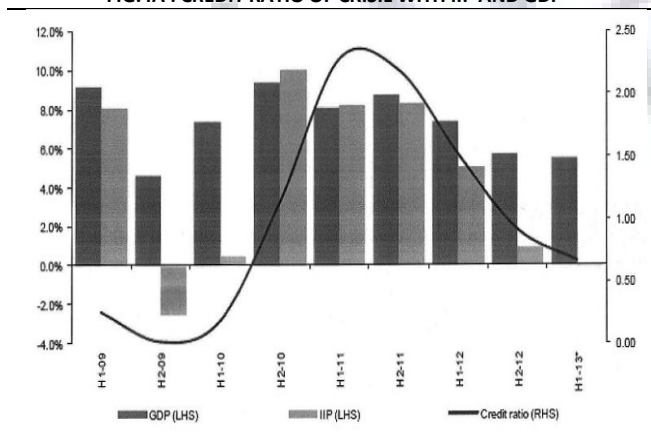
*at 9% CAR

On one side, *BB & below* rated bank clients are paying rating fee to the CRAs and are penalised with higher interest rates on risk based interest rate card, and on the other side, banks have to provide more risk capital than they would have otherwise, had the loan assets remain unrated. Eventually, under this situation, the banks may not insist their weak clients to obtain credit ratings. External ratings protect the bank managers for their lending decisions, though!

- *'Point-of-Time' Ratings moving with macro-economic cycles:* CRAs generally claim that they assign ratings which are through-the-cycle (TTC) that covers the rated instruments' tenure. TTC ratings are long term assessment of the risk associated with an entity which does not change with the economic cycle and therefore, the rating of the borrower will not change due to economic condition. Against this, the point-in-time (PIT) default ratings are assessment of the borrower risk at that particular point-in-time and the borrower will move up or down credit grades in line with the economic cycles (Dalessandro (2011)).

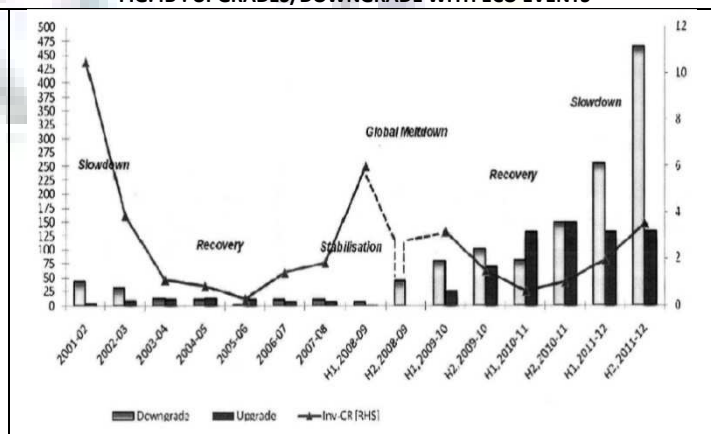
Analysis of the ratings migration of Indian CRAs shows that their assigned ratings are PIT ratings instead of TTC ratings, as these ratings are moving in tandem with the economic cycles. While commenting on the upgrades and downgrades of rating, CRISIL (2002), noted "A strong correlation was observed between GDP growth and the credit ratio⁹ for the previous six years upto 1999-00... IIP growth rate was higher at 9.5% and 13% during 1994-95 and 1995-96 respectively and in those years the credit ratios were above 1.5 levels. Subsequently, IIP growth dropped to around 4-6% and the credit ratio trends also followed a similar trend within 1.0 or lower levels." And, almost 10 years later, CRISIL (2013) maintained and reasoned, "CRISIL's credit ratio exhibits a correlation with economic indicators such as index of industrial production (IIP) and GDP. Notably, the steep fall in credit ratio has been accompanied by a sharp decline in IIP and GDP in H1 of 2012-13." (see fig.4a). ICRA's exhibit also showing similar pattern of upgrade-downgrades with economic cycle phases (fig.4b). This is against the usual claim of rating agencies that their ratings are TTC.

FIG.4A : CREDIT RATIO OF CRISIL WITH IIP AND GDP



Source : CRISIL

FIG.4B : UPGRADES/DOWNGRADE WITH ECO EVENTS*



Source : ICRA

*ICRA's chart is showing 'inverse credit ratio' curve against credit ratio curve of CRISIL in adjoining chart

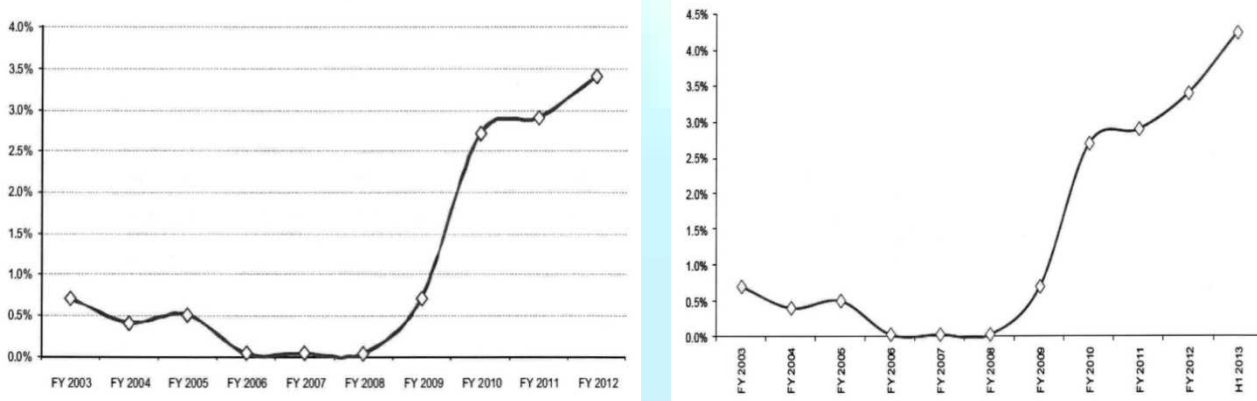
The two premier CRAs of India themselves noted in their own publications that rating upgrades-downgrades are following IIP and GDP growth patterns. The claim that ratings are TTC, at least in India, does not hold true, by CRAs' own admission and the relevant data. If credit ratings are subject to economic risks, then the pro-cyclicality is imbibed.

It is noteworthy to quote S&P (2006) here, "The ideal is to rate 'through the cycle'. There is no point in assigning high ratings to a company enjoying peak prosperity if that performance level is expected to be only temporary. Similarly, there is no need to lower ratings to reflect poor performance as long as one can reliably anticipate that better times are just around the corner." This is against the Indian CRAs' track record.

PIT ratings lose their significance in offering predictability or probability of servicing of the rated financial instruments. In other words, the credit ratings become pro-cyclical. And, this feature of ratings affects the risk capital requirements of the banks, and lends pro-cyclicality attributes. Amato & Furfine (2003) feel that to the extent that ratings are pro-cyclical, banks' CAR will tend to be higher during downturns thereby reducing credit supply from banking.

- **Rising incidence of defaults:** With shifting profile of rated entities to low investment or non-investment grades and the pro-cyclical nature of credit ratings, the default rate is rising (fig.5). The defaults rate in CRISIL's rated portfolio has risen within a period of 6 months from 3.4% in 2011-12 to 4.2% in 1HFY2013. CRISIL reported 183 defaults during first two quarters of FY2013 against 107 in the corresponding period of FY2012. Similarly, India Ratings reported rising default rates in its portfolio. The default rate of India Ratings increased to 2.21% in 2010-11 from 1.28% in 2009-10. And, this default rate is likely to rise further to unprecedented levels as the actual effect of portfolio character deterioration would come into being in next 8-12 quarters. The default rate would though depend upon the rating stability at lower levels.

FIG.5 RISING DEFAULT RATE (CRISIL) IN 6 MONTHS



Source : CRISIL

- **Rising stability at low rating categories:** Indian CRAs feel that the stability rates and default rates in lower rating categories (BBB and BB or below) would rise. This means the rating transition rate of lower ratings would improve and so would be the CDR. CRISIL (2010) reported surge in BBB and lower ratings during 2010 with smaller companies availing the ratings for their bank loan facilities and its overall default rate declined in 2010 to 2.3% from 3% in 2009 even though there was steep rise in default susceptible lower category ratings in its overall rating portfolio. Further, it reported improvement in default rates and stability rates prominently in BB & B categories, though it did not furnish the related data.

TABLE 3: CRISIL'S 1-YEAR AVERAGE RATING STABILITY RATES

Period	AAA	AA	A	BBB
2000-2007	98.1%	93.7%	86.4%	73.8%
2000-2008	97.9%	94.7%	87.7%	75.8%
2000-2009	96.5%	93.8%	88.4%	80.2%
2000-2010	96.9%	93.9%	88.8%	87.2%
2000-2011	97.3%	94.4%	89.9%	89.3%

Note : Data for BB and below is not available

Source: CRISIL

BBB ratings showed marked improvement in one year average stability rates from 73.8% during 2000-2007 to 89.3% during 2000-2011. Despite new ratings, which are largely related to small business outfits, getting added to BBB or below categories during 2007-2011 (Basel II induced business), there was significant improvement in stability rates in these categories. This implies that the smaller entities showed better credit risk profile stability when the economy was slowing!

There can be two reasons for this trend:

- CRAs assigning low rating to the banks' clients, giving higher weightage to the entity size factor though these are better managed businesses (owner – manager type entities) and owner-management has high stakes in business success, and business reputation is important to them; or
- Caution on the part of the CRAs to handle such high workload of new ratings (more than 10,000 in one year) and, naturally, assigning lower ratings without conducting desired analytical due diligence and relying more on process driven exercise.

In any of these cases, both clients and banks get penalised. The bank borrowers are assigned low ratings and hence, banks would have to provide higher risk capital and clients have to bear higher borrowing costs associated with low level of ratings.

It would be a learning for Indian CRAs too that eventually these would rectify their style of operations, in case stability of BB rises higher to that of BBB. Till then, both banks and their clients would suffer.

- **Quality of Ratings:** Though, the quality of ratings is determined by the stability of ratings as determined by the 1-year annual transition matrix and CDRs of rating classes, in the absence of this information, ordinality in rating transition and CDR is a good indicator for examining the quality of individual CRA's ratings.

TABLE 4: CRISIL'S 3-YR CDR AND 1-YR TRANSITION RATES FOR LOWER CATEGORIES

Calculation Basis (for 2001-2011)	Long Term Instruments 3 YR CDR		Short Term Instruments 1 Yr Avg. Transition Rates			
	BB	B	A1	A2	A3	A4
	Monthly static pool basis	19.50%	15.46%	85.63%	88.99%	86.58%
Annual static pool basis	17.65%	15.31%	85.70%	88.60%	87.10%	92.40%

Source : CRISIL Default Study 2011

CRISIL claims that its rating process is vetted by the ordinal nature of default rates, high stability and predictability of its ratings. But, as per published information in CRISIL (2011), such claim is not fully admissible, at least for lower rating categories (see table-4). The statistics for lower grade ratings is better than higher grades for both short and long term instruments for both default and transition rates, calculated on either monthly or annual static pool basis. In

fact, A2 & A4 categories showed better stability than their respective immediate higher rating categories and stability rates of A4 are better than all other higher rating categories!

CRISIL numbers are just indicative in nature and this study should not be construed as a company-specific case study. CRISIL is the largest CRA in India. The story could be similar or worse for other CRAs, which have shied away from disclosing the relevant data on self regulatory basis.

CONCLUSION

Overall, Indian CRAs have seen massive business growth during since 2008, which is largely Basel II induced. These CRAs are experiencing structural changes in their rating portfolio which would have long term ramifications on rating transitions and default rates.

Though the new rating business is boon to CRAs from revenue point of view, the concentration of rating portfolio has already shifted from high investment grade ratings to speculative grades ratings. The low ratings naturally are more susceptible to quick rating migrations (low stability) and high default rates as compared to their high investment grade counterparts.

Crisil, the largest CRA in India, opines that shifting of rating portfolio to low grades would redefine transition or default probabilities of these rating classes. This means, these low rating classes would better their default probabilities from the current levels. BBB ratings are already showing high improvement in stability from 74% to 89% during 2007-2011. If this observation of CRAs is believed to be correct, then CRAs are either giving too much weightage to the size of the entities disregard to their owner-management feature, business and financial strengths or are conducting inadequate analytical due diligence and simply assigning low grade ratings to be on safer side through process-driven rating exercise.

Irrespective of the future events of whether low rating classes would redefine their risk perception or whether these entities would show actual deterioration or caution on the part of the CRAs, banks have to provide more risk capital for these rated entities than they would have to, otherwise. The higher pricing of finance due to provision of higher risk capital is collateral damage to their clients.

The pro-cyclical feature of the ratings in India would adversely affect the capital requirements of the banks. Even if Indian banks graduate themselves for internal ratings under Advance Approach of the Basel II for credit risk, the pro-cyclicality is unlikely to be diminished because these CRAs are reported to be advising and implementing their models in the banks. The ordinality in the lower rating classes of CRISIL for both CDR and transition is missing for both short term and long term instruments. This reflects the lack of quality of ratings.

Another important aspect of the credit ratings is the 1-yr transition matrix which determines the quality of the ratings. This information is consciously being kept under wraps by the frontline Indian CRAs. Indian CRAs are publishing 1-yr transition matrix on average basis for inconsistent periods which hides annual random movement of the ratings. The presence of this random movement is reflected by one-off published data shown in Table-1. The dispersion of ratings stability could not be determined due to absence of data, the random movement though affects the level of risk capital of the banks which is based on this movement. This side of the story could not be explored due to secrecy maintained around it. However, the secrecy can't be without reasons.

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NOTES

- The data used in this paper is collated from various publications of CRAs given in unstructured formats.
- In India, there five CRAs-CRISIL, CARE, ICRA, India Ratings (formerly, Fitch India) and Brickworks. (SME Rating Agency received license from SEBI and RBI in Sept-Oct.2012).
- In Crisil's Annual Report (2007), Director Report says*"The Reserve Bank of India's guidelines on the use of external ratings for computation of Capital under Basel II norms have opened up the bank loan rating market. The Bank Loan Rating activity got off to a brisk start in 2007... We expect substantial growth in the bank loan rating business in 2008 with banks' need to comply with Basel II requirements."*
- CRISIL assigned fresh 2,434 bank loan ratings and 7,800 SME ratings in CY2010 itself and about 12500 SME ratings in CY2011.
- In 2006 alone, Moody's stamped 30 securities everyday as triple-A. 83% of the triple-A rated securities were downgraded ultimately in that year (Financial Crisis Inquiry Commission Report 2011)
- It is noteworthy that credit rating is assigned to the financial instrument and not to the rated entity. The specifications of the financial instruments are considered while assigning the rating.
- Major rise came in CY2009 – from 900 ratings as on Dec.31, 2008 to more than 8,000 ratings as on Dec.31, 2009.
- S&P provides this data in its publications but its Indian affiliate and other Indian CRAs prefer not to publish such data.
- Credit ratio is the ratio of no. of upgrades to no. of downgrades.

A STUDY ON THE CONSUMPTION PATTERN OF BAKERY PRODUCTS IN SOUTHERN REGION OF TAMIL NADU

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ABSTRACT

This article is an outline of the study conducted on the topic "A study on the consumption pattern of bakery products in southern region of Tamil nadu" The main objectives of the study is to study the consumer preference towards bakery products and to analyse the perception of consumers towards the bakery and bakery products. The present study has been confined to Study consumption pattern of bakery products. The study will cover only from the point of consumers from southern region of Tamil Nadu. The present study is an empirical research based on survey method. The researchers have collected primary data by comprehensive interview schedule and Secondary data have been collected from websites, books and journals. This study was carried out for a period of two months. The data which were collected from the respondents were analysed by using percentage analysis. Five point scales that are Likert's scale analysis, weighted average ranking and chi-square test are used.

KEYWORDS

Baker, Bakery products, Baking, Baker.

INTRODUCTION

Food is an integral part of our society and necessary for survival. Food is also a source of pleasure. It is an excess of food, or too much of the wrong kinds of foods, that lead to health problems, obesity, and, in a worst case, poisoning. Thus a delicate balance must be integrated into our eating habits. Food can also be seen as a privilege, gift or reward. It is common to give a child a sweet in reward for good behavior, or give a box of chocolates to a loved one as a sign of affection. Food industry in India is broadly divided into the following categories. They are basic food industry and processed food industry. The basic or primary food industry comprises units engaged in rice and flour milling, legume and oil seed processing, and manufacture of sugar and jaggery. The processed food industry deals with the production of biscuits and bakery goods, confectionery, vanaspathi, meat and fish products, fruits and vegetable products, breakfast products, and etc. Bakery industry is developed in India and it is on increasing trends. The competition is heavy with advertising on local channels, handbills and boards. They are developing to cater the needs of the growing mass of youth. These bakery products are served on special occasion and festival and bakery industry is growing tremendously in number. There are basically two types of bakeries: wholesale bakeries and retail bakeries. The wholesale bakery is the place where there is mass production of bread, cakes and other bakery goodies for distribution purposes. There is usually a large workforce of people who bake and make foodstuffs while following hygienic standards set by the government. A wholesale bakery need not only be a factory; there are even small family businesses that run wholesale bakeries. These family-run businesses are more often found in towns and small cities where they supply bread and foodstuffs to shops of the town. A retail bakery is the place we usually visit for buying bakery products; we can choose from a wide range of bakery products.

STATEMENT OF THE PROBLEM

With hectic schedules in the lives, people do not have time to cook and eat. This increases the demand for the bakery products. Increasing income is always accompanied by a change in the food habit and particularly the consumption of bakery products, ready to eat products and fast foods. Now a days, we can see many of the bakery arranges for food park and cake and they are celebrating cake festival too. Awareness of the need of quality and safety in food with nutrition has risen among people. These factors pose an enormous challenge to the food processing units to come out with appropriate food products that suit the varying needs of the customers. These development demands for the food sector, in order to meet consumer needs are proving a challenge for food scientists and technologists. Euro monitor International, a market research company, says the amount of money Indians spend on meals outside the home has more than doubled in the past decade, to about 200 billion Indian rupees a year and is expected to double again in about half that time. This induced the researcher to study the consumption pattern of bakery products in southern region of Tamil Nadu. The factors that are studied include the consumer attitudes and consumer preferences.

RESEARCH OBJECTIVES

The objectives of the study are:

- To study the consumer preference towards bakery products
- To study the consumption pattern of bakery products among the consumers in southern region of Tamil Nadu
- To analyse the perception of consumers towards the bakery and bakery products
- To give suggestions to the bakers and consumers for better handling of the bakery products.

SCOPE OF THE STUDY

The present study takes into consideration of the consumption pattern and the attitude of the consumers towards the bakery and bakery products and this study is confined to southern region of Tamil Nadu. None of the researches had studied the topic in detail, so the researchers made an attempt to focus the consumption pattern of bakery products.

GEORAPHICAL AREA OF STUDY

The study area for the consumption pattern of the bakery products in the southern region of Tamil Nadu have covered four out of nine districts in the southern region, such as Virudhunagar, Madurai, Ramanathapuram and Sivagangai. Virudhunagar District is an administrative district of Tamil Nadu state in southern India. According to the 2011 census Virudhunagar district has a population of 1,943,309. Majority of the population are involved in Industries and agriculture. Madurai district is one of the 32 districts of the state of Tamil Nadu, in southeastern India. According to the 2011 census Madurai district has a population of 3,041,038. Madurai is also known as "Athens of the East. Ramanathapuram District is an administrative district of Tamil Nadu state in southern India. Total Population of Ramanathapuram district in 2011 census was 1,337,560. Sivagangai District is an administrative district of Tamil Nadu state in southern India. According to the 2011 census Sivagangai district has a population of 1,341,250.

REVIEW OF PREVIOUS STUDIES

There are numerous studies having been undertaken in areas related to this topic. The following studies have been reviewed.

- The study entitled, 'A study on consumption pattern of Bakery Products in Madurai City' analyses the bakery products with special reference to branded and unbranded bakery products available in the market.
- A study entitled "a study on consumer preference towards bakery products in Madurai city" (2007) by Ms. Angelin Gunavathy.E analyses the taste and preferences of bakery items and purchasing behaviour of the consumer.
- Kubendran and Vanniarajan (2005) founded that, the change in consumption pattern is due to changes in food habits. If income and urbanization increase among consumers, the percentage of income spent on consumption increases. The urban consumers prefer mostly branded products compared to rural consumers. The most significant factors influencing buying decisions were acceptability, quality, regular supply, door delivery and the mode of payment.
- Ramasamy (2005) studied consumer behaviour towards instant food products in Madurai, the second largest city in Tamil Nadu and observed that consumers do build opinion about a brand on the basis of which various product features play an important role in decision making process. A large number of respondents (78.00%) laid emphasis on quality and 76.00 per cent on price which is an important factor, while 64.00 per cent of the respondents attached importance to the image of the manufacturer and 50.00 per cent considered packaging as an important factor and an equal percentage (50.00%) felt longer self life influenced them.

But however none of the studies has made any attempt to probe into the consumption pattern of bakery products. Hence, the researchers have undertaken the present study titled "A study on the consumption pattern of bakery products in southern region of Tamil Nadu" as a pioneering approach to find out the various influencing factors and level of attitude towards bakery and its products.

PERIOD OF THE STUDY

The survey for collection of primary data was conducted during the month of January and March 2012.

OPERATIONAL DEFINITIONS

➤ Attitude

Attitude is an expression of inner feelings that reflect whether a person is favourably or unfavourably predisposed to some 'object' (e.g. brand, a service). As an outcome of some psychological process, attitudes are not directly observable, but must be inferred from what people say or from their behaviour. An "Attitude is a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object".¹

➤ Bakery products

Bakery products include bread, rolls, buns, biscuits, pastries, donuts, Danishes, cakes, muffins, bars, cookies, etc.

➤ Baker

One who produce and sell the bakery products.

➤ Bakery

Bakery is the place where the bakery products are sold or the shop for bakery products.

➤ Baking

Baking is the process of cooking or roasting by dry heat in a closed place called oven.

METHODOLOGY

The present study is an empirical research based on survey method. The researchers have collected primary data by comprehensive interview schedule and Secondary data have been collected from websites, books and journals with regard to the bakeries and bakery products.

PRE-TESTING

The interview schedule prepared for the respondents have been pre-tested by the researchers' in person. Comments on the question were noted and after careful analysis necessary modification have been made in the interview schedule. Pre-testing was conducted on 10 respondents. The researchers interviewed two respondents each at Paramakudi, Devakottai, Karaikudi, Sivagangai, Ramanathapuram, Madurai and Virudhunagar. In the course of the interview, the researchers had experienced some difficulties in getting answers to some of the questions raised and suitable changes have been incorporated before finalizing the interview schedule.

SAMPLE DESIGN

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure, the researchers would adopt in selecting items for the sample. The study area covers southern region of Tamil Nadu based on demographic, economic and other conditions as centre for the study in order to measure the consumers' preferences and consumption pattern of bakery products. Southern region consist of nine districts, out of which four districts have been chosen. A sample of 50 respondents was selected from each area to ensure equal representation. Hence the sample size consists of 200 respondents who were selected on the basis of convenience sampling method from Paramakudi, Devakottai, Karaikudi, Ramanathapuram, Madurai and Virudhunagar. This study is both descriptive and analytical.

FRAMEWORK OF ANALYSIS

With reference to the objectives of the study, various factors are taken into consideration such as age of the respondents, gender of the respondents, educational qualification of the respondents, Occupation of the respondents, marital status of the respondents, monthly income of the respondents and region of survival of the respondents. The data which were collected from the respondents were analysed by using percentage analysis. Three point and five point scales that are Likert's scale analysis and chi-square test are used. This study also uses comparison table as tool in order to study the various factors.

¹ Leon G. Schiffman and Lestie Lazar Kanuk. Consumer Behaviour, p.270.

ANALYSIS AND INTERPRETATION

CLASSIFICATION OF GENDER ON THE BASIS OF DISTRICT

TABLE NO. 1: CLASSIFICATION OF GENDER ON THE BASIS OF DISTRICT

Gender	District				Total
	Virudhunagar	Madurai	Ramanathapuram	Sivagangai	
Male	39(29%)	26(19%)	28(21%)	41(31%)	134(100%)
Female	11(17%)	24(36%)	22(33%)	09(14%)	66(100%)
Total	50	50	50	50	200

Source: Primary Data

It is observed that out of 200 sample respondents, 134 are male respondents out of which 41(31%) are from Sivagangai and 66 respondents are female out of which 24(36%) are from Madurai.

AWARENESS TOWARDS BAKERY PRODUCTS

In this study the respondents are asked to give their opinion about bakeries. The response observed for each of the products in the schedule have been scored and tabulated on a master sheet. The scoring factor is based on Likert's method. To secure the total score weights were given by the researchers to the following factors. Three points for friends, two for relatives, and one for advertisements. Thus the total scores were obtained.

The levels of awareness has been classified into three categories namely, high level, medium level and low level for analytical purpose, while the score value $\geq \bar{X} + \sigma$ and score value $\geq \bar{X} - \sigma$ have been classified as high level and low level of awareness respectively, the score value between $\bar{X} - \sigma$ and $\bar{X} + \sigma$

are classified as medium level of awareness. \bar{X} and σ are the arithmetic mean and standard deviation calculated from the score value of 200 respondents

Based on the mean and standard deviation, the levels were classified as below. $\bar{X} + \sigma$ is (4.9) – above 5 – high level, $\bar{X} - \sigma$ is (4.1) – below 4 – Low level and

($\bar{X} - \sigma$) to ($\bar{X} + \sigma$) is between 4 and 5 – Medium level. Table 1 highlights the cross tabulation between the personal factors of the respondents and Level of awareness of the respondents towards bakeries. The researchers have made an attempt to study the level of awareness among bakery products and the bakery.

The factor is classified as high level, medium level and low level. This factor has been cross tabulated with other factors like gender, age, educational qualification, occupation, income, marital status and region of survival.

TABLE NO. 2: LEVEL OF AWARENESS AND PERSONAL FACTORS

Personal Factors		Level Of Awareness			
		High	Medium	Low	Total
Gender	Male	67(50%)	27(20%)	40(30%)	134(100%)
	Female	41(62%)	15(28%)	10(15%)	66(100%)
	Total	108	42	50	200
Age	Less than 25 years	68(71%)	20(20%)	8(9%)	96(100%)
	25-50 years	40(57%)	18(26%)	12(17%)	70(100%)
	Above 50 years	-	4(12%)	30(88%)	34(100%)
	Total	108	42	50	200
Educational Qualification	Illiterate	-	5(42%)	7(58%)	12(100%)
	HSC	55(61%)	21(23%)	14(16%)	90(100%)
	Graduates	53(54%)	16(16%)	29(30%)	98(100%)
	Total	108	42	50	200
Marital Status	Married	25(35%)	22(30%)	25(35%)	72(100%)
	Unmarried	83(65%)	20(16%)	25(19%)	128(100%)
	Total	108	42	50	200
Occupation	Students	40(80%)	10(20%)	-	50(100%)
	Home makers	4(34%)	4(33%)	4(33%)	12(100%)
	Employees	60(51%)	18(15%)	39(34%)	117(100%)
	Farmers	-	2(33%)	4(67%)	6(100%)
	Business	4(27%)	8(53%)	3(20%)	15(100%)
	Total	108	42	50	200
Income	Less than Rs 25000	73(50%)	28(19%)	45(31%)	146(100%)
	Rs 25000 –Rs 50000	21(58%)	10(28%)	5(14%)	36(100%)
	Above Rs 50000	14(78%)	4(22%)	-	18(100%)
	Total	108	42	50	200
Region of survival	Rural	25(43%)	25(43%)	8(14%)	58(100%)
	Urban	83(58%)	17(20%)	42(22%)	142(100%)
	Total	108	42	50	200

Source: Primary Data

It is observed that out of 200 sample respondents, 62% of the female genders have high level of awareness compare to the male respondents in the gender group. In the age group of above 50 years of age, 88% of the respondents have low level of awareness whereas 71% of the respondents in the age group of less than 25 years have high level of awareness towards bakery products. Among the educational qualification, most of the respondents from the HSC and Graduates have high level of awareness. From among the marital status, 65% of the unmarried respondents have high level of awareness. With regard to the occupational category, 80% of the students have high level of awareness whereas 67% of farmers have low level of awareness towards the bakery products.

In the income category, 78% of the respondents whose income above Rs.50, 000 have high level of awareness. The respondents region of survival in among the rural and urban, 58% of the respondents have high level of awareness towards the bakery products. By and large, most of the sample respondents inclined towards the high level of awareness with regard to the bakery products. The study disclosed that majority of the respondents have high level of awareness towards bakery products but some of the respondents have low level of awareness about bakery products like pizza, burger, sandwich etc. because some of the bakeries fail to create awareness of bakery food to the consumers and especially to the home makers, farmers and high age group people.

CHI-SQUARE TEST RESULTS- AWARENESS TOWARDS BAKERY PRODUCTS

Following are the results for chi-square test between demographic factors of the respondents and level of awareness towards bakery products

To find out whether there is a significant relationship between these two factors, the following null hypothesis is framed. The frequency of cell value is less than 5. Hence Yates Correction is applied in chi- square test.

Ho – There is no significant relationship between the personal factors of the respondents and their level of awareness towards bakery products.

The table value of χ^2 for degree of freedom 2 at 5% level of significance is 5.991. The calculated value of χ^2 is less than the table value; therefore the null hypothesis is accepted that there is no significant relationship exists between the **gender** and the **level of awareness** regarding bakery products.

The table value of χ^2 for degree of freedom 4 at 5% level of significance is 9.488. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **age** and the **level of awareness** regarding bakery products.

The table value of χ^2 for degree of freedom 4 at 5% level of significance is 9.488. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **educational qualification** and the **level of awareness** regarding bakery products.

The table value of χ^2 for degree of freedom 2 at 5% level of significance is 5.991. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **marital status** and the **level of awareness** regarding bakery products.

The table value of χ^2 for degree of freedom 8 at 5% level of significance is 15.507. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **occupation** and the **level of awareness** regarding bakery products.

The table value of χ^2 for degree of freedom 4 at 5% level of significance is 9.488. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **monthly income** and the **level of awareness** regarding bakery products.

The table value of χ^2 for degree of freedom 2 at 5% level of significance is 5.991. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **region of survival** and the **level of awareness** regarding bakery products.

PLACE AND SPENDING PATTERN OF THE RESPONDENTS TOWARDS BAKERY PRODUCTS

TABLE NO. 3: PLACE AND SPENDING PATTERN OF THE RESPONDENTS TOWARDS BAKERY PRODUCTS

Place	Spending Pattern			Total
	Less Than Rs 500	Rs 500 To Rs 1000	More Than Rs 1000	
Madurai	2(7%)	23(18%)	25(54%)	50
Virudhunagar	6(22%)	40(31%)	4(9%)	50
Ramanathapuram	6(22%)	29(23%)	15(33%)	50
Sivagangai	13(49%)	25(28%)	2(4%)	50
Total	27(100%)	127(100%)	46(100%)	200

Source: Primary Data

Table 3 depicts that the comparison between the amounts spent for the consumption of bakery products and the place of the respondents residing. Out of 200 respondents, 27 respondents have spent less than Rs 500 per month out of which 13(49%) respondents are from sivagangai district. Spending pattern of 127 respondents are of Rs 500 and Rs 1000 out of which 40(31%) respondents are from Virudhunagar district and the spending pattern of respondents are more than Rs 1000 per month for the purchase of bakery products out of which 25(54%) are from Madurai district. On an average the spending pattern on consumption of bakery products is mostly likely between Rs 500 and Rs 1000.

ATTITUDE OF CONSUMER TOWARDS BAKERY PRODUCTS

In this study the respondents are asked to give their opinion on the basis of five level of satisfaction namely highly satisfied, satisfied, neutral, dissatisfied and highly dissatisfied. The response observed for each of the products in the schedule have been scored and tabulated on a master sheet.

The scoring of factor is based on Likert's method. To secure the total score five points are given for highly satisfied, four for satisfied, three for neutral, two for dissatisfied and one for highly dissatisfied. Thus the total score were obtained.

The levels of attitude has been classified into three categories namely, high level, medium level and low level for analytical purpose, while the score value

$\geq \bar{X} + \sigma$ and score value $\geq \bar{X} - \sigma$ have been classified as high level and low level of attitude respectively, the score value between $\bar{X} - \sigma$ and $\bar{X} + \sigma$ are classified as medium level of attitude. \bar{X} and σ are the arithmetic mean and standard deviation calculated from the score value of 200 respondents. The

mean value obtained was 21 and the value of standard deviation is 4.2 based on the mean and standard deviation the levels were classified as below. $\bar{X} + \sigma$

Above 25 – high level, $\bar{X} - \sigma$ – Below 16 – Low level, ($\bar{X} - \sigma$) to ($\bar{X} + \sigma$) – 16 to 25 – Medium level The researcher has made an attempt to study the level of attitude of the customers. This factor is classified as high level, medium level and low level. This factor has been cross tabulated with personal factors like gender, age, educational qualification, occupation, income, marital status and region of survival. Following are the factors to find out the level of attitude of customers towards bakery products like quality, taste, quantity, price, packaging, varieties of the products respectively.

TABLE NO. 4: LEVEL OF ATTITUDE AND PERSONAL FACTORS

Personal factors		Level of Attitude			
		High	Medium	Low	Total
Gender	Male	12(9%)	43(32%)	79(58%)	134(100%)
	Female	2(3%)	28(42%)	36(55%)	66(100%)
	Total	14	71	115	200
Age	Less than 25 years	5(6%)	35(36%)	56(58%)	96(100%)
	25-50 years	7(10%)	21(30%)	42(60%)	70(100%)
	Above 50 years	2(6%)	15(44%)	17(50%)	34(100%)
	Total	14	71	115	200
Educational qualification	Illiterate	-	2(16%)	10(84%)	12(100%)
	HSC	5(6%)	50(55%)	35(39%)	90(100%)
	Graduates	9(9%)	19(19%)	70(72%)	98(100%)
	Total	14	71	115	200
Marital Status	Married	1(1%)	30(42%)	41(57%)	72(100%)
	Unmarried	13(10%)	41(32%)	74(58%)	128(100%)
	Total	14	71	115	200
Occupation	Students	3(6%)	46(92%)	1(2%)	50(100%)
	Home makers	-	1(8%)	11(92%)	12(100%)
	Employees	10(9%)	20(17%)	87(74%)	117(100%)
	Farmers	-	-	6(100%)	6(100%)
	Business	1(7%)	4(27%)	10(66%)	15(100%)
	Total	14	71	115	200
Income	Less than Rs 25000	14(10%)	48(33%)	84(57%)	146(100%)
	Rs 25000 –Rs 50000	-	18(50%)	18(50%)	36(100%)
	Above Rs 50000	-	5(28%)	13(72%)	18(100%)
	Total	14	71	115	200
Region of survival	Urban	14(10%)	67(47%)	61(43%)	58(100%)
	Rural	-	4(7%)	54(93%)	142(100%)
	Total	14	71	115	200

Source: primary data

From the table 4, out of 200 sample respondents, most of the respondents in the gender group of male and female have low level of attitude towards the bakery products. In the age group of the respondents, mostly in all age group, the respondents have opined low level of attitude. From among the educational qualification, 84% of the illiterates and 72% of the Graduates have low level of attitude whereas 55% of HSC have medium level of attitude towards bakery products. Most of the respondents in the marital status and occupational category have opined low level of attitude. In the income category, 72% of the respondents in the income category of above Rs.50, 000 have opined low level of attitude whereas 50% of the respondents in the income group between Rs.25, 000 and Rs.50, 000 have opined that they have medium level of attitude towards bakery products. 93% of the respondent in the rural area have opined that they have low level of attitude towards the bakery products.

By and large, the overall opinion of the respondents have resulted to the low level of attitude towards bakery and its products and this is due to lack of facility to sit and chat, unhygienic environment, lack of services by the bakers, lack of time management to deliver the products at home, locality of the bakery in congested area, exorbitant pricing and no additional services provided by the bakery like rest rooms, surround music system, parking zone etc. these are the factors which leads to the dissatisfactory level of attitude towards bakery and bakery products.

CHI-SQUARE TEST RESULTS- ATTITUDE TOWARDS BAKERY PRODUCTS

Following are the results for chi-square test between demographic factors of the respondents and level of attitude towards bakery products

To find out whether there is a significant relationship between these two factors, the following null hypothesis is framed. The frequency of cell value is less than 5. Hence Yates Correction is applied in chi- square test.

Ho: there is no significant relationship between the personal factors of the respondents and their level of attitude towards bakery products.

The table value of χ^2 for degree of freedom 2 at 5% level of significance is 5.991. The calculated value of χ^2 is less than the table value; therefore the null hypothesis is accepted that there is no significant relationship exists between the **gender** and the **level of attitude** regarding bakery products.

The table value of χ^2 for degree of freedom 4 at 5% level of significance is 9.488. The calculated value of χ^2 is less than the table value, therefore the null hypothesis is accepted that there is no significant relationship exist between the **age** and the **level of attitude** regarding bakery products.

The table value of χ^2 for degree of freedom 4 at 5% level of significance is 9.488. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **educational qualification** and the **level of attitude** regarding bakery products.

The table value of χ^2 for degree of freedom 2 at 5% level of significance is 5.991. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **marital status** and the **level of attitude** regarding bakery products.

The table value of χ^2 for degree of freedom 8 at 5% level of significance is 15.507. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **occupation** and the **level of attitude** regarding bakery products.

The table value of χ^2 for degree of freedom 4 at 5% level of significance is 9.488. The calculated value of χ^2 is less than the table value, therefore the null hypothesis is accepted that there is no significant relationship exist between the **monthly income** and the **level of attitude** regarding bakery products.

The table value of χ^2 for degree of freedom 2 at 5% level of significance is 5.991. The calculated value of χ^2 is more than the table value, therefore the null hypothesis is rejected that there is a significant relationship exist between the **region of survival** and the **level of attitude** regarding bakery products.

MAJOR FINDINGS AND SUGGESTIONS

- Some of the respondents have faced health issues because of poor taste and quality of the bakery products. To avoid such health problems the bakers should use fresh raw materials to prepare the food products, handle the food products hygienically and serve the food products clearly.
- Majority of the respondents depicts that after they have purchased the cakes and breads from the bakeries it cannot be used even till 48 hours so the bakers have to store the breads and cakes at room temperature to maximize freshness and pack well with attractive package and sealed paper bags or in a bread box.
- Some of the bakers charge high price for the low quality goods or they follow different pricing strategy to the different consumers. To avoid this bakery association must give guidelines to the bakers regarding maintaining proper quality, quantity and standard pricing strategy to all the consumers.
- Respondents from rural areas have low level of awareness towards bakery and bakery products like pizza, burger, sandwich and chat products. So the bakeries have to create awareness among people from rural areas by the way of giving advertisements in news papers and local television channels, increasing sales promotion techniques and also by introducing new offers and discount to the consumers.

- Majority of the respondents are dissatisfied because few of the bakeries don't have facilities to sit, improper and unclean environment, insufficient space and the bakeries situated in inconvenient location for parking the vehicles. To increase the level of satisfaction of the consumers towards bakeries, they have to take remedial measures like providing hygienic environment, proper ventilation and lighting facilities, free spacing and parking facilities and quick services and courtesy to the consumers.

CONCLUSION

The bakery industry plays an important role in industrial activities of food processing industry in the country. It provides nutritious food to go large number of households in cities in the modern times. Baking is a diverse industry that covers a wide range of breads, cakes and pastries. As a fast-growing industry, more and more of its products are being consumed by everyone each day. The life style changes from traditional practice to a modern one by which the product is consumed by every hold. The fortunes of the bakery products can be attributed in part to changing eating habits. Thus the marketers have to concentrate on the overall development thereby to increase the level of satisfaction towards bakery products.

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e-COMMERCE: AN INVISIBLE GIANT COMPETITOR IN RETAILING IN EMERGING COUNTRIES

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ABSTRACT

The objective of this paper is to show that how E-commerce is rising and it is the main competitor of the shopping markets and mall which is invisible and not present amongst it. Its giant stature is covering many shopping arcade and changing its customers way of shopping. More and more customers are becoming loyal to the shops which are not visible and shopping from the shopkeepers which are not physically present. It was found that the online companies are grabbing more and more of customers as compared to the brick and mortar companies. Online shopping is becoming a leading trend in many emerging countries. This is becoming a threat to the physical shops which they cannot even see. Confirmatory research needs to be conducted to establish the stability of these factors. More surveys needs to be conducted by the brick and mortar companies to understand the need of today's customers and in turn format a business model where they can compete with the online invisible giants. The online companies are expanding rapidly both in the remote as well as developed cities. The brick and mortar companies needs to identify their invisible competitor and try to build a model which is giving an equal and opposite competition to them also. The need of the hour is to shake and wake up the customer and force them to drive into the physically present shop rather than changing them to lazy customers shopping online without the feel and touch of the product. Earlier studies have not shown the threats of the online companies to the brick and mortar companies. It is rising and expanding in emerging companies but does not show that it is rising in the remote areas more rapidly the developed cities. Also it shows that it can be big and huge threat to not only to small shops but also to huge giants.

KEYWORDS

Brick & Mortar companies, China, Emerging Countries, India, Invisible Giant competitor.

INTRODUCTION

Electronic commerce', commonly known as 'e-commerce' or 'e-comm', is the buying and selling of product or service over electronic systems such as the Internet and other computer networks. The term "e-business" was coined by IBM's marketing and Internet teams in 1996.

There are many features in e-commerce industry. Initially, it was used for banking transactions or B2B deals. It occupied a large space in travel sector as most of the ticket bookings were done online. Travel industry occupied about 75% of the transactions in which air ticketing, railway ticketing, hotel bookings and mobile recharge were most of them.

Now, in e-commerce the most familiar and most widely used feature is "shopping online". It gives the customer the privilege to shop online 24x7 all types of items and with various variety and most importantly at the comfort of your home. It is rapidly rising in the Asian markets and especially in India.

India having the population of about 1.2 billion people and with 50-60% of the population being young (25-35 yrs). With the rise in technology, there is a rise in general awareness about the technology and its uses. The youths in India are becoming more gadget freaks and are accepting and adapting the advancement in the technology. Nowadays the usage of mobile and internet are going hand-in hands and the youth are becoming more and more addictive to it.

Looking at these youth, who know how to access and use the technology or internet, the online fashion stores or the shopping sites have used these customers as their targets. These sites offer you with various varieties of products and services and with various price ranges and with the comfort of saving time of travelling, saving time in going from shop to shop and even saving money used in travelling to these shops and malls. These sites are expanding their hands day - by- day over other customers and are pushing them to be glued in shopping online and avail the offers which these sites offers. The online shop is given the names as e-shops, e-stores etc.

Initially, online websites were created for online banking, bill payment etc. in United States. Here, the customer could be free from the deadlines and the long awaited lines in order to pay their dues. These websites gave them the pleasure of paying their dues without any hassles. Later, in 1994 Pizza Hut started an online Pizza Delivery in Santa Cruz, California U.S. After the huge response of the customers and the increased sales Pizza hut started to offer free home delivery and in turn a bonus to its customers. People enjoyed ordering online as they did not had to spend time in traveling and waiting in long ques. They could very well enjoy their favorite TV show or if they were guest at home could pay full attention to them and place the order side by side without the headache of picking it up from the pizza shop. The same year a German company named INTERSHOP introduced its first online shopping brand. Intershop offered only good and high quality books.

Later in 1995, a company based in, Seattle, Washington, U.S named Amazon introduced itself as the online shopping store. Initially, it started as an online bookstore. Later, it diversified to products like music CDs, videotapes and DVDs, software, consumer electronics, kitchen items, tools, lawn and garden items, toys & games, baby products, apparel, sporting goods, gourmet food, jewelry, watches, health and personal-care items, beauty products, musical instruments, clothing, industrial & scientific supplies, and groceries. Looking at the profits it made in four to five years it expanded its business to other countries like U.K, India, South Africa, the Philippines, China, Germany, Ireland. It said to have all the products form A to Z. In India, it works as the site named Jungle.com with its call center being in Hyderabad.

After Amazon, then came Ebay in 1995. This website was founded by Pierre Omidyar as AuctionWeb in San Jose, California, U.S. The purpose of the site was to sell and buy old and used products. It was basically an auction site which helped both sides of the consumers. The first item sold on ebay was a broken laser printer. It consists of items like collectibles, decor, appliances, computers, furnishings, equipment, vehicles etc. The products and items on ebay are cheap as there are secondary products and help the buyer to buy these products as he cannot afford or do not want to spend extra penny in buying that item which he can purchase in cheaper amount.

E-commerce or the online bazaar has changed the complete idea of use of the internet. Initially, internet was used only for transferring of data or any information which was important from the business point of view or the company's consent. But, nowadays, internet has gone far far away from all these uses. Right from placing orders of pizza's, booking tickets of movie, hotel, railway or airline, banking transactions to buying and selling products, it is becoming a trend to find the life partner from the matrimonial sites.

Internet has very much become the solution of almost all problems whether related to personal decisions like marriage or connecting with the loved ones who are long distant away. From financial issues where money can be transacted any time and to any place and in any account to leisure and entertainment where we can play and download many games, book online movie tickets etc.

GLOBAL STUDIES

The use of internet is increasing day by day in various parts of the world. China has the maximum users of internet with 513.1 million users then comes United States with 245.2 million users and India being the third largest user of internet in the world with 121.0 million users (Internet world stats, 2012.)

With China and India occupying the first and third place of maximum users of internet in the world, it makes internet a big and a huge market or the "BAZAAR" for the buyers and the sellers. India has become the third-largest Internet market, based on the total number of users, and 60 percent of these come from smaller towns. Internet has large option for the users, but the most important and particular one being the online shopping. Online shopping is like buying and

selling anything and everything to the whole and huge market. In India, people are now becoming very occupied and busy. Now the scenario has changed from the earlier, where one member mainly the male used to work and the other mainly the female used to take care of the house and family. The female had ample time to choose the market for her and according to her needs, like clothes, utensils, grocery or decorative. But, today, both the partners are working and have less time to search on different markets for different needs.

The youth on the other had is becoming very tech savvy and have enough knowledge of the internet and its uses. The youngsters are becoming the slave of the technology where they want to have everything at their doorstep. This has given a huge opportunity for the sellers to market everything and anything online. The online shopping industry in India has become fast catching, not just in the larger metros but also in the smaller cities. At present the market is estimated at Rs.46,000 crore and is growing at 100 per cent per year. India has more than 100 million Internet users, out of which around half opt for online purchases and the number is growing every year. With such a large market size, companies, right from retail shops to consumer goods, are entering the Web space to attract potential customers. The customer behavior is changing dramatically. People are not only using the Web to book air tickets and movie tickets but also do not hesitate in placing orders for mobiles, laptops and other consumer electronics and home appliances.

Online shopping trend is rising in many cities of India.. Ludhiana, known for its high-end malls and opulence, is witnessing a rising trend of online shopping. About 25% of its youth between the age group of 16 to 35 years prefer online shopping when it comes to buying swanky electronic gadgets. A survey by ASSOCHAM has shown that Ludhiana ranks sixth among cities where the trend is picking up. Ludhiana youths place online orders to buy their favourite gadgets, their accessories, branded apparels and shoes. Among electronic gadgets, they mostly go for latest cellphones, iPads, walkman, iPods and laptops. (Rajan Walia, TNN Jul 5, 2011, 12.26am IST).

A survey conducted by credit card issuer MasterCard Worldwide has revealed that online shopping in the country has been rising despite the economic slowdown. In addition to the convenience that online shopping offers, the opportunity to bag sizeable discounts is driving more and more people to click on the internet for what they want to purchase, the report has suggested.

MasterCard's "Insights report, economic crisis and preference for online shopping in Asia/Pacific, Middle East and Africa" has noted that in India, the average frequency of online purchases increased to 2.9 in the fourth quarter of 2008, up from 2.6 during the same quarter in 2007 (TNN May 28, 2009, 03.28am IST, survey conducted in Pune).

Online shopping nearly doubled in China in 2007: BEIJING: Online shopping in China topped 59.4 billion yuan last year, the media reported on Tuesday, up more than 90 per cent from a year ago.

Fifty-five million of China's 210 million Internet users shopped online last year, the Xinhua news agency said, citing a report by China Internet Research Centre and taobao.com, the nation's largest online shopping portal.

In 2006, 43.1 million Chinese used the Internet for shopping, with the value of transactions standing at 31.2 billion yuan, according to an earlier report by China Internet Research Centre. The media released this year forecast online sales, which now account for less than one per cent of China's total retail sales, would make up five to eight per cent of total retail sales by 2012. (AGENCIES Economic Times, Jan 22, 2008, 04.25pm IST).

Even traditional retailers like Shoppers Stop, Westside and Pantaloons are looking at the online shopping space for growth. According to the Associated Chambers of Commerce and Industry of India (Assocham), the size of the online retail industry is expected to touch Rs.7,000 crore by 2015, up from Rs.2,000 crore now, at an annual growth rate of 35 per cent. Keeping in mind of the growing potential of the online sites, not just large brands but even general retail chains are upgrading their sites for ecommerce, making it more convenient for customers to place online purchase orders. Lifestyle products, such as cosmetics, jewellery, watches, fashion products and fitness equipment contribute over 45 per cent.

The eBay India Census has found that brands such as Sony, Nokia, Samsung, Apple and Reebok continue to top buyers' charts

With 10 million transactions, the internet may soon be your favorite shop, too. With e-commerce expected to grow by 47 per cent to Rs 46,520 crore by end-2011 (as per IAMAI data), offline players like Future Bazaar are fine-tuning their approach online.

Futurebazaar.com is confident of netting online sales of Rs 1 crore per day by March 2012. "The main focus will be to switch offline shoppers to online portal," claims Kashyap Deorah, its president. "Footfall is the core asset of any retail business. If we get even three per cent of the footfall that we get in our stores to shop online, the job is done."

The Future Group boasts of offline sales of up to Rs 30 crore per day. Deorah believes that the online target is not difficult to reach, since they have been doubling their business every quarter. The portal, he adds, has already handled 15,000 orders a day, clocking business of up to Rs 3 crore. Next, Futurebazaar.com is set to enter mobile commerce by this month-end.

Futurebazaar.com competes with other e-commerce sites like Yebhi.com, Letsbuy.com, eBay, Flipkart, Homeshop18 and Infibeam. Flipkart.com, a leading e-commerce portal, too is confident of hitting its 2015 revenue target of \$1 billion sooner. The portal has already invested in warehouses across the country and automation to speed up its delivery.

Aventus Capital's report on digital consumer estimates that total number of users transacting online in India is currently at 8-10 million. It is expected to increase to 39 million by 2015. "E-commerce companies," states Aventus Capital, "are growing on the back of promises to address what the Indian consumer desires the most — convenience, value for the money one spends and availability of his desired products and services."

Futurebazaar.com is looking at 10 per cent of sales to come from online platform over the next three years. Deorah admits that while customers are not yet used to shopping online, they are not shying away either. "Around 80 per cent of consumers who go online to buy a mobile phone ended up buying it offline," he notes. "One has to understand that the competition is not with a rival e-commerce portal, but with unorganised retail."

Future Group's e-commerce portal is also looking to reduce the number days required for delivery of a product. On an average, it takes four days to deliver an item to a consumer in the present condition. Futurebazaar.com is aiming to bring it down to three days.

Aventus Capital believes this will also drive the overall growth of the e-commerce space in India, with revenue per online shopper increasing at a similar pace.

Vizisense confirms that a consumer is comfortable buying not just books or apparels but also expensive electronic items online. It estimates that mobile phones garner the maximum share of e-commerce at 31 per cent, followed by Home & Kitchen appliances at 13 per cent and cameras at 10 per cent.

Experian Marketing Services says shopping and classifieds now rank 6th in terms of online visit share as compared to its 8th rank last year. Says Navin Chandani, its managing director (India): "Even though there is still a heavy tilt on the internet for information gathering and product evaluation and selection, actual purchase for many is still a physical world activity." (M Saraswathy / Mumbai Dec 09, 2011, 00:49 IST, Business times.)

TABLE 1: TOP 20 COUNTRIES WITH HIGHEST NUMBER OF INTERNET USERS - JUNE 30, 2012

#	Country or Region	Population, 2012 Est	Internet Users Year 2000	Internet Users Latest Data	Penetration (% Population)	Users % World
1	China	1,343,239,923	22,500,000	538,000,000	40.1 %	22.4 %
2	United States	313,847,465	95,354,000	245,203,319	78.1 %	10.2 %
3	India	1,205,073,612	5,000,000	137,000,000	11.4 %	5.7 %
4	Japan	127,368,088	47,080,000	101,228,736	79.5 %	4.2 %
5	Brazil	193,946,886	5,000,000	88,494,756	45.6 %	3.7 %
6	Russia	142,517,670	3,100,000	67,982,547	47.7 %	2.8 %
7	Germany	81,305,856	24,000,000	67,483,860	83.0 %	2.8 %
8	Indonesia	248,645,008	2,000,000	55,000,000	22.1 %	2.3 %
9	United Kingdom	63,047,162	15,400,000	52,731,209	83.6 %	2.2 %
10	France	65,630,692	8,500,000	52,228,905	79.6 %	2.2 %
11	Nigeria	170,123,740	200,000	48,366,179	28.4 %	2.0 %
12	Mexico	114,975,406	2,712,400	42,000,000	36.5 %	1.7 %
13	Iran	78,868,711	250,000	42,000,000	53.3 %	1.7 %
14	Korea	48,860,500	19,040,000	40,329,660	82.5 %	1.7 %
15	Turkey	79,749,461	2,000,000	36,455,000	45.7 %	1.5 %
16	Italy	61,261,254	13,200,000	35,800,000	58.4 %	1.5 %
17	Philippines	103,775,002	2,000,000	33,600,000	32.4 %	1.4 %
18	Spain	47,042,984	5,387,800	31,606,233	67.2 %	1.3 %
19	Vietnam	91,519,289	200,000	31,034,900	33.9 %	1.3 %
20	Egypt	83,688,164	450,000	29,809,724	35.6 %	1.2 %
TOP 20 Countries		4,664,486,873	273,374,200	1,776,355,028	38.1 %	73.8 %
Rest of the World		2,353,360,049	87,611,292	629,163,348	26.7 %	26.2 %
Total World - Users		7,017,846,922	360,985,492	2,405,518,376	34.3 %	100.0 %

NOTES: (1) Top 20 Internet User Statistics were updated for June 30, 2012. (2) Additional data for individual countries and regions may be found by clicking each country name. (3) The most recent user information comes from data published by Nielsen Online, International Telecommunications Union, Official country reports, and other trustworthy research sources. (4) Data from this site may be cited, giving the due credit and establishing an active link back to www.internetworldstats.com.

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DISCUSSION/CONCLUSIONS

According to the recent information that many sites are coming for online shopping in India. It also states that not only the metro cities are aware of these sites and use them for shopping purpose but it is also becoming a trend in the remote areas where the customers do not have any malls or shops who could offer them with huge varieties and price range. The sites give them this facilities and an add on advantage of supplying the products right at their door step.

Now, the back bone of these online shopping sites is the courier companies. The courier service is the main nerve of these sites which help these companies to survive and even rates them in service which these company can boost on. The less time these courier companies take and till which place they can deliver the product actually brings the site to its best. The online site is totally depended on these courier companies when any order is placed. If it is from any remote area or any village which is not on the map it is to these courier people that will give their service to such places. Once it is placed and delivered to these villages, they become the permanent customers of that particular site and in turn these site earn a lot.

When we talk about mall culture or any giants like shopping arcade having everything under one roof, it only and mainly targets one city or that particular place. But the online sites is making almost everyone and anyone its customer irrespective where his customers stays or lives. It has become a huge but invisible giant which is grabbing all the customers and making these customers addictive to the huge market which is laying on their table and opening and shutting at their will.

These online shopping sites are becoming silent competitors to the brick and mortar companies. The brick and mortar companies are spending huge on the interior as well as exterior of their shops and malls. Recruiting manpower and well qualified managers who can provide the best of service and assist the customers. The companies are becoming very meticulous over their products as well service to the customers. On the hand, the online sites do not require huge budgets for the interior or exterior of their shops neither do any research for land and spend endless on its acquisition. There are simply using the internet to sell their products and earn maximum profit. The major concern for the brick and mortar companies is these online site which is not only stealing their customers but also giving them a big competition without placing their shops besides them. These companies need to concentrate on the online shop competitors rather forming marketing strategies to be better than the neighboring shop.

Lastly, customers are satisfied when there are pampered and given service of their type. This weakness is being fulfilled by these online companies as the customers feel that travelling is waste of time and money. Now, when these online sites are getting all the small as well as big brands at the doorstep with many more facilities like cash on delivery, return if you don't like it and customize the product according to your wish. With such facilities the customer would not like to go to the shops and do searching around for its product and if buys the product and goes home and finds out he picked up the wrong product and again needs to travel back to return which he has to do in the limited time period. This annoys the customer and makes him lazy to go for shopping to these places and hence prefers to do shopping online.

The brick and mortar needs to make policies for such customers which are huge in number. Everybody around the world are becoming the slaves of the technology and the time is not far where each and every person will be depended on their internet for the almost every product. This will have their own pros and cons.

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THE GREAT MATHEMATICIAN SRINIVASA RAMANUJAN

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ABSTRACT

The aim of this paper is to introduce Srinivasa Ramanujan and his work in mathematics. In this paper we have given Introduction, Contributions in Algebra, Geometry, Bernoulli's numbers and so on.. The most significant contributions are Ramanujan Prime, Ramanujan Theta function, Ramanujan-Soldner constant, Ramanujan's sum etc. In order to calculate the value of π up to 17 million places using a computer, the present day mathematicians actually use Srinivasa Ramanujan's method.

KEYWORDS

Life of Srinivasa Ramanujan, Contributions, Prominent Mathematician's Views on Ramanujan.

INTRODUCTION

The most prominent Indian mathematician Srinivasa Ramanujan was born on 22nd December 1887, at Erode near Kumbakonam in Tamil Nadu. Ramanujan has a great mathematical ability even as a child. He passed his matriculation examination at Kumbakonam at the age of 16 and secured junior Subramanyam Scholarship for further study at the Government college at Kumbakonam. He was so fond of mathematics that he hardly paid any attention to any other subject with the result that he failed in English at the first examination and lost the scholarship. He spent the next few years studying mathematics independently. On the 14th July 1909 he got married to Janaki. Ramanujan joined the University at Madras as the first research scholar of University. On the suggestion of Sheshu Aiyer, Ramanujan wrote to Professor G.H. Hardy at Cambridge. His letter to Hardy dated January 16, 1913. Along with this letter he enclosed about 120 theorems. Hardy sent him an invitation to come to England. On the 17th March 1914, Ramanujan sailed for England and he joined as a research scholar on an annual scholarship of 250 pounds.

In 1916 Ramanujan was awarded the B. A. degree of the University of Cambridge on the basis of his research work. While in England Ramanujan was honoured in several ways. In 1918 he was the first mathematician whose name was accepted for Fellowship of the Royal Society at the first proposal. In the same year he was elected a Fellow of the Trinity College, Cambridge. He was the first Indian to have been so elected. Ramanujan lived in England for five years. These were the most fruitful years of his life. He collaborated with Hardy and Littlewood to produce some of the most outstanding work.

In 1917 Ramanujan fell ill and the cold climate of Cambridge did not suit him. The illness grew from bad to worse and it was decided in 1919 that he should be sent back to India where the warm climate might help in his recovery. The cold climate of Cambridge did not suit him. The illness grew from bad to worse and it was decided in 1919 that he should be sent back to India where the warm climate might help in his recovery and passed away a year later, on the 26th April 1920.

CONTRIBUTIONS OF SRINIVASA RAMANUJAN

Indian Vedas, particularly the Yajurveda has been a repository of various mathematical concepts and principles which find extensive application in the modern day mathematics. Srinivasa Ramanujan through his mathematical genius has brought to light the concepts which were hidden and unknown to the present day civilization.

The squaring of the circle is central to the construction of an Ahavanlya and gArhapatya of equal area and a multiple approximations are suggested by different yajurvedic traditions. Similar constructions to these yajurvedic attempts are seen in the Rhind papyrus and the work of Anaxagoras. Several millennia later the 26 year old Ramanujan supplied one of the best approximations for the squaring of the circle – the one shown above. With this he gets a fraction for approximating π as $355/113$ – one which would have made his yajurvedic ancestor proud.

Contribution of Ramanujan is widespread in fields of Algebra, Geometry, Trigonometry, Calculus, Number theory etc. He has also made some extraordinary contributions to the fields like Hyper-geometric series, Elliptic functions, Prime numbers, Bernoulli's numbers, Divergent series, Continued fractions, Elliptic Modular equations, Highly Composite numbers, Riemann Zeta functions, Partition of numbers, Mock-Theta functions etc. In reality, apart from a few elementary ones, most of the contributions of S. Ramanujan belong to a higher realm of mathematics that is often referred to as Higher Mathematics. But the most significant contributions are Ramanujan Prime, Ramanujan Theta function, Ramanujan-Soldner constant, Ramanujan's sum etc.

Ramanujan developed the concept of the series $S(1/n)$. He found Bernoulli's numbers very interesting, as a result he began studying Bernoulli's numbers with deep interest, and in 1911 he published an important research paper on Bernoulli's numbers. This important research paper was published in Indian Mathematical Society, a highly reputable scientific journal.

According to eminent mathematicians, all the numbers were actually the intimate friends of S. Ramanujan. In order to calculate the value of π up to 17 million places using a computer, the present day mathematicians actually use S. Ramanujan's method. The mathematical contributions of S. Ramanujan have also been widely used in solving various problems in higher scientific fields of specialisation. The diverse specialised higher scientific fields include the likes of particle physics, statistical mechanics, computer science, space science, cryptology, polymer chemistry and medical science. Apart from the above fields, S. Ramanujan's mathematical methods are being used in designing better furnaces for smelting metals and splicing telephone cables for communications, as well. Ramanujan actually belonged to the Formalist School of Mathematics. It is true that Ramanujan had not given much attention to the deeper meaning of Mathematics but he had given the subject a concrete form with the help of formulas, theorems, identities etc. He also searched for forms or patterns in mathematics and he actually worked more by intuition and induction and showed relationships between numbers, something that nobody could even imagine at that time. Ramanujan had found results that were both original and very different in nature.

- **RAMANUJAN PERFECT NUMBER**
- **CONTINUED FRACTION**
- **PARTITION OF NUMBERS**
- **RAMANUJAN'S CONGRUENCES**
- **CIRCLE SQUARING**

RAMANUJAN PERFECT NUMBER

[TAXI CABNUMBER]

The number derives its name from the following story: G. H. Hardy told about Ramanujan. I remember once going to see him when he was ill. I had ridden in taxi cab number 1729 and remarked that the number seemed to me rather dull one, and that I hoped it was not an unfavorable omen. "No," he replied, "it is a very interesting number; it is the smallest number expressible as the sum of two cubes in two different ways."

1729 is the second taxicab number (the first is $2 = 1^3 + 1^3$). The number was also found in one of Ramanujan's notebooks dated years before the incident.³

The two different ways are these:

$$1729 = 1^3 + 12^3 = 9^3 + 10^3$$

The quotation is sometimes expressed using the term "positive cubes", since allowing negative perfect cubes (the cube of a negative integer) gives the smallest solution as 91 (which is a divisor of 1729):

$$91 = 6^3 + (-5)^3 = 4^3 + 3^3$$

Of course, equating "smallest" with "most negative", as opposed to "closest to zero" gives rise to solutions like -91, -189, -1729, and further negative numbers. This ambiguity is eliminated by the term "positive cubes".

Numbers that are the smallest number that can be expressed as the sum of two cubes in n distinct ways⁴ have been dubbed "taxicab numbers". The number was also found in one of Ramanujan's notebooks dated years before the incident, and was noted by Frenicle de Bessy in 1657.

The same expression defines 1729 as the first in the sequence of "Fermat near misses", defined as numbers of the form $1 + z^3$ which are also expressible as the sum of two other cubes.

1729 is also the third Carmichael number and the first absolute Euler pseudoprime. It is also a sphenic number.

CONTINUED FRACTION

A continued fraction is an expression obtained through an iterative process of representing a number as the sum of its integer part and the reciprocal of another number, then writing this other number as the sum of its integer part and another reciprocal, and so on.⁵ In a finite continued fraction (or terminated continued fraction), the iteration/recursion is terminated after finitely many steps by using an integer in lieu of another continued fraction.⁶ In contrast, an infinite continued fraction is an infinite expression.

Continued fractions have a number of remarkable properties related to the Euclidean algorithm for integers or real numbers. Every rational number p/q has two closely related expressions as a finite continued fraction, whose coefficients a_i can be determined by applying the Euclidean algorithm to (p, q) . The numerical value of an infinite continued fraction will be irrational; it is defined from its infinite sequence of integers as the limit of a sequence of values for finite continued fractions. Each finite continued fraction of the sequence is obtained by using a finite prefix of the infinite continued fraction's defining sequence of integers. Moreover, every irrational number α is the value of a unique infinite continued fraction, whose coefficients can be found using the non-terminating version of the Euclidean algorithm applied to the incommensurable values α and 1. This way of expressing real numbers (rational and irrational) is called their continued fraction representation.

FINITE CONTINUED FRACTIONS

A finite continued fraction is an expression of the form

$$a_0 + \frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{\dots + \frac{1}{a_n}}}}$$

where a_0 is an integer, any other a_i members are positive integers, and n is a non-negative integer.

Thus, all of the following illustrate valid finite continued fractions:

Examples of finite continued fractions		
Formula	Numeric	Remarks
a_0	2	All integers are a degenerate case
$a_0 + \frac{1}{a_1}$	$2 + \frac{1}{3}$	Simplest possible fractional form
$a_0 + \frac{1}{a_1 + \frac{1}{a_2}}$	$-3 + \frac{1}{2 + \frac{1}{18}}$	First integer may be negative
$a_0 + \frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{a_3}}}$	$\frac{1}{15 + \frac{1}{1 + \frac{1}{102}}}$	First integer may be zero

An infinite continued fraction can be written as

$$a_0 + \frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{a_3 + \frac{1}{a_4 + \dots}}}}$$

Every finite continued fraction represents a rational number, and every rational number can be represented in precisely two different ways as a finite continued fraction. These two representations agree except in their final terms. In the longer representation the final term in the continued fraction is 1; the shorter representation drops the final 1, but increases the new final term by 1. The final element in the short representation is therefore always greater than 1, if present. In symbols:

$$[a_0; a_1, a_2, \dots, a_{n-1}, a_n, 1] = [a_0; a_1, a_2, \dots, a_{n-1}, a_n + 1]$$

$$[a_0; 1] = [a_0 + 1]$$

For example,

$$2.25 = 2 + 1/4 = [2; 4] = 2 + 1/(3 + 1/1) = [2; 3, 1],$$

$$4.2 = 5 - 5/4/5 = -5 + 1/(1 + 1/4) = [-5; 1, 4] = -5 + 1/(1 + 1/(3 + 1/1)) = [-5; 1, 3, 1].$$

CALCULATING CONTINUED FRACTION REPRESENTATIONS

Find the continued fraction for $3.245 (= 3\frac{49}{200})$						
Step	Real Number	Integer part	Fractional part	Simplified	Reciprocal of f	Simplified
1	$r = 3\frac{49}{200}$	$i = 3$	$f = 3\frac{49}{200} - 3$	$= \frac{49}{200}$	$1/f = \frac{200}{49}$	$= 4\frac{4}{49}$
2	$r = 4\frac{4}{49}$	$i = 4$	$f = 4\frac{4}{49} - 4$	$= \frac{4}{49}$	$1/f = \frac{49}{4}$	$= 12\frac{1}{4}$
3	$r = 12\frac{1}{4}$	$i = 12$	$f = 12\frac{1}{4} - 12$	$= \frac{1}{4}$	$1/f = \frac{4}{1}$	$= 4$
4	$r = 4$	$i = 4$	$f = 4 - 4$	$= 0$	STOP	

Continued fraction form for 3.245 or $3\frac{49}{200}$ is [3; 4, 12, 4]

$$3\frac{49}{200} = 3 + \frac{1}{4 + \frac{1}{12 + \frac{1}{4}}}$$

The number 3.245 can also be represented by the continued fraction expansion [3; 4, 12, 3, 1];

PARTITION OF NUMBERS

In number theory and combinatorics, a **partition** of a positive integer n , also called an **integer partition**, is a way of writing n as a sum of positive integers. Two sums that differ only in the order of their summands are considered to be the same partition; if order matters then the sum becomes a composition. For example, 4 can be partitioned in five distinct ways:

$$4, 3 + 1, 2 + 2, 2 + 1 + 1, 1 + 1 + 1 + 1.$$

The order-dependent composition 1 + 3 is the same partition as 3 + 1, while 1 + 2 + 1 and 1 + 1 + 2 are the same partition as 2 + 1 + 1.

A summand in a partition is also called a **part**. The number of partitions of n is given by the partition function $p(n)$. So $p(4) = 5$. The notation $q \vdash n$ means that q is a partition of n .

Partitions can be graphically visualized with Young diagrams or Ferrers diagrams. They occur in a number of branches of mathematics and physics, including the study of symmetric polynomials, the symmetric group and in group representation theory in general.

The partitions of 4 are:

1. 4
2. 3 + 1
3. 2 + 2
4. 2 + 1 + 1
5. 1 + 1 + 1 + 1

In some sources partitions are treated as the sequence of summands, rather than as an expression with plus signs. For example, the partition 2 + 1 + 1 might instead be written as the tuple (2, 1, 1) or in the even more compact form (2, 1²) where the superscript indicates the number of repetitions of a term.

RESTRICTED PARTITIONS

Among the 22 partitions for the number 8, 6 contain only *odd parts*:

- 7 + 1
- 5 + 3
- 5 + 1 + 1 + 1
- 3 + 3 + 1 + 1
- 3 + 1 + 1 + 1 + 1 + 1
- 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1

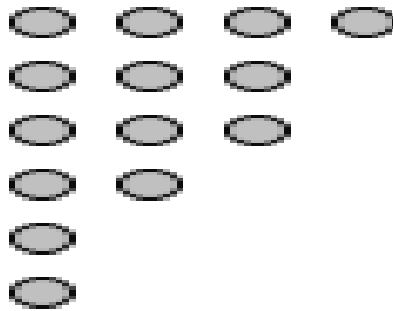
If we count the partitions of 8 with *distinct parts*, we also obtain the number 6:

- 8
- 7 + 1
- 6 + 2
- 5 + 3
- 5 + 2 + 1
- 4 + 3 + 1

It is true for all positive numbers that the number of partitions with odd parts always equals the number of partitions with distinct parts.⁷ Some similar results about restricted partitions can be obtained by a **Ferrers graph** also called **Ferrers diagram**.⁸

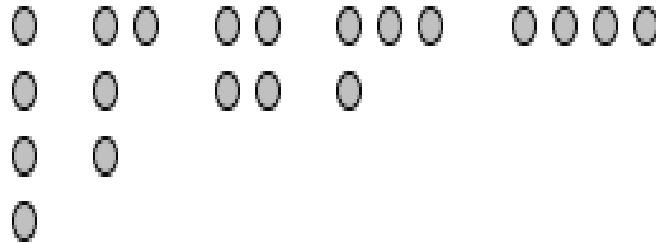
FERRERS DIAGRAM

The partition 6 + 4 + 3 + 1 of the positive number 14 can be represented by the following diagram; these diagrams are named in honor of Norman Macleod Ferrers.



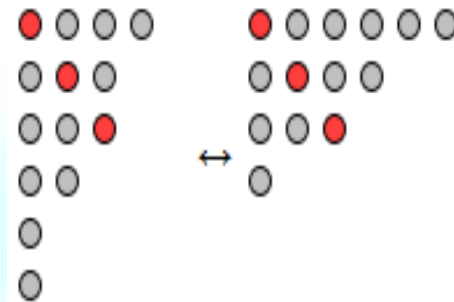
6 + 4 + 3 + 1

The 14 circles are lined up in 4 columns, each having the size of a part of the partition. The diagrams for the 5 partitions of the number 4 are listed below:



4 = 3 + 1 = 2 + 2 = 2 + 1 + 1 = 1 + 1 + 1 + 1

If we now flip the diagram of the partition 6 + 4 + 3 + 1 along its main diagonal, we obtain another partition of 14:



6 + 4 + 3 + 1 = 4 + 3 + 3 + 2 + 1 + 1

By turning the rows into columns, we obtain the partition 4 + 3 + 3 + 2 + 1 + 1 of the number 14. Such partitions are said to be *conjugate* of one another.⁹ In the case of the number 4, partitions 4 and 1 + 1 + 1 + 1 are conjugate pairs, and partitions 3 + 1 and 2 + 1 + 1 are conjugate of each other. Of particular interest is the partition 2 + 2, which has itself as conjugate. Such a partition is said to be *self-conjugate*¹⁰.

RAMANUJAN'S CONGRUENCES

Congruence is the state achieved by coming together, the state of agreement. The Latin *congruō* meaning "I meet together, I agree". As an abstract term, congruence means similarity between objects. Congruence, as opposed to equivalence or approximation, is a relation which implies a *kind* of equivalence, though not complete equivalence.

In mathematics, Ramanujan's congruences are some remarkable congruences for the partition function $p(n)$.¹¹

PARTITION FUNCTION

In number theory, the **partition function** $p(n)$ represents the number of possible partitions of a natural number n , which is to say the number of distinct (and order independent) ways of representing n as a sum of natural numbers. By convention $p(0) = 1$, $p(n) = 0$ for n negative.

The first few values of the partition function are (starting with $p(0)=1$):

- 1, 1, 2, 3, 5, 7, 11, 15, 22, 30, 42, ...

The value of $p(n)$ has been computed for large values of n , for example $p(100)=190,569,292$ and $p(1000)$ is approximately 2.4×10^{31} .

As of November 2011, the largest known prime number that counts a num of partitions is $p(80036992)$, with 9958 decimal digits, found by Bernardo Boncompagni.

For every type of restricted partition there is a corresponding function for the number of partitions satisfying the given restriction. An important example is $q(n)$ =the number of partitions of n into distinct part. As noted above, $q(n)$ is also the number of partition of n into only odd parts. The first few values of the $q(n)$ are (starting with $q(0)=1$):

- 1, 1, 1, 2, 2, 3, 4, 5, 6, 8, 10, ...

The Indian mathematician Srinivasa Ramanujan discovered the following

- $p(5k + 4) \equiv 0 \pmod{5}$
- $p(7k + 5) \equiv 0 \pmod{7}$
- $p(11k + 6) \equiv 0 \pmod{11}$.

In his 1919 paper (Ramanujan, 1919), he gave proof for the first two congruences using the following identities (using q-Pochhammer symbol notation):

$$\sum_{k=0}^{\infty} p(5k + 4)q^k = 5 \frac{(q^5)_{\infty}^5}{(q)_{\infty}^6}$$

$$\sum_{k=0}^{\infty} p(7k+5)q^k = 7 \frac{(q^7)_{\infty}^2}{(q)_{\infty}^4} + 49q \frac{(q^7)_{\infty}^7}{(q)_{\infty}^8}.$$

then stated that "It appears there are no equally simple properties for any moduli involving primes other than these".

After Ramanujan died in 1920, G. H. Hardy, extracted proofs of all three congruences from an unpublished manuscript of Ramanujan on $p(n)$ (Ramanujan, 1921). The proof in this manuscript employs Eisenstein series.

In 1944, Freeman Dyson defined the rank function and conjectured the existence of a "crank" function for partitions that would provide a combinatorial proof of Ramanujan's congruences modulo 11. Forty years later, George Andrews and Frank Garvan successfully found such a function, and proved the celebrated result that the crank simultaneously "explains" the three Ramanujan congruences modulo 5, 7 and 11.

Extending results of A. O. L. Atkin, Ken Ono in 2000 proved that there are such Ramanujan congruences modulo every integer coprime to 6. For example, his results give

$$p(4063467631k + 30064597) \equiv 0 \pmod{31}.$$

Later Ken Ono conjectured that the elusive crank also satisfies exactly the same types of general congruences. This was proved by his Ph.D. student Karl Mahlburg in his 2005 paper *Partition Congruences and the Andrews–Garvan–Dyson Crank*, linked below. This paper won the first Proceedings of the National Academy of Sciences Paper of the Year prize.

A conceptual explanation for Ramanujan's observation was finally discovered in January 2011 by considering the Hausdorff dimension of the following P function in the l -adic topology:

$$P_l(b; z) := \sum_{n=0}^{\infty} p\left(\frac{l^b n + 1}{25}\right) q^{\frac{n}{24}}.$$

It is seen to have dimension 0 only in the cases where $l = 5, 7$ or 11 and since the partition function can be written as a linear combination of these functions this can be considered a formalization and proof of Ramanujan's observation.

Srinivasa Ramanujan is credited with discovering that "congruences" in the number of partitions exist for integers ending in 4 and 9.

$$p(5k + 4) \equiv 0 \pmod{5}$$

For instance, the number of partitions for the integer 4 is 5. For the integer 9, the number of partitions is 30; for 14 there are 135 partitions. This is implied by an identity, also by Ramanujan.

$$\sum_{k=0}^{\infty} p(5k + 4)x^k = 5 \frac{(x^5)_{\infty}^5}{(x)_{\infty}^6}$$

where the series $(x)_{\infty}$ is defined as

$$(x)_{\infty} = \prod_{m=1}^{\infty} (1 - x^m).$$

He also discovered congruences related to 7 and 11:

$$p(7k + 5) \equiv 0 \pmod{7}$$

$$p(11k + 6) \equiv 0 \pmod{11}.$$

Since 5, 7, and 11 are consecutive primes, one might think that there would be such a congruence for the next prime 13, $p(13k + a) \equiv 0 \pmod{13}$ for some a . This is, however, false. It can also be shown that there is no congruence of the form $p(bk + a) \equiv 0 \pmod{b}$ for any prime b other than 5, 7, or 11.

PROMINENT MATHEMATICIAN'S VIEWS ON RAMANUJAN

Hardy : "The limitations of his knowledge were as startling as its profundity. Here was a man who could work out modular equations and theorems... to orders unheard of, whose mastery of continued fractions was... beyond that of any mathematician in the world, who had found for himself the functional equation of the zeta function and the dominant terms of many of the most famous problems in the analytic theory of numbers; and yet he had never heard of a doubly periodic function or of Cauchy's theorem, and had indeed but the vaguest idea of what a function of a complex variable was..."¹². When asked about the methods employed by Ramanujan to arrive at his solutions, Hardy said that they were "arrived at by a process of mingled argument, intuition, and induction, of which he was entirely unable to give any coherent account." He also stated that he had "never met his equal, and can compare him only with Euler or Jacobi."¹³

K. Srinivasa Rao "As for his place in the world of Mathematics, we quote Bruce C. Berndt: 'Paul Erdős has passed on to us Hardy's personal ratings of mathematicians. Suppose that we rate mathematicians on the basis of pure talent on a scale from 0 to 100, Hardy gave himself a score of 25, J.E. Little wood 30, David Hilbert 80 and Ramanujan 100.'¹⁴

John Littlewood "Every positive integer is one of Ramanujan's personal friends", on hearing of the taxicab incident.

Jayant Narlikar In his book *Scientific Edge*, noted physicist Jayant Narlikar spoke of "Srinivasa Ramanujan, discovered by the Cambridge mathematician Hardy, whose great mathematical findings were beginning to be appreciated from 1915 to 1919. His achievements were to be fully understood much later, well after his untimely death in 1920.

For example, his work on the highly composite numbers (numbers with a large number of factors) started a whole new line of investigations in the theory of such numbers."

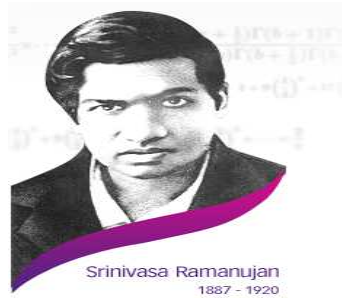
P.K. Srinivasan During his lifelong mission in educating and propagating mathematics among the school children in India, P.K. Srinivasan has continually introduced

Ramanujan's mathematical works. Ramanujan is a Part of a rich, 1500 years old Indian heritage of mathematics and astronomy. Luminaries like Brahmagupta in the 6th century Ad, Bhaskara (600-680AD) Sankara Narayana (840-900 AD) and Vijayanandi (940-1010 AD) created and built upon the foundations of science as we know it today.

OUR PRIMEMINISTER MANMOHANSINGH VIEWS

Mathematics, is the "mother science", the universal language of truth through numbers, touching daily use, technology and life - working out time, distance, calendar, the grocery prices and passenger air craft navigation, from algorithms in Internet search engines, to creating secure credit card transactions and planning national budgets.

"Men and women of such dazzling brilliance and deep intellect are born but rarely," declared Prime Minister Manmohan Singh in Chennai at a function on December 26, to celebrate the 125th birth anniversary of Ramanujan (December 22, 1887-April 26, 1920). The Indian government has also announced Ramanujan's birthday would be celebrated every year as "National Mathematics Day". India has declared 2012 as "National Year of Mathematics" as tribute to Srinivasa Ramanujan.



*So the soul of immensity dwells in minutia.
And in narrowest limits no limits in here.
What joy to discern the minute in infinity!
The vast to perceive in the small, what divinity!*

CONCLUSION

So long as our planet continues to exist in the Universe, and so long as civilization exists on our planet, Ramanujan will be remembered because of the outstanding research contributions made by him to Number Theory and Real Analysis, and his work has kept first rate mathematicians busy till this date, his work has had a tremendous influence on modern mathematics and has opened up new vistas for research, but also he was able to do so without any formal training, without any means of support, and more so he continued to produce work of the highest order even in the face of death.

Exploratory study on the contributions of Srinivasa Ramanujan in the field of Mathematics and General Science reveal his extradinory genius that finds applications in the present day science specially in the emerging areas of NANO Technology ,Nuclear Physics etc. His contributions go long way in providing various solutions to many unsolved mysteries in realm of Mathematics.

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ABSTRACT

Although there appears to have been increased interest in routing IPv6 over the public Internet since mid 2007, the adoption and deployment of IPv6 has been relatively limited. The issues relating to IPv4-to-IPv6 migration will be re-addressed, from where respective solutions will be proposed along with decision-making guidelines. This article does not focus on IPv6's contribution to wireless and mobile networks; attention is placed on its deployment in the Internet backbone and enterprise networks. The findings aim to evaluate the needs and requirements of IPv6 in order to ascertain the extent to which it can be made common place.

KEYWORDS

IPv4 to IPv6 Transition, IPv6 Deployment, Migration Strategy.

1. INTRODUCTION

The IPv4 protocol was created in 1981 like a technology supposed to last for a very long time, with an addressing space of 4000 millions of addresses, but the enormous growth of the internet and the way the addresses were assigned (classes A, B and C), resulted in a serious lack of addresses. There are several methods that avoid the total run out of addresses: PPP/DHCP (address sharing), CIDR (classless inter-domain routing) and NAT (network address translation), but do not seem to be enough in a few years, specially having into account the growing number of devices that need a permanent allocation of an IP address (UMTS, DSL, etc), and the applications that are end-to-end, and are not compatible with NAT (IPsec, VoIP, etc.).

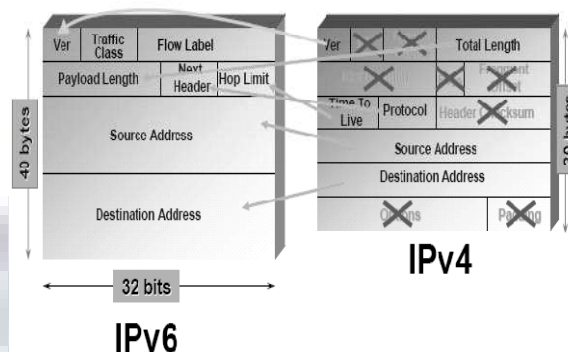
Another problem is that, because of being designed many years ago, the functionalities involved with security, mobility and quality are handled by additional protocols, because they are not integrated in the protocol itself. So, these 2 problems, plus the fact of the great growth of the number of elements in the routing tables motivated the necessity of a new version of the protocol became very important, so a new working group of the Internet Engineering Task Force (IETF) was created with the name: "IP next generation" (IPng). And some time later, the name was changed to IPv6. The main characteristics of this protocol had to be the following:

- Larger addressing space, structured addresses and no addresses classes.
- Automatic configuration.
- Simplified routing.
- Better structuring options for the networks.
- Improved security features.
- Support for real-time and multimedia Services.

In this paper will be explained the main characteristics of IPv6, as well as the differences between both protocols, and the mechanisms to migrate nowadays networks from IPv4 to IPv6. After this, we will see the some conclusions about the existence of both protocols and the implications that this has in the way the internet works.

2. ELEMENTS OF IPv6

FIGURE 2.1: COMPARISON OF IPv4 AND IPv6 HEADERS



The differences between the headers of IPv6 and IPv4 can be observed in the *figure 2.1*:

- The length of the header is enlarged from 20 bytes (IPv4) to 40 bytes (IPv6).
- The number of bytes of each IP address in the header also increases, as IPv4 has 4 bytes for each address, and IPv6 has addresses of 16 bytes, what means that a very great part of the whole header is only used to represent the IP addresses.
- The number of header fields is reduced from 12 to 8.
- The options field is disappears from the base header, so the header length field is no longer needed, as the header will always have the same length.

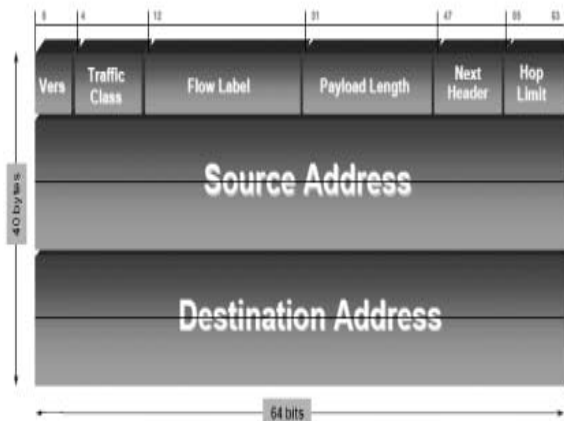
The reason why the number of fields is decreased is the unnecessary redundancy, because, for example, the checksum, whose mission is ensure the integrity of the header, is also realized by other mechanisms of formation of packets (IEEE 802 MAC, framing PPP, ATM adaptation layer,...). Apart from this, the consequences of having errors in the IP header are not very important, so it is not dangerous to eliminate the checksum field.

The fragment offset header is also eliminated, because in IPv6 the fragmentation of the packets is completely different to the IPv4 fragmentation, what means that this field is absolutely useless. In IPv6 the routers do not fragment/defragment the packets, which can only by done end-to-end.

Instead of having the options field, IPv6 uses the "extension headers" that support more functionalities, and that are added to the main header only if needed. With this, we ensure that the length of the base header will always be the same (40 bytes), what implies a greater facility to be processed by the routers and the switches, even by hardware, what means greater prestations.

2.1 STRUCTURE OF IPV6 HEADER

FIGURE 2.2: IPV6 BASE HEADER



In the case of IPv4, the header fields were aligned to 32 bits, but in IPv6 they are aligned to 64 (figure 2.2), what allows that the new generations of processors and microcontrollers of 64 bits can process more efficiently the header.

The header fields and their meanings are the following:

- **Version:** This field indicates what version of IP protocol is being used. Its value will be 6, as we are using IPv6. Its length is 4 bits.
- **Traffic Class:** In this field is indicated what kind of traffic is being dealt and what its priority is. The length of this field is 8 bits. There are 2 types of traffic, in the first type, the user expects an answer in case of congestion (e.g. TCP), and in the second one, in case of congestion, the packets are discarded. For each of these types of traffic there are 8 possible priorities, from 0 to 7, being 7 the highest priority, and 0 the lower.
- **Flow Label:** This label is used when the user needs that the packets are handled by the routers in a special way, as high quality services or real time. Its length is 20 bits. Flow is a group of packets with similar values in their headers that need a special handling.
- **Payload Length:** The value of this label indicates the length in bytes of the data that follows the IP header. Its length is 16 bits, so the maximum size of the packet is 64 Kbytes. If the information is bigger than that, is possible to use an extension header of 32 bits that would allow packets up to 4.3 million bytes.
- **Next Header:** This label indicates the type of extension header that follows the base header. It has a length of 8 bits, and its information is coherent with the value of the field protocol in IPv4, as we see in the following table:

TABLE 2.3: NEXT HEADER VALUES

Next Header	Points to
0	Hop-by-Hop Header
2	Internet Group Management Protocol (IGMP)
6	Transmission Control Protocol (TCP)
8	Transmission Control Protocol (TCP)
9	Interior Gateway Protocol (private) (IGP)
17	User Datagram Protocol (UDP)
41	IPv6 (encapsulated, e.g. for 4to6-Addressing)
43	Routing Header
44	Fragment Header
50	Encapsulating Security Payload (ESP) Header
51	Authentication Header (AH)
58	ICMPv6
59	No Extension Header
60	Destination Option Header
80	ISO Internet Protocol
89	Open Shortest Path First (OSPF)

The marked values are new in IPv6, while the others already existed in IPv4

- **Hop Limit:** This field substitutes the TTL field of IPv4. Its length is 8 bits. This value is decreased in one unit every time the packet is handled by a router, and if it is zero, the packet is discarded.
- **Source and Destination Address:** These fields indicate the IP address of the source and the destination. Each address length is 16 bytes.

2.2 FORMAT OF IPV6 PACKET

FIGURE 2.4: STRUCTURE OF THE IPV6 PACKET



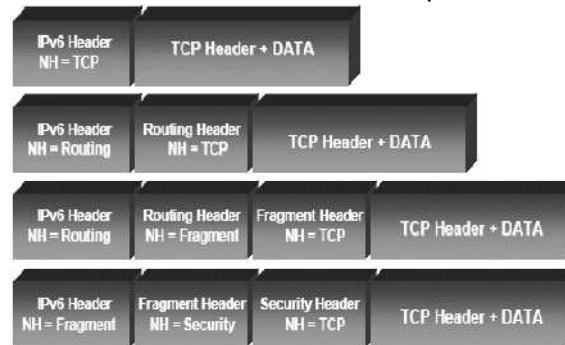
The figure 2.3 shows the structure of the IPv6 packet. We can see that the format is more homogeneous than the IPv4 one, and the handling of options is improved, as we can use a concrete extension header for each special function we need.

With this structure, there are some advantages if compared to IPv4:

- There is no limit in the number of options we can add to our IP packet.
- Better prestations due to the ordering of the headers:
 - Headers processed in routers from left to right.
 - Headers processed in destination from right to left.
- Perfect knowledge of behaviour of the system if there are wrong options.

2.3 EXTENSION HEADERS

FIGURE 2.5: EXAMPLES OF COMPLETES IPV6 DATAGRAMS (WITH EXTENSION HEADERS)



In IPv6, the option field of the IPv4 header is substituted by the extension headers, which are added to the datagram between the base header and the upper layer header, as we can see in *Figure 2.4*, and are indicated with a certain value in the next header field of the IPv6 header. A datagram can have no extension headers, one of them, or more than one [figure 2.4].

All the extension headers are processed in the destination, except the hop-by-hop option headers, which contain information that is needed during the routing of the datagram from the source to the destination. This header always follows the base header.

The extension headers are always processed in the order in which they appear, from left to right, to make faster the handling of the datagrams on the routers. Another reason that improves the handling of the IPv6 packets, is that the length of the extension headers is always a multiple of 8 bytes, so that it is aligned in the same way the fields of the base header are.

The different types of extension headers are the following (it is advisable that when there is more than one extension header in a packet, they appear in this order):

- **Hop-by-Hop Option Header:** contains information to be processed by every node that routes the packet to its destination.
- **Destination Option Header:** contains additional information to be processed by the destination node. If this information is processed by other node, this extension header follows the hop-by-hop header; otherwise, this header is the last one to appear.
- **Routing Header:** is used to indicate certain nodes that the packet has to pass through on its way from the source to the destination. It could define the exact path the datagram has to follow if it contained all the intermediate nodes.
- **Fragment Header:** is used by the source of the packet, to send datagrams whose length is longer than the MTU (Maximum Transmission Unit) of the networks the packet goes through (router sends an ICMP message to the source). While in IPv4 the fragmentation could be done in the routers, in IPv6, the fragmentation can only take place in the source, but the information in this header is the same that in IPv4 (identification, offset and more-fragment-flag).
- **Authentication Header:** is used to ensure the authenticity of the packets (the source node is the right one), the integrity of them (the information was not modified in the intermediate nodes) and to provide protection against the recurrence of packets.
- **Encapsulating Security Payload (ESP) Header:** is used to guarantee the authenticity of the payload only (the authentication header protected the hole packet), but this header is more powerful, as it provides mechanisms for data encryption.

3. CHARACTERISTICS OF IPV6

IPv6 is an evolution of IPv4, not a revolution, as they have many characteristics in common, but, in the case of IPv6, some of them have been improved:

- **Routing:** Hierarchic, based on aggregation of routes, what makes it simpler.
- **Prestations:** Simple header, aligned to 64 bits.
- **Versatility:** Extensible format of options, what means an improved extensibility.
- **Multimedia:** Flows identifier.
- **Multicast:** Is obligatory, and the range control is improved.

Apart from this characteristics, the most interesting, which are reviewed immediately, are mobility, addressing and security and quality of service (QoS).

3.1 MOBILITY

In the last years, there has been an enormous growing of the wireless technologies (e.g. WLAN, Bluetooth, GPRS, UMTS,) and mobile devices (PDAs, laptops,). This implies that there is, among the users, a great interest in being communicated to the internet in a wireless and permanent way. So the goal is to provide connectivity to internet to these wireless devices, and even when they are in movement too.

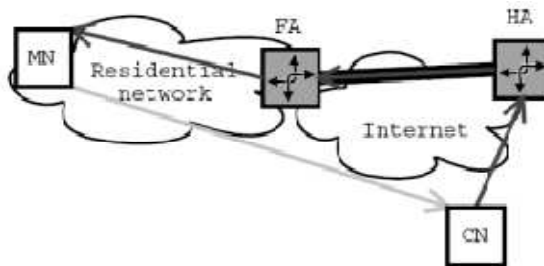
Solving this mobility problem in the network layer provides some benefits:

- The applications do not need to be changed.
- Roaming is provided.
- Allows to connect heterogeneous technologies of the link layer (UMTS, WLAN,).

Having this into account, and after the experience of IPv4, IPv6 provides an improved mobility support, whose mission is providing the mobile users the ability to change the access point, while they keep their network connections. The main advances of MIPv6 compared to MIPv4 are the following:

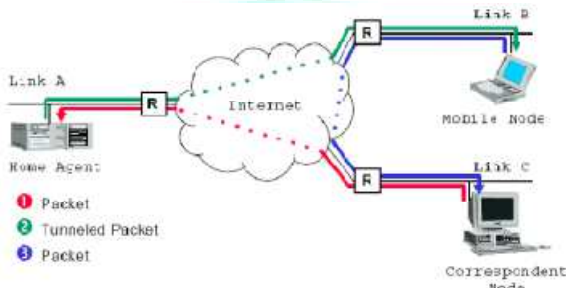
- The mobility problem was taken into account when the IPv6 protocol was being designed, so the mobility support is not an external patch, but it is integrated in the protocol.
- Each foreign agent requires a pool of directions, what means shortage of addresses. IPv6 does not require FA, as the mobile node, with the autoconfiguration mechanism of IPv6, is able to get an address in the foreign network without any external help.
- "Triangle routing" of IPv4 is inefficient (Correspondent node always sends packets to HA, not directly to the mobile node). IPv6 avoids the triangle routing (correspondent node sends packets directly to the mobile node) with the route optimization mechanism.
- IPv4 uses encapsulation for the delivery of packets. In IPv6 the delivery is realized by the Routing Header. The new mechanism reduces overhead.
- Problems with the firewalls avoided.
- Generation of an excessive signalling is no longer needed.
- The handoff time, which deteriorates the communication, is reduced.

FIGURE 3.1: EXAMPLE OF MOBILITY IN IPv4



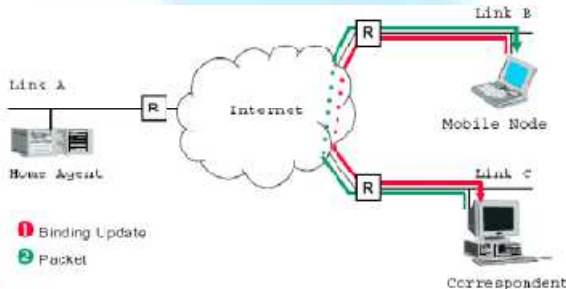
In the figure 3.1, we can observe how the communication takes part in IPv4. There is foreign agent, which handles the traffic of the mobile node in the foreign network. We can see the “triangle routing”, as all the traffic from the correspondent node has to go through the home agent, and the foreign agent, before reaching the mobile node.

FIGURE 3.2: EXAMPLE OF MOBILITY IN IPv6 WITH TRIANGLE ROUTING



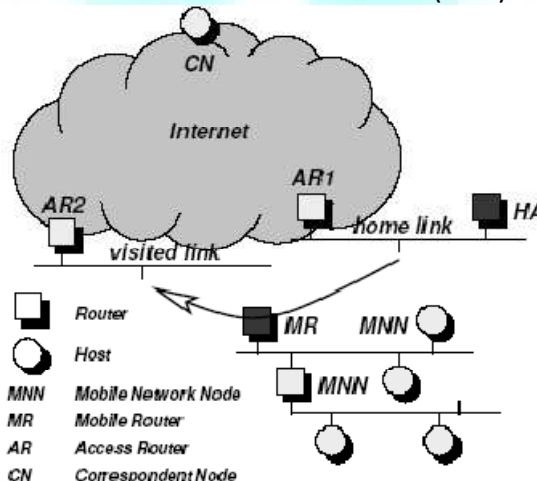
Now, in figure 3.2 we can see how, in the case of IPv6, there is no foreign agent in the visited network, but there is triangle routing, as the home agent intercepts the traffic from the correspondent node to de mobile node. This problem can be solved using the autoconfiguration mechanism of IPv6.

FIGURE 3.3: EXAMPLE OF MOBILITY IN IPv6 WITH ROUTE OPTIMIZATION



In figure 3.3 we can see how, using the route optimization, we can route all the messages without the help of the home agent. This is possible because the mobile node sends a binding update message to the correspondent node, so that, the CN is then able to sends packets directly to the MN.

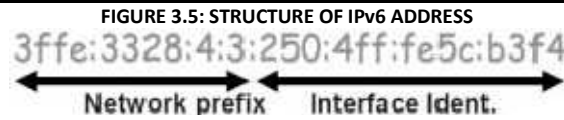
FIGURE 3.4: EXAMPLE OF NETWORK MOBILITY (NEMO)



The main motivation of network mobility is, instead of having many mobile nodes in a network, giving to that network the ability to move, so that, the only mobile element of that network would be the router. In figure 3.4 is shown the basic way NEMO works: there is a mobile network with its mobile router, and when the mobile networks moves to another situation, the mobile router maintains a tunnel to the home agent of the home network. As the mobile router is the default gateway of the mobile network, all the traffic will be routed through the tunnel to the home agent, and then, once the packets reach the access router of the home network, they would be handled like if the network had not moved from its original network.

3.2 ADDRESSING AND SECURITY

The main point of IPv6 addressing is the 128 bits addresses, which give a wide addressing space (more than 10³⁸ addresses). In this case, the addresses are assigned to interfaces, and it is possible that one interface has multiple addresses.



In the figure 3.5 is shown the main structure of an IPv6 address, where there is a network prefix, that depends on the topology of the network, and that identifies the network in which the device with that address is connected, and the interface prefix, that identifies a node of that network.

There are 3 different types of IPv6 addresses:

- **Unicast:** identifies a single interface. A packet with an address of this type in the destiny is delivered only to that interface.
- **Multicast:** identifies a set of interfaces. A packet with this address as destiny, is delivered to all the interfaces of the set.
- **Anycast:** identifies also a set of interfaces, but in this case, a packet with this kind of address as destiny, is delivered only to one interface of the set. Usually the next interface, according to the routing protocol.

The main differences between IPv4 and IPv6 addresses are the appearance of the IPv6 anycast addresses, and the disappearance of IPv4 broadcast addresses, that are replaced by the IPv6 multicast addresses.

The **autoconfiguration** is a very important feature of IPv6, as it provides that a node can configurate its address by itself. This characteristic is what allows to say that IPv6 is "plug & play". There are 2 different ways of autoconfiguration in IPv6, the stateless address autoconfiguration, and the stateful autoconfiguration.

1. COMMUNICATION BETWEEN HOSTS IN DIFFERENT PROTOCOL DOMAINS

In the case of the stateless address autoconfiguration, the host does not require any kind of manual configuration, and the routers need only a minimal configuration, or sometimes nothing. The router can create its own address by a combination of information from the routers, and information available locally. The information provided by the routers are the prefixes of the network where the host is connected, and the local information of the router is an interface identifier that, usually, is the MAC address of the interface card. Combining this 2 elements, the IP address is obtained.

With the stateful autoconfiguration, the host obtains the IP addresses of its interfaces from a DHCPv6 server, which has a database with all the addresses that have been assigned to all the interfaces. This kind of autoconfiguration would be like the DHCP protocol of IPv4, but with some improved features.

The **security** in IPv6 is ensured due to the 2 extension headers which are the authentication and the encapsulation security payload (ESP) headers (explained in section 2.3).

While in IPv4, the security was not included in the original protocol itself (IPsec extension), in IPv6, the security is a part of the protocol itself, and provides the same features like IPv4 and IPsec. IPsec is obligatory in IPv6, and provides authentication and encryption in the network layer, what means that is implemented transparently in the network infrastructure. Another important characteristic of IPsec is that it is an end-to-end technology, so in IPv6, with the wide addressing space, it is possible to have secure communications base on the E2E model.

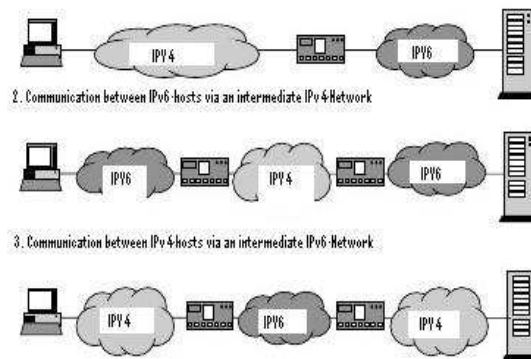
3.3 QUALITY OF SERVICE (QoS)

The quality of service is integrated in IPv6, as there are 2 fields in the base header whose goal is to ensure a certain QoS. These fields are the traffic class, which substitutes the type of service (TOS) field of IPv4, and the flow label, and with them it is possible to give the packets a certain characteristic under the point of view of the QoS (section 2.1).

The goals to achieve by the quality of service mechanisms are:

- Real time applications.
- Less latence and "jitter".
- More tolerance to packet losses.
- Retransmissions are less important.
- More importance of the temporal relationships.

FIGURE 3.6: COMMUNICATION BETWEEN HOSTS.



4. MIGRATION FROM IPv4 TO IPv6

The migration from IPv4 to IPv6 will take a long time, as it is impossible to stop the internet, migrate all the systems and restart all the networks again. So migration will be a slow process (the applications will set the speed or the migration), in which, there will be inter-working and co-existence of both protocols. IPv4 and IPv6 are incompatible, so, in this co-existence of protocols, there will have to be some technics that provide the inter-working of networks and systems using different protocols.

IPv6 has been designed thinking in the migration from IPv4 to it, so although it will be a complicated process because the networks connected are very heterogeneous, and all the elements (hosts, routers, applications, ...) will have to be migrated, there are some tools that will provide the migration. The most important are the following:

- Double Stack:** works in cases 1, 2 and 3.
- Tunnels:** works in cases 2 and 3.
- Translation NAT/PT:** works in all cases, but in 2 and 3 is not recommended

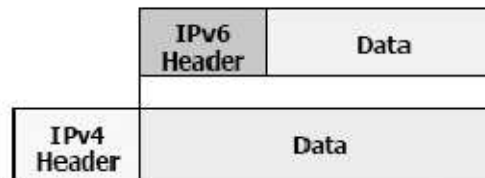
4.1 DOUBLE STACK

In this case, all the routers are able to process both protocols. There are in each router 2 protocol stacks, one for IPv4 and another for IPv6, and depending on the traffic the router is handling, one stack or the other will be uses. This means that the router has 2 routing tables, and for each datagram, 2 routes will be calculated, but only one of them will be the one the packet will follow. In this case, the application will have to know that the routers have a double stack.

4.2 TUNNELS

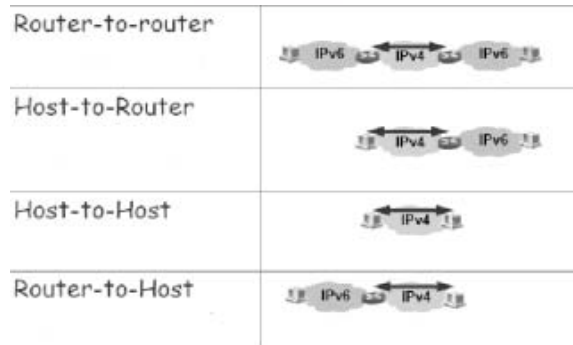
The tunnels are used like a mechanism to transport IPv6 packets through IPv4 networks. The way to do this is encapsulating the IPv6 datagram's in a IPv4 packet, so that the final packet can be handled by the routers of the IPv4 network without problems (Figure 4.1).

FIGURE 4.1: TUNNELLING ENCAPSULATING



The tunnels are widely used in nowadays networks. There are several types of tunnels, depending on the systems they interconnect:

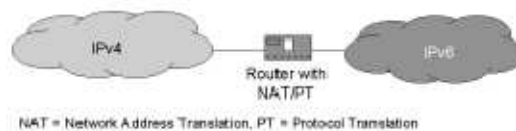
FIGURE 4.2: TYPES OF TUNNELS



4.3 TRANSLATION NAT/PT

This technic allows the communication between only-IPv6 and only-IPv4 systems, and it consists in translating the headers of the packets (only the common fields) of IPv6 and IPv4 (Figure 4.3).

FIGURE 4.3: NAT/PT SCENARIO

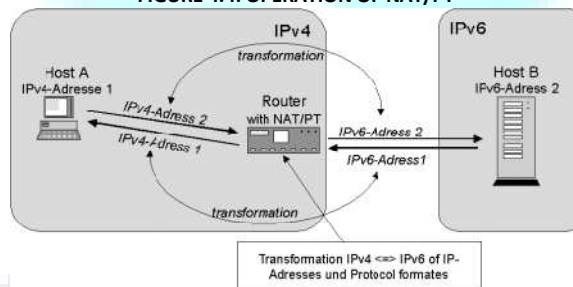


This translation of addresses made by NAT/PT has the same problems of the "regular" NAT, as the process is the same:

- Bottle neck, unique failure point.
- Fiability and scalability.
- Limitation of the usable applications, as the E2E communicaton is not possible when using NAT.

Because of all this problems, NAT/PT is not so popular within the internet.

FIGURE 4.4: OPERATION OF NAT/PT



5. CONCLUSIONS

As it has been shown, IPv6 provides solutions to the problems of the growth of internet, specially to the lack of addresses, due to some reasons, like the short number of addresses allocated in the countries of Asia-Pacific, and the existence of many systems that need a permanent allocation of an IP address (3rd generation mobile devices, DSL, modems, etc).

IPv6 also provides functionalities that improve its behavior in aspects involved with security, mobility, autoconfiguration, ... which are integrated in the protocol itself, not like in the case of IPv4, in which, this funcionaliities existed due to the extensions and "patches" added to the protocol.

As the network addressing is no longer needed, in IPv6 the end-to-end communications are possible, what means that we can use many applications that need this functionality, like IPsec, VoIP, videoconferencing (RTP/RTCP), network gaming, etc. And also IPv6 reduces the complexity of the network administration with features like the addresses autoconfiguration which simplifies the addressing administration, or the elimination of the added functionality "patches".

Anyway, at the moment IPv6 is only used by universities and by isolated spots, because the internet is such a huge network, and it is very difficult to migrate it all, specially having into account that there are many operators of big networks that prefer to stay in the safe side, or what is the same, operating safely with IPv4: "never touch a running network".

Apart from the fact of the co-existence of IPv4 and IPv6, it also has to be taken into account that there are another protocols that have to be adapted to IPv6 too, for example:

1. ICMPv6 (Internet Control Message Protocol)
2. DNS (Domain Name Service)
3. DHCPv6 (Dynamic Host Configuration Protocol)
4. RIPng for IPv6 (Routing Information Protocol)
5. OSPF for IPv6 (Open Shortest Path First)
6. FTP (File transfer Protocol)

So, because of all this reasons, it will take a long time to migrate the whole internet to IPv6, with all its consequences, as, for example with the migration tool of NAT/PT there are still the same problems of normal NAT, so we will not have all the advantages of IPv6 until the migration stage is finished.

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QUALITY OF WORK-LIFE: A TOOL TO ENHANCE CONFIDENCE AMONG EMPLOYEES

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ABSTRACT

The term Quality of Work Life refers to perception of people working in an organisation regarding the work environment characterised by humanistic and life enhancing work experience. The present study was undertaken to assess the relevance of various Quality of Work Life factors in an organisation and to identify variation in perception of employees on the basis of demographic variables. Two hundred regular employees of the different branches of HDFC Bank, Bajaj Alliance, and Punjab National Bank situated in Jammu City of the Jammu and Kashmir State constituted the target population of this study. The results indicate that job security is the most important factor affecting the Quality of Work Life in an organisation followed by fringe benefits and welfare measures. Supervision and Safe and healthy environment are the least considered factors.

KEYWORDS

Job Security, Organisation, Quality of Work Life.

INTRODUCTION

 Quality of Work Life (QWL) encompasses a wide range of organisational phenomena (Campbell, et al., 1976; Davis and Cherns, 1975; Loscocco and Roschelle, 1991; Walton, 1974). Job satisfaction, job involvement and organisational commitment are considered as the most important attitudinal outcomes reflecting the degree of goodness of the QWL in an organisation (Davis and Cherns, 1975).

The term QWL refers to perception of people working in an organisation regarding the work environment characterised by humanistic and life enhancing work experience. This may include proper working conditions, reasonable pay, healthy physical environment, employees welfare, job security, equal treatment in job related matters, grievance handling, opportunity to grow and develop, good human relations, participation in decision making and balance in life (Saklani, 2003, 2004).

The improvement of quality at the workplace is a concept that has captured the attention of managers and workers alike. A high QWL is essential for organizations to continue to attract and retain employees. May, Lau and Johnson (1999) suggested that companies offering better QWL and supportive work environments would likely gain leverage in hiring and retaining valuable people and companies with high QWL enjoy exceptional growth and profitability (Lau & May, 1998).

The concept of QWL made its appearance in Indian organisations in mid-1970s. However, the major concern was shown with the organising of a seminar titled the 'National Seminar on Improving Quality of Work Life' in New Delhi in 1982. This seminar emphasized on the improvement of QWL not only for the purpose of work reorganisation and job redesign but also to improve the life of an individual working in the organisation. This change in the view of the corporate sector was complimentary with the realisation of human resource as the most important asset. In addition, the inability of the existing methods of ensuring job satisfaction in the employees forced the management scientists to propose a new solution in this direction. Thus, QWL emerged as a tool to improve job satisfaction, job involvement, organisational commitment and self esteem among employees.

The key concepts captured QWL are job security, better reward systems, higher pay, opportunity for growth, participative groups and increased organisational productivity (Havlovic, 1991; Straw and Heckscher, 1984; scobel, 1975). The basic objective of an effective QWL programme is improved working conditions and greater organisational effectiveness. QWL not only contributes in an organisation's ability to recruit quality people but also enhances a company's competitiveness. Also it reduces absenteeism, lower turnover and improved job satisfaction (Havlovic, 1991; Cohen, Chiang and Ledford, 1997; King and Ehrhard, 1997).

LITERATURE REVIEW ON QWL

There is a plethora of literature identifying QWL factors (Carlson, 1978; Kalra & Ghosh, 1984; Morton, 1977; Rosow, 1980; Srinivas, 1994; Walton, 1973). Attempts also have been made to empirically define QWL (Levine et al., 1984; Mirvis & Lawler, 1984; Taylor, 1978; Walton, 1975). Comprehensive delineation of the QWL concept is found in three major works: Levine et al. (1984), Taylor (1978) and Walton (1975). Other researchers have attempted to measure QWL in a variety of settings using combinations of various questionnaires such as job satisfaction, organizational commitment, alienation, job stress, organizational identification, job involvement and finally work role ambiguity, conflict, and overload were studied as proxy measures of QWL. There appeared to be no one commonly accepted definition for Quality of Work Life. Heskett, Sasser and Schlesinger (1997) proposed that QWL, which was measured by the feelings that employees have towards their jobs, colleagues, and companies would enhance a chain effect leading to organization's growth and profitability. According to Havlovic (1991), Scobel (1975) and Straw and Heckscher (1984), the key concepts captured in QWL include job security, better reward systems, higher pay, opportunity for growth, and participative groups among others. Walton (1974) proposed the conceptual categories of QWL. He suggested eight aspects in which employees perceptions towards their work organizations could determine their QWL: adequate and fair compensation; safe and health environment; development of human capacities; growth and security; social integrative constitutionalism; the total life space and social relevance. In UK, Gilgeous (1998) assessed how manufacturing managers perceived their QWL in five different industries. Despite the growing complexity of working life, Walton's (1975) eight-part typology of the dimensions of QWL remains a useful analytical tool. Using samples from Standard & Poors 500 companies, Lau (2000) found that QWL companies have a higher growth rate as measured by the five-year trends of sales growth and asset growth. However, the outcome for profitability yield mixed results on Walton's (1974) conceptualisation of QWL. Saklani (2004) stressed that with the ever-changing technology and increased access to information, the study of organizations with respect to productivity, efficiency and quality of services very crucial in order to improve the performance of work in India.

The need to improve organizational productivity in the health care industry has spurred Brooks and Anderson (2005) to develop the construct of quality of nursing work life. They came out with four dimensions of the conceptual framework namely; work life/home life dimension, work design dimension, work context dimension and work world dimension. In another study done by Wyatt and Chay (2001), they found four dimensions of Quality of Work Life among the predominantly Chinese Singapore sample of employees. In Malaysia, Mohd. Hanefah et al. (2003), designed, developed and tested QWL measure for professionals, namely public and government accountants and architects. They conceptualized QWL as a multi-dimensional construct comprised of seven dimensions, namely growth and development, participation, physical environment, supervision, pay and benefits, soeial relevance and workplace integration. In summary, several studies that have examined QWL dimensions varied significantly not only across countries but also among researchers. The factors selected in this study are from a number of previous studies, enabling this study to accommodate a broader view of the existing literature.

NEED OF THE PRESENT STUDY

The present study was undertaken with the following objectives in mind:

1. To assess the relevance of various QWL factors in an organisation.
2. To measure the level of QWL in the organisation.
3. To identify variation in perception of employees on the basis of demographic variables.
4. To identify the acute areas needed to be taken care of.

RESEARCH DESIGN AND METHODOLOGY**RESEARCH POPULATION**

Two hundred regular employees of the different branches of HDFC Bank, Bajaj Alliance, and Punjab National Bank situated in Jammu City of the Jammu and Kashmir State represent the target population of this study. Out of the two hundred questionnaires administered, 175 responded questionnaires were found useful for this study (87.5%). The remaining 12.5% were those that were not refunded by the respondents for various reasons, which could not be, count for. Thus, the sample size comprise of 175 respondents.

SURVEY INSTRUMENT

The survey questionnaire developed included a list of fifteen factors that were adapted from previous studies. The questionnaire asked participants to rank the survey's fifteen questions according to importance they give to these factors to ensure Quality of Work Life in their organisations. The most important factor was ranked five and least important ranked one. All factors were to be ranked and no rank could be used more than once. The participants were also asked to indicate their gender, current age.

DATA ANALYSIS

After data were collected on all the factors, excel computer programme was used to present the results. The collective rank order was determined by entering the ranking given to each of the 15 factors in the survey questionnaire. After entering the rankings given to each factor by each respondent, the total or sum of all the rankings for that factor was totalled. The factor with the least or lowest sum, was ranked number 5 or the last factor and the factor with the highest sum was ranked 1 or first. The same procedure was used to analysis the ranking of factors between the different subgroups.

VALIDITY AND RELIABILITY OF DATA

To ensure both internal and external validity the most accurate and up-to-date literature has been used. The right and relevant questions asked in the survey, the most feasible data collection method used and the tools used to analyse the data are considered to be accurate and produce valid results; the overall validity of this study is considered high. However, due to the varying nature of human beings 100% reliability cannot be considered for this study, as individual perceptions are central in this study. In other words, because we are different as individuals and that our individual wants and preferences are different, future investigations may not produce exactly the same results as reported in this study.

OVERALL FINDINGS

The results indicate that job security is the most important factor affecting the Quality of Work Life in an organisation, as 20.9% or 63 out of 175 respondents ranked it number one. It is followed by fringe benefits and welfare measures, adequate and fair compensation, opportunity for continued growth, reward and penalty system, Opportunities to use and develop human capacity, Job Involvement, Human relations and social aspect of work life, Equity, justice and grievance handling, Image of organization, Work load and job stress, Work and total life space, Participation in decision making, Supervision and lastly Safe and healthy environment (Table II).

In Table II, Column A-Shows the sum of the ranking given to each factor by the total respondents, the smaller the sum of the total rank, the lower the factor was ranked as a motivational factor, Column B. shows the number of times respondents ranked the factors most important and Column C-shows the percentage of respondents who ranked a particular factor as most important (5)

$$\text{Column C} = \frac{\text{Sum of respondents who ranked a factor most important}}{\text{Total number of respondents who ranked any factor most important}} * 100\%$$

Table I shows the categories into which respondents were divided in the factors that influence them survey carried out for this study. The collective rank order of factors by the entire group of survey employees (175) is presented and the figure makes it possible for the responses of each subgroup to be compared with others and that of the entire group. The most obvious general observation that could be made from Table 3 is that the entire group of survey participants and each of the subgroups consistently ranked "job security" the most important factor of QWL. "Supervision" and "Safe & healthy environment" have been considered as the least required necessity in introducing QWL in an organisation.

GROUP-WISE FINDINGS**GENDER (FEMALE/MALE)**

When the responses of female and male employees are analysed, (Table III) no significant differences were found in the ranking of factors of QWL or preferences of the two groups. Both men and women (though placing different rankings) ranked three of the same factors among the top five most important factors. However, certain factors ranked differently by the two groups need a closer look for example male employees ranked "Opportunities to use and develop human capacity" among the five most important components, while female ranked the same factor outside the top five most important components at sixth rank.

Considering the results of this survey, one may safely assume that men are more interested in availing opportunities than women.

AGE GROUP

Three age groups (Table III) were analysed: 25 years or below, 26-30, 31 and above. The ranking of the top five factors was almost similar among these subgroups. Only variation is that the respondents under the group 31 and above consider reward and penalty system more important than having opportunities for continued growth. However, certain other factors like equity, justice and grievance handling, image of organisation and work load and job stress have been ranked differently by the sub

Irrespective of gender and age, the level to which the respondents participated in the survey had no significant difference in the ranking of the factors of QWL among the different employees in the organisation under study.

Discussion and Conclusion

The primary objective of this study is to identify the factors of QWL, which are considered as the most important by the employees working in the organisation. The respondents in this survey ranked as top five factors that motivate them as follows: job security, fringe benefits and welfare measures, adequate and fair compensation, opportunity for continued growth and reward and penalty system. This study concludes that, these factors reflect the current state of affairs in terms of employees needs and implies that especially job security must be ensured by the management of the organisation so that employees could have the feeling of a better work life in their organisation.

The most obvious and major findings emerging from this study is the clear indication of job security is the top requirement of employees. Regardless of age and gender, respondents in this survey seem to have a common interest or goal. This may have some practical implications for organisations, but perhaps its provision and implications may not be as difficult because employees seem to have similar preferences and wants. That is, they want their job to be as secure as it could be. In general, respondents in this study place high emphasis on job security and as well as monetary and non-monetary benefits.

This study has used a sound and solid theoretical base as presented in the literature review. The use of scientifically accepted methods of data collection and analysis further strengthens this study. The results from the analysis are clearly presented and they either contradict existing studies or are supported by the results of these studies. However, the sample size, the short study period, the judgement ranking of factors by respondents and the generality of the results

based on only selected number of employees could represent a weakness of this study. Nonetheless, the strengths of this study in general far outweigh the possible weaknesses.

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TABLES

TABLE I: DESCRIPTION OF SUB-GROUPS WITH THE NUMBER & PERCENTAGE OF RESPONDENTS

Subgroups	Number of respondents	Percentage of total Respondents (175)
Gender		
Males	86	49.2%
Females	89	50.8%
Age Group		
25 and less	44	25.1%
26-30	112	64%
31 and above	19	10.9%

TABLE-II OVERALL RANKING BY THE RESPONDENTS

Factors	A	B	C	OVER-ALL RANK
Job Security	540	63	20.9	I
Fringe benefits and welfare measures	530	55	18.2	II
Adequate and fair compensation	521	20	13.6	III
Opportunity for continued growth	496	27	13.6	IV
Reward and penalty system	466	16	6.6	V
Opportunities to use and develop human capacity	458	17	8.9	VI
Job Involvement	455	41	5.3	VII
Human relations and social aspect of work life	445	41	5.6	VIII
Equity, justice and grievance handling	423	17	5.6	IX
Image of organization	331	5	1.7	X
Work load and job stress	320	5	1.5	XI
Work and total life space	315	4	1.2	XII
Participation in decision making	309	4	0.9	XIII
Supervision	299	3	0.7	XIV
Safe and healthy environment	287	2	0.5	XV

TABLE-III FACTOR RANKING BY SUB GROUPS

Factors	Females	Males	25 and below	26-30	31 and above
Job Security	I	I	I	I	I
Fringe benefits and welfare measures	II	II	II	II	II
Adequate and fair compensation	III	III	III	III	III
Opportunity for continued growth	V	IV	IV	IV	V
Reward and penalty system	IV	VI	V	V	IV
Opportunities to use and develop human capacity	VI	V	VI	VI	VI
Job Involvement	VII	VII	VII	VII	VII
Human relations and social aspect of work life	IX	VIII	VIII	VIII	VIII
Equity, justice and grievance handling	VIII	IX	IX	X	IX
Image of organization	X	X	X	IX	XI
Work load and job stress	XI	XII	XI	XI	X
Work and total life space	XII	XI	XII	XII	XII
Participation in decision making	XIII	XIII	XIII	XIII	XIII
Supervision	XIV	XIV	XIV	XIV	XIV
Safe and healthy environment	XV	XV	XV	XV	XV

GLOBAL RECESSION: IMPACT, CHALLENGES AND OPPORTUNITIES

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ABSTRACT

A recession is a decline in a country's gross domestic product (GDP) growth for two or more consecutive quarters of a year. A recession is also preceded by several quarters of slowing down. An economy which grows over a period of time tends to slow down the growth as a part of the normal economic cycle. A recession normally takes place when consumers lose confidence in the growth of the economy and spend less. This leads to a decreased demand for goods and services, which in turn leads to a decrease in production, lay-offs and a sharp rise in unemployment. Investors spend less as they fear stocks values will fall and thus stock markets fall on negative sentiment. The financial crisis that began in the US in the year 2007 became a full-scale crisis in the year 2008 and 2009 which, in turn, affected each and every economy in some way or the other including the ones which were not directly related to the crisis. There has been considerable slowdown in most developed countries. Investment banks have collapsed, rescue packages were drawn up involving more than a trillion US dollars, and interest rates have been cut around the world in what looks like a coordinated response. Leading indicators of global economic activity, such as shipping rates, had declined at alarming rates. The objectives of the present paper are: (i) to learn about the causes of global recession and financial crisis (ii) to understand the nature & implications of global recession on the business (iii) to learn more about the impact of global recession on the developed countries as well as emerging countries.

KEYWORDS

Recession; GDP; IMF; Depression.

INTRODUCTION**DEFINITION OF GLOBAL RECESSION**

According to International Monetary Fund (IMF): "A Global recession is to occurring when the global growth rate moves below 3%." According to Merry Linch (Global Investment Bank) : "Negative sign in economic development is two or more consecutive quarter of the year is called recession".

The financial market crisis that erupted in the United States in August 2007 has developed into the world's largest shock since the Great Depression in 1930. This has weakened the global economy as the financial turbulence has spread over to the real economy. It has triggered a deceleration in the world economic growth, which is expected to slide even further in the times ahead. There is an impending danger of the rest of the world being dragged into a severe economic slowdown that may eventually inch to wards a synchronized global recession. In economics, a recession is a business cycle contraction, a general slowdown in economic activity. Many economists are now predicting that this 'The Great economic slowdown of the Recession' of 2008-09 will be the worst in advanced countries which started around global recession since the 1930s. mid-2007, as a result of sub-prime crisis in USA, led to the spread of economic Meaning Of Recession crisis across the globe. A recession economies and at the most there would normally takes place when consumers be a shallow effect on emerging lose confidence in the growth of the economies like India. Macroeconomic indicators such as GDP, employment, investment spending, capacity utilization, household income, business profits, and inflation fall, while bankruptcies and the unemployment rate rise. Recessions generally occur when there is a widespread drop in spending (an adverse demand shock). This may be triggered by various events, such as a financial crisis, an external trade shock, an adverse supply shock or the bursting of an economic bubble. Governments usually respond to recessions by adopting expansionary macroeconomic policies, such as increasing money supply, increasing government spending and decreasing taxation.

DIFFERENCE BETWEEN DEPRESSION AND RECESSION

If the GDP of a country drops by at least 10% then this can be classed as a depression. By these standards, the last depression America suffered was The Great Depression in the 1930's. The worst drop in recent times was during the oil crisis in the 1970's.

REVIEW OF THE GLOBAL RECESSION

The economy and the stock market are closely related. The stock markets reflect the buoyancy of the economy. The Indian stock markets crashed due to a slowdown in the US. The Sensex crashed by nearly 13 per cent in just two trading sessions in January, 2008. In November 2008, the giant Citibank and The Bank of America had to be bailed out with several hundred billion dollars by the American authorities. It also reported job losses of more than 530,000. The biggest single month figure since 1974, taking the US unemployment rate to 6.7 percent, the highest in last 15 years. The developed economies of the world like Europe, UK, Japan and US are today officially in recession i.e. they have experienced two successive quarters of negative growth. This is not just bad news for India, but also for the rest of the world. There is much more uncertainty about the depth and duration of the current global recession. The US economy has suffered 10 recessions since the end of World War II. The Great Depression in the US was an economic slowdown, from 1930 to 1939. It was a decade of high unemployment, low profits, low prices of goods, and high poverty. The trade market was brought to a standstill, which consequently affected the world markets in the 1930s. Industries that suffered the most included agriculture, mining, and logging. In 1937, the American economy unexpectedly fell, lasting through most of 1938. Production declined sharply, as did profits and employment. Unemployment jumped from 14.3 per cent in 1937 to 19.0 per cent in 1938. The US saw a recession during 1982-83 due to a tight monetary policy to control inflation and sharp correction to overproduction of the previous decade. This was followed by Black Monday in October 1987, when a stock market collapse saw the Dow Jones Industrial Average plunge by 22.6 per cent affecting the lives of millions of Americans. The early 1990s saw a collapse of junk bonds and a financial crisis. The US saw one of its biggest recessions in 2001, ending ten years of growth, the longest expansion on record. From March to November 2001, employment dropped by almost 1.7 million. In the 1990-91 recession, the GDP fell 1.5 per cent from its peak in the second quarter of 1990. The 2001 recession saw a 0.6 per cent decline from the peak in the fourth quarter of 2000. The dotcom burst hit the US economy and many developing countries. The global economic recession has taken its toll on the Indian economy that has led to multi-crore loss in business and export orders, thousands of job losses, especially in key sectors like the IT, automobiles, industry and export-oriented firms. It has also shaken up the investment arena. It is a difficult phase for a growing economy like India. In August, 2008 India recorded inflation at its 16 year high of 12.91%. This inflationary situation forced the regulatory bodies of the country to take certain anti-inflationary measures by tightening the monetary policy which in turn made it difficult for institutions and individuals to borrow money from banks. In some ways, this has also contributed to the slowdown in different sectors and can be considered to be the start of slowdown in different sectors in India. Before this economic crisis, there were more than 1500 software firms in the country. While the employee base of the sector had grown to 553,000 (from 415,000 in financial year, 06). More than 1300 IT companies were operating in Bangalore alone. This sector has been adversely affected by the global crisis. As for the IT industry, Nasscom had initially projected a 21-24 per cent growth rate for the year 2008, but the software association revised it downward in the wake of the global financial meltdown.

In February 2008, Tata Consultancy Services (TCS) had asked about 500 employees to leave due to non-performance. Patni Computer Systems (PCS) has already laid off around 400 employees, or nearly 3% of its 14,800 workforce, on the same ground, while IBM Corporation followed suit in the case of 700 freshers. Wipro, the country's third largest IT exporter, is considering firing 3,000 employees over performance-related issues. Other than IT firms, the IT-enabled service sector may also face the crisis, since a majority of Indian IT firms derive 75% or more of their revenues from the US.

Thus, if the Fortune 500 companies slash their IT budgets, Indian firms could feel the heat. Industry-wide indications after September, 2008 are also uniformly gloomy. There are reports of significant declines in output of automobiles, commercial vehicles, steel, textiles, petrochemicals, construction, real estate, finance, retail activity and many other sectors. Exports fell by 12 percent in dollar terms in October, while core industries slowed to 3.4 % during the same month from 4.6 % a year ago. The effect of such job (income) losses and pay-cuts has been on demand for goods and services. People either have no money to buy or those who have are postponing their buying because of the economic uncertainties ahead. The most worrying aspect of a recession is the sustained drop in demand leading to deflation that is often caused by a drop in the supply of money or credit. It is also caused by a contraction in spending, by government or people. Deflation tends to raise unemployment, causing a vicious spiral. Just to avoid the deflation trap nations are pumping money into their economies disregarding the deficit they are accumulating. This is to stimulate spending and to keep the inflation from falling below a certain level as to become a disincentive to produce.

CAUSES OF THE GLOBAL RECESSION

Global economy had declined substantially after the collapse of Lehman Brothers in September, 2008, which is called as —Lehman Shock. Lehman Brothers was a leading global financial-services firm that did business in investment banking, equity and fixed-income sales, research and trading, investment management, private equity, and private banking. The firm's worldwide headquarters was in New York City, with regional headquarters in London and Tokyo, as well as offices located throughout the world. On September 15, 2008, Lehman brothers filed for Chapter 11 bankruptcy protection; the filing marked the largest bankruptcy in the U.S. history. The following day, Barclays PLC announced its agreement to purchase, Lehman's North American investment banking and trading divisions along with its New York headquarters building. Lehman Shock had moved quite a lot of investors away from positive purchase of stocks everywhere for some time. On September 22, 2008, Nomura Holdings, Inc (a Japanese company). announced that it had agreed to acquire Lehman Brothers' business in the Asia Pacific region, including Japan and Australia. The following day, Nomura announced its intention to acquire Lehman Brothers' investment banking and equities businesses in Europe and the Middle East also. The deal became effective on Monday, 13 October, 2008.

The year 2008-09 is now known as the extreme recession time in the history of global economy, primarily caused by subprime mortgage crisis, ie, financial crisis triggered by a dramatic rise in mortgage delinquencies and foreclosures in the United States, with major adverse consequences for banks and financial markets around the world. Many USA mortgages issued during 2001-2007 were made to subprime borrowers, (those with lesser ability to repay the loan)¹. When real estate prices in the United States began to decline in 2006-07, mortgage delinquencies soared, and securities backed with subprime mortgages, widely held by financial firms, lost most of their value. The result was a large decline in the capital of many banks and tightening credit around the world. The first issue that people realized about the worsening economy was the collapse of Bear Stearns which was one of the largest global investment banks and securities trading, however, beginning in 2007, the company was badly damaged by the subprime mortgage crisis. Although, the Federal Reserve Bank provided an emergency loan to the company in March 2008, the company could not be saved. Later, it was sold to JP Morgan Chase. Moreover, the collapse of Lehman Brothers made global market fell into great disorders. As a result of that, investors withdrew their money from capital market immediately. In response to this critical situation, the US Government enacted the Emergency Economic Stabilization Act of 2008 authorizing the United States Secretary of the Treasury to spend up to US\$700 billion to purchase distressed assets, especially mortgage-backed securities, and make capital injections into banks.

Needless to say, this financial crisis spread and became extremely critical in Europe, Japan and emerging countries as well. Euro area was also hit by this Financial Crisis seriously. The problems were brought into public attention when Sachsen Landesbank in Germany which invested large sum of money in securitized instruments related to subprime loan went to slump in business in January 2008, and government provided an emergency loan to this bank. In February 2008, the Northern Rock bank in Britain was nationalized by the British Government, due to financial problems caused by the subprime mortgage crisis. From the end of September to the first half of October 2008, several incidents happened, many financial institutions were nationalized. Fortis was nationalized by Benelux countries (Belgium, Netherland and Luxembourg), Bradford & Bingley was nationalized by British government, and three largest commercial banks of Iceland-Glitrir, Landsbanki and Kaupthing were also nationalized by Icelandic government. Also, the Irish government issued a sweeping guarantee to insure deposits and bank borrowings against a potential collapse⁴. As a result of this, huge amount of money moved to Ireland, and then, this created confusion in European countries. According to IMF report regarding GDP growth rate in the world, it had been growing around 5% since 2004. However, by the end of 2008, GDP growth declined to 3.1%, which was the lowest growth rate in the period 2003-08. IMF also released 1.5% GDP growth rate in the year 2009. In 1991, GDP growth rate was same low level, however, the impact of global financial crisis 2008-09 is obviously different from the past recessions. One of the reasons of this is World economy and financial markets have been globalized rapidly and the evils of crisis were spread widely among emerging countries. Another notable point is - minus GDP growth rate of advanced countries such as US, Germany, Italy and Japan in the year 2008 (Crisis Time), the first ever since 1980s.

MEASURES TO TACKLE RECESSION

The following measures can be adopted to tackle the recession:

1. Tax cuts are generally the first step any government takes during slump.
2. Government should hike its spending to create more jobs and boost the manufacturing sectors in the country.
3. Government should try to increase the export against the initial export.
4. The way out for builders is to reduce the unrealistic prices of property to bring back the buyers into the market. And thus raise finances for the incomplete projects that they are developing.
5. The falling rupees against the dollar will bring a boost in the export industry. Though the buyers in the west might become scarce.
6. The oil prices decline will also have a positive impact on the importers.

India has adopted certain measures to combat recession. Since October, 2008 The Reserve Bank of India has cut the repo rate and the CRR by 350 and 400 basis points respectively. The reverse repo rate has been cut by 200 basis points over the same period. This in turn has made credit cheaper and has increased the overall liquidity in the system. Further, the PSU banks of the country have decreased the home loan rates. This is expected to induce more buyers and boost the real estate sector. In addition to this government has proposed to cut service tax and excise duty on most goods.

GLOBAL IMPACT OF RECESSION

The United States of America

The global financial crisis was the outcome of the process, widely known as Subprime mortgage which involved financial institutions providing credit to borrowers who do not meet prime underwriting guidelines⁶. Subprime borrowers have a heightened perceived risk of default, such as those who have a history of loan delinquency or default, those with a recorded bankruptcy, or those with limited debt experience. However, subprime mortgages were not created for low income borrowers who had little or no money to put down, as commonly believed. Subprime mortgages were actually intended to be temporary loans to borrowers who expected to sell the property early or increase their income soon after purchase. Many property investors, also used subprime loans to finance their investment homes. Their expectations that the property prices would increase remained as dream when home bubble burst. Most of borrowers who could not manage their obligation decided to default and securitized instruments from US depreciated gradually. It is worth noting, in this context, to compare the experience of Japan where economic bubble burst and economy was in recession in 1990s after the boom time of 1980s it took more than 10 years to recover

the situation. Japanese stagnant economy after bubble bust was caused by domestic home price; however, it did not influenced foreign countries seriously because other countries were not relying on income from Japan. This is the remarkable differences between bubble burst in Japan and the US. The Federal Reserve Bank provided huge amount of emergency loans and subsidies and the fact of deficit financing of the US was exposed in public. It was expected to pull down home prices, therefore, stock market slump, dollar depreciation. US economy and stock market have started to recover slowly and gradually.

European Countries

In European Countries, just same as United States, financial crisis caused by subprime mortgage crisis was seriously discussed. The first action of European Central Bank against this crisis was the decision to lower the rate of interest taken in autumn 2008. It would take a few more years to go back to the same pre-crisis peak level for stock index, in most of the countries in Europe.

Japan

Japan, which had been too dependent on business from the US, was also a victim of great depression 2008-09. The manufacturing industry in Japan, especially automobile industry dipped into slump due to great depression because of the over-dependence on foreign markets for sales (exports). In 2007, international sale of automobiles had exceeded domestic sales and its revenue had been increasing for a few years. However, in the year 2008-09, manufacturing companies suddenly terminated contract workers with reasons like —some financial problems . Companies did not allow them to stay even for a while. In nutshell, countries like Japan and Korea which are not even related to the causes of crisis itself but depend heavily on international business had got adversely affected due to the global economic crisis. It is said that Japan was not directly involved in subprime mortgage crisis itself; however, Japanese economy has been heavily depending on external demand which in turn negatively affected deeply. This fact hit Japanese economy substantially.

Impact on BRIC Countries- (Brazil, Russia, India and China)

Most of all advanced countries have undergone through the volatile situation as a result of economic depression 2008-09. Needless to say that emerging countries which had been growing rapidly year by year could not avoid the evils of worldwide recession.. A lot of US investors withdrew huge amount of money from BRICs stock market, which made the shrinkage of stock market index in each of BRICs country. It was particularly obvious in Russia and Brazil, which would give Russia and Brazil suffering in the near future. However, BRICs is now facing the different stage. The economy of each country is close to reach the mature mode, people in the upper income brackets are increasing recently and their domestic demand is going to broaden. India's top think tank- Prime Minister's Economic Advisory Council (PMEAC) said that the nation can achieve a 7 to 8% growth rate in the forthcoming years despite a global financial meltdown impact. It was announced that Indian economy is now controlled more by domestic factors than international factors. Stock Indices in India have already bounced back to the pre-crisis period peak (BSE SENSEX crossed 18,000 in 2009 November as against 8000 in Oct 2008 in India). In addition, China announced on November 9, 2008, to take measures to counter depression. Those measures taken, by Chinese government would help to facilitate trade and regain confidence in China.

Looking up GDP based on purchasing power parity share of world total, on the one hand, emerging market and developing countries is on the rise remarkably, on the other hand, the US GDP based on PPP share of world total shrunk slowly after the year of 2000. Moreover, BRICs total GDP based on PPP share of world total exceeded US's in 2007. In November 2008, The Group of 20, (includes the Group of Eight richest countries- United States, Germany, Japan, France, Italy, Britain and Canada and Russia -in addition to the European Union, Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Saudi Arabia, South Africa, South Korea and Turkey) had convened a conference to discuss about the global economic crisis. The Group of 20 countries account for 90 percent of the world economy and about two-thirds of its population. The five key objectives the leaders agreed upon were

1. reached a common understanding of the root causes of the global crisis
2. reviewed actions countries had taken and would take in the future to address the immediate crisis and strengthen growth
3. agreed on common principles for reforming their financial markets
4. launched an action plan to implement those principles and asked ministers to develop further specific recommendations that would be reviewed by leaders at a subsequent summit
5. reaffirmed their commitment to free market principles

However, any of specific and concrete guidelines like financial market regulations or what the mid term international financial systems have not discussed yet.

CHALLENGES

Few important challenges of HRM due to recession are:

- A. Problem of Recruitment.
- B. Managing downsizing program appropriately.
- C. Talent management.
- D. Stress Management.
- E. The Return on Recognition in a Recession.

Recruitment and Recession

Recruitment industry is going through a tough time at this moment, the numbers have dropped drastically for the biggies and even recruitment agencies are battling for survival. Synergy Solutions provides recruitment services to companies in India and in US, the biggest challenge today is to find newer and better ways to add value to the clients. There is a need to find innovative ways to improve recruitment ROI for the client. First things first, the base idea is not to wait and find ways to weather the storm but to take proactive measures to tide the wave. The world is changing very quickly to combat recession and it's about time we translate our thinking into action or else we will be late. The main reason being the companies who are hiring have recently made drastic cuts in their recruiting budget and are in the process of streamlining their side of the story. Companies (clients) has to demand greater accountability from recruitment agencies and focus on improving their recruitment ROI. Recruitment agencies / staffing companies who are agile in their operation and can quickly adapt to the changing environment will emerge victorious at the end of this recessionary period.

Managing downsizing appropriately .

Virtually every country has to face the impact of a global economic downturn which can be in the form of recession, slowdown, depression or growth recession. When a downturn occurs, the organizations have to suffer heavy losses and bear the brunt of slow revenue generation. During this period, there is also less spending by the consumers, less investment by the investors and more of savings. Even the sectors who have been thriving in the boom period try to save more. Numerous causes can be attributed to the economic downturn and one of which affects the business is lack of skilled manpower.

Other reasons could be the increasing population, lack of food supply, climatic condition, and entry of substitutes, inapt investments and technological changes. The shift in supply and demand hugely affects the entire business cycle. There can be acute shortage of cash supply leading to less or poor investments. All of this may ultimately affect the morale of the employees which should be a concern to every organization. Also, the decline in growth and decrease in profits certainly calls for certain top-of-the line strategies to make adjustments to serve organizational needs. Managing the teams or human capital at this juncture is a Herculean task. So, a manager should devise certain strategies in order to manage teams during down turns. Downsizing during this period is certainly not a good option because if there are merits of laying off of employees, there are many demerits too.

What should a manager do to manage teams or workforce?

Hold special meetings: During this unsafe situation, the organization's top most head or CEO should brief the meeting where the main subject should be the employees and their concern. If the head of any organization feels confident, the whole organization feels confident. Alternatively, middle-level managers and senior managers can conduct private meetings where they can console their subordinates. Also, give your workforce to ask questions and express their feelings regarding the business insecurity.

Motivate the employees: The key to managing and retaining the employees during downturn is motivation. Apart from the special meetings being conducted, a manager should regularly be attending to their problems and constantly trigger the employees to have good mood.

Offering challenging assignments and opportunities: If you offer your teams the challenging assignments, they spirits will be lifted and they will manage to survive even in bad times.

Explain to them the importance of their existence in jobs: There is no use crying over the spoiled milk, just like economy turning to a bad shape and business showing downfall. Its better that you discuss about the new projects and subsequently tell them what role they have to play. How their productivity can make the organization grow, explain to them.

Initiate change by identifying key people: There are few employees who are influencers and can bring about a lot of change in the organization. If these employees are given the right message to convince other team workers, the organization can move in the right direction.

Identify the achievers and reward them: Even during this period, you should give your employees the bonuses and increments if possible. In this way, they will always remain motivated and perform. All the above points are crucial to letting the organization grow to greater heights and following the above strategies will promote the general health of the organization despite economic downturns.

Talent Scenario during Recession

The law of demand and supply mercilessly applies to human resources, also. During the economic downturn, companies were able to downsize by getting rid of redundant work force and dead wood. They also restructured the employee compensation (mostly by decreasing) to stave off financial losses. Only those employees were retained who proved their worth. The employees had to accept all kinds of compensation-related compromises while maintaining the same or even higher level of efficiency and productivity. They could thus survive the financial tsunami. These survivors got the opportunity to handle a variety of tasks that further sharpened their skills and made them multiskilled. Thus, overall quality of talent has increased. At the same time, those who were out of job lost this opportunity to hone their skills in a new challenging environment. Adding to our woes, slashing of training and development budgets has led to a depletion of the number of skilled employees within the companies. Such steps from companies have created an altogether tricky scenario: The quality of talent within the companies has increased (raising the bar of the talent), while the quality of skills available in job market has dwindled. Now, recruiters can hire the required quality talent not from outside but from inside their competitors' workplace. While many have forgotten the term "War for Talent", the phenomenon is slowly re-emerging. "A study by Accenture has found that more than two-thirds of executives are now deeply concerned about not being able to recruit and retain the best talent. In today's global and highly competitive economy, the war for talent is now global, not local. The survey of more than 850 top executives from the U.S, UK, Italy, France, Germany, Spain, Japan and China found worries about talent management were growing, with 67 per cent this year putting it second only behind competition as the key threat, up from 60 per cent last year."

It may be worth noting that great companies such as Infosys, responded to the downturn by investing more in training. Instead of fearing of financial losses, these corporate focused on improving the quality of their employees' skills. And the effect is visible in their financial results. Member of Infosys' board of directors and head of HRD and Education and Research, T V Mohandas Pai said, "In response to the economic crisis, we had stepped up our investment in training. This has made us more competitive in fulfilling clients' needs today." The demand for talent in the market will never cease.

Retention will always be a challenge.

Stress Management

The financial recession is impacting large and small organizations and countries in similar devastating manner. For example, as the prices of goods and products increase, consumers tend to buy less and thus companies end up having to lay off some of their employees in order to avoid bankruptcy or just to stay in business, in the US during the first two months of 2009, over 17 banks have gone out of business and more such bankruptcies and closers and expected in the financial industry. Such failures tend to increase the number of people losing their jobs and moving them closer towards poverty.

*"Stress is an inevitable
reality and everyone
needs to find their own
ways of beating it".*

Stress is an inevitable part of work life. A recent ASSOCHAM survey lists construction, shipping, banks, trading houses, electronic and print media, courier companies, SSI, retail, card franchise companies, and even government hospitals as high stress prone zones... akin to chart toppers like BPOs, call centres and IT companies. The pressure is truly spreading everywhere! There is ample evidence of the fact that stress impacts employee health and productivity. And of late, hundreds of articles have been written on how financial stress due to the current economic recession is having a dangerous impact on health and productivity. Results from the AARP survey, "Impact of Economy on Health Behaviors" reveal that 20 per cent of people 45 and older reported health problems due to financial stress; 22 per cent have delayed seeing a doctor due to cost; 16 per cent had to use retirement savings or other savings to pay for medical care; 21 per cent have cut back on other expenses

to afford their medical care; and 16 per cent are not confident they will be able to afford health care in 2009. Bob Gallo, AARP Illinois Senior State Director is reported to have quoted that right now "people are increasingly concerned about their jobs, retirement savings and simply being able to provide for their families and it's taking a major toll on their health".

The Return on Recognition in a Recession

People management is a Key Result Area in delivering success for a business unit during the downturn. It is obvious to adopt lay off as a strategy in achieving the cost minimization strategy. But alternatives such as seeking voluntary reduction in salaries and incentives, flexible work hours and improvement in productivity are worth enough to try during the slowdown. These strategies reduce the costs besides improving the efficiency of the organization. Every year, PricewaterhouseCoopers (PwC) launches its Global CEO Survey during the World Economic Forum's annual meeting in Davos, Switzerland. The survey, PwC says in its introduction to the 2008 edition, "examines how CEOs perceive the business environment in which they operate and how an increasingly connected world affects the way their companies function and achieve success."

This year's survey says: "At present, CEO confidence is at an all-time low. Worldwide, just 21 per cent of CEOs say that they are confident about revenue growth in the next 12 months, down from 50 per cent in last year's Global Annual Survey. Pessimism prevails across all geographic regions, business sectors and levels of economic development." In these tough economic conditions, there are many reasons to suggest that if the human element was responsible for plunging companies and the world into this deep financial crisis, then the human resources of an organization are also perhaps the best bet to help it emerge out of the same. And this is the reason why experts view this period of economic recession as an opportunity for HR management rather than a crisis. The declining state of the global economy, layoffs, bankruptcies, the credit crunch—the headlines are impossible to ignore. Companies across industries and around the world are dealing with similar complex challenges due to the ailing economy. Now is not the time for employees to give in to fear and not work as hard because they believe they will not be recognized for their efforts. But how do company leaders address these employee concerns while remaining fiscally responsible, encouraging greater productivity and sustaining growth? Strategic employee recognition programs reaffirm employees in the value of their contributions, acknowledge the additional work and effort they are being asked to perform, and allay rumors through frequently updated executive messages. Human Resources leaders can actually deliver savings to the bottom line through a properly deployed strategic recognition program while simultaneously boosting morale and productivity. As Judy Bardwick said in Psychological Recession, "Chronically fearful people are too exhausted to be creative and innovative. They expect the worst to happen, so they see no reason to give their all."

CONCLUSION

The main aim of this paper is to discuss the causes, impact, challenges and opportunities of the Global recession. To sum up we can say that the global financial recession which started off as a sub-prime crisis of USA has brought all nations including India into its fold. The GDP growth rate which was around nine per cent over the last four years has slowed since the last quarter of 2008 owing to deceleration in employment, export-import, tax-GDP ratio, reduction in capital inflows and significant outflows due to economic slowdown. The demand for bank credit is also slackening despite comfortable liquidity in the system. Higher input costs and dampened demand have dented corporate margins while the uncertainty surrounding the crisis has affected business confidence leading to the crash

of Indian stock market and volatility in forex market. Nevertheless, a sound and resilient banking sector, well-functioning financial markets, robust liquidity management and payment and settlement infrastructure, buoyancy of foreign exchange reserves have helped Indian economy to remain largely immune from the contagious effect of global meltdown. Indian financial markets are capable of withstanding the global shock, perhaps somewhat bruised but definitely not battered. India, with its strong internal drivers for growth, may escape the worst consequences of the global financial crisis. In other words, the fundamentals of our economy continue to be strong and robust.

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IMPACT OF CELL PHONE ON LIFESTYLE OF YOUTH: A SURVEY REPORT

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ABSTRACT

Mobile phones have such a deep impact on our lives, youngsters in particular, that we cannot imagine a day without our mobile phones. From morning alarm in our mobile phone, to ordering breakfast, for scheduling our meetings or planning outing with friends, from buying movie tickets to travel tickets, from downloading songs and listening to music to clicking pictures and uploading them on some social networking site. In short, mobile phone is an integral part of our life. Youngsters have become addicted to this tool of communication. They want latest mobile handsets, want to carry it to school and use during lectures in colleges. They get scolded by their parents, ignore health hazards, arrange money for paying the bills for mobile services by cutting other expenses, carry their mobile phone to the bathroom and restroom, keep it with them while sleeping... This research tries to look into the minds of this school/college going young generation, and ask them how much they are addicted to mobile phone and if they can live without mobile phone.

KEYWORDS

Mobile Phones, SIM Card, Service Providers.

1. INTRODUCTION

One are the days when there used to be a single telephone connection in the neighborhood and we had to go to a PCO for making a phone call to our near and dear ones. Today, we have moved from fixed line telephone connection to very affordable, always-on mobile telephone services. It has a very great impact on our daily lives. It has changed the way we communicated, the way we make business, the way we study – in short it has changed every sphere of our life.

We still remember, when we were in school, we used to scribble some message on a paper slip and pass it to our friends sitting in the other row during a class lecture. Many times we were caught by the teachers and were tipped off. But, today, that paper slip has been replaced by SMS, pokes, Whatsapp, etc.

When we used to work upon any project reports, we used to visit the library, then we moved on to computers for online search, but nowadays it's all available on just a click on the mobile handset.

There is also another side of this technological innovation. More than often we come across parents and teachers complaining about the excessive usage of mobile phone by the children. Some children are addicted to their mobile phones and it leads to less concentration on studies and hence, meager results in exams. Frequently, we come across news of accidents taking place due to people conversing over mobile phone while driving. There is also a danger of tumors and other illness caused by radiations emitted by mobile phones.

The availability of low cost mobile handsets and mobile services has made the use of mobile telephone very popular among all sections of the society and students in particular. This research paper tries to analyze the importance, impact and perception of school going students towards mobile phones.

For this purpose, 200 students were interviewed and their responses were gathered and analyzed. The students belonged to various schools and colleges of Delhi. The students interviewed were of the age group of 18 years to 23 years.

2. NEED AND IMPORTANCE OF STUDY

We conducted the survey to get a view about the perception, attitude and the usage pattern of the mobile phones in the youngsters. This survey was even conducted to know the impact of the growing technology on the youngsters. How would a youngster feel without a mobile phone, why are they using mobile phones? When parents are against the use of mobile phones for their young children then why are youngsters running behind it? With the survey we can come to know about youngster's mentality, perception and attitude towards the mobile phones, which would help their parents and the world to control all the unwanted activities where mobile phones are involved, which are happening in today's world, along with the destruction caused by the mobile phones in terms of career of a students.

3. OBJECTIVE

To analyze the data collected during the survey and find out the perception of youngsters towards mobile phones.

4. RESEARCH METHODOLOGY

To achieve the above mentioned objective we gathered the data using interview based questionnaire. A survey was carried out among 200 school and college going students in Delhi. The data collected was tabulated and analyzed by using software like MS Excel and SPSS.

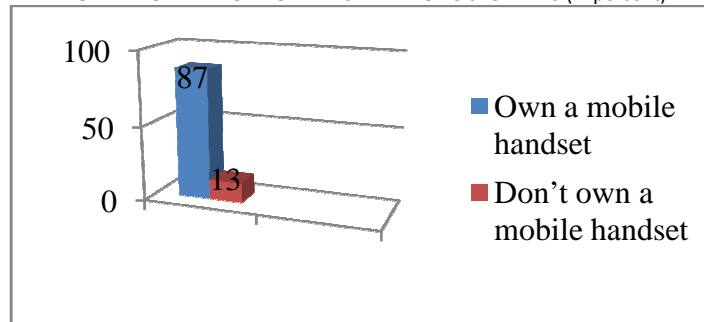
5. ANALYSIS

The analysis of the data collected shows that among the total number of students interviewed, 87% own a mobile phone, while only a 13% do not have a mobile phone. The ownership does not mean that they have purchased it themselves. It might be that the mobile handset was gifted by their parents or even owned by the parents, but it is being used by the respondent individually.

TABLE-1 - MOBILE PHONE OWNERSHIP AMONG STUDENTS

Response	Frequency	Percentage
Own a mobile	174	87%
Don't own a mobile	26	13%
Total	200	100%

FIG. 1 – MOBILE PHONE OWNERSHIP AMONG STUDENTS (in percent)

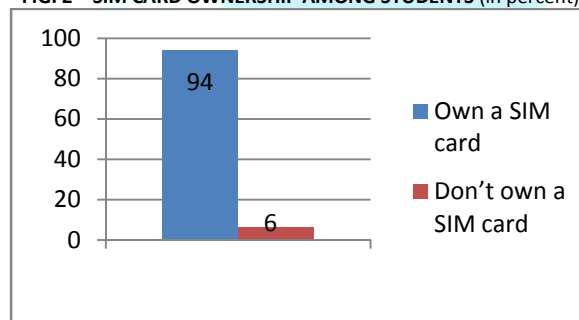


However this does not mean that the 13% students who do not own a mobile phone are not using mobile services. Interestingly, 94% of students own a SIM card, while only a meager 6% do not own a SIM card. Further analysis of the data brings to light a very interesting fact; the percentage of students who own a SIM card is higher than the number of students owning a mobile phone. It means that the students who don't own a mobile phone still use mobile services by using the mobile handset of some friend or family member. There can be many reasons for such a high percentage of students having SIM card. One of the reasons is that the price of a SIM card is very low. One can get a SIM card for paying only a small amount of Rs. 50. In some cases, this amount is even less. Another reason is the availability of pre-activated SIM cards and no address verification for SIM activation by the mobile service providers.

TABLE-2 – SIM CARD OWNERSHIP AMONG STUDENTS

Response	Frequency	Percentage
Own a SIM	188	94%
Don't own a SIM	12	06%
Total	200	100%

FIG. 2 – SIM CARD OWNERSHIP AMONG STUDENTS (in percent)

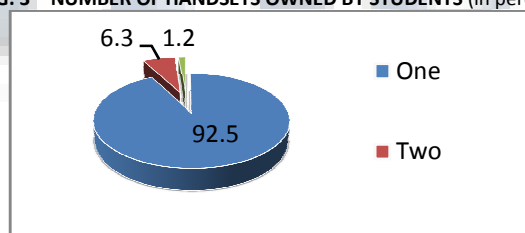


When the students who owned a mobile phone, were asked about the number of handsets owned by them, 92.5% of the students said that they own only one mobile handset, while 6.3% own two mobile handsets. Only a meager 1.2% own more than two handsets. So, students prefer to use only one mobile handset. It may be because of ease of carrying and availability of Dual SIM mobile handsets. This is a straight forward indication for mobile handset companies that they have to provide a good handset having all the facilities and add-ons. The terms like battery life, memory capacity, 3G, Wi-Fi, efficient touch screen, sound quality, software version, Android etc. are common terms you can hear from every youngster today. It seems as if they all are tech-whiz.

TABLE-3 - NUMBER OF HANDSETS OWNED BY STUDENTS

Response	Frequency	Percentage
One handset	161	92.5%
Two handsets	11	6.3%
More than two handsets	02	1.2%
Total	174	100%

FIG. 3 – NUMBER OF HANDSETS OWNED BY STUDENTS (in percent)

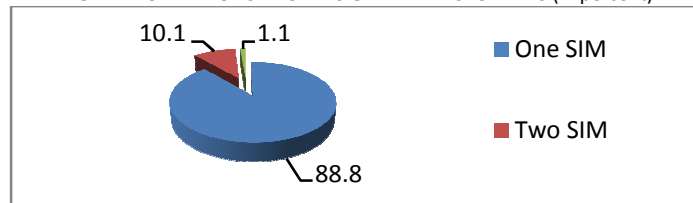


According to the data collected and analyzed, of the total number of students who own SIM card, 1.1% own more than two SIM cards, while 10.1% own two SIM cards. A majority of students that is 88.8% own only one SIM card. It means that of the total of 200 students interviewed, 188 students own a total number of 211 (approx) SIM cards.

TABLE-4 - NUMBER OF SIM CARDS OWNED BY STUDENTS

Response	Frequency	Percentage
One SIM card	167	88.8%
Two SIM cards	19	10.1%
More than two SIM cards	02	1.1%
Total respondents	188	100%

FIG. 4 – NUMBER OF SIM CARDS OWNED BY STUDENTS (in percent)

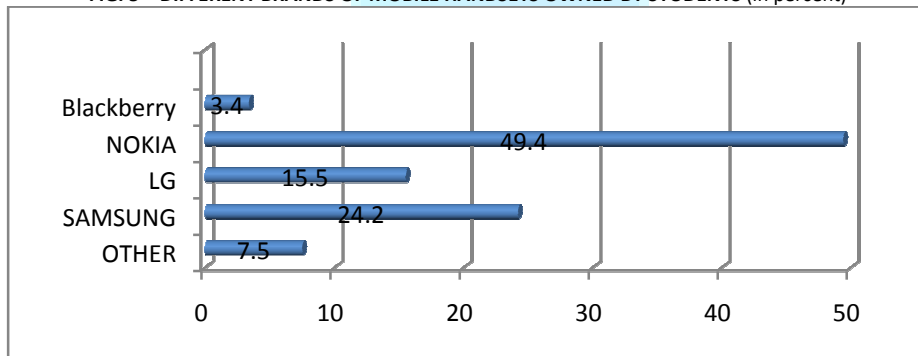


When asked about the brand of mobile handset that they use, Nokia swept the market, with 49.4% of students interviewed preferring Nokia. Samsung and LG with 24.2% and 15.5% respectively were also among the top three preferred brands of mobile handsets. The Blackberry with 3.4% is also creating its space in the market. 7.5% respondents are using handsets of other brands like HTC, Sony and other Chinese and domestic brands.

TABLE-5 - DIFFERENT BRANDS OF MOBILE HANDSETS OWNED BY STUDENTS

Response	Frequency	Percentage
Blackberry	06	3.4%
Nokia	86	49.4%
LG	27	15.5%
Samsung	42	24.2%
Others	13	7.5%
Total	174	100%

FIG. 5 – DIFFERENT BRANDS OF MOBILE HANDSETS OWNED BY STUDENTS (in percent)

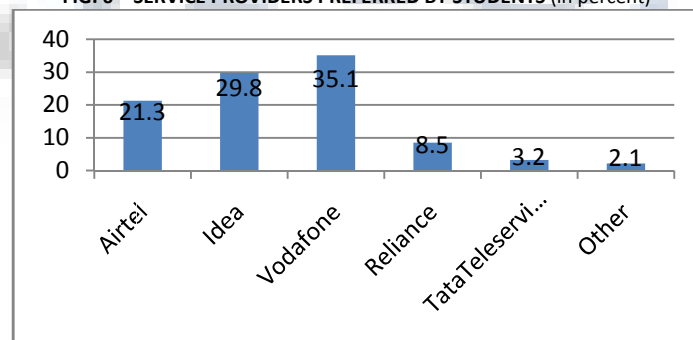


In Delhi, there are many mobile service providers with each fighting hard to capture more share of the market. According to the students interviewed, the situation is similar, with Vodafone, Idea Cellular and Bharti Airtel competing for the top slot with 35.1%, 29.8% and 21.3% respectively. There is an unbending competition among these three players, with each launching different and attractive schemes every now and then. Reliance and Tata Teleservices have 8.5% and 3.2% share respectively. Others with 2.1% are mostly new entrants like MTS, MTNL and Aircel.

TABLE-6 - SERVICE PROVIDERS PREFERRED BY STUDENTS

Response	Frequency	Percentage
Airtel	40	21.3%
Idea	56	29.8%
Vodafone	66	35.1%
Reliance	16	08.5%
Tata Teleservices	06	03.2%
Others	04	02.1%
Total respondents	188	100%

FIG. 6 – SERVICE PROVIDERS PREFERRED BY STUDENTS (in percent)



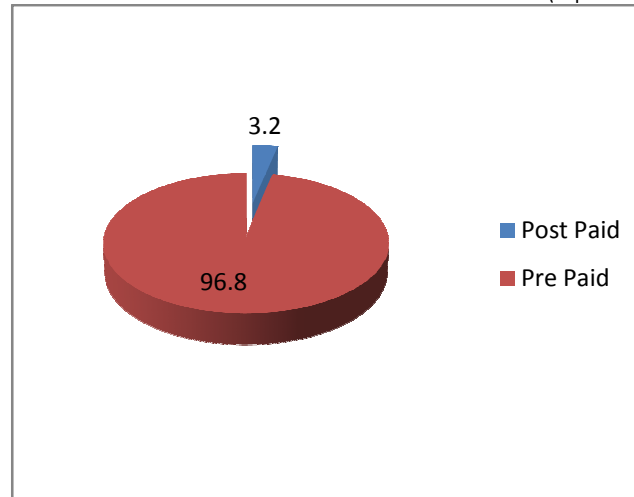
When it comes to type of payment plans, pre-paid is the most preferred one among students. Only 3.2% of the students interviewed use Post-paid connections while the rest i.e. 96.8% students interviewed use Pre-paid connections. This is because pre-paid connections are easy to purchase as compared to post-paid

connections. Mobile service providers follow strict rules while allotting and activating post-paid connections, while pre-paid connections are easily available and activated. The cost of getting pre-paid connection is low as compared to that of post-paid connection. There is no security deposit for pre-paid connection, while generally there is a security deposit. Although, call charges are slightly lower in post-paid connections but for students pre-paid is the real thing as it gives them the flexibility of small recharges, free calls during nights, and other attractive offers.

TABLE-7 - TYPE OF PAYMENT PLANS PREFERRED BY STUDENTS

Response	Frequency	Percentage
Postpaid plan	182	96.8%
Prepaid plan	06	03.2%
Total respondents	188	100%

FIG. 7 – TYPE OF PAYMENT PLANS PREFERRED BY STUDENTS (in percent)

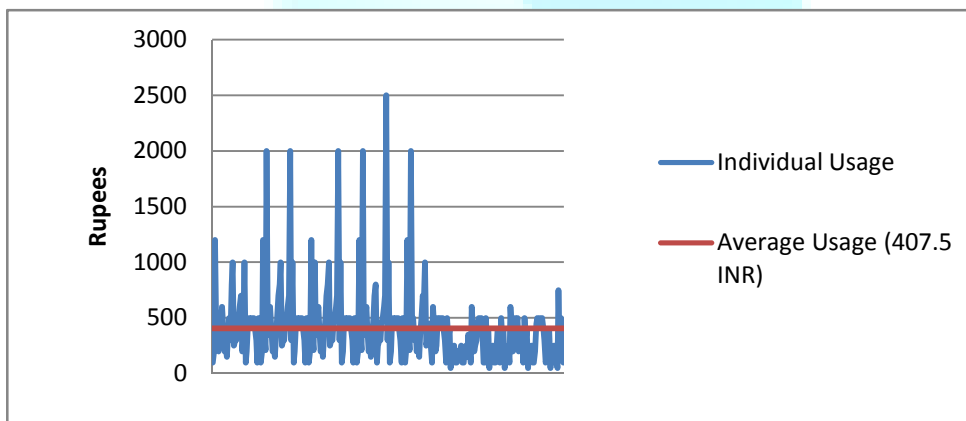


The research reveals a very shocking fact. The monthly average usage of the students interviewed comes out to be Rs. 407.50/-.

TABLE-8 – MONTHLY AVERAGE USAGE

Minimum Usage	Maximum Usage	Average Usage
100 rupees	2500 rupees	407.50 rupees

FIG. 8 – MONTHLY AVERAGE USAGE (in Rupees)



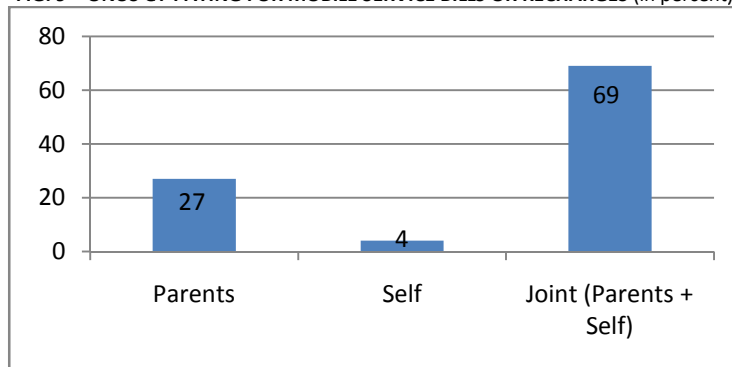
The amount may seem small but try putting it on a larger map. A student spends an average of Rs. 4,890/- annually for mobile services. This does not include the price of handset and other accessories. And remember, this is the average usage; in this research there are students who spend more than Rs. 30,000/- annually for mobile phone services.

As an old saying goes, “It is always easy to use a service but always difficult to pay for it”, the same is true for students using mobile services. In response to, who pays for the monthly mobile services bills or recharges; only 4% said that they themselves pay for it, while 27% of the respondents said that their parents pay for their mobile services bills or recharges. A majority of the respondents i.e. 69% said that the expenses are bourn jointly by the parents and themselves. It does not mean that there is some sort of agreement between the parents and the respondents of sharing the expenses for mobile services. Most of the students in this category said that their parents pay for the normal bills or recharges, but other expenses like internet recharges, and other value added services are paid by the respondents, and also that generally the parents are not aware of such expenses.

TABLE-9 - ONUS OF PAYING FOR MOBILE SERVICE BILLS OR RECHARGES

Response	Frequency	Percentage
Paid by parents	51	27%
Paid by Self	07	04%
Joint payment	130	69%
Total	188	100%

FIG. 9 – ONUS OF PAYING FOR MOBILE SERVICE BILLS OR RECHARGES (in percent)

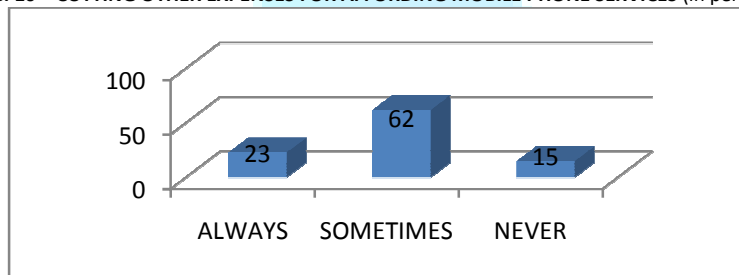


The mobile phone has carved such a space for itself in the young generation’s life that the youngsters are ready to sacrifice many things only to save money for paying the mobile phone’s bills or recharges. Only 15% of the students interviewed responded that they have never cut other expenses in order to afford mobile phone services. 62% responded that they sometimes cut other expenses to afford mobile phone services. While 23% said that they always have to cut their other expenses to afford mobile phone service.

TABLE-10 - CUTTING OTHER EXPENSES FOR AFFORDING MOBILE PHONE SERVICES

Response	Frequency	Percentage
Always	43	23%
Sometimes	117	62%
Never	28	15%
Total	188	100%

FIG. 10 – CUTTING OTHER EXPENSES FOR AFFORDING MOBILE PHONE SERVICES (in percent)

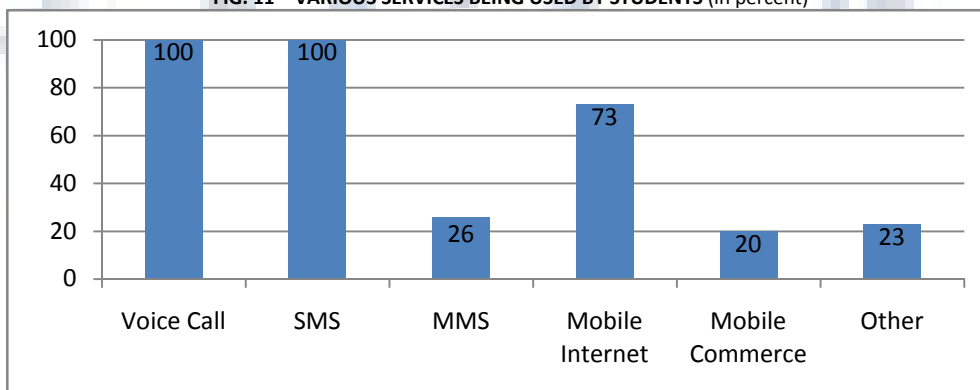


When it comes to the services used by the students interviewed, voice calls and SMS are used by every single student interviewed. MMS is used by only 26% respondents as it is a bit costly and also because not all handsets support MMS. Mobile Internet is fast catching-up as 73% of respondents use mobile internet. Mobile Internet is getting cheaper day by day and quality of handset displays is getting better day by day. Mobile Commerce is also getting popular among students; with 20% of the respondents said they use mobile commerce in one way or another. SMS alerts on mobile from banks, searching, buying and downloading games and other stuff from online markets etc. are making mobile commerce popular among youngsters. 23% respondents said that they use some other services as well like weather forecast, astrology, dating, fun SMS etc.

TABLE-11 - VARIOUS SERVICES BEING USED BY STUDENTS

Response	Frequency	Percentage
Voice Calls	200	100%
SMS	200	100%
MMS	52	26%
Mobile Internet	146	73%
Mobile Commerce	40	20%
Other	46	23%

FIG. 11 – VARIOUS SERVICES BEING USED BY STUDENTS (in percent)

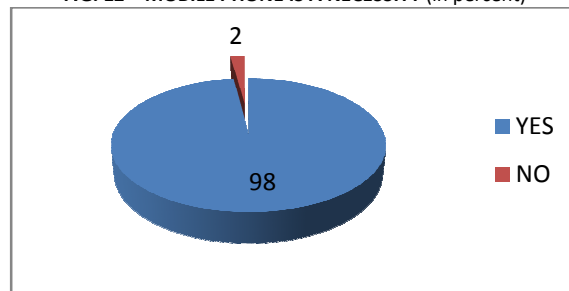


Young generation considers mobile phone as a necessity. 98% of the respondents said mobile phone is necessity and has made their life easier by providing connectivity to their loved ones and also a host of other services. Only 2% respondents said that mobile phone is not a necessity and it is just another gadget.

TABLE-12 – MOBILE PHONE IS NECESSITY

Response	Frequency	Percentage
YES	196	98%
NO	04	02%

FIG. 12 – MOBILE PHONE IS A NECESSITY (in percent)

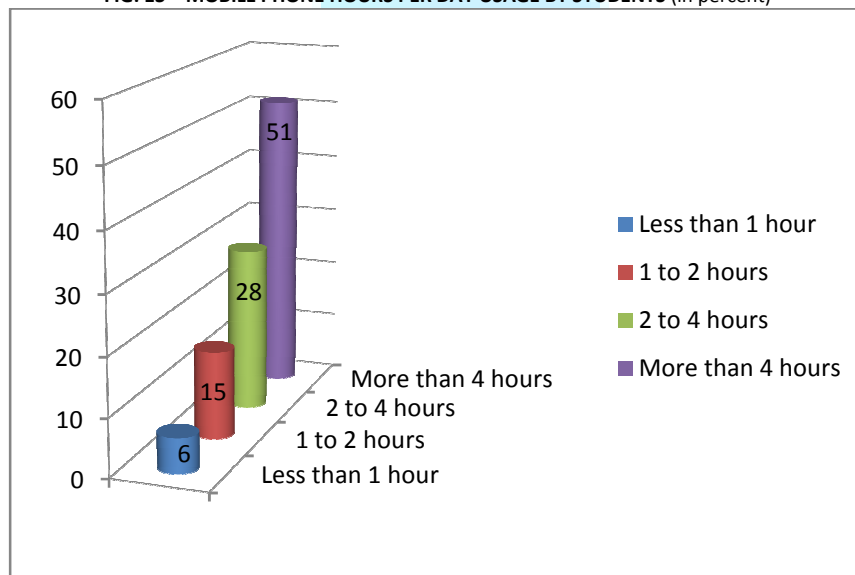


The respondents justify their claim that mobile phone is a necessity, when 51% of them said that they use their mobile phone for more than 4 hours per day. 28% said they use their mobile phone for 2 to 4 hours daily, 15% said they use it for 1 to 2 hours daily. Only 6% respondents use their mobile phones for less than an hour daily.

TABLE-13 - MOBILE PHONE HOURS PER DAY USAGE BY STUDENTS

Response	Frequency	Percentage
Less than 1 hour	11	06%
1 to 2 hours	28	15%
2 to 4 hours	53	28%
More than 4 hours	96	51%
Total respondents	188	100%

FIG. 13 – MOBILE PHONE HOURS PER DAY USAGE BY STUDENTS (in percent)

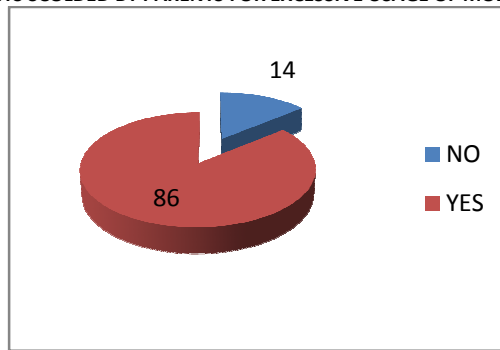


But, using mobile phone for long durations daily have its repercussions – being scolded by parents is one of them. Only 14% of the students said that they have never been scolded for using mobile phone. A whopping 86% of the students interviewed, accepted that they have been scolded by their parents for excessive usage of mobile phone. The respondents said that their parents give various reasons like wastage of time, wastage of money, health hazards including headaches and eyesight problems, lack of concentration on studies etc.

TABLE-14 - RESPONDENTS SCOLDED BY PARENTS FOR EXCESSIVE USAGE OF MOBILE PHONE

Response	Frequency	Percentage
Yes	162	86%
No	26	14%
Total respondents	188	100%

FIG. 14 – RESPONDENTS SCOLDED BY PARENTS FOR EXCESSIVE USAGE OF MOBILE PHONE (in percent)

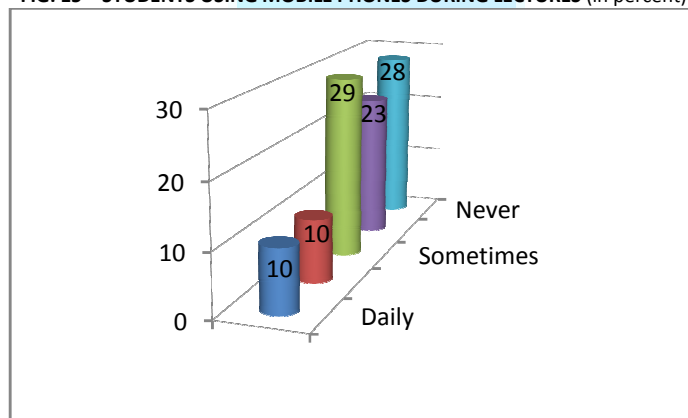


Home is not the only place where one can be scolded for using mobile phone. Most of the educational institutions prohibit the use of mobile phones in the campus or during classes and lectures. Using mobile phones during classes not only creates disturbance for the user but also for others attending the class. However, only 28% respondents said that they never use mobile phone during lectures. 23% said they have used the mobile phone atleast once during lectures. 29% responded that they use mobile phone sometimes during the lectures. There are 10% students who use mobile phones often during the lectures, while those who do this daily stood at 10% also.

TABLE-15 - STUDENTS USING MOBILE PHONES DURING LECTURES

Response	Frequency	Percentage
Never	53	28%
Once	43	23%
Sometimes	54	29%
Often	19	10%
Daily	19	10%
Total respondents	188	100%

FIG. 15 – STUDENTS USING MOBILE PHONES DURING LECTURES (in percent)

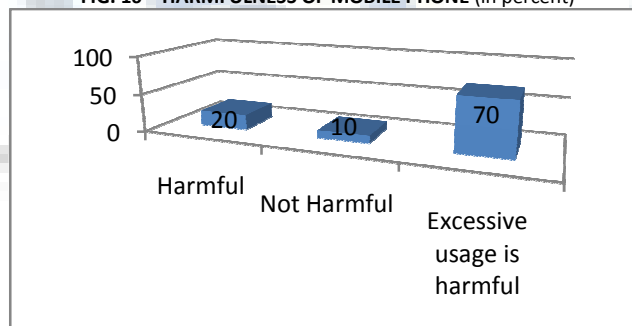


When asked if they thought mobile phones are harmful for health, 70% of the students interviewed said that only excessive usage of mobile phone is harmful, while 20% said that the think using mobile phone is harmful for health and only 10% said that it is not harmful at all.

TABLE-16 – HARMFULNESS OF MOBILE PHONE

Response	Frequency	Percentage
Harmful	40	20%
Not Harmful	20	10%
Excessive usage is harmful	140	70%
Total	200	100%

FIG. 16 – HARMFULNESS OF MOBILE PHONE (in percent)

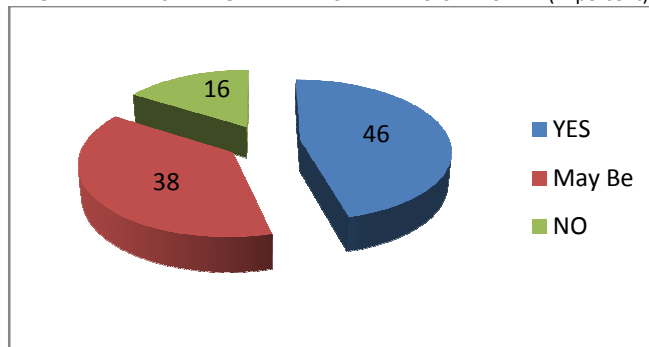


Young generation is very conscious about the lifestyle, image and appearance. When it comes to mobile phones, 46% said that expensive mobile phone reflects a person’s lifestyle. 38% of the students interviewed said that maybe it is true that expensive mobile phone reflects a person’s lifestyle. Only 16% respondents said that there is no relation between expensive mobile phones and a person’s lifestyle.

TABLE-17 – EXPENSIVE MOBILE HANDSET REFLECTS LIFESTYLE

Response	Frequency	Percentage
Yes	92	46%
No	32	16%
May be	76	38%
Total	200	100%

FIG. 17 – EXPENSIVE MOBILE HANDSET REFLECTS LIFESTYLE (in percent)

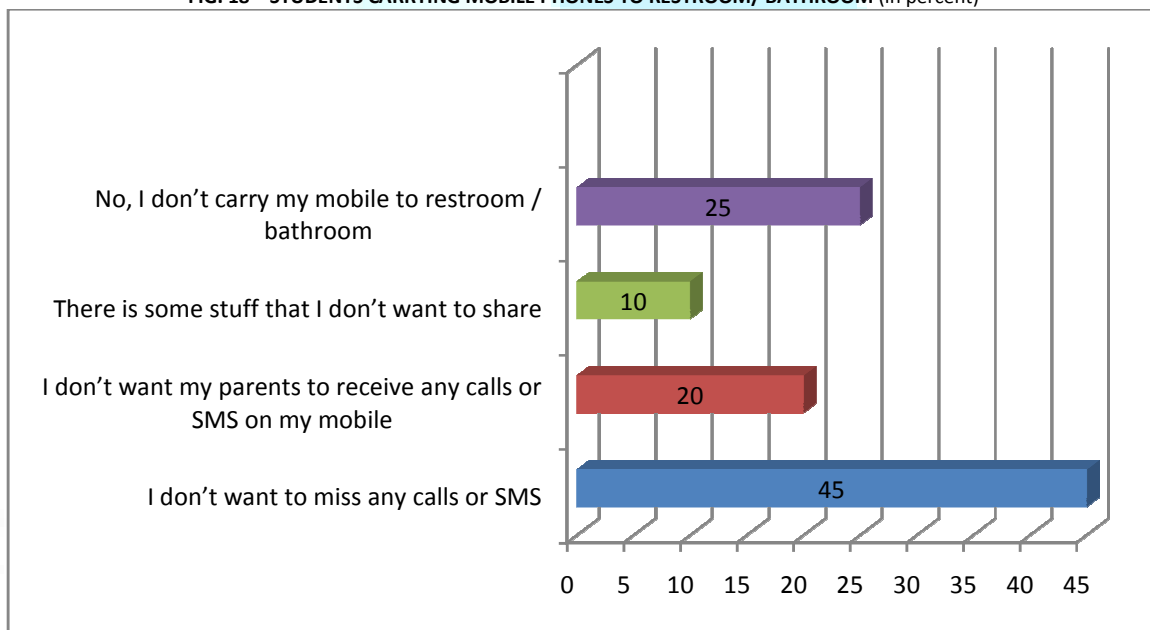


Another, interesting fact that came to light during this research was that a majority of students carry their mobile phones to the bathroom and even restrooms. The students were asked whether they carry mobile phones to the restroom and or bathroom even when they are at home. 25% responded that they don't. The remaining 75% said that they do; due to various reasons. The prominent among them was that they don't want to miss any call or SMS. Others said that they don't want their parents to receive any SMSs or calls on their phone. Some said that there is some material in their mobile phones that they don't want to share with anyone. So, it can be understood that the mobile phone is not only a tool for communicating but today it has become a device to hide secrets and can provide an insight to a person's life.

TABLE-18 – STUDENTS CARRYING MOBILE PHONES TO RESTROOM / BATHROOM

Response	Frequency	Percentage
I don't want to miss any calls or SMS	85	45%
I don't want my parents to receive any calls or SMS on my mobile	38	20%
There is some stuff that I don't want to share	18	10%
No, I don't carry my mobile to restroom / bathroom	47	25%
Total respondents	188	100%

FIG. 18 – STUDENTS CARRYING MOBILE PHONES TO RESTROOM/ BATHROOM (in percent)

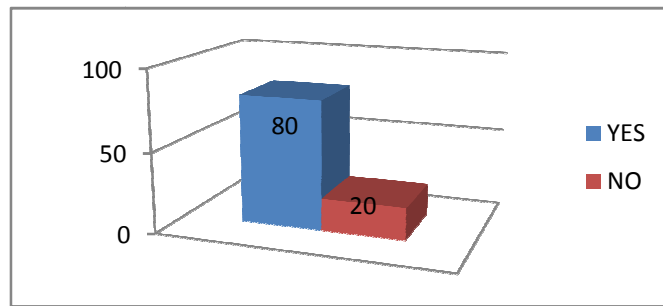


Youngsters are so very much addicted to mobile phones that they keep it with them even while sleeping. Surprisingly, 80% of the students interviewed said that they keep their mobile phones with them while sleeping. Only 20% responded that they don't keep their mobile phones with them while sleeping. Most of the students, who keep their mobile phones with them while they are sleeping, do so because they communicate with their friends till late at night via SMS or some social networking sites or applications. Some said that they do so because they set morning alarms in their mobile phones.

TABLE-19 – PLACING MOBILE PHONES NEARBY WHILE SLEEPING

Response	Frequency	Percentage
Yes	150	80%
No	38	20%
Total respondents	188	100%

FIG. 19 – PLACING MOBILE PHONES NEARBY WHILE SLEEPING (in percent)

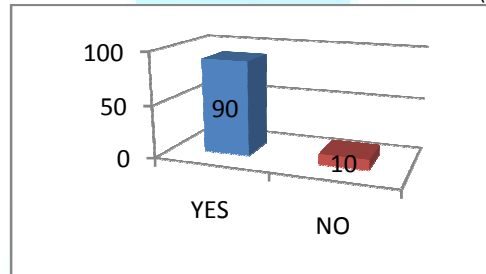


We remember our childhood days, when our moms use to tell us that the first thing we should do when we get up in the morning is to enchant prayers and brush our teeth. This is our routine till today. But nowadays, youngsters check their mobile phones after getting up from sleep. 90% of the students interviewed said that the first thing that they do after getting up from sleep is to check their mobile phone for any missed calls, SMS or some update on social networking site. Only 10% said that checking mobile phone after getting up from sleep is not their first priority.

TABLE-20 – CHECKING MOBILES AFTER GETTING UP FROM SLEEP

Response	Frequency	Percentage
Yes	170	90%
No	18	10%
Total respondents	188	100%

FIG. 20 – CHECKING MOBILES AFTER GETTING UP FROM SLEEP (in percent)

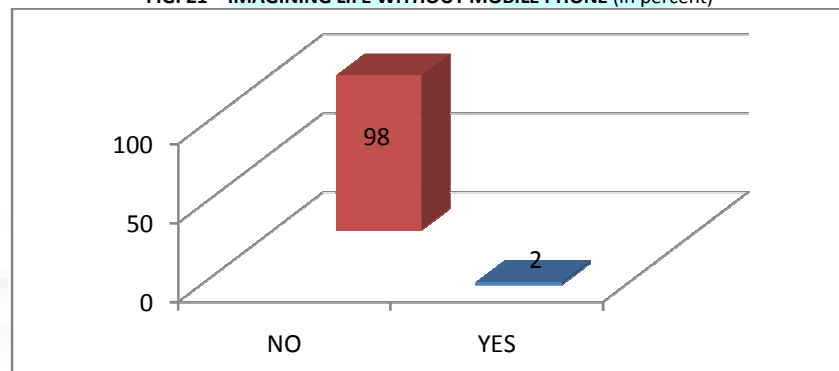


Finally, when the students were asked if they can imagine life without mobile phone, 98% responded that they cannot live without the mobile phone, while only 2% said that they can live without mobile phone. The facial expressions of the students interviewed changed after listening to this question, as if we are from some ancient time.

TABLE-21 – IMAGINING LIFE WITHOUT MOBILE PHONE

Response	Frequency	Percentage
Yes	04	02%
No	196	98%

FIG. 21 – IMAGINING LIFE WITHOUT MOBILE PHONE (in percent)



The students told us that mobile phone has become an integral part of their lives. They communicate with their friends, plan outings, share gossips, sometimes notes, locate stores, buy movie tickets, order pizza, surf the internet, listen to songs, click images, and so much more.

When asked one of the students: “Can you imagine life without mobile phone? He replied; “Life without mobile phone – Are you kidding...”

6. FINDING AND CONCLUSION

According to the above analysis, we have reached to the conclusion that life without mobile phones is unfeasible. As any individual from getting up in morning till he/she again goes to bed he/she spends majority of time on his/her mobile phone, even some are keeping them with themselves while sleeping. Students are even curtailing their expenses to maintain a mobile phone. In accordance with emerging technologies, as it is making life more easier and comfortable, students are running behind good and latest handsets. Students are giving that much importance to mobile phones that even they have stopped paying attention even to health hazards and warnings given to them by their parents and teachers. In the end we can conclude that mobile phones have become the life of youngsters.

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EFFECTIVENESS OF TRAINING IN AUTO COMPONENT INDUSTRY – AN EMPIRICAL STUDY

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ABSTRACT

This project work is undertaken with a view to study and analyse the effectiveness of the training program conducted for the employees of auto component companies in Tamilnadu state. The main objective of the study is to study about training given to the employees particularly staff, study the training methodology and the effectiveness of the training on employees. In this study, research design is descriptive and the Stratified sampling technique is adopted. The data is collected through questionnaire method from the employees of auto component companies in Tamilnadu state. The Percentage method is used to analyse the data, the Pearson's Correlation is used to find the dependency of variables on each other. ANOVA is used to find out the mean variance between the different variables. Based on the analysis the major findings are majority of the respondents are given good opinion about the training effectiveness, training period, and enhancement of skills after the training. Based on the findings, the suitable suggestions are given. The companies can conduct more number of training programs, and also give more training to improve employee morale.

KEYWORDS

Training, Training effectiveness, training outcome, Trainer-trainee relationship, Training satisfaction.

1. INTRODUCTION

Training is an organised procedure for increasing the knowledge and skill of the people for a specific objective which in general results in the change of behaviour and attitudes-(**Kenny and Reed**). It is important to find out whether a training program is accomplishing its objective, clarity and validity of the content to determine training effectiveness (Rao & Pareek, 1981). Employees try to excel at their work and advance in their career. It is possible only when the organization provides state of the art training. The success of business makes it necessary to have the presence of high performance teams throughout the organization. Training helps in team building, leadership development and personal development. According to Yoder (2008) who has done study on the training effectiveness, the following factors determine the training effectiveness: They are

1. Organisation effectiveness
2. Superior skills
3. Employee's skills
4. Number of training programs
5. Frequency of training programs
6. Period of training programs
7. Effectiveness of the trainer's communication.
8. Trainee's communication.
9. Trainee's involvement
10. Trainer and trainee relationship
11. Involvement of work group
12. Increase motivation
13. Trainer's personality
14. Trainer's perception
15. Better periodical training

2. REVIEW OF LITERATURE

Williams (1976) defines evaluation as the assessment of value. Kirkpatrick's (1976) model sets out 4 levels and is an indicator of different level at which training can be evaluated. Training evaluation is a systematic process of collecting and analysing data in order to determine whether degree of objectives is achieved (Boulmetis and Dutwin 2002). P. Chinadurai (2005) conducted a study on "Training needs assessments". The objective of this study is to identify the employees who need training, to determine whether training is the best solution to the problem. In this study, the researcher found a step by step approach. The researcher suggests that the step-by-step approach provides a means of identifying and forecasting possible future skills and knowledge deficiencies. A.R. Hajaly, (2006) the literature on evaluation needs to be classified into education and training. The latter reveals may difficulties as regards evaluation. Scientific and quantitative methods are not popular. Evaluation appears to be under taken reluctantly and with the simplest methods. Behavioural objects are rarely even set by trainers. Progress in the techniques of evaluation has been slow, through a good deal of research has been done. The literature is small but growing. Dr. K. N. Ramanujam (2006)³ starts the management role in productivity HRD Times. Training is short term utilising systematic and organised procedure by which non management personal learn technical knowledge's skills for definite purpose. Vander Krogt, Fred J (2006) conducted a study in a Australian company. The objective of the study is to find the rules of an informal work place trainer in different organisational contexts. In this study, the researcher found that informal work place trainers help employees learn what they need to know and do in order to get their job done. Michale J.Tws and J. Bruce Tracey (2007) conducted a study on enhancing formal interpersonal skill training through post training supplement. The objective of the study is to identify the value of following up of class room training with on the job support in this study the researcher found that following up of class room training boosts the effectiveness of the work done. Subash C. Kandu(2008) says training is a process that helps companies and employees to cope with the effects of changes in the business that result from completion.

3. IMPORTANCE OF THE STUDY

Training facilitates get into grips with the requirements of a job quickly and by improving the knowledge and skill of the worker. it allows him or her to better the quantity and quality of output with fewer mistakes and a reduction of waste. When the outcome of training leads to greater competency in the execution of tasks by subordinates. this relieves the manager from tasks related to remedial or corrective. Hence there is a need to study the effectiveness of the training in the auto component companies where the export potential is high.

4. STATEMENT OF THE PROBLEM

The growth of the auto component business is also accompanied by various employee related issues like absenteeism, loss in productivity, turnover intentions etc. Similarly, voluntary turnover, not including termination or retirement, has been a main subject of attention and importance among researchers. To retain the employees and to prevent them from leaving the organization, the researcher has studied the effectiveness of training in the auto component companies.

5. OBJECTIVES OF THE STUDY

1. To study about training given to the staff of auto component companies.
2. To study the effectiveness of training on employee's development.
3. To suggest suitable measures to improve present training system in the organisation.

6. RESEARCH METHODOLOGY

The research design is descriptive in nature. The sample design is probabilistic in nature. A sample size of 600 staff from 20 companies in Tamilnadu is taken for the research study. The companies are selected based on systematic random sampling and the individual staff are selected based on stratified random sampling where department is taken as strata.

7. DATA COLLECTION

The researcher used questionnaire for collecting the primary data. The secondary data is collected from journals and magazines.

8. HYPOTHESIS

The following hypothesis are framed by the researcher.

- H1- There is significant difference in means of Age & Level of satisfaction towards the frequency of training program.
 H2- There is significant difference in means of Experience & Level of satisfaction towards the frequency of training program.
 H3- There is no significant difference in means of Experience & Usefulness of the training program

9. DATA ANALYSIS AND INTERPRETATION

Percentage analysis: The Percentage analysis is done to find out the respondents opinion.

Correlation: Correlation is done to find out the relationship between the two variables.

ANOVA : It is done to study the mean variance among the two variables.

10. RESULTS AND DISCUSSION

The results of the study are discussed in the following chapters and it is based on percentage analysis, Correlation and ANOVA techniques.

TABLE 1: REASON FOR ATTENDING THE TRAINING PROGRAM

Reason for attending the training program	No. of Respondents	Percentage
Improve knowledge	250	41.66
Technology development	60	10
Improve job efficiency	166	27.66
Sense of service and commitment	124	20.66

From the above table 1, it is confirmed that 28% of the respondents' view about the reason for attending the training program is to improve job efficiency, 10% is to technology development, 42% is to improve knowledge and 21% is to achieve the sense of service and commitments towards your organisation.

TABLE 2: STAFF' OPINION ON TRAINING PROGRAM

Staff opinion on training	No. Of respondents	Percentage
Very bad	40	6.66
Bad	80	13.33
Neutral	176	29.33
Good	260	43.33
Very good	44	7.33

From the above table 2, it is shows that 43% of the respondents' opinion is good about the training program, 29% of the respondents' view is neutral, 7% of the respondents are very good opinion on training program

TABLE 3: OUTCOME OF THE TRAINING PROGRAM

Training outcome	No. of respondents	Percentage
Improvement of present way of doing the job	276	46
Improvement among the group	84	14
Increase motivation	160	26.66
Lead to stress	80	13.33

From the above table 3, it is confirmed that 46% of the respondents' opinion about the training outcome is to improvement of present way of doing job, 27% has given increase motivation, 14% has given improvement among the work group, and 33% of the respondents given the opinion is lead to stress.

TABLE 4: CORRELATION ANALYSIS

Factors	Pearson's Correlation value	Significance
Trainer- trainee relationship and Satisfaction of training program	0.511	0.01 level (2 tailed)
Satisfaction towards the training program and Communication of the trainer	0.671	0.01 level(2 tailed)
Level of satisfaction towards the training program and Usefulness of the program	0.561	0.01 level(2 tailed)

The following inference is derived from the Table 4. Pearson's correlation value is 0.511. The above correlation value is significant. This implies significance positive correlation between the trainer- trainee relationship & level of satisfaction towards the training program. Pearson's Correlation value is 0.671 for Satisfaction towards the training program and Communication of the trainer. This implies positive correlation between Level of satisfaction towards the training program & Effectiveness of the trainer's communication. There is a positive correlation between level of satisfaction of training program and usefulness of the program and the Pearson's correlation value is 0.561.

TABLE 5: ANOVA ANALYSIS

Factors	F value	Significant value
Age and Level of satisfaction towards the training program	2.414	0.071
Experience and the level of satisfaction towards training program	5.197	0.002
Experience and the effectiveness of the training program	3.217	0.026

** at 1% level of significance

It is inferred from table 5 that, the ANOVA value is 2.414. Having assumed at 1% level of significance, the significant value is less than 0.01. This implies that there is significant difference in means of Age & Level of satisfaction towards the frequency of training program. From the above table, it is inferred that, the ANOVA value is 5.197. Having assumed that 1% level of significance the significant value is less than 0.01. This implies that there is significant difference in means of Experience & level of satisfaction towards the training program. From the above table, it is inferred that, the ANOVA value is 3.217. Having assumed that 1% level of significance the significant value is less than 0.01. This implies that there is significant difference in means of Experience & effectiveness of the training program.

11. SUGGESTIONS

From the study, it is clear that the existing training program activities in the organisation are good, but some improvements can be made by the organisation in the following aspects to maintain training effectiveness.

- More number of training programs is required
- There should be opportunity to implement the skills learnt through training.
- The Personality Development training can be arranged
- The Vestibule training method can be given to employees
- The trainer can give more explanation for doubts.
- The training program should be suitable to the nature of work.
- More training to improve employee morale is needed.

12. CONCLUSION

From the detailed studies, the training program conducted by the industry is effective. We can conduct the more number of training program, give the opportunity to implement the skills learnt through training, and give the more training related to latest technology. If these methods are implemented in the training program of the organisation there would surely be remarkable achievements in the development of the auto component industry.

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THE IMPACT ON MARKETING BY THE ADVENT OF WEB 2.0 INTERNET TOOLS

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ABSTRACT

Ever since Marketing has emerged as the core of Business Management, there is always quest for finding ways to get connected with customers and consumers. Past centuries saw the Theatre, Printing Press, Public Gathering and Wall Graffiti as the communicating and connecting media. Then came the era, that was dominated by the advent of TV, Radio Broadcasting, Public Address Systems, Photography, Cinema, Newspapers, Magazines and Email. Marketing quickly adapted these emerging technologies for their quest for connecting with the customers. Conventional or Traditional marketing channels were highly controlled as they are mostly one-way messages created by some specific group and directed at the customers. Now with Web 2.0 Tools, everyone can participate in the creation, distribution and use of the messages. Web 2.0 denotes all online tools, platforms, that people use to share opinions, insights, experiences and perspectives with each other that include blogs, wikis, photo and video sharing, podcasts, Twitter, social networking sites like LinkedIn, Facebook, widgets, chat rooms, message boards etc. The Web2.0 tools have significantly altered the Business and Marketing Landscape. Unless corporate and business entities are aware of their existence, their potential, the cost of not adapting or the benefits of leveraging them, future survival and growth will be severely threatened. This research paper aims at capturing these trends and how they have forced the reengineering of the Marketing Landscape with special reference to Indian Markets and a discussion on future outlook.

KEYWORDS

Marketing, Web 2.0 Tools, Social Media, Social Networking Sites, Impact on Marketing by Social Media.

INTRODUCTION

Now a days, the term of social media is becoming increasingly popular and with the magnitude of social media users growing exponentially, the use of social media for marketing has been discussed in publications but not in details.

The enigma of marketing is that, it is one of the oldest activities and yet it is regarded as the most recent of business disciplines. Marketing relies heavily on interactions between entities be it within organization, among general public and between organization and society. The effectiveness then directly depends on how these interactions are planned, controlled and executed.

Ever since Marketing has emerged as the core of Business Management, there is always quest for finding ways to get connected with customers and consumers. Past centuries saw the Theatre, Printing Press, Public Gathering and Wall Graffiti as the communicating and connecting media. Companies and business entities which leveraged these media grew rapidly. Then came the era, in early part of the last century, that was dominated by the advent of TV, Radio Broadcasting, Public Address Systems, Photography and Cinema. Also with the advancements in printing technology, Newspapers and Magazines became the inevitable part of the mass media throughout the world. Marketing quickly adapted these emerging technologies for their quest for connecting with the customers.

History tells us that only those business entities which are quick to leverage these technologies survived and flourished manifold to become national and global players. Those who did not appreciate these trends were relegated to local level "mom and pop" businesses.

Conventional or Traditional marketing channels were highly controlled as they are mostly one-way messages created by some specific group and directed at the customers. With Internet proliferating in a big way starting with Initial Internet tools (which we can call as Web1.0) such as Email, World Wide Web pages and now with Web 2.0 Tools, everyone can participate in the creation, distribution and use of the messages.

Web 2.0 denotes all online tools, platforms, that people use to share opinions, insights, experiences and perspectives with each other as defined by Wikipedia. This includes blogs, wikis, photo and video sharing, podcasts, Twitter, social networking sites like LinkedIn, Facebook, widgets, chat rooms, message boards etc.

The revolutionary advancements in Web2.0 tools with Social Networking Sites and convergence of Mobile and Computer Technology have significantly altered the Business and Marketing Landscape. Unless corporate and business entities are aware of their existence, their potential, the cost of not adapting or the benefits of leveraging them, future survival and growth will be severely threatened.

This paper aims at capturing these trends, how they have impacted the Marketing Macro Environment, how they have forced the reengineering of the Marketing Landscape with special reference to Indian Markets and a discussion on future outlook.

LITERATURE REVIEW

INTERNET IN BUSINESS

Greg Pelling(2005) in his book titled "CISCO Net Impact" writes that "most leaders know that as the global economy embarks upon the next new business cycle, the Internet is poised to be employed as the single greatest differentiator or equalizer"

John R Patrick(2001) in his popular book titled "Net Attitude", describes the potential of Internet using a concept namely 'Net Attitude'. He says, "Net Attitude is about preparing your organization and the people who are part of it, as well as all its systems and processes, to take advantage of everything the Internet has to offer".

Susan[2009] describes the present situation succinctly that "Seven of the top 20 most visited sites in the world are social networking sites. By 2011 and beyond, half of online adult and 84% of online teens in the United States will use social networking."

Dave et al [2000], explains that the Internet can support the full range of marketing functions and in doing so, can help reduce costs, facilitate communication within and between organizations and improve customer service.

SOCIAL MEDIA AND COLLABORATIVE TOOLS

Another noteworthy paper published titled "Social Media and its Role in Marketing" by Sisira Neti (2011) discusses the social media's role in the marketing. Starting with definition of Social Medium and describing some of the latest social media sites, this paper is a sincere attempt in understanding -what is social media and how relevant they are today. This discusses what are social media and why they are relevant. However, it does not discuss "How" aspect - that is, "How Web 2.0 tools can be used for marketing and their impact". The present research study will focus on this aspect also.

SOCIAL MEDIA IN THE INDUSTRY

According to a recent report by Michael A Stelzner (2011), number of B2B companies that have explored and tapped social media has increased significantly, as testified by the latest report that the majority of marketers (58%) are using social media for 6 hours or more each week, and more than a third (34%) invest 11 or more hours weekly!

Martin Thomas and David Brain [2008] opine that Social Media is still in its infancy, especially as a commercial vehicle, although most industry watchers are predicting dramatic growth. This is really happening now as we see the in the last few years exponential growth of social media and the urgent need to understand the phenomenon.

NEED OF THE STUDY

According to the internet blog "Role of Social Media in B2B marketing [2011], social media is seen by many marketers as the 'next gold rush'. The conventional marketing tools like the TV, the print media, and outdoor advertising no longer effective as they used to be. The reason for this is simply the lack of time spent by customers as compared to the social media tools in abundance today.

Here it is important to note a significant demographic development in the recent times as emphasized by the Alcatel-Lucent report titled "*The Rise of the Millennials -Strategic White Paper*" and the AT&T White Paper titled "*The Business Impacts of Social Networking*", the Millennials, a new term that is used to refer the generation born from 1980 onwards, brought up using digital technologies, Internet ,Mobile Telecommunication and Computer Gadgets (also called Generation Y) are the major market to reckon with as they represent 84 million people in North America ,with more than 51 million in Western Europe, and 99 million in the Asia Pacific region.

Millennials expect the communications channels to adapt to their lifestyle in which they are comfortable rather than willing to adjust to the other ways. Considered worldwide, this group has the same market clout as the Baby Boom generation. Given their buying power, their reliance on social networking, Millennials will continue to exert considerable influence over the success or failure of many business offerings for the next ten to twenty years.

Here it is also important to see how the Internet Usage stands today worldwide. The following table Table-1 World Internet Usage and Population Statistics reveals, how the Internet Penetration is more in the developed world than other places. Another interesting fact is though Asia, Internet penetration wise lagging behind the developed continents like North America and Europe, when it comes to absolute numbers of Internet users , it is the largest among all.

TABLE -1 WORLD INTERNET USAGE AND POPULATION STATISTICS

Region Names	Population (2011 Est.)	Internet Users	Penetration (% Population)
Africa	1,037,524,058	139,875,242	13.50%
Asia	3,879,740,877	1,016,799,076	26.20%
Europe	816,426,346	500,723,686	61.30%
Middle East	216,258,843	77,020,995	35.60%
North America	347,394,870	273,067,546	78.60%
Latin America / Carib.	597,283,165	235,819,740	39.50%
Oceania / Australia	35,426,995	23,927,457	67.50%
World Total	6,930,055,154	2,267,233,742	32.70%

Source : www.internetworldstats.

TABLE-2 HOW INDIA COMPARES WITH OTHER COUNTRIES

Region Names	Population (2011 Est.)	Internet Users	Penetration (% Population)
Bangladesh	158,570,535	5,501,609	3.50%
China	1,336,718,015	513,100,000	38.40%
India	1,189,172,906	121,000,000	10.20%
Indonesia	245,613,043	55,000,000	22.40%
Japan	126,475,664	101,228,736	80.00%
Korea, South	48,754,657	40,329,660	82.70%
Malaysia	28,728,607	17,723,000	61.70%
Nepal	29,391,883	2,031,245	6.90%
Pakistan	187,342,721	29,128,970	15.50%
Singapore	4,740,737	3,658,400	77.20%
Sri Lanka	21,283,913	2,503,194	11.80%
France	65,102,719	50,290,226	77.20%
Germany	81,471,834	67,364,898	82.70%
Italy	61,016,804	35,800,000	58.70%
Russia	138,739,892	61,472,011	44.30%
United Kingdom	62,698,362	52,731,209	84.10%
Canada	34,030,589	26,960,000	79.20%
United States	313,232,044	245,000,000	78.20%
Argentina	41,769,726	27,568,000	66.00%
Brazil	203,429,773	75,982,000	37.40%
Mexico	113,724,226	34,900,000	30.70%

Source : www.internetworldstats.com.

Coming to Indian Story, the same trend is observed. Though India, with the Internet penetration of just 10%, is very much behind the other developed countries, absolute number wise it is 3rd largest country of Internet users after China and USA. Also data from Google [2011], predicts that the Internet users will triple in the country by the year 2014.

This throws the following important pointers that need careful attention:

1. As the internet penetration is only 10%, there is lot of potential for exponential growth to catch-up with other developed countries.
2. Even the present absolute number of internet users is huge as the third largest in the world , thereby the impact of Internet on marketing is need to be analyzed by corporates before it is too late.

Another development that is fuelling the internet usage is the mobile revolution in India. Already India with 70% penetration of Mobile Users (that is approximately 850 Million !), the trend is that many of them are getting used to access internet on mobile.

As per the recent report by "7inverse.Com" [2011]" India with its 35+ million mobile internet users ranks No.2 in the world. And according to Google around 14 billion WebPages were viewed by Indian mobile internet users in February 2010. According to Google's India product head, Vinay Goel, the number of mobile internet users has grown nearly five times in the last five years with experts claiming that mobile internet usage in India will touch 250+ million by 2015

The International Business Times in its report dated November 9th 2011, quoting Internet and Mobile Association of India (IAMAI) predicts that Internet usage will continue to rise in India as awareness about its use spreads and India may become the world leader in Internet usage by the end of this decade.

The impact of social networking on businesses is so profound that if any business does not have a website, blog, or even a Facebook page then they are already behind everyone else. Businesses must realized that if they don't get into the business of doing business through social networking websites like Facebook, LinkedIn, MySpace, they will see their profits drop and what used to be household names will be nothing but a past long forgotten by a technology driven world.

The revolutionary advancements in Web2.0 tools with Social Networking Sites and convergence of Mobile and Computer Technology have significantly altered the Business and Marketing Landscape. Unless corporate and business entities are aware of their existence, their potential, the cost of not adapting or the benefits of leveraging them, future survival and growth will be severely threatened. Hence this study is aimed at bringing these facts in detail.

SCOPE OF THE STUDY

- Marketing and the Communication Channels
- The rise of Internet and Mobile Telecommunication.
- Early usages of Internet and Mobile Technology for Marketing
- What is Web 2.0 and Social Networking Media
- Convergence of Internet, Mobile and Computer Technologies
- Prominent Web2.0 Tools and their use by businesses around the world.
- Present Indian Marketing Scene and Web2.0 adaptation
- How to harness the full Potential of Web2.0 Tools.

OBJECTIVES OF THE STUDY

- What are Web2.0 Tools and their usage in Marketing;
- How they have impacted the Marketing Macro Environment
- How they have forced the reengineering of the Marketing Landscape in General and with specific reference to Indian Scene.
- Future Outlook and the Re-Engineering of the marketing

RESEARCH METHODOLOGY

Research methods are important to provide a systematic approach to a certain study. Empirical research methods are a class of research methods in which empirical observations or data are collected in order to answer particular research questions. While primarily used in academic research, they can also be useful in answering practical questions

In this study, the following have been used to gather information and analyze:

- Survey of published Books for understanding and appreciating the present context and the journeys undertaken so far in the territories.
- Survey of Internet Blogs, discussion Forums to understand the trends and the changes taking place in the industry
- Collection of supporting Data from conference proceedings, Seminars and Webinars
- Case Studies of some industries from selected industry verticals
- Face to Face interaction with industry veterans/thought leaders
- Perspectives from users of Web 2.0 tools and their beliefs, tastes, trends and buying behavior

CONCLUSION

This chapter concludes the study with summary of benefits, key findings about the way the rules of marketing have changed and future outlook.

SUMMARY OF BENEFITS

Marketing through Web 2.0 Tools provide many benefits that include:

- Reach
- Segmentation
- Refreshed Updated Content
- Ability to Listen to the Market in Real Time
- Creating the Buzz in the market
- True Multimedia engagement with Customers
- Personalized and increased interaction duration with the customers
- Cyber Sales Force
- Reduction of Sales Cycle Time

Key findings about the way the rules of Marketing have changed:

- People want participation and not propaganda.
- Develop thought leadership and the content that buyer wants to read, hear and see; Let the content drive the buyer's action. Create content and thought leadership by leveraging blogs, informative web content and avoiding direct sales pitch. Be a catalyst and use the collective wisdom of community to drive, shape and influence the perception of the buyers subtly.
- Be visible in online forums where potential customers throng.
- Use the power of creating viral buzz if you have appropriate deserving content, deals, products, events or innovative offering.
- Social Media is still to catch up in Indian Public Sector Industries. Even in Public Sector Banks, except State Bank Of India, there is no presence from state owned entities.
- There is a need to come with Social Media adoption policy from the Government as well as state controlled enterprises. One silver lining is, recently, there was a draft policy on "Framework & Guidelines for Use of Social Media for Government Organisations" dated [September 2011], by Department of Information Technology, Ministry of Communications & Information Technology, Government of India circulated for feedback from the various stakeholders. Similar approach to be followed by Public Sector Companies.

FUTURE OUTLOOK OF SOCIAL MEDIA MARKETING

The marketing through Social Media is still in early stages as the companies are still experimenting with various trial and error strategies. With more and more penetration of internet and mobile access devices, people accessing Social Media is going to explode. This will attract more players using Social Media platform and companies need to vie for each other in grabbing their attention.

With technology growth both in Hardware and Software, new social media platforms may emerge. The future is mobile and 'appified' resulting in the products / services not designed for mobile will flounder. To keep pace with them the "content-ware" also needs to evolve, in attracting, communicating, connecting and convincing the users. The present ways of engaging with the customer by the Social Media may look like spamming in future.

Cross-Platform Marketing will come into its own in the coming years, the ability to cross-integrate a marketing strategy across all online avenues such as SEO, Social Media, Mobile Marketing may become feasible. This will give companies the ability to deliver a focused message across multiple platforms. World tilting towards going Mobile Devices. It is predicted that by 2014 the majority of people accessing the internet will do so from mobile devices. Companies are already beginning to recognize the need to serve mobile demand. We will see more and more companies shifting their direction to feed the mobile frenzy.

LIMITATIONS OF STUDY AND FUTURE RESEARCH

As Social Media itself evolving and growing at an astronomical proportion coupled with experimental nature of companies trying with *ad hoc* strategies, it is difficult to define a framework as the "observer" and "observed" are constantly changing. Also proper monitoring tools are not fully developed and agreeable to all. At present there are reliable data only with respect to PC, mobile devices and internet penetration data. These data alone will not help in studying the impact on marketing. The data collected through observation and qualitative case analysis may lead to biased and incomplete results because of the people's subjective opinions. There are many industries especially in India which are yet to adapt to digital marketing. Social Media literacy is also to increase to bring about the change in the increased recognition and use of Social Media potential. It therefore brings the further possible research in many ways taking into account the following:

- Social Media Literacy
- Business Sector wise adoption of Social Media
- Business Models with Social Media either from Cost or Profits perspectives
- Quantitative research frameworks or other metrics for studying the Social Media's return on investment. (Refer Appendix)
- Categorizing Social Media and Web 2.0 tools with their alignment with business models.

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MARKET INFLUENCE ON THE TECHNOLOGY IN THE ENERGY SECTOR - A STUDY OF INDIAN SCENARIO

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ABSTRACT

The liberalization of economic policies in India, in 1990, effected massive changes in the market scenario right from consumer products to corporate systems and shown remarkable economic growth in past two decades. Marketing management as a business discipline, which focused on the practical application of marketing techniques and the management of a firm's marketing resources and activities, came into its real existence. Rapidly emerging forces of globalization led firms to market beyond the borders of their home countries, making international marketing highly significant and an integral part of domestic market and marketing strategy of individual firm / company in India. Generally, whenever new technology is put in the market, awareness is generated through various types of advertisements and consumers would adopt. In case of Power sector, it is the market which is demanding for the new technology and Power Equipment manufacturers are struggling to bridge this technology gap. Indian Power equipment manufacturers have an additional issue with technology. They have to essentially depend upon the imported technology in the form collaboration or joint ventures. Availability of this advanced technology is very expensive and rare, in the wake of Indian open policy. This paper while looking at the dilemma (whether to depend upon the external technology or develop their own) of the Indian power equipment manufacturers like BHEL, L&T, etc, concludes that Indian Power sector companies should develop their own technology than to depend upon external help all the time. It would be beneficial to total economy of India.

KEYWORDS

Conventional or Fossil fuel based energy, Non-conventional energy sources, Giga watt, Power Equipment Manufacturers.

INTRODUCTION

The liberal economic policies of India unleashed in 1990s have resulted massive changes in the market scenario right from consumer products to corporate systems and remarkable economic growth in past two decades. Marketing management as a business discipline, which focused on the practical application of marketing techniques and the management of a firm's marketing resources and activities, came into its real existence. Rapidly emerging forces of globalization led firms to market beyond the borders of their home countries, making international marketing highly significant and an integral part of domestic market and marketing strategy of individual firm / company in India. The role of a marketing manager became very significant based on the business size, corporate culture, and industry context. For example, in a large consumer products company, the marketing manager may act as the overall general manager of his / her assigned product. To create an effective, cost-efficient marketing management strategy, firms must possess a detailed, objective understanding of their own business and the market in which they operate. In analyzing these issues, the discipline of marketing management often overlaps with the related discipline of strategic planning.

Traditionally, marketing analysis was structured into three areas: customer analysis, company analysis, and competitor analysis (so-called "3 Cs" analysis). More recently, it has become fashionable in some marketing circles to divide these further into certain Six "Cs": customer analysis, company analysis, company R&D or technological capability, collaborator analysis, competitor analysis, and analysis of the industry context.

When it comes to Power Sector Industry, for marketing, the R&D or technological capability of the company and the Collaborators Capability (if the company is in collaboration with any foreign company for technology) becomes very important. Strength of the company also gauged on the R&D investments and technological base of the company in the market.

Competitor analysis is required in terms of Technology Strengths.

Recent power policy of Government of India is encouraging even private sectors to establish the power plants. Even foreign collaborations are taken to establish power plants and power production in India. In this context it becomes necessary to make Customer analysis to understand as to which customer can pay for better technology.

As the competition keeps becoming more and more fierce, market analysis turns to be business analysis. Power Sector Business is generally a corporate business and not consumer business or consumer durables. Hence, the business strategy adopted would consist of competitors and technology the company has employed in the business. Customer's awareness and the competitor's technological edge would take away the cake than the price. Though price plays the major part, Technology also plays the equally important role in the Power sector of India. Study of the technology along with price and service capability of the company would determine its position of the company in the market.

In case of power sector technology, management becomes most important and goes hand in hand with regular marketing activity.

It will not be out of context to recall the disaster caused on the very grate, multi-faceted, most promising Public Sectors like HMT and ITI. Many such public sectors went down the drain, since they did not change their technology or manage the technology as per the market requirements. Some organizations like BEL, HAL could survive since their products were meant for Defense, Government of India. BHEL could not only survive the paradigm shift, it dared the recession without the help of Government. BHEL has been able to manage the technology fairly well till date by changing the collaborations now and then. It is able to meet the market demands by the borrowed technology. Since the international giants are coming into India there by converting Indian Power sector market as the International Market, one has to wait and see strategies of BHEL. Whether BHEL would continue their strategy with borrowed technology or will they mind to establish and develop their own technology in the coming days.

This thesis is to examine the inner strengths of Public Sectors in the area of Power sector in India and to suggest real growth for them to become the India's Multi-National company.

REVIEW OF LITERATURE

Since, the power sector is the most important corner stone of the development in India, lot of researches are going on this field. There are good no of books, publications, seminar proceedings etc. are available. Government of India itself has established Integrated Energy Policy and keeps on reviewing every year.

1. The Important of the salient features of **Integrated Energy Policy** Issued by Press Information Bureau Government of India Planning Commission are given below:

- PSUs operating in the energy sector must operate with autonomy and also full accountability** to ensure incentives for adequate investment through their own resources and improvements in efficiency in energy production and distribution.
- India will have to pursue all available fuel options and forms of energy and must seek to acquire new energy sources abroad.
- India must actively promote technologies** that maximise energy efficiency; demand side management, conservation and energy security and this must be done by encouraging domestic research into such technologies and free access to suitable energy related technologies available abroad.

PSUs should consider the appropriate technology to generate the power efficiently.

2. An article, "**Integrated Energy Policy Approved by India**" written by Mr Narsi Santhanam, and published in website EAI Catalysing Cleantech in India (<http://eai.in/blog/2009/01/integrated-energy-policy-approved-by.html>) :

The Union Cabinet recently approved an **Integrated Energy Policy for the country and a monitoring committee**, to be chaired by the Cabinet Secretary, will be set up to review the progress of the policy's implementation.

Currently, there are 5 separate ministries Coal, Petroleum and Natural Gas, Atomic Energy, Power and Non-Conventional Energy sources each preoccupied with issues in its own turf.

The integrated policy is expected to explore alternative technologies and possible synergies that would increase energy system efficiency and meet requirement for energy services. It would allow for relative pricing of different fuels taking into account both their efficiency in use and convenience as well as the amount of pollution they generate. As per report, an integrated policy is also expected to bring in level playing field for all energy players large or small, public or private, domestic or foreign.

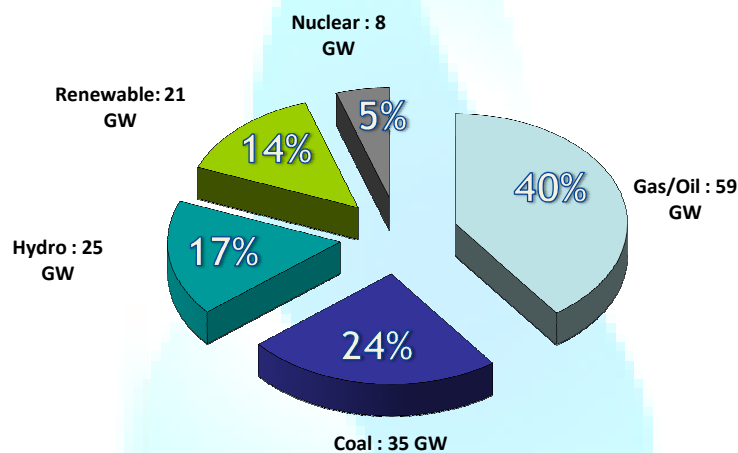
3. **As per the Expert Committee** (Established by Government of India) Report on the Integrated Energy Policy of India it is necessary to establish a National Energy Fund (NEF) in order to encourage the R&D Activities in the Energy sector. Relevant portion of the Point No.5 Chapter IX - Energy R&D is given below:

"Based on these considerations, we recommend the following:

A National Energy Fund (NEF) should be set-up to finance energy R&D. Our expenditure on R&D excepting for atomic energy, which as on today provides less than 3 per cent of our total electrical energy supply, is miniscule compared to what industry and governments spend in developed countries.

.....There is, thus, a strong case for funding by the government either directly or through fiscal incentives. The latter accounts for the bulk of government support in the developed countries. Fiscal incentives, however, have not resulted in significant expenditure on R&D by Indian industry. An annual allocation should be made by the government for energy R&D. Individuals, academic research institutions, consulting firms, private and public sector enterprise could all compete for grants from this fund for identified and directed research."

4. Global Power Generation Landscape ... 2006-2015



Source: World Energy Outlook 2006 OECD

- Coal and natural gas account for largest increments in fuel consumption for electricity generation worldwide.
 - Demand outlook will remain robust and growth will be driven by a mix.
 - Issues of energy security – coal with clean technologies will be the preferred choice for new power plant equipment
 - Significant potential for hydro power in India, China and Latin America.
5. **Bharat Heavy Electricals Limited (BHEL)**, India's Premier Power Generating Equipment Manufacturer, is in the business of engineering, manufacturing, and supplying of Power plant equipment and has the capability of taking EPC contracts. The government of India holds 67.7% equity in BHEL. With 14 plants & 8 service centres, BHEL has the capacity to deliver 15,000MW pa and planning to reach 20,000MW pa by FY12. BHEL has been able to enjoy about 60-70 % of Indian Market share due to their improved deliveries, capex investments, and slight improvement in technologies now and then. BHEL has been able to give better PLF than its competitors. There does not seem to be any difference between the deliveries of plants of BHEL, Chinese, Russian and Korean origin, while deliveries of Russian suppliers have been terrible. Overall BHEL has been growing very well. At the same time its projections for the coming years also seems to be very good. Their DCS business is also very much ahead of the competition in India.

NEED FOR THE STUDY

Prior to 1991, before the Indian Economy getting opened the Public Sectors were enjoying full-fledged government support. No Government company was allowed to buy or import any equipment / commodity from the private organization, if the said equipment is manufactured by another Government company in India.

At the same time Multi-National companies, who were eyeing at the Indian business were fairly open for the collaboration and technology transfers to Indian companies very easily. PSUs of Power generating Equipment manufacturers (BHEL) enjoyed the collaboration with various companies, worldwide for their various products like Boilers, Turbines, Transformers various valves. Apart from the mechanical equipment collaborations, the high-tech collaborations for the control and instrumentations were also entered into with world's leading organizations viz., Siemens for manufacturing drives and ABB for Manufacturing DCS Systems. M/s NGEF, a state (Karnataka) owned company, had collaboration with M/s AEG Germany and similarly, Kerala government owned KELTRON also enjoyed various collaborations for manufacturing control instruments. M/s Instrumentation Limited Kota had good lot of collaborations with various companies for manufacturing instruments and DCS for thermal power plants. Though the collaborations got ended, these companies continued the collaboration with same company by paying heavy Royalty or entered into arrangement with another company of the world.

To give an example, the situation was almost same as automobile situation before Maruti Suzuki entered in the market. Indian consumer had to be satisfied with same old Ambassador or Premier Padmini. The day new automobiles started coming in the market, these two companies closed their operation. Similarly after 1991, NGEF completely closed; KELTRON and IL are on the verge of getting closed. It is only BHEL, which has survived due to its internal operational changes. As far as technology is concerned BHEL is still borrowing from one or the other World Giants in the field.

BHEL is the premier organization of India in the ever growing business of Power Generating Equipment Manufacturers. BHEL's business is intact and indeed improving. A key catalyst for the stock re-rating is winning of large power orders in 2011, which will not only prove its competitiveness but also lead to a consensus upgrade for FY 2012-13E. The key ingredients taking BHEL into a new orbit are:

- its speedy indigenization of super-critical technology,
- Capacity building and vendors development to improve delivery, and cost cutting on economies of scale and improving labour productivity.

This report on evaluating PSU's long-term structural business would address key market myths and analyse what are considered to be some real concerns. Also look for list of BHEL orders and evaluation of Chinese plants.

If BHEL is looking to be the Indian Multinational and would like to develop to be on par with big giants in field like M/s GE US, Siemens Germany, Hitachi Japan, etc... then should it not develop its own technology? How much R&D expenditure it has to invest? How long they can survive on the borrowed technology? How long BHEL in specific and India at large will be able to afford the high cost technology from outside? As far as the marketing figures like market share, turnover, profit and other parameters are concerned the organisation is in the leading position. But it is not growing at the same rate as that of the Market Growth.

This report / Thesis on evaluating PSU's long-term structural business would address key market myths and analyse what are considered to be some real concerns. Also look for list of BHEL orders and evaluation of Chinese plants. This thesis would also look to answer the question if Power sector of India still needs to borrow the technology from outside instead of re-inventing the wheel or it is necessary to develop its own technology. This thesis would also like to address urgency of the indigenous technology development.

OBJECTIVE OF THE STUDY

Power sector market is growing at a very high rate in the world as well as in India. Though the figures like Turnover and Profit of the existing PSUs are growing and highly encouraging on the paper, it is not in congruence with the Market growth. Market share is also slowly depleting. One of the major indication is the competition is entering the market with better technology. The objective of this paper is to:

1. Get the insight in to the Technology aspect of the power industries to assess the competitive edge.
2. Study if the Indian Power Sector companies are left with no alternative to make big investments in R&D Activities to develop their own technology if not today, tomorrow to be a global player. As Indian Market is turning to be the International Market due to the liberal policies of the government, it is becoming imperative that Indian companies may not get the state of the art Technology from the multinationals Siemens, ABB, Matsushita, GE US etc.

These are the Prime questions this paper is likely to answer as the conclusion

SCOPE OF THE STUDY

1. Study the path of technological development under taken by the global giants in the power sector like General Electrics USA, Siemens Germany, and Hitachi Japan.
2. Power Sector Market Potential and Market Scenario in India and the effect of Government Policies.
3. Technology status of the Indian Public sectors vis a vis the world scenario
4. Chinese low cost equipment and their effect on the Market share of Public sector companies.
5. Private companies entering into the Power / Energy business both as the Suppliers / Manufacturers of power equipment and as users.
6. Due to the Government policies, Indian market is getting converted as the International Market. The effect of this on the Indian Markets.
7. The concerns of the Utility organisations like NTPC, NHPC and various SEBs of India. Their demands on the Technology of the power equipment.

RESEARCH METHODOLOGY

The aim of this thesis is to find out the Market-Forces on the technological changes in the public sectors of India. Descriptive and Analytical method of research will be used.

1. An extensive survey of the literature about the Public sectors has to be taken up to collect the data i.e. Ex Post Facto Research. Technology changes over a period of time and need for the same will be recorded.
2. An extensive interview with top officers of Utility organisations like NTPC, KPCL, SEBs and Tata Power etc. would be conducted to establish their Technology preferences. A questionnaire method will also be taken up with the other officers. This is to establish the gap between the available and aspired technology.
3. A similar interview and questionnaire method will be adopted to collect the information from the public and private power equipment manufacturers.
4. A study on the development path of the world leaders like GE USA, Hitachi Japan and Siemens Germany would be taken to establish the national and international technological gap.
5. A study will be conducted to establish the influence of the Chinese low cost products on the technological developments in India.

SUGGESTIONS & RECOMMENDATIONS

In order to take advantage of the existing opportunities in the equipment industry, it is crucial that the domestic manufacturers have to step up their manufacturing capacity and boost their technological base. Further, with increasing race for supercritical technologies, building up clean technological know-how and expertise should be necessitated.

The nonconventional energy sources like Wind Mills and Hybrid Systems, Small Hydro Power stations, Biomass energy, etc to be given boost by the government with appropriate incentives. This will reduce the burden on the fossil fuel based energy generation.

It is necessary to conduct the energy audit on the power intensive industries like Aluminium Industries, Steel Industries, and Big 5 star Hotels etc

Continuing programmes to develop decentralised solar systems and other types of decentralised renewable electricity strategies, could help in the achievement of this important goal of reaching the rural India.

Energy-related research in particular plays an important role in driving forward economic growth. They should take energy related researches very seriously.

Conclusions

The following are the most important points one should note about the electricity in today's world of sound bites and takeaways:

- Electricity is morphing from a commodity into a premium form of energy
- Demand for more high-quality electricity will continue growing unabated
- The link between economic prosperity and quality electricity is tightening
- Traditional fossil fuels will be increasingly scarce, expensive and polluting
- The smart grid vision offers unique solutions to meet customers' needs and society's need for a sustainable, high-growth, low-carbon economic model.
- Infiltration of Chinese equipment and their quality. India's strategic planning in the area of electricity generation would go hay wire if the under-quality products are purchased. India can hardly compromise on the low quality front for lower value of the products at this juncture of the development.

FUTURE SCOPE OF STUDY

There are many characteristics of the Indian electricity sector that makes its future a compelling study. First, the demand growth is bound to be much higher. This necessitates that the whole power sector be re-planned from scratch. Second, while coal is an important indigenous energy resource, the coal quality is much lower than elsewhere which results in coal not being the most economic option: coal imports or other power supply options might be more cost-effective. Third, renewable resources, with the exception of solar, are limited in India, particularly when this possible supply is juxtaposed with demand growth forecast for the coming decades.

Since, this area is continuously and rapidly growing sector, it necessitates a continuous study to use the existing power resources most effectively and efficiently depending upon time and situation.

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SPOT ELECTRICITY PRICE MODELLING AND FORECASTING

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ABSTRACT

Structural reforms and deregulation since early 1990's around the world has transformed Electricity markets from highly regulated and controlled markets, into, deregulated and competitive markets. Electricity trading is no more a technical business. Today, electricity is treated and traded like any other commodity. A power market participant, who will be in a position to forecast prices correctly, can make an informed decision of adjusting production schedule, buy/sell electricity at an appropriate price from an energy exchange and maximize profits. In this study, literature pertaining to spot electricity price modelling and forecasting is reviewed.


JEL CODES

D43, G16, H44, L11, L13, P23

KEYWORDS

Electricity, Forecasting, Modelling, Spot Price.

INTRODUCTION

 Structural reforms and deregulation since early 1990's around the world has transformed Electricity markets from highly regulated and controlled markets, into, deregulated and competitive markets. Today, vertically integrated electrical utility structure which was the norm traditionally for an electrical utility has been completely replaced by a competitive market scheme not just in developed countries but also in developing countries (Li et al. 2007). Countries around the world have proactively engaged in this transformation of power system structure with an agenda of introducing competition in all the sub sectors of power industry such as Generation, Transmission, Distribution as well as Trading of electric power. The rationale behind this move is to provide more choices to the power market participants especially in the way electricity is traded along with its ancillary services (Amjady and Daraeepour, 2009). Liberalization, deregulation and increased competition have resulted in power market participants facing newer challenges every time. Electricity trading is no more a technical business. Today, electricity is treated and traded like any other commodity (Pilipovic, 1997). It is interesting and very important to note the fact that electricity is undoubtedly a unique commodity because it cannot be economically stored, it cannot be seen unlike other commodities, it has to be consumed the moment it is produced and user demand shows strong seasonality at every interval of time (hourly, daily, weekly and monthly). Unfortunate and extreme events outages of power plants, electrical transformers malfunction or breakdown, unavailability of resources due to unavoidable constraints (ex: Transportation problem resulting in Non availability of coal for thermal power stations) or faulty/imperfect transmission grid reliability will result in having severe effect on electricity prices. This aspect of electricity makes modeling and price forecasting critical for all the power market participants.

OBJECTIVE OF THE STUDY

The deregulation and liberalization of electricity markets worldwide has not only led to new challenges for power market participants, but, has also created a new field of research. Liberalization, deregulation and introduction of competitive power markets have propelled research in electricity price modeling and forecasting. The main objective of this study is to review literature pertaining to spot electricity price modelling and forecasting.

SIGNIFICANCE OF THE STUDY

In today's world of competitive electricity markets, the power market participants i.e. power producers and power consumers need accurate price forecasting tools. Price forecasts signify by embodying crucial information which is essential for power producers and consumers when they are planning for bidding strategies with an objective of managing price risk as well as maximizing their benefits i.e. utility.

According to Weron (2006), if classical notion of volatility i.e. Standard deviation of returns is considered, and is calculated on the daily scale (i.e. for averagedaily prices), then:

- Treasury bills and Notes have Volatility of less than 0.5%
- Stock indices have moderate volatility of about 1-1.5%
- Commodities like crude oil or natural gas have volatilities of 1.5-4%
- Very volatile stocks have volatilities not exceeding 4%
- Electricity exhibits extreme volatility – up to 50%!!!

Karakatsani and Bunn (2004) highlight that Electricity Price curve exhibits considerably richer structure when compared to the load curve with the following unique characteristics of:

- High frequency
- Non-constant mean and variance
- Multiple seasonality (i.e. daily, weekly, monthly, hourly)
- Calendar effect
- High level of volatility and
- High percentage of unusual price movements

These characteristics of Electricity Price curve are mainly due to the following reasons which distinguish electricity from other commodities (Bunn, 2000).

- Non-storable nature of electrical energy
- The requirement of maintaining constant balance between demand and supply
- Inelastic nature of demand over short time period
- Oligopolistic generation side
- Load and generation side uncertainties

As described by Girish et al. (2013), for power market participants, price forecasts are necessary for developing bidding strategies to maximize benefit/profit. A Generator/firm/Individual Power Producer (IPP) which is able to forecast spot prices correctly can adjust its own production schedule accordingly and hence maximize its profits. Spot electricity price modeling and forecasting is of prime importance in day-to-day market operations for these power market participants. In this study, all relevant Univariate Time Series Econometric models used for spot electricity price modeling are reviewed.

SPOT ELECTRICITY PRICE MODELLING AND FORECASTING LITERATURE

Electricity Price forecasting techniques in literature can be broadly divided into six classes: (Weron 2006)

1. **Production-cost (or cost-based) models** - These models simulate the overall operation of the generating units. The main aim is to satisfy the demand of electricity at the minimum cost. But the major drawback in this approach is that strategic bidding practices often employed by power market participant is completely ignored.
2. **Equilibrium (or game theoretic) approaches** - These models are similar to cost-based models with consideration for strategic bidding however the performance of these models are questionable, problematic and difficult if any kind of quantitative conclusions have to be drawn and it is computationally demanding.
3. **Fundamental (or structural) methods**—In these methods, price dynamics are described by modeling the impact of certain important physical and economic factors on the price of electricity. However, these models are better suited for medium-term rather than Short Term electricity Price Forecasting.
4. **Quantitative (or stochastic, econometric, reduced-form) models**— These models characterize statistical properties of electricity prices with respect to time. The ultimate objective of quantitative models is its application in evaluation of derivatives and for risk management.
5. **Statistical (or technical analysis) approaches** - Time series Autoregressive models such as ARMA, ARMAX, (Seasonal) ARIMA, GARCH, TAR and Markov regime-switching models fall under this category. Along with spot electricity price series, fundamental factors such as loads, prices of fuels are considered while modeling.
6. **Artificial intelligence-based (or non-parametric) techniques** – Electricity prices are modeled using non-parametric tools such as neural networks, fuzzy logic, etc. The advantage of these techniques is that they are flexible and can handle complexity along with non-linearity. However, they are Not intuitive often performing below par.

Based on the time horizon for which forecasting has to be made, forecasting of electricity prices can be categorized into: (Misiorek et al., 2006)

- a) **Long-term price forecasting:** The main objective is for investment profitability analysis and planning (especially for determining the future sites or fuel sources of power plants)
- b) **Medium-term forecasting:** These are generally preferred for balance sheet calculations, risk management and derivatives pricing. In many cases, they do not concentrate on the actual point forecasts but on the distributions of future prices over certain time periods
- c) **Short-term price forecasting:** This is of particular interest for participants of auction-type spot markets wherein participants are requested to express their bids in terms of prices and quantities. In such markets buy (sell) orders are accepted in order of increasing (decreasing) prices until total demand (supply) is met.

The following table gives a summary of spot electricity price modeling and forecasting techniques used in the literature (Girish et al. 2013).

TABLE 1: MODELS USED IN THE LITERATURE FOR ELECTRICITY PRICE MODELING AND FORECASTING

S.I No.	Model	Authors
1	Autoregressive models	Cuaresma et al. (2004); Weron and Misiorek (2005)
2	ARMA models	Carnero et al. (2003); Nogales et al. (2002)
3	ARIMA models	Bowden and Payne (2008); Conejo et al. (2005); Contreras et al. (2003); Cuaresma et al. (2004); Garcia et al. (2005); Gianfreda and Grossi (2012); Zhou, Yan, Ni and Li (2004)
4	Multiple linear regression models	Schmutz and Elkuch (2004)
5	Dynamic regression models and transfer function	Karakatsani and Bunn (2008); Lora et al. (2002); Nogales et al. (2002)
6	GARCH models	Mugele, Rachev and Trueck (2005); Karakatsani and Bunn (2004); Garcia et al. (2005)
7	Jump diffusion models	Johnson and Barz (1999); Knittel and Roberts (2005); Skantzze and Illic (2000)
8	Regime switching models	Ethier and Mount (1998); Haldrup and Nielsen (2006); De Jong and Huisman (2002); Huisman and Mahieu (2003); Weron et al. (2004)

CONCLUSION AND SCOPE FOR FURTHER RESEARCH

Electricity spot price modeling and forecasting is very crucial for power market participants. A Generator/firm/Individual Power Producer (IPP) which is able to forecast spot prices correctly can adjust its own production schedule, buy/sell power from the market and end up maximizing its profits. Spot electricity price modeling and forecasting is of prime importance in day-to-day market operations for these power market participants. Electricity Spot prices have been modelled for many electricity markets around the world. (See Girish, 2012; Girish et al. 2013)

TABLE 2: PRICE FORECASTING RESEARCH IN VARIOUS ELECTRICITY MARKETS

S.I No.	Market	Authors
1	PJM Electricity Market	Bastian et al. (1999); Xu and Niimura (2004)
2	California Electricity Market	Contreras et al. (2003); Weron and Misiorek (2005)
3	New England Electricity Market	Guo and Luh (2004); Zhang and Luh (2005)
4	Ontario Electricity Market	Rodriguez and Anders (2004)
5	Spanish Electricity Market	Contreras et al. (2003); Nogales et al. (2002)
6	Victoria Electricity Market, NEM	Szkuta et al. (1999)
7	Queensland Electricity Market	Zhao et al. (2005)
8	UK Power Pool	Wang and Ramsay (1998); Yao et al. (2000)
9	European Energy Exchange (Leipzig)	Cuaresma et al. (2004)
10	Electricity Markets of China	Hu et al. (2004)
11	Korean Power Exchange	Zhou et al. (2006)
12	Amsterdam Power Exchange	Culot et al. (2006)
13	Alberta's Power Market	Serletis and Shahmoradi (2006)
14	New Zealand Electricity Market	Guthrie and Videbeck (2007)
15	Polish Power Exchange	Mugele et al. (2005)
16	Ukrainian Electricity Market	Frunze (2007)
17	Turkey Electricity Market	Ozmen et al. (2011)

One of the directions of future research is modelling and forecasting spot electricity prices of a developing nation like that of India. India has two power exchanges namely Indian Energy Exchange (IEX) and Power Exchange India Limited (PXIL) . Ever since its inception, IEX has emerged as a preferred trading platform nationwide and covers 80 Members & more than 1600 clients registered as on March 31, 2012 (with over 350 private power generators/Independent power producers and more than 1000 direct consumers). IEX has Day-Ahead Market (Hourly contracts for next day by employing double-sided closed Auction, Contingency hourly market for Next day having Continuous Trading and Intraday continuous Trading for the same day which are categorized under Spot

markets), Term-Ahead Market and Renewable Energy Certificates (Solar and Non-Solar). Electricity price spike forecasting is another direction for further research.

ACKNOWLEDGEMENTS

I would like to thank Dr. Ajaya Panda, Dr. SubrataSarkar, Dr. Badri Narayan Rath and Dr. Ban Sharma for all their valuable comments and feedback.

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AN ANALYTICAL STUDY OF RURAL MARKETING IN INDIA - OPPORTUNITIES AND POSSIBILITY

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ABSTRACT

The Indian rural market has a huge demand base and offers great opportunities to marketers. More than 68% Indian consumers live in rural areas and almost half of the national income is generated from here. It is not just witnessing an increase in its income but also in consumption and production. It is in this background that rural marketing has emerged as a special marketing. Rural marketing has caught the eye of most corporates even multinational corporations across the globe as a place of opportunity for exploring new markets. This paper presents a review of rural markets "Environment problems and opportunities and possibilities" in India. And discuss the profile of the rural Indian consumer and analyses the characteristics of the diverse and scattered rural market. Using primary and secondary data collected from various market segments such as literacy levels, accessibility, distribution networks, income levels, market penetration, distances from nearest towns, etc. It exhibits linguistic, regional and cultural diversities and economic disparities, increases in purchasing power fuelled lot of interest in rural area.

KEYWORDS

Rural marketing, Rural consumer, Rural marketing strategy, Rural marketing opportunities.

INTRODUCTION

India is one of the largest emerging markets with a population of over one billion. Out of which 68.84% are living in rural areas (census 2011). Level of urbanization increased from 27.81% in 2001 census to 31.16% in 2011 census. The size of rural market itself speaks of its potential. The current marketing environment and economic scenario have brought the corporate under contemporary roofs of modern India. This is challenging the current standards of segmenting, targeting and reaching the customers. Realistically, India as a nation has come a long way from the place where only urban population which constitutes 20 per cent of customer base for companies are responsible for 80 per cent and their profits. The companies are looking for new opportunities and avenues, as they are witnessing a decline in their growth rates in urban markets due to market saturation and they do have a huge, untouched and untapped rural Indian market.

Today rural market offers a vast untapped potential, development programs on the field of agriculture and related activities such as health, education, communication, etc. have improved the lifestyle of village population. And also rural markets have acquired significance, as the overall growth of economy has resulted into substantial increase in the purchasing power of the rural communities a survey by India's premier economic research entity. National Council For Applied Economic Research (NCAER) indicates that rise in rural incomes is keeping pace with the rise in the urban incomes. The rural middle class is growing at 12 per cent, close to the urban middle class which is growing at 13 per cent. Punjab, Kerala, Haryana, Rajasthan, Gujarat, Andhra Pradesh, and Maharashtra are considered highly prosperous states.

NEED FOR THE STUDY

More than 68% Indian consumers live in rural areas and almost half of the national income is generated from here. It is not just witnessing an increase in its income but also in consumption and production. It is in this background that rural marketing has emerged as a special marketing strategy. Still Indian rural market untouched market, rural market was being ignored by corporate sector and small and medium industries. Hence it is proposed to study the potentiality and problems of rural market with a special reference to Indian rural market.

OBJECTIVES OF THE STUDY

1. To understand the opportunities in the rural market
2. To unleash the potential of rural market
3. To assess the paradigm shift from urban to market
4. To analyse the various parameters of potential of rural market
5. To offer conclusion

RESEARCH METHODOLOGY

The research is based on primary and secondary data, primary data collected with the help of structured questionnaire, observations and personal interview. The questionnaire was prepared for rural consumers and retailers. The research was conducted in six districts of Karnataka (Hyderabad Karnataka) and 30 villages in the selected districts. The data was collected from 250 rural consumer and 50 retailers of Bidar, Gulbarga, Raichur, Yadgir, Koppala, and Bellary districts of Hyderabad Karnataka region. Multistage sampling methods used for select the samples. Both qualitative and quantitative analysis was done to derive worth while conclusion from responses. The statistical tools used to analyses the data and to draw the conclusion. Percentage, graphs and tables have used statistical tools.

In support to make better interpretation lots of secondary data source has been referred these are journals, books, reports, and various market segment and other players of the market.

RURAL

Which place can be defined as rural area?

The rural area means as per the census 2011 any place which meets the following criteria

- A population of less than 5000
- Density of population less than 400 per SQ km
- More than 25 per cent of the male working population is engaged in agricultural pursuits

RURAL MARKETING

According to the national commission on agriculture- Rural marketing is a process which starts with a decision to produce a saleable farm commodity and it involves all the aspects of market structure or system, both functional and institutional, based on technical and economic considerations and includes pre and post-harvest operations, assembling, grading, storage, transportation, and distribution.

According to Thomsan "study of rural marketing comprises of all the operations and the agencies conducting them, involved in the movement of farm produce food, raw materials and their derivatives, such as textiles, from the farms to the final consumers, and the effect of such operations on producers, middleman and consumers."

The above two definitions reflects only one side of the coin and are narrow in explanation, i.e. it explains only the movement of goods from rural to urban areas, whereas, the rural marketers also need agricultural inputs like seeds, fertilizers, pesticides, cattle feed and agricultural machinery, as well as the rural population needs consumables, consumer durables and services also. That's why the urban manufacturers have entered the rural markets with consumables, consumer durables and services.

So, rural marketing has two major areas

- Marketing of agricultural products, from rural to urban areas, from rural to urban areas
- Marketing of manufactured goods and services in rural areas

Thus, rural marketing is a two way marketing process. Which includes the flow of goods from rural to urban areas and the flow of goods and services from urban to rural areas. In addition the flow of goods and services within the rural areas itself.

	URBAN	RURAL
RURAL	<ol style="list-style-type: none"> 1. Agriculture products (food grains) 2. Oil seeds, tobacco, sugar cane, cotton, etc. 3. Handicrafts and rural industry products 	<ol style="list-style-type: none"> 1. Small agricultural tools 2. Household earthen items, wooden items, etc.
URBAN	Not concerned	
		<ol style="list-style-type: none"> 1. Consumables and consumer durables 2. Agricultural inputs like seeds, fertilizers, pesticides, tractors, etc. 3. Services like health, education, market information, etc.

Rural to urban: The rural to urban transactions include the agricultural products like food grains, oil seeds, cotton, sugar cane, tobacco, etc. consumed by urbanites after due processing.

Urban to rural: The urban to rural transaction cover the goods and services of all agricultural inputs like fertilizers, pesticides, seeds, tractors, consumer durables like radio, bicycles, mopeds, clocks, batteries, electrical goods, etc. and consumables like soaps, detergents, cosmetics, tea, cigarettes, and food items, etc.

Rural to rural: The flow of goods and services within the rural areas such as small agricultural tools, household earthen items, wooden items such as doors, windows, etc. and the services of blacksmiths, carpenters, masons, cobblers, also have within rural areas itself.

REASONS FOR GROWTH OF RURAL MARKETING

There are a large number of reasons for growing interest in rural markets. The greater importance is given to the rural market as a different segment with a vast market with large number of smaller markets or sub market due to growing economic power and purchasing power, improved communication and accessibility, high growth and untapped potential. The large rural population is an important factor in high demand of certain goods and services. Also, increasing competition in urban markets make rural an attractive new market for marketing products to cater to these rural needs and wants. The major reasons for growing rural markets are

1. **GROWING POPULATION:** India's population is growing at an average of 1.94 per cent every year and rural population is growing at a rate of 22 per cent therefore, demand particularly for certain consumer and essential goods which are essentially related to population will grow every year.
2. **MARKET SIZE AND PENETRATION:** The estimate size of India's rural market, based on India's total population of one billion. Out of which 68.84 per cent are living in rural areas. The rural market is scattered in 6,38,000 villages all over India.
3. **CURRENT CONSUMPTION AS AN INDICATOR OF FUTURE POTENTIAL:** The purchase and use of some durable and nondurable products by rural consumers is more than urban consumers (according to NSSO data)
4. **UNTAPPED MARKET POTENTIAL:** Rural market is still untapped market, now it is attracted to MNC's because of high competition in urban market.
5. **INCREASING INCOME AND PURCHASING POWER:** Now agriculture is also one of high income generated sources in rural due to modernisation in agriculture sector. More than 70 per cent rural people working in agriculture. Agricultural families income has increased considerably and purchasing power also.
6. **ACCESSIBILITY OF MARKETS:** The attractiveness and sustainability of a market depends upon its accessibility. The marketing programme can be implemented if the market has necessary communication, transport, storage and other necessary infrastructure facilities. The road network has considerably increased in last thirty years.
7. **CHANGES ON RURAL CONSUMER BEHAVIOUR:** Increased mobility between urban and rural areas because of improved transport and communication facilities, and also due to greater emphasis in literacy, all these factors have contributed greater awareness of products and services available to the rural consumers. Product awareness complete with higher disposable income, have created demand for many products which were earlier thought to be urban products.
8. **COMPETITION IN URBAN MARKET:** The competition of market share, sale, profit and shelf space in the urban market is driving many companies to look beyond the urban market which has been their activity area for the last few decades. The costs have increased and the creating pressured reduces profits. In such a situation, rural market is becoming more remunerative and profitable.

RURAL MARKETING ENVIRONMENT

In order to formulate an effective marketing programme and strategy for rural marketing, it is essential to understand the marketing environment which is predominantly agricultural in nature. To understand their characteristics, it is necessary to determine their occupational pattern, income generation, marketing arrangements for agriculture produce, activities of rural and cottage industry. Attitude and belief, culture and subcultural influence, influence of religion, caste and other local factors. The rural market environment should consider following factor

1. **CHARACTERISTIC OF RURAL POPULATION:** The rural population consist of 68.84 per cent of India's total population of one billion, scattered over the country in roughly 6,38,000 villages. The main occupation is agricultural activity comprising rich farmers, middle farmers, and marginalised farmers. The rural population is increasing at a higher rate than the urban population.

2. **THE CULTURE AND SOCIAL FACTORS:** These two factors have major influences on the behaviour of the rural consumer. The widely dispersed villages and limited and ineffective communication helped preserve tradition in rural markets. Increasing access to urban areas and information has a noticeable impact on the attitude of the rural consumer. The influence reveals itself in consumer preferences for product features, product size, shape and colour.
3. **RURAL INCOME AND OCCUPATION PATTERN:** The rural population, estimated at 59 per cent is mainly engaged in agricultural activities. About one third of the rural population owns or leases land to cultivate it for their livelihood and another 27 per cent of the population is dependent on these cultivators as agricultural labour. Petty shopkeeper, small merchants and small traders constitute 10 per cent and teachers, health workers, village level government officials, contract labours and non-agricultural labour constitute 11 per cent.
4. **LAND USE PATTERN AND LAND DISTRIBUTION:** more than 70 per cent of rural income is generated from agricultural activity and the basic resource for agriculture is land and pattern of land distribution, decides income distribution in rural areas. The distribution of land is highly uneven and skewed and the distribution of income is also uneven. There are a large number of families lower income groups in rural areas compared to families in higher income groups.
5. **IRRIGATION:** It plays a major role in improving the economic activity of rural areas. Considerable investments have made through five year plans to irrigated area in the country through major and minor irrigation projects.
6. **RURAL ELECTRIFICATION:** Rural electrification has made good impact in improving agricultural operators, including rural and cottage industries in addition to providing domestic lighting and street lighting. Rural electrification corporation at the national and state level been formed with the sole objective of financing the rural electrification projects.

OPPORTUNITIES IN RURAL MARKETS

Rural marketing provides opportunities for marketers

1. UNTAPPED POTENTIAL

it offers a great chance for different branded goods as well as services for large number of customers. It is estimated by HLL that out of 5 lakh villages in India, only lakh has been tapped so far, which goes on to indicate the market potentials of the rural market.

2. MARKET SIZE AND POTENTIAL

The size of India's rural market is stated as 12.2 % of the percentage of the old population this means 12.2% of the world's consumers live in rural India. In India, rural household farm about 72% of total household constitutes a huge market by any standard.

CURRENT CONSUMPTION

Consumer durables	95-96	2001-2002	2009-10
Scooters	33.1	39.4	39.9
Motor cycles	47.3	39.8	48.3
mopeds	52.7	58.2	57.7
Cars/jeeps	2.1	8.0	10.9
Auto motives	37.9	36.0	37.9
Television	54.0	54.5	44.2

3. INCREASING INCOME

Different programs undertaken have helped to improve the economic the economic situation of the rural areas. The increase in income is seen in both absolute values as well as in the increase in average number of days of occupation in a year.

4. ACCESSIBILITY MARKETS

Though the road network has not developed to the best possible extent but a fire amount of development has been made in many regions, making these regions accessible from the urban region and making it easier for supplying products to these regions

5. COMPETITION IN URBAN AREAS

The urban market is getting saturated and thus is unable to provide the much needed market to many companies and in search of greener pastures many of these companies are now targeting the rural market.

CURRENT FACTS IN RURAL AREA

The Indian market comprises both urban and rural segments in which the rural population alone is about 70 per cent of India's population, a huge opportunity for marketers in India. The benefit of this market is large in size. Which is still untapped and preference for local brand among rural consumers of Karnataka region.

This led us to several us to several queries: why are some brands very popular and why have some failed? Why are local brands not popular in rural areas? What are the consumer preferences?

Focusing on the basic features of rural market in Karnataka, study also gives an insight into consumer behaviour towards various brands in the fast moving consumer goods (FMCG) sector.

Two-thirds of the India's consumers live in rural areas and almost half of the national income is generated from rural regions (NCAER projection) there are roughly 700 million people living in villages. For most of the companies, rural India has a large consuming class with 41 per cent of India's middle class and 58 per cent of the total disposal income with 128 million households (NCAER projection) concentrated in this segment. Consider the potential market: out of 6,38,000 villages in India. Only one lakh has been tapped so far if the rural market has to be adequately tapped, then there has to be a change in the way a company markets its products in rural India. This report on features has been validated by the study done in several villages covered and visited during the study.

MIXED TYPE OF INCOME

The income level of people in Karnataka has been an example of mixed type. Some of the villages had purchasing capacity but they lacked in knowledge and in some villages people were from the lower income group. For example the daily wage earners, farmers, small vendors, load lifers etc. it is imperative that the basic need of consumers are met because they also form the major market for marketers.

STRONG MODE OF LOCAL COMMUNICATION

This is the strongest feature of this region. People understand the local dialect and prefer to be informed in their local language so this can be useful for promotion of brands in rural market by these major players.

LOW LITERACY LEVEL

The literacy level is very low among rural consumers some of the people are totally illiterate so this is biggest challenge posed to marketers.

TRADITIONAL OUTLOOK

Ethnicity matters a lot for consumers. The market explored witnessed that rural consumer. The market explored witnessed that rural consumer of Karnataka prefer commodities which are traditional in outlook, and also may be with packaging and brand names like Krishna, Mohan which are easy to remember and recognise.

CONSUMPTION RATE HIGH DURING FESTIVE SEASONS

If marketers want to tap this potential market then they need to focus on the demand factor year round which is mostly very high during festivals which is for specific product categories.

FINDINGS OF THE STUDY

1. **MODE OF PURCHASING:** More than 80 per cent of rural consumers prefer to purchase their products in weekly markets. Weekly markets are more prevalent and purchase is moderate and both branded and non-branded products are sold in weekly haats.
2. **FAIRS AND EXHIBITIONS:** 60 per cent of consumer attracts the displayed product. Fairs have always been a centre of entertainment for villagers and it is a place where marketers have a lot of scope. They could have the maximum display for their products, as these fairs are centres for creating awareness and easy to attract buyers.
3. **PERSONAL SELLING OR MOBILE TRADERS:** Only 45 per cent consumers prefer to purchase product from sales man, and only selected items had selling in this mode like clothes, utensils, cosmetics, etc. personal selling can help the traders to convince the customer easily.
4. **VILLAGE SHOPS:** 95 per cent of rural consumers, daily requiring products are purchasing in village village shops. These shopkeepers provide goods on credit and consumers prefer to buy from them because of trust and convenience.
5. **PAAN AND TEA SHOPS:** 90 per cent of FMCG products (Gutuka, chocolates, cigarettes, tea, masala, water pochos, cold drinks, and biscuits etc.) are selling paan and tea shops, and rural consumers are very much preferred these shops then other outlets.
6. **INCOME AND SPENDING PATTERN:** 40 per cent of rural workers are daily wage earners and have daily purchase habit and could do so because of low unit price packs, hence the products is meeting the basic level of need and providing the benefits of convenience and economy and easy availability.
7. **BRAND NAME:** Rural consumers can remember the known brand names like Krishna, Kasturi, etc. than the unknown brand names like Peter England, Jacky, Belmont, etc.
8. **PLACE:** For villagers, this P matters simply because it is the place, which is the deciding factor for purchase of goods it can be at fairs or weekly haats, which are the centre of sales, so it should be given more preference by the marketers. For most companies wanting to enter rural markets, distribution poses a serious problem.
9. **PROMOTION:** The distribution channel has to be proper in the case of rural marketing and retailers should be given some good margin for selling and stocking the product. Advertising should be mass appealing or personalized that is wall paintings, banners, kiosks, pup-petry, through mobile traders or salesman demonstrate the product.
10. **PRICE:** In all, there are more than 3.8 million retail outlets in rural India, averaging 6 shops per village. the term shop is a significant portion of the rural population for people paid in daily wages. Daily wage earners tend to have little stock on money, and therefore tend to make purchases only to meet their daily needs. The implication is that pack sizes and price and points are critical to sale, and importantly, rural consumers view the purchase trade-off dilemma across a much wider range of product categories.

CONCLUSION

Data on rural consumer buying behaviour indicates that the rural retailer influences purchase occasions. Therefore, sheer product availability can determine brand choice, volumes and market share. So, role of retailer is also very important in rural markets, because he would be one who provides information regarding quantity of pack, promotional schemes, influences of advertisement, consumer feedback etc. to company. So the retailer plays a very big role here. The rural customer goes to the same shop always to buy his things. And there is a very strong bonding in terms of trust between the two.

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