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STATEMENT OF THE PROBLEM

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HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

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- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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SUSTAINABILITY IN GREEN RETAILING: ACHIEVEMENTS, CHALLENGES, AND A VISION FOR THE FUTURE

DR. GIRISH.K.NAIR
TEAM LEADER
INTERNATIONAL HOSPITALITY MANAGEMENT FACULTY
STENDEN UNIVERSITY
QATAR

HARISH K NAIR
RESEARCH SCHOLAR
RESEARCH & DEVELOPMENT CENTRE
BHARATHIAR UNIVERSITY
COIMBATORE

SWATI PRASAD
LECTURER
INTERNATIONAL HOSPITALITY MANAGEMENT
STENDEN UNIVERSITY
QATAR

ABSTRACT

In the global front, retailers started giving importance to sustainability long back, but in Indian context, the sustainability measures were practiced since time in history but began to be realized recently. Regardless of its origin, sustainability has become an important consideration for the retail industry, affecting strategy, operations, workforce engagement, and connection to consumers and communities. This is more due to the emergence of organised retail sector in India. Retailers are evaluating their direct store, distribution center, and supply chain operations to uncover cost saving and workforce enhancing opportunities. While sustainability measures are reducing energy, greenhouse gases, waste, and chemicals, the organizations are trying innovative methods to improve their business the Green retail way. Further, the retail industry is evolving to meet the changing needs of consumers in specific and society at large. As one of the most notable evolutions of the past decade, consumers have become progressively more concerned about their environmental and social impact. This concern has manifested in an increased demand for Corporate Social Responsible activities, environmentally friendly products, a rise in the availability of organic foods, and more. The researcher seeks to highlight sustainability trends in the retail industry i.e. various sustainability measures followed by retailers, the benefits of adopting sustainability practices to retailers, shedding light on retail's evolving business practices and the challenges the industry still faces. The broader objective is to provide the retail industry and those it serves with a way to act on and engage in sustainability, through framing the critical issues, anticipating future trends, recognizing challenges, and sharing examples of how retailers are responding.

JEL CODE

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KEYWORDS

Sustainability, Green Retailing, Sustainability Tools, Corporate Social Responsibility.

INTRODUCTION

The retail industry plays a unique role in connecting product manufacturers, consumers, employees, and communities. From this point, the retail companies have insight into evolving manufacturing practices, consumer preferences, and community demands. Recently the retailers have started feeling that the traditional measures of competition—namely price, quality, service, and convenience—are now being supplemented by environmental and social considerations. Global warming and other environmental concerns are changing the way people live and do business. Consumers worldwide are increasingly showing their preference for companies who practice social and environmental responsibility. Seeing opportunities to differentiate themselves and build customer loyalty, retailers are implementing 'green' initiatives that improve brand image and involves lower spending (Green Retail Report 2010). These changing marketplace dynamics reinforce retailers' efforts to identify and act on environmental and social concerns in their direct operations and product supply chains. For the purposes of this research, "sustainability" is defined as operations that meet the needs of the present without compromising the ability of future generations to meet their own needs.

REVIEW OF LITERATURE

- **Saroj Datar, Kavita Laghate (2011):** in their paper titled 'Green Business: A View of Retail Sector in India' opined that sustainable business practices is important not only for today but also for securing business tomorrow. Hence this issue is going to be the top concern for the corporate houses in any format. Media creating awareness, consumers are becoming aware of eco friendly sustainable business practices, government control, rules laws, regulations, environment protection groups etc are having a synchronized impact on this movement. The scarcity of natural resources, limited availability of non renewable energy sources, and the time required to create these sources in natural way, energy prices make sure that the issues related to the environmental can not now be neglected. And the overall business strategy need to be in tune with the environmental friendly, sustainable manner that will drive the business decision making and enhance the commercial viability of the business venture.
- **Prof. Ritu (2011)** in her titled "Green Retailing: An Exploratory Study Examining the Effects of Sustainability on Global Retail Landscape" found that majority of global retail players have developed an approach to monitor individual retailer's activities and progress made in the different areas of action over time towards achieving sustainability. These approaches were widely used by global retailers rather than the Indian counterparts. These players have created a buzz for their actions related to green products, greening supply chain, retailer's own environmental performance and raising consumer awareness relating to the green movement.
- **Smitu Malhotra (2012)** in her research paper "Green Retailing" stated that Building environmental sustainability in the vision mission statement of the organization is the starting point. Developing processes and culture in the organization that accepts sustainability, developing transparent standards and

measuring their impact, setting concrete sustainability targets to be achieved, will send a message in the organization about the seriousness of the commitment of the top management. Unless sustainability is ingrained in the culture of the organization, it has little chance of success.

IMPORTANCE OF THE STUDY

The Government of India has given green signal to global retailers to start their ventures in India. Even though their entry into Indian market is expected to take time it is worth taking note of their business practices. One of the important business ideologies that they follow is sustainability practices. They are moving towards the concept of green retailing and self sustainability. In India the growth of organised retailers and malls are in their nascent stage hence the concept of sustainability is new to them. If the Indian retailers are to compete with their global counterparts they must be aware of the sustainability measures taken by them. This paper throws light into the need and benefits of following sustainability measures, the challenges in the road towards green retailing, some of the measures taken by major global retailers and Indian retailers.

OBJECTIVES

The objectives of the study are:

- To understand the concept of retail sustainability.
- To study the benefits enjoyed and challenges involved while adopting sustainability practices.
- To identify the sustainability initiatives taken by both global and Indian retailers.
- To understand tools used by global retailers to reach sustainability

RESEARCH METHODOLOGY

The study is purely descriptive in nature and the data used for conducting research were taken from primary and secondary sources. Primary information comes from the interview with the administrative of selected retailers and secondary information from various journals, magazines, newspapers and websites.

NEED FOR ADOPTING SUSTAINABILITY MEASURES BY RETAILERS

- **Minimizing Energy consumption:** Retailers are accountable for the largest energy bills. Further the energy use is growing faster. There is always a need to conserve energy as most of the nations across the globe are facing acute energy crisis. Use of renewable sources of energy like wind and solar need to be encouraged.
- **Waste Management:** A large volume of waste materials are generated during the process of sale and distribution of physical goods. One of the major headache faced by developing nations are the process of managing waste disposal. Still most of the countries have not developed professional methods for proper waste disposal. Hence it is for the retailers to minimize the waste generated during trade activities and to develop their own indigenous waste management system.
- **Minimizing the use of non renewable natural resources:** The retailer especially those in the shopping malls consume huge amount of water everyday. To prevent the acute shortage of fresh water, the retailers need to manage its use.
- **Preventing Green house gas emissions:** Most of the retail malls use heavy refrigeration system which emits green house gases. Proper service and management of the refrigeration and cooling system will reduce the emission. The Government can enforce strict rules on the manufacturing of the refrigerators and levy penalties on the use of harmful chemicals that leads to greenhouse gas emissions.

BENEFITS OF SUSTAINABILITY

Adopting sustainability practices can bring a host of opportunities and benefits to the retailers. Some of the advantages are:

- **Develop a professional business:** Looking at business operations through the lens of sustainability brings environmental and financial advantages through the reduction of energy, fuel, materials, waste, packaging, and other resources.
- **Dynamically lowers risks:** Decreasing dependence on natural resources like fuel and materials, both internally and in the product supply chain, reduces exposure to price fluctuations and market volatility. Ensuring proper labor standards, managing at-risk suppliers, and ensuring the safe manufacture and use of products alleviate brand risk.
- **Bring in new innovations:** Sustainability is increasingly seen as a platform for identifying and driving innovative business practices. An eye toward reducing energy, water, waste, and toxic chemical use, as well as other environmental impacts leads to the development of new technologies and processes to save money, reduce risks, and identify revenue opportunities.
- **Favourable attitude and support from employees:** Employees, now more than ever, enjoy working for a company they can be proud of. They appreciate employers that value their opinions, ideas, and skills. Strong sustainability programs attract and retain top employees by providing them with opportunities to positively influence society.
- **Enter new market locations:** Retailers who constantly strengthen the value they bring to communities, beyond that of simply economic value or job creation, are more likely to be welcomed in new locations.
- **Enter new product markets:** As the green, natural, conscious, and healthy consumer segments grow, retailers will benefit from developing products and services that cater to these markets. This can be done by proper waste management process.
- **Acceptability among industry's stakeholders:** When sustainability efforts address the concerns of NGOs, suppliers, vendors, consumers, and other stakeholders, those stakeholders provide support rather than resistance to all dimensions of company growth—financial, social, and environmental.

IMPACTS OF CORPORATE SOCIAL RESPONSIBILITY (CSR) IN RETAIL

Social responsibility is the responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that is consistent with sustainable development and the welfare of the society; takes into account the expectations of stake holders; is in compliance with applicable law and consistent with international norms of behavior and is integrated throughout the organization.

BASIC DIMENSIONS OF CSR ACTIVITIES

Since CSR encompasses a broad range of activities, it seems likely that the CSR activities will not all be the same. Underlying dimensions may exist by which different types of CSR activities can be distinguished. A consumer may not perceive the same level of CSR or may not be affected in the same way by, e.g., donations to charity as by attention to product safety. This research encourages the evaluations of CSR which are dependent on the type of CSR activity that the retailer performs. CSR activities differ on two main dimensions: (1) the beneficiary of the activity and (2) the intrinsic contribution of the retailer. Consumers are interested in who reaps the benefits of the activity and how much the retailer invests in the activity.

RETAIL SUSTAINABILITY MEASURES ADOPTED BY FIVE MAJOR GLOBAL PLAYERS

NIKE

Nike has set a goal to be "carbon neutral" by 2013 and currently purchases 79,820,000 kWh of green power for its World Headquarters, representing 72% of annual consumption. The company is also designing its footwear to meet targets for waste reduction, elimination of volatile organic compounds and increased use of environmentally preferred materials by 2013. Nike Environmental Action Team (N.E.A.T.) was established in the year 1993 with the objective of directing

and coordinating Nike's global environmental programs. They promoted the initiatives like "Reuse-A-Shoe" that made use of worn and defective footwear and grinds them into granulated rubber used for sports surfaces and carpet padding, thus eliminating 7.5 million shoes entering into the landfills. On this the company saved around \$4.5 million dollars and 1.3 million gallons of solvent by shifting to water based adhesives in nine out of ten of its shoe designs. Nike saves a half a million trees a year by switching to environmentally responsible packaging by making use of corrugated cardboard.

WAL-MART

Wal-Mart has made a commitment to reduce overall Green House Gas emissions by 20% over the next 8 years and set a long-term corporate goal to purchase 100% of their energy from renewable sources. Wal-Mart has also set a goal to increase fuel efficiency of its fleet by 25% over the next 3 years and is currently the largest single purchaser of 100% organic cotton products. According to Wal-Mart CEO, Lee Scott, the company has invested \$500 million in sustainability projects and working on the three ambitious goals for the company: usage of entirely renewable energy, create zero waste; and sell products that sustain resources and the environment. It is working closely with suppliers and other stakeholders to lower their carbon footprints, packaging wastage and to be more energy efficient in transporting products to Wal-Mart outlets. It has invested heavily in the development of a hybrid truck fleet, establishing energy efficient pilot stores, switching to more efficient LED lighting in store, renovating outlets to lower electricity usage, opening new outlets with advanced green building features and deploying energy saving technologies in its warehousing.

TARGET

The discount retailer, Target, became a certified organic produce retailer late last year and now offers more than 500 choices of organic certified food. Target also reduces waste through food-donation programs, giving away nearly 7 million pounds of food last year. They also have four buildings in California using on-site solar electricity, with systems under development at 14 additional stores. Target is one of Australia's leading department store retailers who show its commitment to inculcate an environmentally sustainable culture within their business and the community. They successfully carried a campaign of removing plastic shopping bags from their stores in 2009, which is followed by a program called Buddy Bag where they are selling Target red reusable bags. This is followed up by educating the customers about the Buddy bag through in store signage, print advertisements, our internet site and internal bulletins. Customers can bring their own bag or purchase from the range of reusable or compostable bags. They have launched a "Think Climate label" to their customers where they are encouraging them to opt for less energy usage by cold washing and line drying the Target products. They are drafting and implementing environmental packaging guidelines with that aim to further reduce packaging waste. They have introduced carton reduction program by consolidating orders across departments, increasing promotional pack sizes, introducing multiple pack sizes to accommodate smaller and larger stores, reviewing and reducing the frequency of replenishment orders. This program aimed at reducing greenhouse gas emissions from reduced volumes in the supply chain, less waste to landfill, considerable savings in processing costs, reduction in supplier and store costs, and improved productivity in buying teams, distribution centers and stores.

CARREFOUR GROUP

Carrefour Group is accelerating its efforts to decrease emissions, combat waste and promote recycling. This has led to the opening of stores which are more economical and less on energy, plastic bags and make use of paper for catalogues and consumer magazines that is made from recycled wood fibers. Also, it is focusing on to improve its stores' energy efficiency and has launched an investment plan of some €30 million per year. It is working to have optimized refrigeration systems, energy-saving lighting and the use of natural light and closed freezers. It is also working hard to reduce the greenhouse gas emissions linked to refrigerant leaks and finding out the ways to avoid them at all. At the same time Carrefour works upstream with its suppliers to reduce water consumption in the supply chain and stores' water use. It is making efforts to reduce the volume of store waste by replacing merchandise shipping boxes and crates with reusable plastic bins. It is also encouraging customers to sort and opened waste recycling centers for glass, plastic, metal, paper, small household appliances, telephones and batteries. They are also involving staff to raise awareness of environmentally-friendly practices and conducts sustainability training in its various business Units. Its stores also promote sustainable-development awareness campaigns by organizing numerous initiatives to coincide with national, European and international events.

TESCO

The supermarket giant has identified "green consumerism" as a key to success in competitive retailing by focusing on concepts like recycling, labeling, store design, energy management and promotion and reward for employees and consumers as well. They have commissioned Environmental Resources Management (ERM) to map the total direct carbon footprint of the Tesco business across all the countries. This will enable them to baseline from which they have to start and prioritize in reducing emissions. It has plans to build environmentally-friendly shops and install wind turbines on its stores.

TOOLS USED BY GLOBAL RETAILERS TO ACCESS SUSTAINABILITY

WAL-MART'S "LIVE BETTER SCORECARD"

The tool has been in development since 2009, in collaboration with a number of other companies, as well as The Sustainability Consortium (TSC). Keeping in line with Walmart's broad goal of establishing a global retail standard for the 21st century, the Live Better Scorecard seeks to help:

- Improve the sustainability of products
- Integrate sustainability into the core business
- Reduce cost, improve product quality, and create a more efficient supply chain

The Live Better Scorecard has already been rolled out to buyers in over 100 categories—such as cereal, coffee, apparel, hardware, and electronics—with another 100 categories to be added by the end of the year. Walmart's original goal was to have the scorecard in 100 categories by the end of 2012.

Wal-Mart has said that the long-term goal is to evolve the scorecard as a product label for sustainability, similar to a nutrition label; however, the short-term focus is on providing the buyers in the merchandising team a tool to assess the sustainability of the products placed in shelves.

P&G SCORE CARD

The Scorecard Analysis Tool is the latest publicly available component of P&G's Supply Chain Environmental Sustainability Scorecard, which was designed to improve the environmental footprint of P&G's supply chain, fuel innovation, and encourage suppliers to make environmental improvements in their own supply chains.

The scorecard measures absolute or intensity improvements in nine key metrics including energy use, water use, waste disposal and greenhouse gas emissions on a year-to-year basis. It also assesses P&G's external business partners' sustainability innovation ideas and promotes collaboration. Indeed, its results affect a supplier's rating, which can impact future business with P&G.

ESTY ENVIRONMENTAL SCORECARD

A tool designed to help companies assess the company's sustainability strategies and performance, benchmark their results against industry peers and build brand value through sustainability. Esty Environmental Partners developed the scorecard using the research in Dan Esty's book, Green to Gold, an insight gathered from extensive work with clients, including global sustainability leaders. The Scorecard is customized by size and type of product or services and organizes company performance in 3 key areas: Organizational Commitment and Alignment, Core Environmental Performance and Stakeholder Communications and Engagement.

RETAIL SUSTAINABILITY CONCEPT: A CASE OF INDIAN RETAIL SECTOR

Retail sustainability concept is new to Indian retail sector. As far as Indian retail sector is concerned a vast majority belongs to the unorganised sector and organised retail sector is in its nascent stage. The unorganized retail stores popularly called the 'Kirana' stores are run by small businessman with less working capital. Most of them are have only primary education, follow primitive business practices and are in perpetual cash crunch. Majority of them will not be in a position to understand and carryout the concept of 'retail sustainability'. However, it is worth noticing that paper bags were quite a popular practice used by these retailers in ancient times. With growing industry revolution people became more used to convenience and got indulged in the use of plastic bags. Indian Government has put forward a step in minimizing the use non bio-degradable bags by forcing the retailers to put a complete stop on the use of plastic bags

while issuing purchased items to the consumers. On the contrary, the consumers are asked to pay a price for these bags thus discouraging them for further use of it.

On the other hand the organised sector in India is in its nascent stage. This has both advantage and disadvantage. Disadvantage being the limited knowledge, experience and expertise in this field and advantage being the sustainability practices can be absorbed and implemented at early stages of business so that sustainable practices become a way of life.

RETAIL SUSTAINABILITY FOLLOWED BY INDIAN RETAILERS

On the Indian front, most of the players don't speak much of their green initiatives. Future group takes the lead where it is making obvious display of its green initiatives through Pantaloon Retail India Limited. Tata International, part of the Tata Group, has plans to launch Green Retailing stores across India. The stores will consume 40 per cent less energy and designed on LEED certification of USGBC. Mahindra Retail has launched its "Green" Mom & Me store in Bangalore. This store makes use of eco-friendly, recycled and reused construction material. It has made use of natural elements in the store such as low energy consumption lighting, lead free paints & tiles, doors reconditioned from the existing buildings etc. IBM Retail Store Solutions has received Green Excellence of the Year award for its outstanding efforts in energy conservation and its commitment to safeguarding natural resources. The other key retail players follow as Shopper's Stop, Trent (Westside), Reliance, Aditya Birla Group, Central and others are not working so seriously in this direction. In India green retailing may not be that obvious but there are many companies that are contributing towards the green movement. The key players are Suzlon, Wipro Technologies, and HCL technologies, ONGC, IndusInd Bank, Idea Cellular and Hero Honda Motors.

CHALLENGES FACED BY RETAILERS WHILE ADOPTING SUSTAINABILITY IN INDIA

- **Lack of expertise for implementing the sustainability program:** Because expertise is not yet available within their respective organizations, retailers are reaching out to nonprofits, academics, and governments, as well as suppliers, consumers and investors to accelerate sustainable innovation.
- **Turning away from sustainability as a cost-incurring concept:** Most of the retailers view the initial investments into the waste management and energy reduction program as a burden, even though the retailers will have long term benefits from sustainability practices. Many of them are reluctant to adopt the concept into business as the initial investment is high. Other than this the end consumer is also apprehensive in consuming sustainable product as they are normally an expensive affair.
- **Developing systems for continuous improvement:** As retailers build sustainability programs, they have developed management, measurement and IT systems for continuous improvement. Such mechanisms include environmental management systems, supplier "score carding" and management training, employee training and engagement, energy and waste reduction goals and sustainability reporting. All these are challenges as Indian organised retail sector is still in its nascent stage.
- **Educating customers and suppliers on the importance of sustainability:** To make sustainable practices a success the retailers require the tough task of customer attitude about consumption, usage and disposal of products in their daily life.
- **Low political priority for sustainability:** as far as India is concerned there are no strict rules regarding sustainability measures. Even though the Government makes it a point to acknowledge the efforts taken by retailers towards sustainability by way of issuing awards, there is no real pressure on the retailers to practice sustainability measures.

CONCLUSION

Retail industry serves as a vital connecting link with the end customers and can play an important role in pushing green products. If the consumers are properly educated and motivated for the green products, then policy of three R's i.e. Reduce, Reuse and Recycle can help make the industry more environment friendly. When there is demand for the green products, retailers are bound to stock green and organic products for their customers. One of the major apprehensions with the green products is its cost factor. But with the growing interest in the environment over the past few years; most of the customers are opting for the "green" options and ready to pay the premium for these products. Many studies have confirmed the fact food, beverage and personal care are the two most commonly used categories that accounts for the majority of green products in the marketplace. The researchers and the government in conjunction with the retailers should look into innovations and ideas to make these environment friendly products much affordable to be able to promote sustainability practices among general public much easily. Corporate Social Responsibility activities can be encouraged to be practiced by the retailers in India. This social commitment will not only help overall sustainable development of the society but in addition can lead customer trust in the company. CSR activities can increase overall retail store evaluation.

Thus green retailing is an approach that reflects the concern of big corporations towards the environment. Also, it should be the onus of governments and consumers to press the retailers to adopt green practices. Retailers are observing that environmentally- responsible retailing serves as a strong, powerful marketing tool and also a way to reduce operating costs and improve business efficiency. But at the same time, it should also keep a check whether these big stores are actually living up to their "greenness" they are merely using it as a sales technique. Thus it becomes very important to quantify the activities relating to materials consumption, carbon emissions, waste, pollution and transport infrastructure, the environment and the consumer and then strategies to minimize the detrimental impact of their activities in a positive and proactive way. This requires investment in environmental audits, reviewing store design and operation, assessing logistics and transportation effectiveness, reviewing energy usage and energy sourcing, partnering with suppliers and stakeholders, and educating both employees and consumers in key areas. At the least the extensive usage of plastic bags can be avoided by using bags made of natural fabrics and recycled paper.

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CAUSES AND EFFECTS OF RURAL-URBAN MIGRATION IN OYO STATE: A CASE STUDY OF IBADAN METROPOLIS

OSHATI TITILOLA
RESEARCH SCHOLAR
NATIONAL PRODUCTIVITY CENTRE
IBADAN

ESAN, ADESIJI DAVID
RESEARCH SCHOLAR
NATIONAL PRODUCTIVITY CENTRE
IBADAN

DR. ADU, EMMANUEL OLUSOLA
DEAN
BAISAGO UNIVERSITY COLLEGE
GABORONE


ABSTRACT

In recent years, the rate of rural-urban migration has become alarming as more people drift into the urban centres from the rural areas; it is against this backdrop that this paper examined the causes and effects of rural-urban migration in Oyo state with particular reference to Ibadan Metropolis. A survey was carried out amongst 300 respondents drawn from within the metropolis and the results indicates that the major causes of rural urban migration are; search for better employment, education, availability of social and infrastructural amenities and business opportunities. Others are identified as famine, poverty, unemployment, and inadequate social amenities in the rural areas. While some of the effects of rural-urban migration are; rural-urban migration brings pressure on urban housing and the environment, high rate of population growth in the urban centres, low living standard which reduces the quality of life, survival of the fittest that culminating to social menace, overpopulation which encourages crime rate in the society, low productivity and rural-urban migration slows down the pace of development of the rural areas. It is recommended among others that the Government should provide social amenities and facilities in the rural areas, employment opportunities to cater for jobless people and youth empowerment scheme (YES) programme should be broadened and taking to the rural areas, industrial modernization, technological sophistication, improvement in the quality of education to mention a few. In addition to this Vocational Training Centres should be established in the rural centres for training the productive youths for self-employment.

KEYWORDS

Rural-Urban Migration, Youth Empowerment Scheme, Poverty, Unemployment, Vocational Training Centre, Region.

INTRODUCTION

 Nigeria is among the few countries of the world characterized by contradictory socio-economic and development scenarios (Nwokocha 2007). Despite her enviable human and material resources, the country and its peoples are still classified among the very poor (Okunmadewa, 2001) with no fewer than 54% of Nigerians living below poverty level (Akinyele, 2005). Multiple environmental, political, religious and cultural factors have been implicated in Nigeria's underdevelopment (Okafor, 2005). The political factor is considered, in most quarters, as most crucial in understanding the Nigerian crisis. In a way, this paper subscribes to the above position but argues, and in line with systemic analysis, that distortion of Nigeria's development agenda could have resulted from any component given that parts of the society function collectively to sustain the whole with emphasis on interdependence.

Specifically, long years of military dictatorship and the consequent tele-guided mentality impinged negatively on the psyche of Nigerians. Throughout those dark periods, mediocrity displaced excellence in all spheres of life thus leaving the society without laws and values. For the most part, amenities and welfare were not provided as and when due, with rural communities disproportionately more disadvantaged than urban centers. The situation did not improve at those few intervals of military-supervised democracy. With the return of a fairly military-independent democracy in 1999, Nigeria has made little progress in re-situating itself in the realm of sustainable development. Poverty is still a visible aspect of the people's culture. The dilemma is exacerbated by recurring unimaginable level of unemployment and frustration that have increased the army of disenfranchised people incapable of participating directly in the growth process (Okunmadewa, 2001).

Migration is the movement of people from one geographical location to another, involving permanent or temporary settlement. The region where people are leaving is referred to as the source region whereas the region to which people are entering is known as destination region. While rural-urban migration is the movement of people from rural areas (villages) to urban centres (cities). One noticeable aspect in the society today is the rate at which people migrate from the rural to the urban centres. While the urban centres are increasing in population, the rural areas are decreasing in population. (Zainab & Mustapha 2007)

Rural-Urban migration in Nigeria occurs with the migration of rural dwellers many of whom are young men and women seeking greener pastures in the city. The movement to the pre-colonial traditional centers, Lagos, and the cities of the South and Eastern region of Nigeria is driven largely by wage employment opportunities, to enjoy the "good life", religious study, trade and apprentice and agriculture along the river basin regions.

The burden of rural to urban migration in Nigeria is multifaceted and intertwining. As such, an analysis of one decomposable component or consequence, such as unbearable population density, impinges on other issues within the identifiable cycle of burdens. For instance, in examining the immediate effect of rural to urban migration, which is increase in population or at the extreme its explosion, various other subsequent effects are expected to be considered. Population explosion activates the housing challenge both at micro family and macro society levels. Congestion in households and communities has implications for both the health and psychology of victims.

Nigerian cities such as: Lagos, Port-Harcourt, Kano, Onitsha. Ibadan among others are characterized by human traffic, vehicular congestions, environmental pollution, consistent in-migration and spurious expansion of territories to accommodate human additions. This paper argues that although maternal and infant mortality have been identified as accounting for a significant number of deaths in Nigeria (Okolocha et al 1998; Isiugo-Abanihe 2003; Nwokocha 2006)

EFFECTS OF RURAL-URBAN MIGRATION

As countries pursue development and industrialization drives, the need to build urban centres become certain. It is in this pursuance that leads to somewhat neglect of the non-urban centres. This calls for people in the rural areas desiring to move to the urban centres. Every man wants a standard of living better than where he is now thus; the drive to move to the urban centres becomes obvious. In the developing countries, this passion becomes so great that the movement

becomes rampant. Rural areas are isolated areas of an open country with low population density. Occupation by the rural folks is mostly primary in nature. For instance, farming, lumbering, fishing, quarrying etc. are the major activities offered by the rural people. Most of the industries are being concentrated in the urban centres. It becomes relatively hard for the rural folks to make ends meet. Since the available occupations in the rural areas are mostly primary, they offer a low profit capital and the few elite are not motivated because of the primary nature, and fewer wage offered by the jobs in the rural areas, not much to be desired.

The seasonality of the primary job or the agricultural activity which they are engaged in results to seasonal unemployment and the small scale business industries are been wiped off by the demand for the technological products from the urban centres thus causing structural unemployment. This leaves much people in the rural areas unemployed in most part of the year. Rural areas are characterized with chronic food insecurity widespread and livelihoods are more vulnerable. Rural folks have limited access to basic social services, safe water, roads that are accessible year round, and electricity and telephone services. Poverty is most severe among rural farmers, who are mainly traditional small-scale producers. About six in ten small-scale rural farmers are poor, and many are women. (Okuneye 2008)

Women bear heavy workload in addition to their domestic chores, they are responsible for about 60 per cent of agricultural production. More than half the women who head households in rural areas are among the poorest 20 per cent of the population. The fate of the youth and students in rural area is not promising. They are mostly at disadvantage to their counterparts at urban areas who have easy access to quality education, internet facilities, employment opportunities, better health care and opportunities for advancement. Notwithstanding these disadvantages, the rural folks are facing, they enjoy certain advantages. For instance, living in a rural area allows residents to enjoy the natural environment instead of having to go to recreational sites. In addition, rural people do not have to struggle with the daily stresses of urban life such as being stuck in traffic, dealing with higher rates of crime, and in many cases, paying higher taxes. (Nwokocha 2009)

These absences of stressors can have a great effect on the overall quality of life and as one researcher notes, "People living in rural and sparsely populated areas are less likely to have mental health problems than those living in urban areas and may also be less likely to relapse into depression or mental illness once they have recovered from these in more densely populated areas" (Nigerian wiki 2010). The big question is, are these advantages much enough than the disadvantages to motivate those there to stay there? The big response to the big the question is "NO" since its disadvantages outweigh that of the advantages. These phenomena is the main push factor causing the rural folks to move to areas (urban areas) having comparative advantage than the rural areas (thus from the rural areas to the urban centers) (Okafor 2005).

Urban area is an area with relatively high population density that contains a set of closely related activities. Urban areas are endowed with free-standing built-up area with a service core with a sufficient number and variety of shops and services, equipped with better administrative, commercial, education, entertainment and other social and civic functions. Urban areas generally have advanced systems for sanitation, utilities, land usage, housing, and transportation. Parents in the urban areas have a number of choices available for the education of their children and can often select from a long list of both public and private school districts, which leads to the potential for better education.

It is also worth noting that urban areas offer residents the possibility to choose from a range of employment opportunities at any number of companies or organizations. Aside from this, urbanites have better access to choices in healthcare as well and if they suffer from diseases they have a number of specialists to choose from in their area. Development is mostly concentrated in the urban areas which intend to facilitate interaction between people and businesses, benefiting both parties in the process. There is a widely availability of modern amenities like the internet, telephone and satellite communication facilities in the urban areas.

Majority of the households in urban areas are blessed with technological advancement or products which lead to effective and efficient work done since most of the jobs are done technologically instead of man power. Urban folks are at an advantage of using these technological amenities (internet facilities and computer) to broaden the scope of their knowledge compared to their counterparts at the rural area where these products (technological products) are limited, and in most cases lacking. Again there is unlimited access to financial opportunities to the urban producer. His rural colleague being poor in nature has limited access to financial institutions. The presence of credit available to the urban producers to expand their business and engage in other ventures is one of the advantages the urban folks have over the rural folks who although have the available raw materials, lack the capital and technological expertise which can be provided by the financial sectors. As stated earlier these advantages compel most of the rural folks to move to the urban centers to have access to the numerous advantages endowed in those areas. (Nigerian wiki 2010)

THE REPERCUSSIONS OF EXCESSIVE RURAL-URBAN MIGRATION

The deleterious consequences of rural-urban migration has led to the demand for urban socioeconomic amenities exceeding their supply, the urban areas often become spectacles of multifarious problems such as overcrowding, congestion, inadequate housing, high rates of unemployment and underemployment, crime and other forms of delinquency. The quality of life at both the areas of origin and destination are, therefore, significantly affected. The repercussion of the ongoing analysis is being discussed below;

Unemployment in the rural areas: in the developing world, there are limited job opportunities available, so the influx of people from the rural areas to the urban who are mainly unskilled in profession causes them not fit for the available jobs in the urban which are mainly skilled in nature. Thus there will be a rise in the unemployment and the underemployment rate in the urban areas as well as the rural areas. As the migration happens, the labour force in the rural areas is being reduced and this will go a long way to affect the output that can be produced in the long run.

Low productivity in output and thus low GDP: As there are more and more people leaving the rural areas which happen to be the fertile grounds of development of any developing country, there become a limited number of labour forces in the rural centres. This goes a long way to reduce the amount of produce that can be produced to feed the whole nation. The fact that most developing nations rely on agriculture and primary production for their development means that a reduction in agricultural and other primary activities means a reduction in the nation output and hence a low gross domestic product or national income.

Overcrowding and pressure on social amenities: if a country is advanced in infrastructure and basic social amenities, there is no point to classify it as developing. To this point, it is common to see most developing countries having limited social amenities and infrastructure. This may include schools, roads, places of convenience, pipe borne water among others. As people troop from the rural to the urban, they increase the usage of these limited amenities in the urban areas. This leads to massive and quick deterioration of the amenities and hence an increase in the cost of repairs and maintenance and thus government expenditure. The increase in the population in the urban areas relative to a constant land area leads to overcrowding at a particular area and most especially the urban areas.

Increase in social vice and the development of slums: when people move from the rural to the urban areas, they have in mind that they are coming to work and feed their relatives at home. It becomes a new story when their quest for employment becomes an illusion as there is no job to absorb them. To make ends meet, most people who migrate to the rural areas resort to stealing, armed robbery, prostitution, and "drug pushing" and as they cannot afford a decent house to buy, they settle in a particular place and build houses made of wood, aluminum slate among others.

Slowdown of development in the rural areas: as the youth who are the agent of change in the rural areas move to the urban areas, they leave behind the aged and the too young ones who cannot effect any meaningful change or development in the rural areas. This leaves most rural areas in the developing countries almost the same in social setting over decades and jubilees. The aged think of what they will feed on till they die thus are not ready to cause any development, the little ones on the other hand look forward to be helped. Therefore those in whose hands lie the catalyst of change move to the urban centres in such of greener pastures. The feeble ones left at the rural areas cannot work to bring massive change which comparatively could be done by the energetic ones.

OBJECTIVES OF THE STUDY

1. To find out the causes and effects of rural-urban migration in the study area.
2. To examine the socio-economic status of the migrants.

3. To proffer solution to the problems emanate from rural-urban migration
4. To make suggestions where necessary.

STUDY METHODOLOGY

A case study design was adopted in this research where Ibadan Metropolis was chosen as a case study. The data for this study were mainly collected in areas where most of the people have migrated from rural areas. A random sampling method was used to select the respondents. A total of 300 respondents were involved in the study. Primary data for the study were gathered by using structured questionnaires and interviews. Secondary data were obtained from existing literature. The statistical tool used for data analysis is simple percentage.

RESULTS AND FINDINGS

Gender Distribution of Respondents

Survey data revealed that 75% of the respondents are males while 25% were females. This shows that male migrants constitute the majority among the migrants in Ibadan Metropolis.

Age Distribution of Respondents

Findings from the study showed that 42% of the respondents fell within the age group of 21-30 years, 34% are within the age group of 31-40 years while 24% are within the age bracket of 41 years and above. It can be deduced that 77% of the migrants are in their middle ages.

Marital status of Respondents

Data indicate that a large majority of migrants are single as survey results revealed that 30% were married, 50% were unmarried while 13% and 7% were divorced and widowed respectively.

Education Status of Respondents

Findings from the study also indicate that 22% of the respondents have been to primary school, 42% have attended secondary school. 36% have attended tertiary institutions like universities and Polytechnics/colleges of education.

Causes of Rural-Urban migration

The major causes of rural-urban migration is identified as; search for better wages, education, political and social stability, better technologies, employment and business opportunities. Others are poverty, unemployment, crop failures and famine, inadequate social amenities and facilities in the rural areas such as pipe borne water, electricity, good roads, hospitals, schools, vocational centres.

Effects of Rural-Urban Migration

As more and more people arrive in the urban centre, there will be insufficient jobs for them and the unemployment rate will increase there will be more workers chasing too few jobs this will lead to straining the resources of the government. Rural-urban migration brings pressure on urban housing and the environment as migrants arrive from rural areas they live on the streets and makeshift sub-standard accommodation before establishing themselves. The high rate of population growth in the urban centres also lessens the quality of life because it: destroys resources, such as water and forests, needed for sustenance. Rural-urban migration leads to overpopulation of the urban centres thus encouraging and raising the rate of crime in the society. Rural-urban migration also slows down the pace of development of the rural areas.

SOLUTION TO THE PROBLEM OF RURAL-URBAN MIGRATION

The key to solving this problem of excessive rural urban migration in restoring a proper balance between rural economic and social opportunities are;

Provision of basic social amenities: The governments in the developing countries should implement policies that will enhance the provision of basic social amenities like electricity, portable water, recreational centres, schools, good roads among others in the rural areas. The government of Ghana's initiatives concerning the rural electrification project is a typical example concerning this point. As these amenities are provided, they enhance healthy living and opportunity to know what is going on in the world. The recreational centres would be a source of entertainment and relaxation for the dear hardworking farmers and their relatives.

Improvement in the quality of education: In an attempt to reduce congestion in urban school as well as some fortunate rural areas, there should be a policy that will lead to the improvement in the quality of education in the rural areas. This should not just be the number of school built but also the quality of teachers, the resources in the school like library, playing field, serene environment and even better structure of the school as far as building is concerned. Well trained teachers must be posted into the rural areas and adequately motivated; teachers bungalows; rural teachers allowances, teachers that will teach what they have to teach and inculcate in their student the passion to believe in themselves.

Creation of credit and loan scheme: Especially, farmers and women in the rural areas should be provided with credit facilities and loan opportunities. The fact that "rural" is poor means that these loans should not bear high interest rate. Government should made available loans and credit schemes to the "rural" to expand his farm, business and buy new crops. Again subsidies should be given on fertilizers and basic farm inputs. The government can purchase farm inputs and sell it to the farmers or rural folks at a subsidized rate on credit to be paid in installment, rural banking services and rural microfinance institution in the rural areas to improve their savings and enhance their endowment and introduce them to the financial sector.

Industrial modernization: The government should also embark on the establishment of industries, factories and Agro businesses in the rural areas. These industries would serve as a means through which the primary produce can be processed into semi or finished goods. Example the establishment of Akomadan Tomato factory in Ghana has made it possible to process fresh tomato into canned ones; preventing loss of farm produce thus providing a ready market for the farm produce. Further, the government should build silos and other storage facilities into which farm produce would be bought directly from the farmer at a more competitive price and be stored in the storage to feed the available industries and even for export. *Technological Sophistication;* Because simple tools are used for farming, rural farmers cannot produce in large quantities, therefore providing technologically advance input like mower, ploughs, tractors, fertilizers and education in modern farming techniques among others would increase the amount of output and therefore even their wealth. This is because provision of such opportunity can positively impact on the rural folk because they can embark on large scale plantation or commercial farming to increase yield and output and their income. This will make farming to both adult and youth in the rural area attractive hence limiting their desire to get to the urban centre for other employment opportunities.

Entrepreneurship: Another possible and vibrant policy that can curb rural urban migration and it adverse effect on unemployment and underemployment in developing countries is the training and coaching of new and potential entrepreneurs in the rural. Funds and material should be made available to trainees and those that are ready to initiate their skills as a startup capital for their various jobs. This will be a source or motivation to establish themselves in the rural area and thus no incentive to move. Again, the youths should be trained and educated to be innovative and their skills should be sharpened to effect positively on their jobs. To this, the "rural" can come out of her shell to produce and thus be well equipped to face the challenges in the rural areas that would compel them to move. Available resources should be utilized in every possible way as this can go a long way to even reduce unemployment and underemployment. This policy should be geared towards the youth because about 80 percent of the migrants to the urban centres are youth.

CONCLUSION

The rate of rural-urban migration is alarming in recent years and its effects are not only felt by the destination regions alone but also felt by the source regions-as facilities in the destination regions are overstretched, the source regions are virtually deserted. Unless the government provides the basic necessities of life to the rural areas and provide the productive youth in the rural areas with employment opportunities people will continuously drift in to the urban centres from the rural areas in search for better life and employment.

RECOMMENDATIONS

The following suggestions were made based on the findings of this study:

1. In view of the effects of rural-urban migration the Government should strive to provide social amenities and facilities in the rural areas.
2. The Government should also provide jobs for the citizens in the rural areas.
3. Vocational training centres should be established in the rural centres for training of the productive youths for self-employment.
4. Those youths that passed out of the Vocational training centres should be given micro-loans as a start-up capital.
5. The Government should put in place a broadened Youth Empowerment Scheme (YES) programme and take it to the rural areas.
6. Government should endeavour to modernize the industries by establishing factories and agro-businesses in rural areas.
7. Technological sophistication is essential so that the rural farmers can produce in large quantities.
8. Improvement in the quality of education.

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ORGANIZATIONAL TEACHING AS STRATEGIC PLAN

DR. NASSER FEGH-HI FARAHMAND
ASSOCIATE PROFESSOR
DEPARTMENT OF INDUSTRIAL MANAGEMENT
TABRIZ BRANCH
ISLAMIC AZAD UNIVERSITY
TABRIZ, IRAN

ABSTRACT

Organizational teaching, as a recent phenomenon, plays a crucial role in the development of organizations. The organizational teaching among different types of organizational teaching takes a significant part in the development and evolution of organizations, as well. Teaching strategy presents the principal objectives, policies, and the chain of organizational actions in the framework of a coherent set. There are no distinct teaching management systems in use at organizations, and nor should there be anything of the sort, as the aim is that strategic plan is an integrated part of teaching. Indeed, teaching management system is also in general e.g. in the recognized teaching standards understood as a concept for systematic approach or mental system but not as a distinct, physical system. An exploration of the ways in which the characteristics of the teaching organization influence whether or not those organizations engage in strategic plan. This paper explore the ways in which certain characteristics in case of teaching organization generates a tendency to prepare a formal written teaching plan and focus is primarily on what describe as the environmental characteristics. Teaching excellence for teaching plan includes also tools for financial, human resource, and risk management, as well as technology management, acquisitions and marketing. The teaching strategy opposed to the prior models takes the prioritization of internal and external environment and their pertinence to organizational teaching into consideration and presents nine alternatives for the strategy formulation rather than identification of the internal strengths or weaknesses of organizations, and the examination of threats and opportunities for them. This paper studies the dispersion around the workers expected teaching of the few organizational hierarchical positions in cross section data samples. Data collected form managers and workers of teaching organizations, showed that dispersion decreases with education and work experience before entering the current job and increases with job tenure.

KEYWORDS

teaching, teaching organization, organizational teaching, organizational learning, strategic plan, teaching plan.

1. INTRODUCTION

Traditional human capital theory (Becker, 1964, 45; Mincer, 1974, 97) explains differences in the teaching of workers because of differences in their observed ability of level and type of formal education, experience and training. A variant of human capital theory is the learning model in which ability and competence are not observable at the time a worker enters the labor market, but can be learned by employers from what observed from the way the job performed. Salaries can therefore change over time for two reasons (Harris and Holmstrom, 1982, 198) as employees acquire new abilities and the information about their ability improves and they can match better to job positions. This paper explore the ways in which certain characteristics of actors that in this case of teaching organization generates a tendency to prepare a formal written teaching plan and focus is primarily on what describe as the environmental characteristics (Bolton and Thompson, 2000, 12). Environmental characteristics such as education, scientific and prior experience rather than those characteristics (Chell, 1985, 124; Chell, Haworth and Brearley, 1991, 271) derived from personality traits. This paper investigates the implications of teaching strategy theory on the relationship between within job teaching dispersion and human capital variables, such as experience and education (Feghhi farahmand, Nasser, 2003, 728). The research is relevant because learning models provide theoretical support for models of career (Holmstrom, 1982, 38; Gibbons and Murphy, 1992, 369; Andersson, 2002, 156; Auriol et al., 2002, 34) concerns within the broader field of internal labor markets. Because most of the regularities found in previous empirical work can also be explained by teaching strategy models under perfect information evidence in support of learning models based upon within-job teaching dispersion and its determinants will further validate the use of learning models to study career concerns and internal labor markets.

2. STRATEGIC PLAN

It is generally arguing that effective strategic plan is one of the important factors in teaching success (Rue and Ibrahim, 1998, 151; Burns, 2001, 412; Kuratko and Hodgetts, 2004, 25). The most extensive review, although now some years old, is the analysis that there seemed to be a consensus that planning was linked positively to growth undertaken (Schwenk, Shrader, 1993, 251).

There are some argues that formal written planning may be inappropriate for the teaching organization but this seems a minority view (Bridge, O'Neill, Cromie, 1998, 32). It can be argued that strategic plan is as important to teaching organization as to larger organizations and standard textbooks (Burns, 2001, 20; Kuratko, Hodgetts, 2004, 32; Kirby 2003, 242) on teaching offer chapters on teaching plan whilst a range of specialist publications outline the best ways of writing teaching plan (Sahlman, 1997, 467). The trend of organizational development in the developed states indicates that organization has been subject to organizational teaching. In other words, teachings play a pivotal role in the development through identifying the assets of the states for the exploitation purpose. The evidence has demonstrated that the industrial development of states such as US, Japan and Germany, has been because of organizational teaching. Nowadays, this phenomenon considered as a profession and should expand like other professions (Khanka, 2003). Moreover, its level of prominence is to the extent that some of the theorists have called the current age as the organizational teaching age. From their point of views, teaching conducts a revolution, which brings about economic innovation and evolution around the world (Bygrave, 1994). Regarding the incremental value of corporate organizational teaching, the environment inspections should increase, because environmental studies facilitate different facets of risk taking and activism in organizational teaching behaviors. Put another way, the environmental examinations reduce risk assessment of a venturous organizational teaching behavior, and consequently put the organization at stake. The environmental examinations with the purpose of formulating strategy for organizations might considered as a way for preserving the competitive situation by teaching.

3. TEACHING PLAN

Learning models are playing an increasingly greater role in the study of labor markets, but there is the impression (Baker et al., 1994, 139; Gibbons and Waldman, 1999, 258) that more work that is empirical is needed for better evaluation of the relevance of comprehensive human capital theories in explaining teaching and careers in organizations. Some of the research in this area assumes observed and unobserved ability interact and affect managerial decisions. For example, formal education can be a signal of hidden innate ability (Salop and Salop, 1976, 182; Spence 1976, 197). Hidden ability (Gibbons and Waldman, 1999, 211) increases the rate of human capital accumulation with labor experience, or it provides new capabilities (Farber and Gibbons, 1996, 91) from those acquired through education and training. Other research demonstrates the need to design short term performance based on incentives, taking into account that high powered incentives may distort the information content of the output about the hidden ability of the employee, introducing career concerns (Holmstrom, 1982, 83; Gibbons and Murphy, 1992, 452; Andersson, 2002, 351; Auriol et al., 2002, 45) in the design of incentives. Finally, the labor market may distort because employees, aware of the signaling effect of the outcome of their decision. For example, on the decision whether to promote them can act strategically in

choosing which projects to implement (Chevalier and Ellison, 1999, 273), or in preparing to earnings forecasts (Hong and Kubik, 2003, 27). On the other hand, employers reveal information about the ability of workers when making job assignments, because this may increase salaries with retained workers and the employers (Waldman, 1990, 83; Bernhardt, 1995, 61; Gibbons and Waldman, 1999, 67) may strategically delay job assignments.

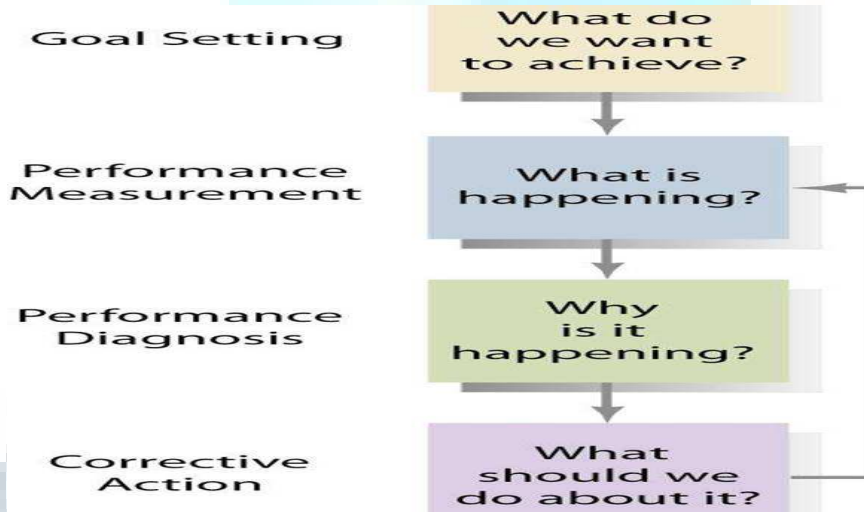
This paper contributes to this field of study by providing a new prediction for and empirical evidence of the relevance of learning about hidden ability in explaining work assignments and wage formation in hierarchical organizations. One of the earliest empirical supports for learning theory comes from the evidence that teaching dispersion is higher for employees with more work experience and more years of schooling (Mincer, 1974, 384). Learning enables better matching of employees to jobs over time and, therefore, the observed dispersion of salaries should converge with the true dispersion of hidden ability among employees that enter the job market at the same time (Harris and Holmstrom, 1982, 37). According to organizational teaching, the promotion will occur when the organizational teaching management estimated ability is equal to or exceeds the minimum level required for the new job. In those models, time is a discrete variable. Under continuous time, one would expect organizational teaching managers that just been promoted to have the minimum ability required for that hierarchical level. In teaching organization, where a teaching plan exists, the preparation of the strategic plan may driven by external forces. The most obvious of these are the requirements of external agencies providing funding for either start up or expansion. The form of the plan (Mason and Stark, 2004, 374) may vary between the agencies but the strategic plan is the minimum document required by any financial source (Kuratko, Hodgetts2004, 296). In addition to its role in teaching funding, the teaching plan may serve as a strategic planning document for the teaching, a plan to guide the teaching and serve as a basis for taking strategic decisions and it may serve as a subsequent monitoring device (Deakins, 2003, 329).

In view of its perceived ongoing value to the small teaching, it might expect that strategic plan would be a feature of many, if not most, teaching organization (Feghhi farahmand, 2005, 461) on the other hand, by coupling teaching with customer service recovering satisfaction. Therefore, in a world of perfect information, the teaching strategy and organizational teaching management would provide sufficient statistics about their respective ability and no dispersion of teaching plan would observe within organizational teaching positions. Learning models study the dispersion of teaching strategy when information about innate abilities is imperfect but can improved over time. To simplify the exposition, first assume that formal teaching strategy and teaching plan experience do not produce ability, although can provide a signal that provides information about the innate ability of organizational teaching management, the only attribute that determines differences in expected ability across workers. Each period of expected innate ability of organizational teaching management is updated using new information in terms of on the teaching performance.

4. STRATEGIC TEACHING CHALLENGES

Teaching characteristics provides empirical evidence that appears to contradict this stylized fact, because find that the teaching dispersion of the managers in research sample decreases with work experience and increases with job tenure. In other words, within the current job, teaching dispersion decreases with work experience in previous jobs and increases with tenure of the current one. This result as evidence that workers enter a particular job a hierarchical position with similar expected abilities, equal to those required to perform the job, but with different levels of precision in the estimation. In the new hierarchical position, learning continues but at a rate that inversely related to the information available about the worker's ability at the time of promoted. Precision in the estimated ability at the time of assigned to a new job increases with the worker's formal education and work experience at that moment in time. Previous empirical research has found a positive association between teaching strategy variables and organizational teaching, with and without controlling for organizational teaching management positions. Because education and experience come into decisions about organizational teaching management assignments, introducing these variables into a teaching model reduces the explanatory power of teaching plan. There is also evidence of a positive association between teaching plan dispersion and teaching experience. The evidence is consistent with the way organizational teaching management learn about the hidden abilities of workers over time, so workers are progressively sorted into jobs whose productivity closely matches the distribution of abilities in the respective cohort as Figure 1.

FIGURE 1: STRATEGIC TEACHING CHALLENGES



The reason for this is that formal education helps improve the process of sorting workers into jobs when they enter the labor market, and greater experience implies more previous performances, which subsequently reduces the noise of the information used to infer ability. When teaching dispersion estimated across job positions, the variance of teaching reflects the dispersion in beliefs about the distribution of the hidden ability of workers in those jobs. Older workers will be better match to jobs and dispersion of salaries across jobs for workers at a given age will increase with age. Within jobs, however, observed salaries correspond to the estimated ability required for those jobs and the teaching dispersion, observed that inversely reflects the precision with which such estimation made. If the teaching dispersion within a job decreases with the information available at the time of entry, there is evidence that employers learn about the hidden abilities of individual workers (Feghhi farahmand, Nasser, 2003, 455). A few tactical actions for implementation (Mason and Stark, 2004, 205) can make the challenge simpler and provide leadership that is as follows (Feghhi farahmand, 2004, 358):

1) Organizational teaching supporting: Obtain support from the board of directors, because an organization is total teaching efforts must begin at the very top and begin with the board of directors. One method of obtaining their support is to conduct a teaching survey among them that such questions could include:

- Has an estimate been made of the cost of poor teaching?
- What measures using to judge teaching?
- What are current teaching performance levels?
- How does your teaching of customer satisfaction compare with competitors?

2) Organizational teaching preparing: Prepare teaching action plan and answers to these and other questions will provide valuable insights into the existing corporate culture and indicate the organization's readiness for adopting teaching. A teaching action plan based on the survey feedback should formulate by the top management and communicated at every board meeting.

3) Organizational teaching visionary: Vision and mission statement of teaching and develop a vision or mission statement if the organization does not have one already. The key to the initial adoption of teaching is continuous communication of the vision within a comprehensive communication plan.

4) Organizational teaching visionary training: Train senior management in teaching, because organization with successful teaching cultures start by training and educating senior management, followed by all employees that the establishment of teaching teams is a top priority.

5) Organizational teaching participating: Establish a top-level teaching committee, because an essential ingredient for success is a senior teaching committee, which provides leadership in teaching and stimulates cultural change. This should be chaired by the CEO and comprise the entire senior management team and the individual responsible for teaching.

Depending on the size and structure of the organization, these committees can establish within operating divisions, functional group or by geography. The responsibilities of a senior teaching committee can include (Feghhi farahmand, 2004, 398):

- Establishing strategic teaching goals with allocating resources,
- Sanctioning teaching improvement teams by reviewing key indicators of teaching,
- Estimating the cost of poor teaching with ensuring adequate training of employees,
- Recognizing and rewarding individual and team efforts

6) Organizational teaching conducting: Conduct a customer satisfaction survey that it sponsored by the top management to send a clear message throughout the organization that teaching linked to customer satisfaction. The senior executives should then present the results to all employees that detailed strategies for improving customer satisfaction can devised and communicated.

7) Organizational teaching goal setting: Set goals for teaching and customer satisfaction. The results of the customer satisfaction survey lead the senior management to establishing a set of teaching goals. Although the whole organization can provide input to this task, the setting of goals is part of management's leadership responsibility. These goals must manage and communicate via the senior teaching committee.

8) Organizational teaching performance: Incorporation performance in management teaching system with financial performance rewards teaching improvement goals incorporate into executive management compensation models to help achieve the desired teaching results.

The combination of two concepts of organizational teaching and strategy engenders the new concept of strategic organizational teaching. In order for the strategies to be formulated based on the strategic organizational teaching, these two elements should be addressed in a single matrix. For achieving a strategic organizational teaching model, organizational teaching should placed along one column from low to high and the prioritization of the internal and external affairs should be inserted on the row of matrix. The main feature of the model was the organizational teaching-based strategy preparation.

5. ORGANIZATIONAL TEACHING

Organizational teaching can assessed for each type and level of organization. Organizational teaching includes a learning process, and implicates the ability to solve and learn from the problems and difficulties (Deakins & Free, 1998, Kotha, 2010). Organizational teaching takes three forms of corporate organizational teaching, intra-corporate organizational teaching, and independent organizational teaching. Various definitions have presented for corporate organizational teaching the corporate organizational teaching as a process for development of products or the new markets. The corporate organizational teaching embraces all the attempts for increasing the number of competitive privileges of an organization via innovativeness, meaningful modifications, and balancing the competition in industry. In order to assess the extent of competitiveness in organizations, the aspects of risk taking capability of organization, the creativity in the organization, diligence of staff should considered (Ferreira, 2002). Coordinately, for appraisal of corporate organizational teaching different factors could suggest. Each model emphasizes different dimensions, however, all of them have consensus upon three factors of organizational creativity, proactive ness, and innovation.

6. STRATEGIC TEACHING PLANNING

A large number of researchers have recognized organizational teaching as amalgamate of the concepts of innovation, risk taking, and aggressive competitiveness and persistence (Aktan & Bulut, 2008: 69). Strategic teaching implicates setting long-term objectives for an organization, and choosing a set of actions and allocating necessary sources for accomplishing the established objectives (Chandler, 1962). All the organizations, from the commencement of their activity adopt a strategy. Even though the strategy revolves around daily actions, belongs to an teaching strategy, or was controlled unofficially, a proper strategy formulation can be of sizable effect on the development and prosperity of the organization (David, 2003, Agarwal, Rajshree, Audretsch, David, and Sarkar, 2010). Put differently, strategy presents the principal objectives, policies, and a chain of organizational actions in the framework of a coherent set (Quinn, 1999). Disparate models have proposed for strategy formulation in organizations (e.g. models of Rubin (1988) and Nutt (1984)) in recent years. It should be mentioned that the current of modeling have moved from simplicity and bi-dimensionality toward multi-dimensionality, complicity, and more practicality.

Therefore, the focus of the models has been on strong and weak points, external opportunities and threats for an organizational teaching. However, it can learn from the models that all of them could be of help for putting the organization in a perfect position regarding competitive situation of market by taking the variables of the environment into account. Despite environment is an indispensable part of strategy and considered, as threats and opportunities in strategy designing, organizations and industrial firms do not devote the same amount of attention to the environmental examination in the strategy formulation. Many organizations give priority to the inspection of the industrial, national, and international environment. On the contrary, some of the institutions lean toward interior affairs rather than external ones (Ebrahimpour, Khalili and Habibian, 2011). Thus, giving priority to internal or external affairs was chosen as the second variable for achieving strategic situations and strategy formulation model i.e. prioritization of internal or external affairs in the environmental examination provides a matrix for outlining strategic situations as teaching strategy. There are some problems in general or in particular in the organizations, especially in those, which are pioneers of strategic programming and new managerial methods.

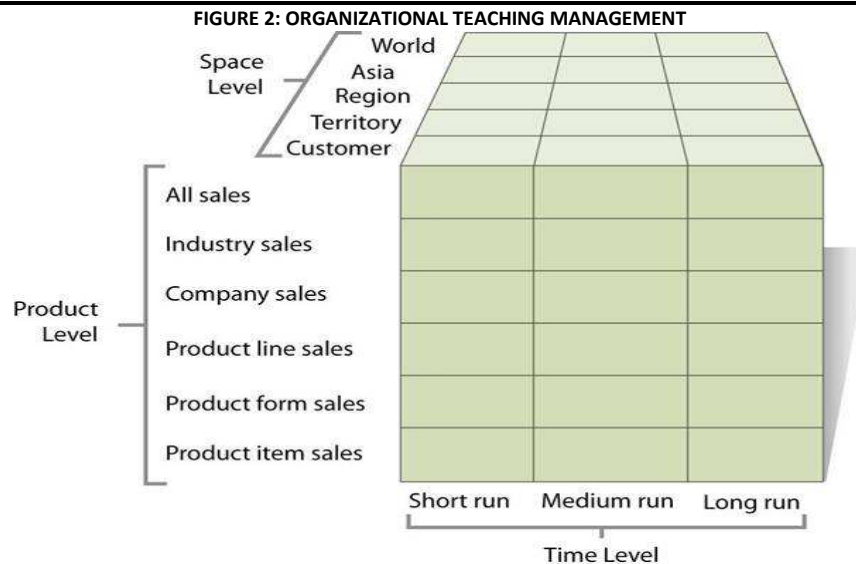
The requirements of organizations for employing new and solid ways in strategy formulation, the status of corporate organizational teaching in industrial organizations, the necessity of prioritization of internal or external affairs in the environmental examination at the same time, and the difficulty of organizations is faced in describing the strategic situations and strategy formulation.

Sample teaching plans and teaching plan templates can help to develop a professional document that will serve as a tool to convince others of organization venture's potential for success.

7. ORGANIZATIONAL TEACHING MANAGEMENT

Organizational teaching management are able to provide organization with access to materials that can tailored to organizational needs; all it takes is a visit in person, a phone call or an email. Organization may even choose to use web-based teaching plan applications or purchase software to help organization prepare plans and forecasts. The mainly qualitative evidence available to date suggests that strategic plan within teaching organization is an activity of a minority, as highlighted that few small teachings use strategic planning (Woods and Joyce, 2003, 183). There may be a number of reasons for the lack of teaching strategic plan. Historically the typical organizational teaching management has tended not to pursue higher levels of education or to take formal teaching training. When beginning the research phase of organization plan, keep in mind that there is a lot of information out there, especially online, but not all of it is accurate. It is always important to consider the source of any information organization gather; research is only valuable to you if it is factual. Avoid letting unreliable sources tell you what organization want to hear. If organization comes across information that organization, find useful.

There are various, excellent organization market research tools that are available online. Teaching and Industry Canada both offer market research and statistics resources. If organizational teaching has trouble piecing research together to paint an accurate picture of organizational teaching, try brainstorming with a skilled professional is necessary as Figure 2.



Hence, there are two possible reasons why organizational teaching management tends not to plan (Chell, 2001, 67) that they are emotionally unsuited to it. They think and act intuitively and they are simply unaware of the various tools, which would enable them to plan systematically. Indeed, the limited awareness amongst strategic plan of the tools associated with the practice of strategic management has been organized (Woods and Joyce, 2003, 284). A further constraint, likely to restrict strategic plan, is that they may not have sufficient financial information to prepare a formal plan. For example, at the lower end of the size range of organization with less than 10 employees, only 33 percent regularly calculate profits to monitor their organization's performance (Nayak and Greenfield, 1994, 227). A lack of formal organizational teaching management planning may also relate to the fact that small organizations are just too busy surviving to take time out to plan ahead whilst others might argue the environment in which operate is so turbulent there is little point in planning ahead (Westhead and Storey, 1996, 197). A lack of formal strategic plan among teaching organization does not necessarily mean that organization badly managed. It does, suggest that much organizational teaching management miss the opportunity to consider the overall direction of the teaching and management decisions may be made based on poor information.

Further, if organizational teaching management strategic plan is an important component for teaching success, advice agencies might find it useful to identify the characteristics of those managers who are most receptive to the strategic plan idea.

The characteristics of the organization and teaching development strategies hereafter termed teaching strategy, influencing teaching behavior, which might be used to inform analysis of the determinants in teaching organization. Organization characteristics controlled out of analysis in order to focus our attention on organizational teaching management variables. Only the environmental characteristics, describe the backgrounds of the managers rather than their personality traits. Of course, the two components on which attention focused related to one another and the individual variables grouped within each category do themselves show a high degree of interdependence (Storey, 1994, 65). Nevertheless, the two components and the individual variables provide a useful conceptual framework within which to interpret the determinants of strategic plan within the teaching organization.

8. ORGANIZATIONAL TEACHING MANAGEMENT STEPS

Organizational teaching is a term derived from a with the meaning of undertaking some work. This phrase has a long record in business. The most well known definition of the word is to create value by innovation (Cool, 1946; Cooper, 1946; Draker, 1985; Schumpeter, 1951). Miller (1983) defines organizational teaching by using phrases such as risk taking and basic innovativeness in production. The organizational teaching activities encourage the firms to develop a new business for raising the profitability.

1) Organizational teaching management ability: The innate ability of organizational teaching management and setting involving overlapping generations where there is a shared belief that the innate ability of teaching management for each generation is distributed among the population. Organizational teaching management can increase their ability over time through formal education, schooling, and experience and in job training. To simplify the exposition, assume that investment is constant for every period but can be different in the period of organizational teaching management.

2) Organizational teaching management productivity: The productivity of a organizational teaching management with ability. It takes place in multi-level organizations and workers assigned to hierarchical levels in accordance with their estimated organizational teaching management ability. The organizational teaching management has hierarchical levels where top management corresponds to first level. the minimum ability required to be assigned to hierarchical level, and normalize the productivity of the organizational teaching management on the basis of the minimum productivity needed to be placed at the lowest hierarchical level of the organizations.

3) Organizational teaching management information: In accordance with learning models (Altonji and Piarret, 2001, 651; Farber and Gibbons, 1996, 155), the teaching managers and employees know all parameters except the innate ability of a particular worker. The innate ability can be inferred, however, from informative signals provided by formal education and work experience. It provides signals, for example grades g that is public knowledge and imperfectly correlated with organizational teaching management ability. To simplify the exposition, assumed that the noise variables of the two signals, education and work experience, are related.

4) Organizational teaching managers: Teaching managers update their beliefs about the expected ability of organizational teaching taking into account all public information accumulated.

Clear guiding ideas and principles concerning teaching and organizational teaching as well as a comprehensive, company-wide realization model for organizing the ideas is not enough for getting teaching happen. Practical means, tools, methods, etc., especially relevant management methodology, are available to get the approach concrete in practice. For this purpose, a collection of management tools has been created at organizations. Some of these tools have been created and maintained by teaching experts. The basic steps of strategic plan development (Storey, 1994, 365) that they are suitable for all of organizations are as follows (Feghhi farahmand, 2004, 428):

1) Organizational teaching purpose: For develop strategic plan to strengthen the organization's customer related, operational, and financial performance.

2) Organizational teaching scope: The strategic plan should include both short-term and long-term goals and plans and a method to ensure that the plan deployed and adhered to should be part of the management review procedure throughout the organization.

3) Organizational teaching responsibilities: The chief executive usually has control of these developments, deployment, improvement processes and all executive management should be personally involved in these processes.

4) Organizational teaching procedure: The procedure should include the description of the timetable for strategy and strategic plan development including of how the development considers (Feghhi farahmand, 2004, 298):

- Customer requirements, expectation, expected changes, the competitive environment, financial, market, technological, societal risks, company capabilities, human resource, technology, research, development and supplier an/or partner capabilities.

- A description of how information and company level data related to teaching, customers, operational performance, and relevant financial data are collected, analyzed, and integrated into the strategy development should be included in this procedure.

- A description of how the strategies and plans translated into actionable key teaching drivers i.e. those things the company must do well for the strategy to succeed should be included.

- A description of how the teaching plan, together with the key teaching drivers, deployed throughout the organization should be included. Describe how they translated into actions. This includes reviews to ensure that the teaching processes support the teaching plan.

5) Organizational teaching continuous improvement.

6) Organizational teaching procedures: Within an organization, there must be a constancy of purpose, an alignment or unification of goals, and consistency of processes, actions, information and decisions among organization units in support of these goals. Since the strategic plan is one of the primary documents describing these goals, it influences all teaching processes in the organization. It directly has relation with management review, customer satisfaction measurement and lists all job instruction related to this procedure (Nayak and Greenfield, 1994, 168).

7) Organizational teaching system: Management responsibility, document and data control, corrective and preventive action, handling, storage, packaging, preservation and delivery, control of teaching records, internal teaching audits, training, statistical techniques, continuous Improvement, manufacturing capabilities (Feghhi farahmand, 2004, 371).

Consequently, organizational teaching is a concept that developed from a small enterprise to the large and complicated organizations and governmental systems. To sum up, organizational teaching comprises creating opportunities and making use of them, risk-taking actions, innovative act, outlooks about the future, and setting value (Jahangiri & Mobaraki, 2009). Organizational teaching considered as a multilateral process that applied in various organizations. Inasmuch as, nowadays, the term of organizational teaching used in the private sector, it should not viewed merely from the profit making perspective (Zampetakis & Moustakis, 2010). Stiff competition among firms and organizations, decrease of the traditional managements' efficiency in this field, and fast growth of small firms led the organizations to attach a specific significance to innovation, because they found innovation as the only way to survive in the competition field. The major assumption, which is the basis of corporate organizational teaching notion, is that corporate organizational teaching is a behavioral subject, and all organizational teaching are located along a continuum highly teaching. The teaching organizations are risk taking, innovative, and proactive. On the opposite side, the conservative firms are risk-adverse, less innovative, and passive or reactive. The position of a teaching organization on this continuum depends on its teaching strategy. In today's fast-paced changes, most of the large teaching organization lost their teaching plan for continuing their activities. As teaching organization grows fast, they may lose their flexibility and innovativeness due to size and success. As a result, organizations recommended employing corporate organizational teaching for survival of these dynamic industrial environments (Echols & Neck, 1998). The entrepreneurial organizations by having substantial and gradual innovations as the strategic importance for competitiveness of the teaching organization and tactical importance for its process have high commitments (Herbert & Brazeal, 2000). It should mention that, corporate organizational teaching principles are not limited to the profit-making organizations and private sector and the same processes. (Cronwall & Perlman, 1990).

9. CONCLUSION

Empirical evidence organizational teaching this hypothesis can interpreted in support of the learning theory as long as assumed that, at the time workers are hired, employers cannot observe other variables. Empirical evidence showing a positive association between teaching dispersion and strategic plane has also interpreted as evidence supporting learning theory (Murphy, 1986, 314; Foster and Rosenzweig, 1993, 28; Baker et al., 1994, 114; Poppo and Weigelt, 2000, 72). This study shows that teaching dispersion can increase with strategic plan for reasons other than learning, suggesting that explanations that are more robust needed. However teaching dispersion decreases with experience before entering the strategic plan is more difficult to explain using alternative theories (Feghhi farahmand, Nasser, 2002, 515). The paper also contributes to the existing literature through a new two equation empirical model, one for the level of teaching and another for conditional dispersion, in order to test the theoretical predictions. The methodology based on Harvey approach (Harvey, 1976, 297). Although main interest lies in the dispersion equation, certain insights also provided into the return on job human specific capital and the question of whether innate and acquired abilities interact in determining the productivity of teaching strategy at a given moment in time. The goal of teaching plan, i.e. teaching excellence reached through innovative management and leadership practices. In order to realize teaching plan objectives in all parts of the company and at all levels of teaching and teaching management, an organization-wide management structure, a leadership infrastructure framework has defined. The framework originally created covers all organization functions in a natural and flexible manner and covers the following levels of the organization:

- The organizational teaching strategic level: Where decisions made by the general manager of the teaching unit and the other top teaching leaders, and measures undertaken concerning the entire particular teaching and especially the future competitiveness of the teaching and management of the whole teaching system are addressed. The teaching system is composed of the interrelated operational teaching processes. Very often in corporations, there are different teaching areas that may be at different development stages. All these need different strategic teaching plan approaches but they may operate within one corporate culture.

- The organizational teaching operational level: Where decisions and measures daily management made and undertake products and services realized in real time for customer needs, just now and here. Responsible person is the process owner.

- The organizational teaching management level: Where the personal contribution of each organizational teaching management including, the top management provided in natural working environments.

Over the years, the model has also been able to accommodate efficiently various organizational changes as well as various new emphases in the teaching and in teaching thinking. This has made it possible to develop organizational teaching management in a more sustained manner than based on the formal organizational structure and continually depending on numerous organizational changes.

This framework utilizes the most exemplary international ideals and is based on what has been learnt over decades e.g. with teaching partners. There are no distinct teaching management systems in use at organizations, and nor should there be anything of the sort, as the aim is that organizational teaching management is an integrated part of teaching. Indeed, teaching management system is also in general e.g. in the recognized teaching standards understood as a concept for systematic approach or mental system but not as a distinct, physical system. Teaching excellence for teaching plan includes also tools for financial, human resource, and risk management, as well as technology management, acquisitions and marketing. When information is available, the conditional expected teaching management system estimated by controlling the job positions of teaching management.

However, the implications for the conditional variance of teaching management system, information about teaching strategy have yet empirically explored. The main purpose of teaching strategy is to extend previous learning models by investigating within job teaching when the job position represented by the hierarchical level of workers in organizational teaching for teaching.

From organizational teaching management where innate abilities assumed to be organizational knowledge, which can view as alternatives to the learning theory.

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CORPORATE GOVERNANCE PRACTICES IN FIS OF BANGLADESH

MOZAFFAR ALAM CHOWDHURY

ASST. PROFESSOR

IUBAT—INTERNATIONAL UNIVERSITY OF BUSINESS AGRICULTURE AND TECHNOLOGY

DHAKA

ABSTRACT

The aim of this study is to know corporate governance practices in financial institutions of Bangladesh. The method of this study is based on secondary research that examines the legal framework in Bangladesh. Evidence of observed practice comes from the review of annual reports of financial institutions in Bangladesh including their internal control and compliance, board of directors, regular AGM call and regular dividend payment, top five executives and audit committee which play a vital role in corporate governance practices. The paper next examines financial reporting and disclosures which are statutory requirements for practice. The function and role of regulatory bodies have the responsibility to ensure that practices follow regulations as well as encourage good corporate governance practices. The current corporate governance in financial institutions is briefly explored. Finally, the findings and recommendations with the concluding remarks.

KEYWORDS

Compliance, Governance, Disclosure, Financial Reporting, and FIs.

1.0 BACKGROUND

This paper examines the corporate governance (CG) in financial institutions of Bangladesh. In Bangladesh, corporate governance has drawn attention of the policymakers and the regulators following 1996 capital market crash. Bangladesh Bank (BB) has brought major changes in the laws to strengthen the financial sector and ensure appropriate governance structure. Some changes in the rules and regulations of the Securities and Exchange Commission (SEC) have been made to ensure proper functioning and monitoring of the behavior of the Stock Exchanges. Some of the international accounting standards have been adopted by the ICAB. The SEC requires special auditing by the audit firms affiliated with the reputed international audit firms of the companies planning to go public. SEC has provided separate governance guidelines on compliance and explanation basis.

The role of governance is to maximize shareholder's wealth. Corporate governance depends on managerial performance as well as social responsibility, legal and ethical practices with a focus on stakeholders of the organization. The Companies Act 1994 is the law which governs incorporated domestic entities in Bangladesh. It governs the creation, functioning and dissolution of companies, the relationship of shareholders to a company, periodic disclosure and audit requirements, the functions of the Registrar of Joint Stock Companies, and the jurisdiction of the courts in relation to companies. To govern the corporate environment in Bangladesh, following legal frameworks are in practice:

- Securities and Exchange Ordinance 1969
- Bangladesh Bank Order 1972
- Bank Companies Act 1991
- Financial Institutions Act 1993
- Securities and Exchange Commission Act 1993
- Companies Act 1994
- Bankruptcy Act 1997

Since the early 1990s, the first initiative was undertaken by the Securities and Exchange Commission (SEC), as CG has been receiving increasing attention from regulatory bodies and practitioners worldwide. SEC issued a notification on Corporate Governance Guidelines (CG Guidelines) for the publicly listed companies of Bangladesh under the power vested on the Commission by Section 2CC of the Securities and Exchange Ordinance, 1969. The CG Guidelines were issued on a 'comply or explain' basis. CG practices in Bangladesh are gradually being introduced in most companies and organizations. 66.7 percent of the companies have adopted CG and 43.3 percent have compliance policy with national or international benchmarks.

2.0 LITERATURE REVIEW

Different authors view the meaning of corporate governance differently. For example, one school of thought describe corporate governance as a "system" by which companies are directed and controlled (Cadbury and Greenbury Report, CFACG 1992); another school views corporate governance as "structures and processes for decision making, accountability, control and behavior at the governing body" (Public accounts and Estimates Committee, 2002). But it must be kept in our mind that the fundamental concern of corporate governance is to ensure the conditions whereby a firm's directors and managers are held accountable, ensure better and effective protection to all stakeholders. The World Bank argues that the framework of corporate governance should be based on four "pillars" – of Responsibility, Accountability, Fairness and Transparency (RAFT).

3.0 UNDERSTANDING THE CORPORATE GOVERNANCE IN BANGLADESH

In general, CG deals with laws, procedures, practices and implicit rules that determine company's ability to take managerial decisions for shareholders, creditors, customers, the State and employees. However, a broader definition may be to define CG as a set of mechanisms through which a firm within a country operates when ownership is separated from management. Therefore, CG represents the value framework, the ethical framework and the moral framework under which business decisions are taken. Corporate governance therefore calls for four factors as Responsibility, Accountability, Fairness and Transparency.

3.1 BANK & NON-BANK FINANCIAL SECTOR: In both the bank and non-bank financial sector, the primary regulator is the central bank of Bangladesh, Bangladesh Bank, which itself established by the Bangladesh Bank Order, 1972.

3.2 CORPORATE SECTOR & CAPITAL MARKET: In the corporate sector and the capital market, the principal regulators are the Registrar of Joint Stock Companies and Firms (RJSC) and the Securities and Exchange Commission of Bangladesh.

4.0 CORPORATE GOVERNANCE GUIDELINES BY SEC, BANGLADESH

The companies listed with stock exchanges in Bangladesh should comply with the conditions or shall explain the reasons for non-compliance in accordance with the following conditions:

4.1 BOARD OF DIRECTORS:

4.1.1 BOARD SIZE: The number of the board members of the company should not be less than 5 (five) and more than 20 (twenty). However, in the case of banks and non-bank financial institutions, the separate primary regulator is Bangladesh Bank.

4.1.2 INDEPENDENT DIRECTORS: The companies should comply with at least one tenth (1/10) of the total number of the company's board of directors, subject to a minimum of one, should be independent directors and should be elected by the elected directors.

4.1.3 CHAIRMAN OF THE BOARD & CEO: The positions of the Chairman of the Board and the Chief Executive Officer of the companies should preferably be filled by different individuals. The Chairman of the company should be elected from among the directors of the company. The Board of Directors should clearly define respective roles and responsibilities of the Chairman and the Chief Executive Officer.

4.1.4 THE DIRECTOR'S REPORT TO SHAREHOLDERS: The directors of the companies should include following additional statements in the Directors' Report prepared under section 184 of the Companies Act, 1994: (a) the financial statements prepared by the management of the issuer company present fairly its state of affairs, the result of its operations, cash flows and changes in equity. (b) International Accounting Standards, as applicable in Bangladesh, have been followed in preparation of the financial statements. (c) If the issuer company has not declared dividend (cash or stock) for the year, the reasons thereof should be given. (d) The number of Board meetings held during the year and attendance by each director should be disclosed. (e) The pattern of shareholding should be reported to disclose the aggregate number of shares (along with name wise details where stated below) held by: means top five salaried employees of the company, other than the Directors, Chief Executive Officer, Company Secretary, Chief Financial Officer and Head of Internal Audit.

4.1.5 CFO, HEAD OF INTERNAL AUDIT & COMPANY SECRETARY APPOINT: The Company should appoint a Chief Financial Officer (CFO), a Head of Internal Audit and a Company Secretary. The Board of Directors should clearly define respective roles, responsibilities and duties of the CFO, the Head of Internal Audit and the Company Secretary.

4.1.6 AUDIT COMMITTEE: The Company should have an Audit Committee as a sub-committee of the Board of Directors. The Audit Committee should assist the Board of Directors in ensuring that the financial statements reflect true and fair view of the state of affairs of the company and in ensuring a good monitoring system within the business. The Audit Committee shall be responsible to the Board of Directors. The duties of the Audit Committee should be clearly set forth in writing. The Audit Committee should be composed of at least 3 (three) members. The Board of Directors should appoint members of the Audit Committee who should be directors of the company and should include at least one independent director. Report on activities carried out by the Audit Committee, including conflict of interests, fraud, infringement of laws should be signed by the Chairman of the Audit Committee and disclosed in the annual report of the issuer company.

5.0 ACCOUNTING STANDARDS

The Institute of Chartered Accountants of Bangladesh (ICAB) is a professional accountancy body in Bangladesh. It was created under the Bangladesh Chartered Accountants Order in 1973. ICAB regulates the accountancy profession and oversees professional ethics and code of conduct by its members, provides specialized training and professional expertise, and fosters acceptance of International Accounting Standards (IAS) and International Standards on Auditing (ISA) by adopting the same as Bangladesh Accounting Standards (BAS) and Bangladesh Standards for Auditing (BSA) respectively.

6.0 INDEPENDENT REGULATORS

In the financial sector, the primary regulator is the central bank of Bangladesh, Bangladesh Bank, which itself established by the Bangladesh Bank Order, 1972. In the corporate sector and the capital market, the principal regulators are the Registrar of Joint Stock Companies and Firms (RJSC) and the Securities and Exchange Commission. The Dhaka Stock Exchange and the Chittagong Stock Exchange are two self-regulatory organizations with key responsibilities in the capital market.

6.1 BANGLADESH BANK: The Bangladesh Bank has legal authority to supervise and regulate commercial banks and banking institutions. It can impose penalties for non compliance. The measures taken by the Bangladesh Bank to reinforce the governance structure of banks include the introduction of better disclosure and transparency standards. BB regulates the non-bank financial institutions under the Financial Institutions Act, 1993 and the microfinance institutions are regulated under the Microcredit Regulatory Act, 2006. The following guidelines are given by Bangladesh Bank:

- a. **DECEMBER, 2002** - Instruction has been given by the BB requiring banks to constitute Audit Committee of the Board to assist the Board in fulfilling its oversight responsibilities.
- b. **MARCH, 2003** - Provision for two independent directors representing the depositors' interest has been included in the amendments to the Bank Company Act.
- c. **APRIL, 2003** - Number of directors in Bank's board restricted to a maximum of 13 for more effective direction of these banks.
- d. **JULY, 2003** - With a view to ensuring proper CG, the responsibilities and accountabilities of the Board of Directors, chairman of the Board of Directors and the CEO of the banks outlined clearly.
- e. **JUNE, 2003** - Disclosure requirements of financial information were substantially enhanced for banks as per the Internal Accounting Standard (IAS).
- f. **JANUARY, 2006** - Number of the Board members (5-20), appointment of independent non-shareholder directors, abolishing CEO duality (chairman and CEO are same person), appointment of Chief Financial Officer, Head of internal audit and company secretary, and establishment audit committee.
- g. **FEBRUARY, 2006** - Banks/FIs have been advised to follow the guidelines by BB regarding the salary allowances and other facilities of the chief executive.

6.2 REGISTRAR OF THE JOINT STOCK COMPANIES & FIRM: The regulator dealing with company law is the companies' registry, the Registrar of Joint Stock Companies and Firms (RJSC), which is administered by the Ministry of Commerce. The functions of the RJSC are governed by the Companies Act 1994 in relation to the formation of companies, filing of statutory returns and power to call for information or explanations.

6.3 SECURITIES AND EXCHANGE COMMISSION: The Securities and Exchange Commission (SEC) was established in 1993 under the Securities and Exchange Commission Act, 1993. The institution has overall responsibility to administer securities legislation. The Commission is a statutory body and attached to the Ministry of Finance. The SEC exercises its powers limited to listed companies in the holding of AGMs, declaration and issuance of dividends and disclosure of price sensitive information.

6.3.1 SEC ACT, 1993: The SEC Act, 1993 authorizes the Commission for proper issuance of securities, protection of the rights of the investors and the development and regulation of capital and securities market. The SEC is empowered to take the following measures:

- Regulation of stock exchanges, the securities market, stock-brokers, issue managers, underwriters, portfolio managers, and investment advisers;
- Registration, regulation and management of mutual funds; prevention of fraudulent and corrupt trading in securities;
- Acquiring shares of a company or taking control, and takeover; Inspection, investigation, audit, obtaining information from issuers of securities, stock exchanges. The SEC is also empowered to suspend or cancel any registration certificate in accordance with regulations issued under the SEC Act 1993,

6.4 INSTITUTE OF CHARTERED ACCOUNTANTS OF BANGLADESH: In Bangladesh, Chartered Accountants and auditors are regulated by a self-regulatory organization, the Institute of Chartered Accountants of Bangladesh (ICAB). Accountants and auditors could be better advocates for corporate governance. The Securities and Exchange Rules of 1987 require that a Chartered Accountant (CA) audit the financial statements of listed companies. The ICAB certifies Chartered Accountants and adopts and amends the BAS. ICAB Bye-laws require compliance with BAS by Chartered Accountants. The Institute of Cost and Management Accountants of Bangladesh (ICMAB) is an autonomous professional body under the Ministry of Commerce. ICMAB offers Cost and Management Accounting education and research. It also regulates and promotes the profession of cost and management accounting in the country.

6.5 THE JUDICIARY: The judiciary in Bangladesh is largely based on the structure established during the period of British India and later formalized under the Constitution of Bangladesh 1972, as comprising of the Supreme Court of Bangladesh, with two divisions: the High Court Division and the Appellate Division, the latter serving as the last court of appeal, and subordinate courts. The courts adjudicating debt recovery matters are presently ranked as Joint District Courts, which at the highest level of the lower courts. Appeals from such courts lie to the Supreme Court of Bangladesh. Projects for judicial capacity building have not focused on the outdated curricula of legal education institutions to include financial laws nor does the vocational training of lawyers include the peculiarities of the specialized courts, such as the *Artha Rin Adalat* [Money Loan Court] for debt recovery by banks and financial institutions, the Bankruptcy Court and a court of the High Court Division conventionally referred to as the "Company Court". The Company Court is vested with original jurisdiction on matters referred under the Companies Act 1994 in addition to jurisdiction for hearing other matters. Proposals continue to be made for a separate court in the High Court Division to dispose of financial cases and their appeals, including those related to debt recovery and securities laws. The High Court Division in the exercise of its jurisdiction for judicial review hears petitions challenging the actions of regulators such as the SEC and Bangladesh Bank.

7.0 OBJECTIVES OF THE STUDY

The objective of this study is to identify and understand corporate governance reporting by non bank financial institutions in Bangladesh. In particular, the paper is expected to know the followings:

- a. The current practice of corporate governance in terms of internal control and compliance.
- b. The current practice of independent Board of Directors.
- c. The regular AGM call
- d. Regular dividend payment
- d. Top five salaried persons other than CEO, CFO, CS & HIA
- e. The practice of Audit Committee Report
- f. The practice of financial reporting system

8.0 LIMITATIONS OF THE STUDY

This study paper has some limitations that need to be taken into account while considering recommendations. It was a difficult task to access the detailed information with a limited time. During this study, it has been found that there is a lack of financial institutions specific studies conducted in Bangladesh.

9.0 METHODOLOGY

The methodology followed to prepare this paper is based on review of the available literature/ secondary material, annual reports of non-bank financial Institutions, and a review of relevant literature on corporate governance in Bangladesh is conducted. This review examined recent articles, periodicals, books, and reports, both public and non-public.

10. OVERVIEW OF NBFIs

Twenty-nine financial institutions are now operating in Bangladesh. Of these institutions, 1(one) is govt. owned, 15 (fifteen) are local (private) and the other 13(thirteen) are established under joint venture with foreign participation. The total amount of loan & lease of these institutions is Tk.99,091.80 million as on 31 December, 2007. Bangladesh Bank has introduced a policy for loan & lease classification and provisioning for FIs from December 2000 on half-yearly basis. Among the 29 financial institutions, 21 institutions are listed with Dhaka Stock Exchange out of which DBHFC, IPDC, IDLC Finance Ltd., NHFIC, and PFIL are multi-product financial institutions in Bangladesh.

NON-BANK FINANCIAL INSTITUTIONS LISTED IN DSE: Bay Leasing & Investment Limited, Bangladesh Finance and Investment Co. Ltd, Bangladesh Industrial Finance Co. Ltd, Delta Brac Housing Finance Corporation Ltd, Fidelity Assets & Securities Company Ltd, First Lease Finance and Investment Ltd, ICB, IDLC Finance Ltd, International Leasing & Financial Service Ltd, Industrial Prom. & Dev. Co. of BD Ltd, Islamic Finance & Investment Ltd, Lanka Bangla Finance Ltd, MIDAS Financing Ltd, National Housing Fin. and Inv. Ltd, Phoenix Finance and Investments Ltd, Peoples Leasing and Fin. Services Ltd, Premier Leasing & Finance Limited, Prime Finance and Investment Limited, United Leasing, Union Capital Limited, Uttara Finance

Source: Dhaka Stock Exchange and Bangladesh Bank

11.0 CORPORATE GOVERNANCE IN NBFIs

The primary regulator of financial institutions is Bangladesh bank and secondary regulators are Securities and Exchange Commission, DSE, and CSE if they are listed with stock market.

12.0 CASES & FINDINGS

12.1 CASE 1-DBH (ANNUAL REPORT 2009): Delta Brac Housing Finance Corporation Limited - is the highest rated financial institution in Bangladesh started operation in the early 1997. Among all Banks and Financial Institutions of Bangladesh only DBH has been rated the highest 'AAA' credit rating. DBH is an international joint venture organization promoted by five institutions: three local shareholder organizations and two international partners (HDFC and IFC). The local promoters are: Delta Life Insurance Company Limited, BRAC, Green Delta Insurance Company. DBH includes a separate section in its 2009 Annual Report entitled 'Report on Corporate Governance' (pp.34-43). DBH is committed to the highest standards of corporate governance in all its activities and processes. The Company has always believed in and practiced various elements of corporate governance since its inception. Disclosures include in this section including internal control and compliance, Board of Directors, AGM, dividend payment, top five salaried persons other than CEO, CFO, CS & HIA, audit committee report, and financial reporting. Disclosures included in this section in the nature of corporate governance and reporting are summarized as follows.

'Internal Control and Compliance' (pp.35-35) - DBH made relevant mandatory disclosure in its financial statements under the regulatory framework, including compliance with the provisions of International Accounting Standards (IAS) and Bangladesh Accounting Standards (BAS). The annual financial statements have been audited by the reputed chartered accountants firm and issued unqualified audit reports for all the years of the operations. **'Board of Directors'** (pp.35) - The corporate governance principles of the Company ensures that the Board remains informed, independent and involved in the affairs of the Company. The Board members have collective experience in diverse fields like finance, banking, insurance, economics, corporate laws and administration. **'AGM'** (pp.36-37) - DBH holds General Meeting of shareholders once a year and the Company ensures effective interaction with the shareholders at the Annual General Meeting. The Directors pay special attention in answering the various queries raised by the shareholders at the Annual General Meeting. The Company's results and official news release are also displayed on the Company's web site and on the websites of the Dhaka and Chittagong Stock Exchanges and the news required to publish in the daily newspaper were also published accordingly. **'Dividend Payment'** (pp.37) - The final dividend if declared by the shareholders at the Annual General Meeting shall be paid on or before 24th December, 2009, i.e. within 30 days from the date of declaration. **'Top five salaried persons other than CEO, CFO, CS & HIA'** (pp.41) - Head of Operations, Head of IT, Head of Human Resources, Head of Credit, Head of Home Loans. All of them have zero number of shares. **'Audit Committee Report'** (pp.43) - According to the Bangladesh Bank and SEC's guidelines, the Audit Committee is a sub committee of the Board. The Committee reports on its activities to the Board of Directors. The Company Secretary of the Company is the Secretary of the Audit Committee. The Audit Committee of DBH is comprised of five members of the Board of Directors. **'Financial Reporting'** - DBH introduces and maintains disclosure in its financial statements under the regulatory framework, including International Accounting Standards (IAS) and Bangladesh Accounting Standards (BAS).

In the case of DBH the corporate governance disclosures are assembled with the issues mentioned above. It is notably needed to mention that DBH discloses all information above regarding corporate governance followed by the Bangladesh Bank and SEC guidelines.

12.2 CASE 2- IDLC (ANNUAL REPORT 2009): A public limited company incorporated in Bangladesh on May 23, 1985 under the Companies Act 1913 and listed with Dhaka and Chittagong Stock Exchanges on March 20, 1993 and November 25, 1996, respectively. IDLC commenced its journey in 1985, as the first ever leasing company of the country. In 1995, IDLC was licensed as a Financial Institution by the country's central bank, Bangladesh Bank, following the enactment of the Financial Institution Act 1993. IDLC has changed its name to IDLC Finance Limited from earlier Industrial Development Leasing Company of Bangladesh Limited in August 2007. The company continues to evolve as an innovative financial solutions provider. IDLC includes a separate section in its 2009 Annual Report addressing governance entitled 'Statement on Corporate Governance' (pp.28-33). IDLC considers that its corporate governance practices comply with almost all the aspects of the SEC Notification No. SEC/CMMRRCD/2006-158/Admin/02-08 dated February 20, 2006 and almost all aspects of Bangladesh Bank's DFIM Circular No. 7 dated September 25, 2007. IDLC also considers best governance practices in its activities. The independent role of Board of Directors, separate and independent role of Chairman and Chief Executive Officer, distinct role of Company Secretary, Chief Financial Officer and Chief Compliance Officer, different Board committees allows IDLC to achieve excellence in best corporate governance practices....(p.28).

'Internal Control' (pp.28) - the Company's internal control systems have been designed to provide the directors with reasonable assurance that assets are safeguarded against unauthorized use by the employees and/or management and/or third parties, transactions are authorized and properly recorded and material error and irregularities are either prevented or detected within a reasonable period of time. Properly designed management structure, clearly defined responsibilities, delegation of authorities, establishment of accountability at each level and system of periodic reporting and monitoring performance are the key elements of the internal control framework employed in IDLC. **'Board of Directors'** (pp.28) - the Board of IDLC comprises of ten directors who possess a wide range of skills and experience over a range of professions, businesses and services. All of them are nominated by their respective institutions except for the independent director. The Directors are appointed by the shareholders in the Annual General Meeting (AGM). **'AGM'** (pp.6) - the 25th Annual General Meeting of the shareholders of the Company will be held on Monday, April 19, 2010 to transact the business as approval of appointment of CEO & managing director of the Company, declaration of dividend, election of directors, appointment of auditors. **'Dividend Payment'** (pp.59) - proposed dividend for 2009 as stock dividend @ 100% (one share for every one share held) which is about BDT 300 million and cash dividend @ 10% (per share on 3,000,000 ordinary shares) or BDT 30 million. **Executives (Top five persons other than CEO,CFO,CS,HIA):** (pp.61) - Names have been mentioned. All of them have zero number of shares except one member who holds 79 shares. **'Audit Committee Report'** (pp.31) - The Audit Committee comprises of five Directors. The Company Secretary also acts as the Secretary of the Audit Committee. The Committee is headed by a director who has professional background in accounting and finance. The rules of the Audit Committee clearly lay down its authority, responsibility and specific duties. **'Corporate 7 Financial Reporting'** - The Directors, in accordance with SEC Notification No. SEC/CMRRCD/2006-158/Admin/02-08 dated February 20, 2006; confirm compliance with the financial reporting framework for the following: a) The financial statements prepared by the management of IDLC, present fairly its state of affairs, the results of its operations, cash flows and changes in equity, b) Proper books and accounts of the Company have been maintained, c) Appropriate accounting policies have been consistently applied, d) International Accounting Standards, as applicable in Bangladesh, have been followed in preparation of financial statements....(p.59).

In case of IDLC Finance Limited, internal control is complied as mentioned in the annual report, 10 Board of Directors are nominated except independent director and directors are appointed in the AGM. AGM was called in 2009 and declared for 2010 as well. Dividend has been declared in 2009. Top 5 most salaried persons were disclosed including their holding of shares. Audit Committee comprises 5 directors including company secretary which is complied. Financial statements preparation and reporting standards confirm compliance with IAS and BAS.

12.3 CASE 3-PRIME FINANCE & INVESTMENT LIMITED (ANNUAL REPORT 2009): Prime Finance is one of the leading financial institutions operating in Bangladesh. It was incorporated on March 10, 1996 and licensed from Bangladesh Bank April 25, 1996. Prime Finance got licensed from SEC as Merchant Bank in 1999. Prime Finance listed with both the DSE and CSE in 2005. Prime Finance operates within the legal framework of Bangladesh Bank, The Securities and Exchange Commission and Dhaka and Chittagong Stock Exchange. Prime Finance complied with all the conditions stipulated in SEC's Notification dated 20 February 2006 with no exception although it has been issued for the listed companies on 'comply or explain' basis. Statements on compliance of the conditions of SEC's Notification and Bangladesh Bank guidelines have been given on pages 68 to 70 of this Annual Report....(p.56). Disclosures included in this section in the nature of corporate governance are summarized as follows.

'Internal Control' (pp.70) - Audit Committee shall be formed for effective implementation of an integrated internal control system of the Company and for keeping loan/lease/investment quality at a desired level. Board Audit Committee shall review the report provided by the Internal Control & Compliance Department, the external auditor and the Bangladesh Bank shall make comments thereon. **'Board of Directors'** (pp.57) - The Board comprises of eleven non-executive Directors of whom seven are nominee Directors and one Executive Director who is also the Managing Director. The eleven non executive Directors also include one Independent Director. They encompass a range of talents, skills and expertise to provide prudent guidance with respect to the operations of the Company. **'Annual General Meeting/AGM'** (pp.42 and 209) - The thirteen AGM was held in 2009 and AGM to be held in 2010 has also been declared including agenda. **'Dividend Payment'** (pp.41) - the Board recommended 50 percent dividend (40 stock and 10 cash) for the year ended 31 December, 2009 for approval of Shareholders in the Fourteenth Annual General Meeting. **Executives (Top five persons other than CEO,CFO,CS,HIA):** (pp.48) - The top five executive's names have been mentioned including their zero shares holding. **'Audit Committee Report'** (pp.61) - An active Board Audit Committee comprises of four non-executive Directors, including independent Director is in place. The Chief Financial Officer and the Company Secretary attend the meeting by invitation. **Finally, 'Corporate and Financial Reporting'** (pp.43) - The Directors, in accordance with SEC's notification No. SEC/CMRRCD/2006- 158/Admin/02-08 dated 20 February 2006, confirm compliance with the financial reporting framework for the following: The financial statements prepared by the management of Prime Finance present fairly, appropriate accounting policies have consistently applied, International Accounting Standards, as applicable in Bangladesh, have been followed in preparation of financial statements.

In the case of Prime Finance and Investment Limited, internal control is complied and 11 Board of Directors including independent director encompass broad range of talent, skills and expertise to operate the company. AGM was called in 2009 and AGM to be called in 2010 has also been declared. Dividend has been declared for 2009. The top five executive names have been disclosed with their shares holding. Audit committee comprises four members including independent director and its report has been disclosed which is complied. Appropriate accounting policies including financial reporting have been applied followed by IAS and BAS.

12.4 CASE 4-NHFIL (ANNUAL REPORT 2009): National Housing Finance and Investment Limited is a Public Limited Company under the Companies Act, 1994 and licensed by Bangladesh Bank under the Financial Institutions Act, 1993. It was incorporated in August 18, 1998 with authorized capital Tk. 2000 million paid up capital of Tk. 400 million. A separate section includes in the annual report of NHFIL which focuses on the status of compliance on Corporate Governance with the conditions imposed by the Securities and Exchange Commission's Notification No. SEC/CMRRCD/2006-158/Admin/02-08 dated February 20, 2006....(p.15).

'INTERNAL CONTROL' (pp.15) - Internal control and compliance committee under board of directors. **'BOARD OF DIRECTORS'** (pp.19) - The Board comprises of fifteen Directors with no single Independent Director at all. **'ANNUAL GENERAL MEETING/AGM'** (pp.6) - The tenth AGM was held in 2009 and AGM to be held in 2010 has also been declared including agenda. **'DIVIDEND PAYMENT'** (pp.39) - Considering the overall financial result of the Company, the directors recommended 17.50% cash dividend for the year 2009. **EXECUTIVE (Top five persons other than CEO,CFO,CS,HIA)** - are absent in the annual report, 2009. **'AUDIT COMMITTEE REPORT'** (pp.44) - The Audit Committee consists of the following members: Chairman and one member with no independent director. **'CORPORATE & FINANCIAL REPORTING'** (pp.16) - Consistency in application of appropriate accounting policies in preparation of Financial Statements and IAS, as applicable in Bangladesh, is followed in preparation of financial statements. In the case of NHFIL, internal control and compliance committee is revealed but it's responsibilities are not mentioned which is under cover. Board of directors comprise with fifteen members but without independent director. AGM was called regular basis and declared cash dividend 17.5% in 2009. No high salaried executives were disclosed and audit committee has no independent director which is complied. Accounting policies are appropriate followed by IAS.

13.0 FINDINGS

I have found corporate governance disclosures contained with the annual report of DBH, IDLC, and Prime Finance. The focus was on transparency, corporate responsibility, and fairness in terms of company operations, independent director, board of directors, internal control, regular dividend payment including cash and stock dividends, regular AGM call, audit committee formation, top five persons in the executives other than CEO, CFO, CS, and HIA, and financial reporting system with the IAS and BAS compliance. I searched for evidence of the above compliances in the annual report of the 4 companies. The first three companies (DBH, IDLC, and PF) complied guidelines given by SEC and Bangladesh Bank in terms of dividend issue, board of directors, regular AGM call, internal control, audit committee formation, and financial reporting standards. NHFIL was complied regular AGM call and financial reporting system but internal control is not clear because its responsibilities were not mentioned although there was a committee under Board of Directors. Independent director was absent in the board as well as in the audit committee.

14.0 RECOMMENDATIONS

1. There may be specific instructions to be given by Bangladesh Bank as well as SEC on internal control under code of corporate governance to be more accountable and make better disclosures.
2. Appointment of independent director which is 1/10 or subject to minimum of one may be an obligatory option to form the Board of Directors which can ensure more responsibility.
3. As directors are elected in AGM which is under agenda, independent director may also be included to be appointed in under AGM agenda.
4. Appointment and disclosure of top five persons in executives should be a compulsory option in the annual report to be published.
5. Formation of audit committee and independent director to be a member of committee should be a code of governance which may be a requisite for annual report publication.

15.0 CONCLUSION

Corporate governance disclosure has important implications in the financial sector. It is observed that regulators are playing an important role to promote the governance disclosures in the annual report of financial institutions. In this study I did not investigate all companies listed with DSE which is likely to give important information in the context of the Bangladesh financial institution sector.

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MAJOR PROBLEMS AND ISSUES IN SRI LANKAN UNIVERSITY SYSTEM – STUDY FOCUS ON THE STUDENT PERSPECTIVE

W.M.R.B. WEERASOORIYA
RESEARCH SCHOLAR
SCHOOL OF GRADUATE STUDIES
MANAGEMENT AND SCIENCE UNIVERSITY
MALAYSIA

ABSTRACT

The study discusses the major issues and problems of students in university system in Sri Lanka. A comprehensive literature is reviewed and critical discussion is offered from the findings of researches conducted by various authors of different regions. Along with detailed view of scholarly researches on students' issues and problems, an empirical investigation is incorporated taking the sample from public universities in Sri Lanka. An estimate of 100 respondents in different degree programme and different degree levels was administered in the Faculty of Management Studies, Rajarata University of Sri Lanka. A self-constructed survey scale of 18 items was distributed to the students and taken back simultaneously. Study also conducted a focus group along with quantitative data to identify the insights of phenomena in qualitative perspective. The paper tries to explore students problems and issues related to various academic disciplines such as Lecturer personal Characteristic, Lecturer Related and Student related activities. Under these categories different type of question ask from the student according to the student perspective. The study reports deficiencies of institutes and dissatisfaction of students in identified areas and urges the management in higher education to shift their focus on the most ignored dimensions of academic disciplines. The study also recommends the needed areas of future research and offers managerial implications.

KEYWORDS

Sri Lankan Universities, Management Faculty, Student Perspective.

1. INTRODUCTION

The paradigm shift in socio-economic change in all trades of human life, continuous innovation in science and technology, cultural diversity, and globalization has caused a similar shift in educational settings, particularly higher education (Barker, 1992). The static academic life in the countries like Sri Lanka has been shaken up and process of upbringing the educational system has been started. The deregulation of public enterprises specifically new entrants in higher education has created tough competition in the business of university management. In order to response to the consequences of this paradigm shift, which highlighted the deficiencies in the performance of public enterprises, governments introduced free market and privatization in many sectors including universities (Sharma & Lawrence, 2002). This movement has resulted in upsurge of academic culture in higher education, offered a competitive environment and demanded reengineering of systems and processes such as employment of total quality management (TQM) and balanced scorecard (BSC) in universities. The nature of university has been altogether changed into a commercial business, revenue led performance and customer dependent education and services. The pursuit of business-like efficiency and effectiveness calls for a representation of academic operations in the appropriate economic terms i.e. an emphasis on academic capitalism treating students as customers and education as product. Quoting Powell (1995) they argue that TQM was adopted by organizations with the intention of profit through a customer orientation improving market share and competitiveness. They proceed forward that the BSC approach to performance measurement as articulated by Kaplan and Norton (1993), has gained enormous prominence in mainstream management accounting research. Kaplan and Norton's BSC suggests that apart from financial measures of performance, attention needs to be paid to the requirements of customers, business processes and longer-term sustainability.

The universities are perceived as change leader in the modern world, where they construct the ideology of nations and direct the future of local community. The universities are supposed to be the home of policy advises and guidance for the political, social and economic progress. In the case of Sri Lanka, the role of universities is adverse, where they are being forced to adopt the advancements of new world. The universities are left with no choice, but to accommodate the upcoming changes around in the respective environment. What sorts of changes are demanded? Is the question, needs to be answered through a comprehensive investigation. This study is conducted to explore the major issues and problems in higher education in the perspective of students of public sector universities in Sri Lanka. The research covers the areas like Lecturer personal Characteristic, Lecturer Related and Student related activities. The findings of study may help the management of universities to focus on identified areas, upgrade their processes and meet the requirements of their students.

2. LITERATURE REVIEW

2.1 GENERAL ISSUES IN THE UNIVERSITY SYSTEM

Becket & Brookes (2006) describe that within the UK there are particular environmental forces imposing the need for effective quality management within university programs. These include a growing climate of accountability; an expansion in the size of student populations; an increasingly diverse student population resulting from widening participation initiatives and targeting international markets; diminishing resources with which to deliver programs of study; the increasingly competitive nature of higher education; greater expectations of students as paying customers; more flexible provision at both undergraduate and postgraduate level; and an increase in collaborative provision between institutions.

This changed scenario gives high emphasis to students and being customers, they are the key factors in shaping school outcomes and educational productivity (Levin, 1993). At most of the universities these days, students evaluate the performance of their teachers. At this point, however, the commodification of education depicts the problematic aspect of this change. Many researches (Goldverg & Callahan, 1991; Simpson & Siguaw, 2000; Eiszler, 2002; Centra, 2003; and Olds & Crumbley, 2003) provide significant relationship found between the evaluation of university teachers by their students and inflated grades awarded to students by such teachers. Cavanaugh (2006) provides most summarized account of the problems caused by visiting teachers.

But Carrier, et al. (2000) pointing out students' problems describe that in a constructivist perspective, student learning problems, such as those identified by faculty members on the four campuses of the University of Minnesota, stem in part from students' sense that their coursework is largely removed from their central experiences, and thus, is neither easily assailable nor engaging. Furthermore, learning activities often conflict with activities or aspirations that they regard as more salient, such as their paid work or the everyday demands of their communities. They describe that on the campuses of most public universities, many students lack effective strategies for learning and, in some cases, have poor preparation in the skills and background knowledge needed for success in higher education. The literature on student learning problems shows that motivational and skill deficits make reading, study, and other coursework effortful and frustrating and those students often give these activities lower priority as a result. By referring to Gillani (2000) they conclude that constructivist-inspired interventions emphasize re-examining student-centered choices in teaching and learning that "place students' needs at the heart of the design process and take their backgrounds into consideration".

Problems are manifold. Some researches (Brookfield, 1990; Mukhtar, 2001; Rasheed, 2003; Isani & Virk, 2003; and Nisar, 2003) describe the following problems that most of the university students face:

i. Classroom Problems

The shortage of teaching staff, extra responsibilities with teaching a large number of students in class, unpleasant environment for teaching, non-availability of teaching aids, unawareness of teachers from learning experiences of students and uninterested/irrelevant studies are classroom problems faced by university teachers.

ii. Administrative Problems

These problems are basically related to administration. Misuse of administrative power of officer's and promotion of teachers make the university students suffer.

iii. Economic Problems

Teachers are mostly low-paid employees and same is true for university teachers as regard the demand of work expected of them. Similarly university teachers face residence and related problems which cause low or dissatisfaction among them. They can not teach well causing a decrease in the standard of education.

iv. Social Problems

Social problems of teachers affect the quality of teaching. Teachers' position in society and their relations with community, colleagues and administrator affect the teaching process.

Why such problems are important to be discussed? The university students are at terminal stage of their academic career after which they are to enter the most dynamic field of economic endeavor. But, if a graduate wonders who he is and where he does fit in this dynamic world (Malik, 2004). The preparation of these students for practical field according to the market demand makes the job of university teachers more and more challenging to ensure the recommended standards of quality education the world over. To educate students according to the market demand, Crawford (2004) points out the most urgently needed characteristic as, "the development of a student's ability to think clearly, logically and honestly is far greater value than the development of his/her memories, and that it should underlie all the teaching and learning. He or she will need capable staff who are able to teach in a way which develops thinking skills of their students" (p.25).

Jiwani (2004), while commenting on the problem-based learning, concludes that it will stimulate students' critical thinking skills and encourage independent learning, something that our system of higher education badly needs. To promote clear and critical thinking skills in students, the teacher him/herself needs to be very much clear in his/her capabilities, duties and responsibilities.

In July 1999, Dr. Lorie Roth, Senior Director of Academic Services & Professional Development, California State University, described the following areas of major concern in a report "Faculty Development at Armstrong Atlantic State University 1998- 999" regarding issues and problems of students in higher education as: Meeting the Unprecedented Need for New Faculty in Higher Education

- a. Unprecedented Retirements: In order to respond high projections regarding students' population in future and growing number of faculty retirements, an ever increasing number of new faculty is required at universities. Obviously, the need to train and develop the new faculty is ever increasing.
- b. Lack of Diversity: Recruitment of diverse faculty is another major challenge universities are facing. This lacking diversity among the newly selected graduates demands their development as diversified teachers.
- c. Ability to Attract and Retain Quality Faculty: Universities are facing problems to attract and retain quality faculty especially in public sector because of salaries lower than the high costs of living.

Therefore, the faculty hired whatsoever, needs to be developed to fulfill the challenges of the modern age. Improving Teaching Quality and Student learning at Colleges and Universities

- a. Instructional Quality: universities have as their core responsibility the provision of comprehensive and high quality educational experiences that optimize student learning. Instructional quality is key to meeting this responsibility. Essential in this regard is faculty knowledge and understanding about instructional processes, the design and development of curriculum, the assessment of learning, and the identification of student needs. Further, faculty knowledge about teaching and learning in diverse classrooms and the appropriate integration of technology into teaching and the curriculum are critically important to the achievement of all students.
- b. Systematic Campus-wide Change: There is a need for new strategies that address systemic and cultural issues within the institution and, at the same time, provide "structural invitations and incentives" for faculty to participate efforts to improve teaching and learning.
- c. Local Context and Factions: Policies and strategies must be suited to local contexts and specific segments of the community. Within this context, modifying doctoral and master's programs will facilitate change to place increased emphasis on developing knowledge and skill in teaching in the disciplines, thus having an impact on the teaching-related sophistication among new hires.

2.2. SRI LANKAN UNIVERSITY QUALITY ASSURANCE SYSTEM

The University Grants Commission (UGC) was established under the Universities Act. No.16 of 1978. The functions of the UGC are to allocate funds to the universities and university institutes, serve as the central admission agency for undergraduate studies in universities, planning and monitoring of academic activities of the university system in order to maintain academic standards and implement national policies in respect of university education. There were 31 higher educational institutes are operating under UGC (it included 15 universities, 7 post graduate institutes and 9 other institutes). The Quality Assurance and Accreditation Council (QAA) was established under UGC and it look after all academic issues and development of the entire higher education system.

The QAA council has "Responsibility for quality and standards can only lie effectively where the powers to control or change practices exist, that is, with the institution itself - not with an external body" Universities are public institutions. They hold and must conscientiously exercise, and be seen to exercise, their responsibility for quality and standards. Higher education is a 'public good' and is of crucial importance to the health, wealth and well being of society and the economy in Sri Lanka. University accountability for quality and standards is a key factor in promoting and safeguarding public confidence in Sri Lankan higher education and those standards are help to minimize most of the exiting problems in entire university system.

The following general principles apply to the quality assurance procedures adopted for the purpose of institutional and subject review in Sri Lanka:

1. To safeguard the standards of awards and the quality of delivery of academic programmes in Sri Lanka
2. To encourage good management of academic institutions.
3. To identify and share good practice in the provision of education
4. To develop a national quality assurance system in Sri Lanka that combines institutional review (quality, standards and management), with subject level review
5. To implement procedures that is based on academic peer review combined with strong administrative support at national and institutional level
6. To provide sufficient funds nationally to cover the central costs of the quality assurance system, including the payment of academic reviewers and a central administrative team and perhaps providing earmarked funding to support quality assurance in individual universities/institutions
7. To enable funding judgments to be taken on the basis of the outcomes of reviews
8. To recruit a national team of academic reviewers, all of whom will receive training for institutional and subject review
9. To implement the system in such a way as to make use of existing structures, documents and other materials wherever possible, rather than to introduce additional bureaucracy

2.3 COMPONENTS OF NATIONAL QUALITY ASSURANCE SYSTEM

Within the national quality assurance system, the Committee on Quality Assurance has agreed that the following components of each institution's provision will be reviewed:

The nation also has very high expectations from the teachers of universities as they are considered to be responsible for the provision of high quality manpower for the development of the country. But these quantitative achievements at university level, showing very high degree of government interest, hide serious qualitative deficiencies (Haq, 1987, given in Haq, and Kirdar, 1988) and national expectations are not being realized.

"Most of the candidates lacked the ability to express their views or discuss the subjects with clarity and logic. The candidates were generally poor in English and gave the impression as if they were using the language for expression for the first time. A good number of candidates presented themselves before the

commission without proper preparation. They showed casual attitude and gave the impression that they had come to the Commission to take a chance for better prospects. They did not exhibit the aptitude or the ability to achieve it. Most of the candidates gave the impression that they had not studied relevant syllabus of their subjects but had managed to secure their degrees through the made easy guides and notes. They did not exhibit the knowledge about the subject of their studies and their knowledge remained shallow and superficial”.

3. RESEARCH METHODOLOGY

All students of the public universities in Sri Lanka built the population where as one public university was included in the sample. Only undergraduate students in different degree programme and different level were selected for this study. A 18-item self-made questionnaire was piloted and administered, by the researchers personally, which was found valid and reliable with 0.82 Chronbach Alpha. As the questionnaire was constructed on 5-point Lickert Scale, response options were quantified as Extra Satisfaction (1); Satisfaction (2); Average (3); Un satisfaction (4); and Extra Un satisfaction (5). Mean Scores for every individual item and Average Mean Score for every individual area and an overall Average Mean Score of all areas were calculated using SPSS.

3.1 OBJECTIVES OF THE STUDY

1. To identify the possible problems in Sri Lankan university system. Specially in degree programme.
2. To evaluate most important problems in the university system in the teaching and learning process.
3. To give the realistic solutions to overcome problems

4. RESULTS AND DISCUSSION

The study makes a fruitful addition in literature by identifying the shortcomings in university education as perceived by students. The estimate is composed of private and public universities and administered in Sri Lanka. Therefore selected one of the best samples, which represent the population of management faculty in Rajarata University undergraduate and ensure the generalizing validity. In terms of quantities analysis (table 4.1), the results could be surmised as: a) Lecturer's personal characteristic (LPC) segment, the average mean score is 4.73. b) Lecturer Related (LR) segment the average mean score is 4.29. c) Student Related (SR) takes an average mean score of 4.35. The identified shortcomings in the universities in descending scale of high rated shortcomings (HRS) and low rated shortcomings (LRS). The problems and issues of universities in terms of their shortcomings in the Lecturer's personal characteristic. The statistics show that category of LPC variable includes; 1) Punctuality of the Lecturer, 2) Explicitly of the Lecturer, 3) Equity of the Lecturer, 4) Rooms for personal contract with students. In the bracket of LR variable fall as: 1) Evidence of preparation for the lecturer, 2) Starting the lecture with summary of previous topic, 3) ability to grasp the content of the lecture, 4) Speed of the delivery, 5) Explanation and Example, 6) Reference given, 7) Legibility of the letter of the lecturer and 8) Use of the audio visual. The problems and issues regarding teaching facilities provided by the universities The SR includes 1) ability to write down note 2) Adequacy of tutorials and handouts, 3) interest on the lecture series 4) Overall knowledge improvement 5) Awareness of the syllabi 6) Awareness of Evaluation procedure. The qualitative analysis is derived from the focus group of public universities in Sri Lanka. In summer the focus groups reveals the following points (table 4.2):

- a. Kind of evaluation should follow on the beginning of the lecture series. Not at the end.
- b. Student contact hours should increase.
- c. Speed of delivery is common mistake.
- d. A large number (students could not quantify) of university teachers are not friendly with students.
- e. University teachers are not role-model for students as they fail to maintain a high standard in their external appearance, communication, interpersonal relationship, unbiased behavior, and humanism.
- f. There are no appropriate arrangements in the universities for the personality development of students owing to the indifferent faculty attitude toward this highly desired task.
- g. Insufficient teaching material and audio visual like Multimedia, handouts etc.

TABLE 4.1 – MEAN VALUES FOR EACH AREA

| | Mean | Average Mean |
|---|------|--------------|
| Lecturer's Personal Characteristics | | 4.73 |
| Punctuality of the lecturer | 4.89 | |
| Explicitly of the lecturer | 4.74 | |
| Equity of the lecturer | 4.69 | |
| Rooms for personal contract with students | 4.60 | |
| Lecturer Related | | 4.29 |
| Evidence of preparation for the lecturer | 4.61 | |
| Starting the lecture with summary of previous topic | 4.21 | |
| Ability to grasp the content of the lecture | 4.32 | |
| Speed of the delivery | 4.00 | |
| Explanation and Example | 4.50 | |
| Reference given | 4.36 | |
| Legibility of the letter of the lecturer | 4.25 | |
| Use of the audio visual | 4.10 | |
| Student Related | | 4.35 |
| Ability to write down note | 4.13 | |
| Adequacy of tutorials and handouts | 4.43 | |
| Interest on the lecture series | 4.57 | |
| Overall knowledge improvement | 4.29 | |
| Awareness of the syllabi | 4.32 | |
| Awareness of Evaluation procedure | 4.35 | |
| Overall Mean Value | | 4.41 |

TABLE 4.2 – MEAN VALUES FOR EACH AREA (HIGHEST AND LOWEST)

| | Highest Mean | Lowest Mean |
|---|--------------|-------------|
| Lecturer's Personal Characteristics - (4.73) | | |
| Punctuality of the lecturer | 4.89 | |
| Explicitly of the lecturer | 4.74 | |
| Equity of the lecturer | | 4.69 |
| Rooms for personal contract with students | | 4.60 |
| Lecturer Related – (4.29) | | |
| Evidence of preparation for the lecturer | 4.61 | |
| Starting the lecture with summary of previous topic | | 4.21 |
| Ability to grasp the content of the lecture | 4.32 | |
| Speed of the delivery | | 4.00 |
| Explanation and Example | 4.50 | |
| Reference given | 4.36 | |
| Legibility of the letter of the lecturer | | 4.25 |
| Use of the audio visual | | 4.10 |
| Student Related – (4.35) | | |
| Ability to write down note | | 4.13 |
| Adequacy of tutorials and handouts | 4.43 | |
| Interest on the lecture series | 4.57 | |
| Overall knowledge improvement | | 4.29 |
| Awareness of the syllabi | | 4.32 |
| Awareness of Evaluation procedure | 4.35 | |

5. CONCLUSION

The study investigates the problems and issues of students of public sector universities, taking the case of Sri Lanka. The data was collected on survey instrument of 18 items, validated and administered in one university with 100 useful questionnaires. The teaching is primary product of universities, delivered through resource person and play prominent role in determining the quality of education. In the concern of teaching quality in universities, the highly ranked shortcomings are 1) provisioning of course outlines, 2) updated content knowledge, 3) on campus availability of teachers, 4) friendly with students, 5) encouraging participation of students. The universities should pay their attention to improve these areas, which is basically neglected by the management. The management of universities is responsible to provide academic support facilities that assist the teachers and students in learning and teaching process. In the case of teaching facilities, universities are ignoring their highly graded shortcomings like 1) availability of multimedia, 2) overhead projector, 3) on-campus access to Internet, 4) field studies and seminars and 5) on-campus lab facilities. The negligence in providing educational support material hinders the quality of education lower the overall learning outcome rate. The universities should design their course contents in a way, which primarily cater the identified shortcomings of students.

6. LIMITATION OF THE STUDY

Study limited to Management Faculty in Rajarata University.

7. FURTHER RESEARCH

This study is limited to one (01) university out of fifteen (15) universities and selected only the management faculty. Consist of 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 occurred. 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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A DIVERSIFIED APPROACH OF FACE DETECTION AND RECOGNITION

KALIYAPERUMAL KARTHIKEYAN
LECTURER
ERITREA INSTITUTE OF TECHNOLOGY
ASMARA

DR. MUNGAMURU NIRMALA
LECTURER
ERITREA INSTITUTE OF TECHNOLOGY
ASMARA

SREEDHAR APPALABATLA
LECTURER
HAWASSA UNIVERSITY
ETHIOPIA

ABSTRACT

Having Face detection and recognition system with all its benefits as an aid to the existing systems like finger print, signature, passwords, identification cards, voice recognition systems etc. will definitely bring great difference and precision. The overall issue of facial recognition is complex, but could be simplified by taking into consideration, portraits that are coherent in terms of orientation, lightening, expression and image quality. This is by far the basis for the growing development in the area of facial recognition. Learning from the strengths and weaknesses of two most widely approved algorithms Eigen faces and Elastic bunch graph algorithms, a thought provoking research has been carried out which resulted in a new working algorithm. In the proposed system, a face image is captured by a web cam or digital camera, in turn converted into a hashed form which is compared with existing image hashed database that has registered users images with permission to enter into a privileged area. Once the image captured matches with one of the images in the database, the person is authorized. The accuracy of this system does not depend on the attributes viz., background of the image, intensity of light (contrast and brightness), zoom in and out, image color and position of the face within the system. In addition to that inclination of the face up to 20 degrees left and right is also handled well.

KEYWORDS

Face detection, Face Recognition, fiducial, Graphical testing, Image processing.

INTRODUCTION

The first attempt to automate facial recognition started in the 1960s in semi-automatic mode. They essentially focused on checking the coherence of measurements between different characteristic points of the face (e.g. the corners of the eyes, the nose, the ends of the mouth and the hairline, etc.). They were not very successful, because faces are by nature very mobile (changing) and measurements between characteristic points are affected by orientation (poses), light variation and distance difference from which pictures were taken, to the extent that specially-developed models quickly proved to be necessary.

At the end of the 1980s, the development of the Eigen faces [2] technique prompted a more intense research effort. This technique is used to detect (find a face in a photo) and to recognize (compare images of faces). Researchers quickly found that the overall issue of facial recognition was complex, but could be simplified by only taking into consideration portraits that are coherent in terms of orientation, lighting, expression and image quality. Research focused on this problem subsequently the responsible organization for such researches defined criteria to obtain controlled portraits and meaningful test sets were created.

At the start of 2007, the NIST (National Institute of Standards and Technology) published the results of its "FRVT 2006 (Face Recognition Vendor Test)". Its conclusions were quite clear. It led to a point where the operational use of facial recognition on high-resolution frontal images taken in a controlled environment proved to be feasible. But this event obviously did not put an end to work on the recognition of controlled portraits. More improvements are expected, but facial recognition has thus become a biometric technique in its own right.

Since 2007, research has been looking into significantly more difficult problems, in which faces are not viewed frontally; resolution is low or poor image quality. With the MBGC (Multiple Biometric Grand Challenge), the NIST is again seeking to assess performance and has provided researchers with representative data (images and videos of faces under un-controlled conditions). It is the start of a new era and one can expect significant progress over the coming years.

LITERATURE REVIEW

Since 1970, researchers concentrated more on image retrieval. Plenty of works had been done on feature based image retrieval. In this section, the existing CBIR system has presented a good survey of the technical aspects. Ramadevi, et al. [4] has proposed interaction between image segmentation (using different edge detection methods) and object recognition. Edge detection methods such as Sobel, Prewitt, Roberts, Canny, Laplacian of Gaussian (LoG) are used for segmenting the image. Expectation-Maximization (EM) algorithm, OSTU and Genetic algorithms are used to demonstrate the synergy between the segmented images and object recognition.

P. S. Hiremath, Jagadeesh Pujari [5] presented a novel framework for combining all the three i.e. colour, texture and shape information, and achieve higher retrieval efficiency using image and its complement. In this paper, the images are partitioned into non-overlapping tiles. The image and its complement are partitioned into non-overlapping tiles of equal size. The combination of the colour and texture features between image and its complement in conjunction with the shape features provide a robust feature set for image retrieval.

Mungamuru Nirmala et al. [3] proposed the basic concept of content-based image retrieval methods using visual content. The descriptors should be of transformation invariance to measure the similarity between any two descriptors. Instead of comparing the query image as a whole with the images in the database, the descriptors are compared for retrieval. With an extension of the comparison, Relevance feedback technique is used to reduce the gap between the extracted features and targeted descriptors are used as feedback to refine the retrieval process further. Based on the feedback, the descriptor can be redefined and an iterative similarity checking can be implemented to improve the retrieval of proper image with reference to the query image.

Mustafa Ozden, EdizPolat (6) describes a new colour image segmentation method based on low-level features including colour, texture and spatial information. The method uses wavelet frames that provide translation invariant texture analysis. The method integrates additional texture feature to the colour and spatial space of standard mean-shift segmentation algorithm. This new algorithm provides better results than the standard mean-shift segmentation algorithm.

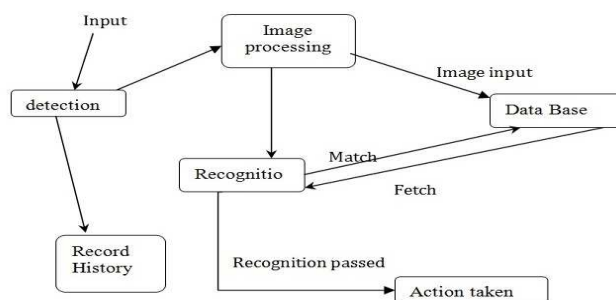
OVERVIEW OF FACE DETECTION AND RECOGNITION PROCESS

Live face detection doesn't give room to unauthorized access. It does not need to make direct contact with the individual as in the case of signature, finger print etc., a case might arise, where an accidental or permanent deformation of the face can create complexity for the system but still can be updated by the administrator with the new input. Studying the above mentioned side effects, and weighing the advantages of face recognition, an attempt is made to develop a simple yet a highly effective system.

For obvious reasons, the human brain and visual organs can be considered as the best existing face recognition machines ever. A specific area of the human brain called fusiform face area (FFA) has been proven to be totally dedicated to this task. The apparent ease of use is the cause for many fantasies, inconsistencies and difficulties while implementing automatic face recognition systems in the field. Because the technology has an outstanding competitor: the human brain which is naturally trained from birth to do exactly the same thing; facial recognition.

The images used for the analysis are either captured by a webcam or a digital camera mounted on the system. The live picture captured is analyzed and is supplied to the PC, triggers an event to control the action of the system which is the general objective of this system.

FIG-1: STATE DIAGRAM OF PROPOSED SYSTEM



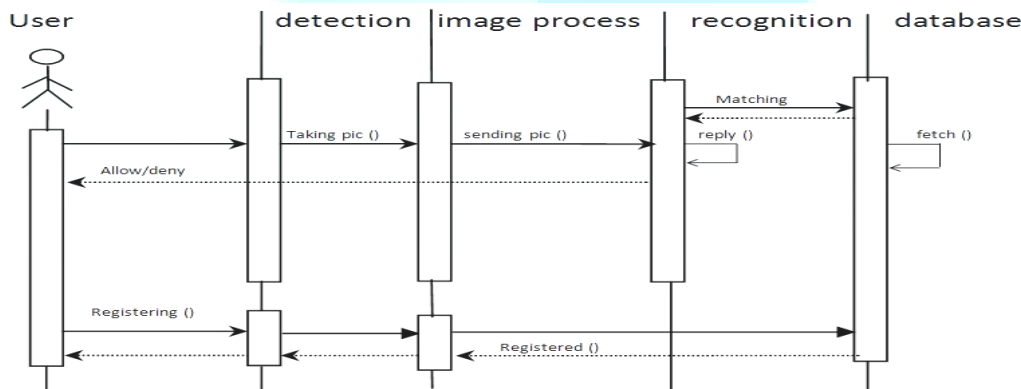
Developing this system generally involves three stages:

- Face Detection**, where a photo is searched to find any face, then image processing cleans up the facial image for easier recognition.
- Image processing**, to transform the detected image into convenient mathematical representation for further comparison and storage.
- Face Recognition** where the detected and processed face is compared with a database of known faces, to match and to decide and identify the person if exists.

Through efficient completion of the above mentioned three stages, the system satisfactorily provides a fairly precise detection and recognition application for further security applications. Based on this background study, this system aims at fulfilling the following objectives:

- To develop an integrated face recognition system to maintain the security of a certain privileged access area.
- To thoroughly study and come up with a practical face recognition algorithm for this problem.
- To implement a precise face detection and recognition system.
- To provide a two level security to manage the image database
- To make the system more applicable so to make the interface in the two locally used languages.

FIG-2: SEQUENCE DIAGRAM OF PROPOSED SYSTEM



When the user wants to register, first the system should take his/her current picture of the face and some other related additional information is filled during registration. Then the system detects his/her face and takes the image to generate its standard representation in order to store it for further comparison. Later the representation and all the additional information is saved in the database. When the user wants to log on, first the system captures the user's current picture. Then the image is processed for the standard representation then compares the generated standard representation with the existing image representations, stored in the database. Finally system replies the user by allowing or denying authority based on the comparison outcome.

After the detection process is successfully completed, the recognition process compares the detected face with the images or faces in the database by comparing the distances between each fiducial point of both the faces. As the number of fiducial points increase, the efficiency of the recognition will also be increased since comparison is done based on each and every part of the faces, this leads the system to high accuracy with no confusion.

FACE DETECTION AND RECOGNITION ALGORITHMS

Most facial recognition algorithms use mathematical transformations in order to compare images. These transformations can highlight the distinctive specific features of an image: frequencies, directions, contours, distance etc. Transformed images cannot usually be used by the operator's naked eye. The algorithms we have used in development of our system are Eigen face algorithm and Elastic bunch graph matching algorithm.

EIGEN FACE ALGORITHM

It is a facial recognition technique that consists of learning the distinctive characteristics of faces from a broad sample of portraits using each complete image rather than local characteristics (e.g. the eyes, nose or mouth).

ELASTIC BUNCH GRAPH MATCHING ALGORITHM

This approach uses the structure information of a face which reflects the fact that the images of the same subjects tend to initialize the fiducial points (such as pupil, tip of nose, chin etc.) and deform in the image plane. It makes use of the labeled graph. The edges, distance information and the nodes are labeled in jets. This model graph can then be used to generate image graph. Then the model graph can be translated, scaled, rotated and deformed during the matching

process. This can make the system robust to large variation in the images. Based on the best part of these algorithms, a new algorithmic approach has been proposed for detection and recognition.

PROPOSED ALGORITHM

Step 1: Capture a live current image from a web cam/camera.

Step 2: Start the detection process by searching the pupil which shines more or having high intensity of light. To complete the action of face detection, an image detection class with a set of methods has been developed.

searchFace()method

It searches the individual pixels of the image to find the brightest region using the method addRgb() and checks the property of the eye using the checkEye() method. In addition, some important attributes are used to facilitate the searchFace() method namely; eye_mindiff, shine, pix_color, max_xvalue, max_yvalue, eyeL_found, eyeR_found and others.

❖ **addRgb():** returns the total sum of the color value of the pixel information(RGB).

❖ **checkEye(pixel):** Makes sure whether the received brightest pixel position is the exact position of the eye with in the image, by comparing the property of the neighboring pixels surrounding the brightest region.

boundFace():

A method to calculate the difference between the two searched eyes, and stores the value in the eye2eye_edge. Depending on the value stored, it calculates a rectangle to bound the face area, using 2*Eye2eye_edge as FaceWidth and 3* Eye2eye_edge as FaceHeight. To get the face inclination teta_rad attribute is used.

$$\text{Eye2eye_edge} = \sqrt{(((\text{eyeR}(x) - \text{eyeL}(x))^2 + (\text{eyeR}(y) - \text{eyeL}(y))^2))}$$

$$\text{Teta_rad} = \frac{\tan^{-1}[(\text{eyeR}(y) - \text{eyeL}(y))]}{\text{eyeR}(x) - \text{eyeL}(x)}$$

drawFaceRegions():

A method that divides the bounded face into small rectangular regions which aids in indicating the regions of fiducial points; To facilitate this method, attributes used are initial points and maximum points of individual regions represented by the attribute names: init_pnt(x,y) and max_pnt(x,y). In addition, methods like rotateRects() and drawRect() are used to rotate the region with respect to the human face inclination while the drawRect() draws all the regions in a rectangular manner.

searchFudicialPoints():

In this method, the relationship between edges and distance is directly proportional and is calculated during registration in recognition stage. searchBright(region) searches the brightest group of pixels within the rectangular regions, and searchDark(region) searches the darkest group of pixels. To calculate the light intensity of the pixels within a region in a group manner, both the methods use averageFudicial() to calculate the average value.

edgeDistance():

It calculates and stores distance between each and every fiducial points in an array. The total number of edges is:

$$N=nC2$$

In which, N the number of edges in the image, n the number edges in the cut image.

Step 3: It is time for face recognition which in turn uses some methods and attributes to compare the mathematical representation of the identified face with the representations of the privileged faces stored in database. To complete the activity, following methods are used.

recognize():

This method performs the overall recognition process, viz., loading mathematical representation(edges) of individual members from database, storing the value in a two dimensional array dbedges(rollno,edge), computing the variance between the current image value and the mathematical representation fetched from database using the method getVariance(), and then it compares to find the least variance.

$$\text{Dist}(\text{eyes}) = \text{diff}(\text{eyeLeft} - \text{eyeRight}) \text{-----eqn.[1]}$$

$$\text{Dist}(k) = [(\text{edges}(i) - \text{edges}(j))/\text{dist}(\text{eyes})]*1000, \text{ for } i \text{ is different from } j \text{-----eqn.[2]}$$

$$\text{Total diff} = \sum_{i=1}^n \text{diff}(i) \text{-----eqn.[3]}$$

$$\text{Total variance} = \frac{\sum_{i=1}^n \text{diff}(i)}{\sum_{i=1}^n \text{diff}(i)} \text{-----eqn.[4]}$$

eqn.[1] determines the distance between the two eyes. Once this distance is obtained properly, it serves as reference distance and all the remaining distances can be obtained from the reference distance by drawing a line from the pupil of the eye to all the fiducial points.

eqn.[2] determines the difference of the reference distance between the two eyes and the distance between any two fiducial points (e.g. if the distance between points of I & j is 7 and reference distance is 5, then the difference is 2) and multiplying by 1000 resulting in small decimal value. It makes the system independent of color intensity, color background etc.,

eqn.[3] gives the total difference of all the edges with respect to the reference distance and *i* refers to the number of edges in the face.

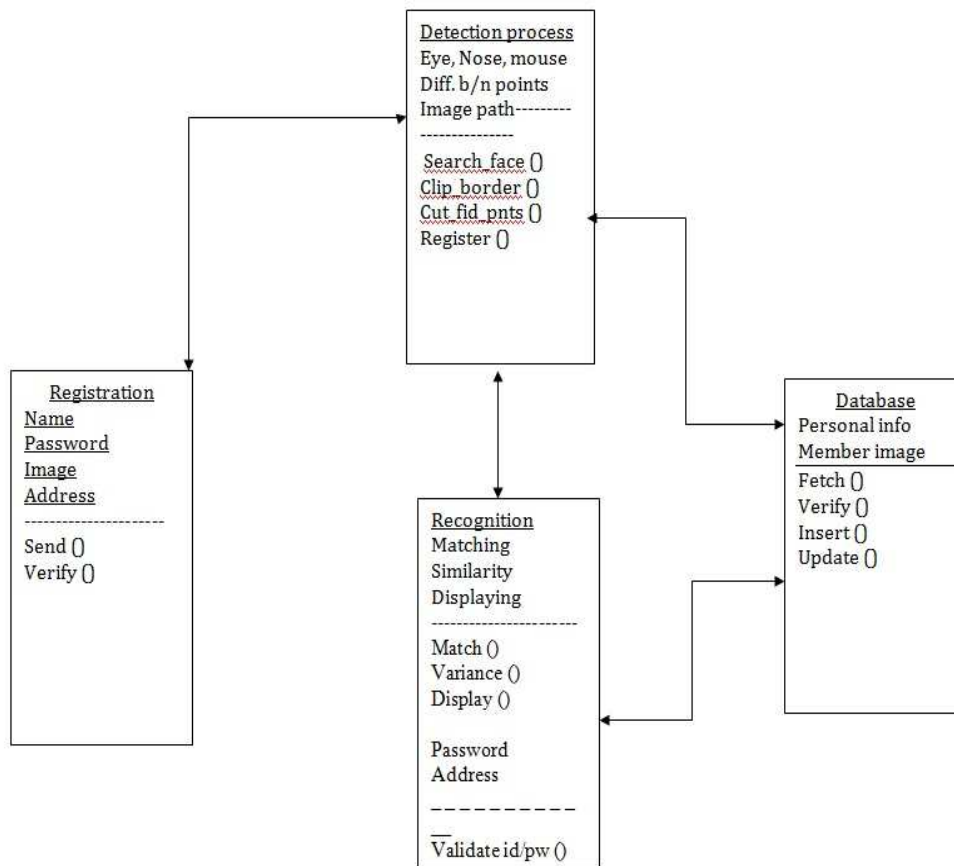
eqn.[4] calculates the total variance of the detected live image and the image already stored in the database by comparing edges of both faces which are in the same position, i.e. edge (i) in detected image when compared to edge (i) in images of the database.

Finally this total variance is converted into percentage range and the system either gives access or rejects based on this percentage value.

Step 4: The face, if it is privileged, it is successfully recognized; if not the administrator has to proceed with the registration. If the comparison fails due to any changes in face, the authorized member requests permission from the administrator and the administrator issues permission after through check.

The detailed class diagram defines the overall view of the system i.e. all the functions and data members available in every class within the system. Every class is defined either in the detection side or recognition side. The functionality of the algorithms applied is clearly presented.

FIG-3: DETAILED CLASS DIAGRAM OF THE FACE RECOGNITION



SYSTEM IMPLEMENTATION, TESTING AND RESULTS

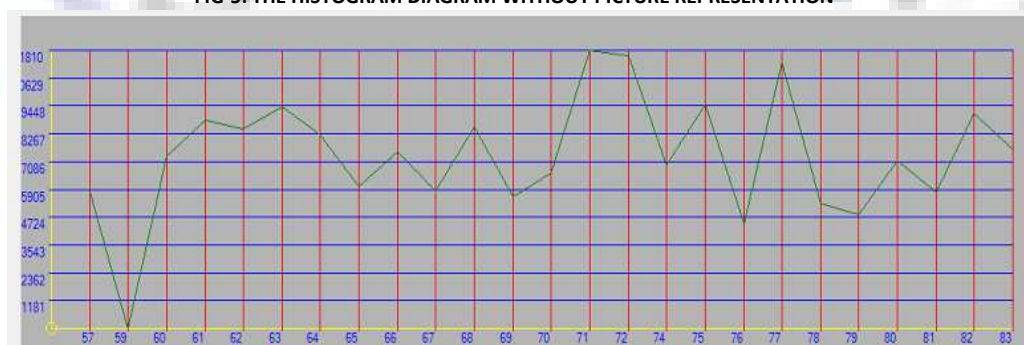
During implementation, prior training guides the user to come up with a quality system as the users of the system may not familiar with face recognition system. One has to follow the sequence of steps viz., searching face, clipping face, cutting face.

FIG-4: CUTTING ALL THE FIDUCIAL POINTS



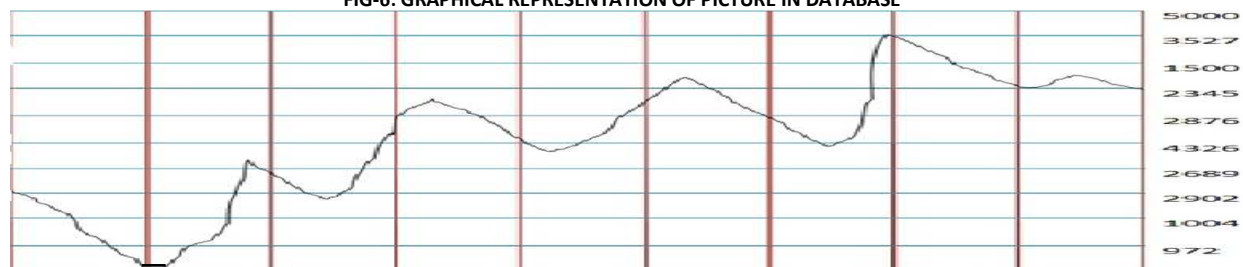
While testing for the successful implementation of the system, a graphical method is used to clearly represent the degree of precision of the recognition. The graphical representation of the individual members is symbolized in the form of a histogram, named as Test Form Histogram which is used to represent the distinguishing variations and similarity among the live detected image with the images stored in the database based up on variance of distance versus image.

FIG-5: THE HISTOGRAM DIAGRAM WITHOUT PICTURE REPRESENTATION



As we can see in the histogram representation above, the picture which was processed in the implementation stage is notified as the 10th picture; likewise the variance difference in comparison to the other privileged pictures is less. Different tests were made using different faces of different people both of those registered in the database as well as those unregistered.

FIG-6: GRAPHICAL REPRESENTATION OF PICTURE IN DATABASE



The variance value of all the registered pictures with the processed picture is indicated in rows. In the first figure, the processed picture is of the user registered in the database so the variance becomes zero with the specific picture in database. In the second figure, since the picture being processed is not of someone registered in the database, the variance difference is very wide.

The third type of test conducted is to make sure that the system does not confuse live image with an image taken from a photo of a privileged user. If a photo is presented in place of a live image, the system denies processing the image by stating "*convenient face is not found*", in a message box. The system is programmed in a way that it can differentiate two dimensional photos from three dimensional live images using the light intensity difference in the pupil as an indicator.

Results of the comparison can be categorized under three percentage ranges. If it is less than 80% it clearly represents significant difference between detected image and image in database due to some changes in the face, hence access is denied. If it is in between 80% to 90%, it denotes utmost similarity but not exact. Detected image can be either identical twin of the image in database or seems that image; in such case the system requests password to give access confidently. If it is greater than 90%, the exactness between the images in comparison is acceptable, and access is granted.

CONCLUSION AND FUTURE ENHANCEMENT

Efficient and effective comparison & retrieval techniques of images are desired because of the explosive growth of digital images. Content based image retrieval is a promising approach because of its automatic indexing and retrieval based on their semantic features and visual appearance. Interest in the potential of digital images has increased enormously over the last few years. However, "a picture is worth a thousand words." Image contents are much more versatile compared with text, and the amount of visual data is already enormous and still expanding very rapidly.

Face recognition is a highly secured identification system aid. This proposed system currently takes frontal pose only; in the future it can be improved to take poses from left and right position of the face as well. It is already planned to add more fiducial points in order to increase precision of this system [The more fiducial points, the more precise the system will be]. So far the system accepts and handles up to 20 degrees of inclination of the face, increasing this by 10 degrees will bring a good improvement. As a future enhancement, still more efficient system to keep a record of the detailed edges / distances that differentiate the particular similar looking images evolves out.

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IMPROVING THE SOCIAL DISABILITIES OF PRIMARY SCHOOL STUDENTS

MATEBE TAFERE
EXECUTIVE DIRECTOR FOR ACADEMIC AFFAIRS
BAHIR DAR UNIVERSITY
BAHIR DAR

ABSTRACT

This qualitative study was conducted on the practices of improving the social disabilities of students at three primary schools in Gulele sub City of Addis Ababa: Dilbetigile primary school, Eyerusalem primary school, and Tsehay Chora primary school. The participants of the study were primary school teachers selected using purposive/snow ball sampling, which was helpful in selecting informed or information rich participants for the study. In an effort to address the purpose of the study, guiding or basic questions were raised around the issues related to the commonly identified cases as social disabilities, the means by which teachers identify students with social disabilities, the possible causes for those social disabilities identified, and the specific strategies that have been used by teachers in improving those social disabilities. Following the collection of data using focus group discussion and interview, an attempt was also made to organize it in to major themes, on which discussion and interpretation was based. Consequently, the major findings of the study included the following ones. The commonly identified cases as social disabilities were: difficulty of smooth and active interaction; loneliness; aggressiveness; depression; excessive fear and shyness; excessive worry; excessive inferiority feeling or in appropriate self perception; and lack of willingness and in ability to share their ideas. The means by which teachers identify students with social disabilities were observation, teacher nomination, parents' nomination, and peer nomination. The common causes for those social disabilities identified were: overloaded responsibilities of children; family adjustment problems like conflict between parents; parents' hatred towards their child; parents' frequent cruel punishment and neglect; physical handicappedness; economic problems related to feeding, clothing, and worry for other resources required for schooling; family health related problems like having HIV positive parent/s; having single parents; having alcoholic addicted parents; and mistreatment by foster mothers especially for orphans. The specific strategies that had been used by teachers in improving social skills of those identified students were: advising and initiating them to frequently play with their peers at school; dealing with their parents on the problems and mechanisms for improvement; forcing them to join and participate in social clubs at schools; inviting them to observe the activities of socially active students in especially arranged programs; deliberately and frequently asking questions, and giving special responsibility in the classroom; arranging group activities and making them group representatives; arranging their seats with socially active peers; and providing extra tutorial sessions, for most of the socially disabled children encounter learning difficulties. In conclusion, there seem to exist significant numbers of students in our primary schools who are seeking help in promoting their social skills; despite this, however, schools seem to lack the necessary attention for the issue under study, except a few teachers who are personally committed in supporting students with social skill problems. Hence, for positive social interaction and the establishment of friendship to occur among children with social disabilities, they need to be provided with the opportunity that would enable them to promote their social skills, the opportunity should be provided on continuous basis, and special support shall also be offered so as to enable them cope up with their peers/students in the inclusive school setting.

KEYWORDS

Improving social skills, social disability, primary school students, special needs education, child rights, social skills, social work, inclusive education, education policy.

1. INTRODUCTION

The convention on the Rights of the child, being adopted by the general assembly in 1989, guarantees the child's human rights. The convention has been ratified by more countries than any other human rights treaty. In addition to guaranteeing children protection from harm and abuse, and making special provision for their survival and welfare through, for example, health care, education and family life, it accords them the right to participate in society and in decision making that concerns them. Besides, the convention on the Rights of the child is concerned with the best interests of the child as a primary consideration in all actions regarding children, relative to the best interests of the others in the society and balancing the child's autonomy rights with his or her need for protection. That is, Article 3 specifically emphasizes the rights of children to express their views in all matters related to their lives, in accordance with age and maturity, and it also encourages appropriate participation of children in making decisions. Article 12 also calls for the views and voice of children to be heard and respected. Closely linked to the best interests of the child, it acknowledges that children's opinions are important and their views and voices must be taken in to account concerning the realization of their rights; and this article further stressed that children should participate in decision-making processes that are likely to affect them, in ways that are appropriate for their age (Betcherman, 2004).

Similar to this international focus on the children's development, the Education and Training Policy of Ethiopia also states that;

The Education and Training policy envisages bringing-up citizens, endowed with human outlook, country-wide responsibility, and democratic values, having developed the necessary predictive, creative and appreciative capacity in order to participate fruitfully in development and the utilization of resources and the environment at large" (TGE, 1994).

To realize such strong assumptions and commitments, the policy document encompassed five general objectives, fifteen specific objectives and over-all strategies of implementation from pre-primary to higher education. For the sake of setting the scene for latter discussion on the issue of improving children's social skills, the presentation of the general objectives of the Education and Training Policy seems essential. Accordingly, as indicated in Article 2 (Sub-article 2.1) of the Policy document, the "new" Education and Training Policy of Ethiopia has the following general objectives: develop the physical and mental potential and the problem-solving capacity of individuals by expanding education and in particular by providing basic education for all; bring up citizens who can take care of and utilize resources wisely, who are trained in various skills, by raising the private and social benefits of education; bring up citizens who respect human rights, stand for the well-being of people, as well as for equality, justice and peace, endowed with democratic culture and discipline; bring up citizens who differentiate harmful practices from useful ones, who seek and stand for truth, appreciate aesthetics and show positive attitude towards the development and dissemination of science and technology in society; and cultivate the cognitive, creative, productive and appreciative potential of citizens by appropriately relating education to environment and societal needs.

Besides, special needs education (SNE) has also been taken as a focus area in the targets of the Education and Training Policy. For example, Articles 3.2.9, 3.4.11, and 3.7.6. respectively states that "special education and training will be provided for people with special needs; teacher training for special education will be provided in regular teacher training programmes; and special attention will be given in the preparation and utilization of support input for special needs education". Moreover, recognizing the exclusion and barriers to active learning and participation and in order to produce the required changes in the education system, the MOE has also developed a special needs education strategy (2005) that provides an overview of the current situation of special needs education; defines national objectives, strategic priorities and division of responsibilities; identifies resources and possibilities for cooperation; proposes key elements for inclusive education system development, and analyzes favorable factors, constraints, risks and possible solutions (MOE, 2006).

In general, the discussions made on the international treaties on the rights of children, and the national policy provisions on the well-being and cultivation of children as responsive citizens for the political, social, economic, and cultural demands clearly indicate that schools take the greatest share in creating a conducive climate for the all rounded development of children, by responding to their specific and respective demands. Perhaps, one of the issues that schools need to work in promoting students' education is improving social skills, especially for students with social disabilities. That is, if schools are to produce citizens

who are able to defend against and for their rights, and respect the rights of others, healthy development of students' social interaction skills at schools are very crucial.

Broadly speaking, social skills are those components of behavior that are important for persons to initiate, and then maintain positive interactions with others. Our ability to interact and develop relationships with those around us is not fully realized until we are able to listen and communicate effectively. Similarly, if a child has any type of social communication problems, the ability to connect with others will be affected. That is, social skills are the foundation for getting along with others. A lack of social skills can lead to behavioral difficulties in school, delinquency, inattentiveness, peer rejection, emotional difficulties, difficulty in making friends, aggressiveness, problems in interpersonal relationships, poor self-concept, academic failures, concentration difficulties, isolation from peers, and depression (Slavin, 2000). Hence, appropriate social skills are important if students are to develop sustainable academic competence and sound personality characteristics.

As research evidences show students with social disabilities face multidimensional difficulties in coping up with the schools' general expectations. That is, in inclusive schools where students with social adjustment problems are prevalent, not only estimation of the exact degree of individuals' physical incapacity is essential, but also a detailed study of his/her vocational learning, personality traits, and reaction to wards his/her disability and capacity for readjustment must be studied. Taking this concern, sociologists as well as educators agree that the chief function of the school is to develop in young people modes of behavior commensurate with the ideals and objectives of a democratic social order (Fisher, 1965; Finlayson, 1941; Moffat, 1939; Reznikoff and Glass, 1965; Thrasher, 1965; Winston, 1965).

In short, in the process of schooling, students' interaction seems to take the greatest share in the efforts they shoulder to share the desired knowledge, skills and values. Especially in the information age in which we are living, schools are highly expected to produce citizens who are able to express their thoughts and emotions, share ideas, defend their rights, argue for and against issues of their concern etc... Inclusive educational settings create a situation where children with disabilities can increase their social competence. It is important to note, however, that such an increase in social competence certainly does not always occur automatically.

The results of most studies of integration and inclusion do not support the belief that merely placing a child with a disability in the mainstream spontaneously improves the social status of that child (Slavin, 2000). There is actually a danger that the child will be marginalized, ignored or openly rejected by the peer group. This situation must not be allowed to occur since it is evident that poor peer relationships in early school life can have a lasting detrimental impact on social and personal competence in later years (Thousand and Villa, 1998). It is for this reason that establishing good social relationships with other children has been described as one of the most important goals of education (Cooper and McEvoy, 1996). Despite these pressing global and local concerns, no local researches seem to indicate the situation in our schools.

Hence, this study is aimed at exploring the situation of three primary schools in improving social skills of socially disabled children. These schools were found in Gulele Sub City of Addis Ababa. To achieve its objective, the study basically addresses the following basic questions:

1. What common cases or problems are being identified as social disabilities in primary schools?
2. How are students with social disabilities identified?
3. What are the basic causes of students' social disabilities?
4. What specific strategies have been used for improving those social disabilities identified?

2. METHODOLOGY OF THE STUDY

As it is already indicated in the introduction section, the major objective of this article is to undertake a qualitative study on improving the social skills of socially disabled primary school children. The study employed a qualitative design, which in fact helped for the in depth description of the situations of schools under study.

The participants were selected from three primary schools in Gulele Sub- City, Addis Ababa: Dilbetigle primary school, Tsehay Chora primary school, and Eyerusalem primary school. The participants of the study were 15 primary school teachers, 5 in each school. Their selection was also made with purposive/snowball sampling, which is helpful in selecting informed participants for the issue under study.

In collecting the desired data for the study, focus group discussion and interview were used and it was found to be interesting as was possible to understand from the participants' reflections during the discussion. The focus group discussion helped the researcher to study the real practices of teachers in promoting students' social disabilities. The interview, on its part, also helped the researcher to collect detailed information from those participant teachers who had active roles in the focus group discussion.

Finally, the collected data was analyzed using thematic analysis. This type of analysis is highly inductive in that the themes emerge from the data and are not imposed upon it by the researcher. In most cases, the data collection and analysis seemed to take place simultaneously. Even the background reading formed part of the analysis process for it helped the researcher to explain emerging themes.

Coding technique was also used to analyze the responses to interview items. In analyzing these data, responses to the interview items were grouped by themes, following the guidelines presented by Creswell and Maietta (2002). In the initial coding, the first step of the coding process, the responses to the interview items were compiled and read in order to determine any dominant themes or patterns in the responses. These responses were used as initial codes for the data. The second phase of the coding process involved arranging the responses into categories that emerged from additional reviews of the data after grouping them for the first time (i.e., categorized according to their affinities into general thematic categories). This yielded a final list of codes for the data. Finally, the coded data were grouped by the emerging themes on the basis of which the thematic content analysis was made. In order to assure trustworthiness of the coding process, a senior lecturer of educational planning and management took part. The inter-rater reliability was found to be 0.90 in the main study. On the other hand, in the pilot study, the inter-rater reliability found was 0.84.

3. DISCUSSION OF RESULTS

In an effort to see how far our schools are shouldering their own responsibilities in improving the social skills of students with social disabilities, an attempt was made to undertake a qualitative study on the practices of three primary schools: Dilbetigle primary school, Eyerusalem primary school, and Tsehay Chora primary school. After the participants were selected, the qualitative data was collected using focus group discussion and interview as per the pre formulated guiding questions. The guiding questions were raised around the issues related to the common cases that teachers identify as social disabilities; the means by which teachers identify students with social disabilities; teachers' perception about the possible causes of those social disabilities identified; and about the strategies mostly used by teachers in improving the social skills of students with social interaction problems. Then, the collected qualitative data was organized and discussed as per the major themes identified as per the guiding questions. Accordingly, the discussions of the results are presented here under.

As was observed in the responses during data collection, there seemed to exist differences among participants even on the awareness they have in the need to think about improving social skills. Some teachers seemed highly committed while others seemed to take the issue as something marginal, not part of their basic responsibility. Unfortunately, these gaps on the awareness of improving students' social skills were also seemed to exist with the school principals as was observed during the preliminary communication I made in order to get their permission. Specially, one principal confirmed as the issues for my study is not their schools' concern. He tried to inform me that I should conduct my study on special schools that are providing education for only disabled students. In fact, I tried to convince him that such issues are also crucial in inclusive schools like his own, and finally, he got convinced with the issue I raised and the data collection process continued. Though there was similar resistances from the principals of the three schools, permissions were sought from each of them after long discussions. Hence, discussions of the data collected are made in the following paragraphs as per the major themes identified.

The first issue raised to the respondents was about the commonly identified cases as social disabilities. Firstly, the very essence of the study was explained to the respondents followed by some orientations about the need for improving students' social skills. Then, they were asked to share their experiences of social disabilities in the process of teaching-learning. That is, an attempt was made to let them remind and share the commonly identified cases as social disabilities.

A teacher from school "A" expressed that:

I feel very happy when supporting socially disabled students. Unfortunately, teachers in my school do not pay attention to social disabilities. What most teachers are doing is teaching their subject matters, giving tests and exams, and reporting results accordingly. Even the school principal does not give any attention to social disability. But as a social studies teacher, I have been trying my best in identifying and supporting students with social problems like loneliness, excessive shyness, aggressiveness, depression, and excessive fear.

Another teacher from school "A" on his part noted that:

I think it is not our responsibility to worry about improving the school skills of students. Even it is not part of the curriculum. As we all know, the number of students in most classrooms are too many. Teachers are very busy in undertaking continuous assessment activities and providing the corresponding feed back to that large number of students. So, on the one hand, we have never made improving social skills as part of our task, and on the other hand, it seems impractical to order teachers to do so. Despite these, however, there are very few teachers who have been supporting socially poor students on voluntary basis or on their personal initiatives.

In the schools where the study was conducted, there were only very few teachers who were trying to deal with the social disabilities of students. Similar cases seem to have been observed in the three schools as was drawn from the focus group discussion. Consequently, the following were found to be the common ones: difficulty of smooth and active interaction; loneliness; aggressiveness; depression; excessive fear and shyness; excessive worry; and excessive inferiority feeling or in appropriate self perception, especially for orphans. These identified cases were more or less similar to the ones raised by Slavin (2000) as problems associated with social interaction. Perhaps, what seems to have been missed in the schools under study is the necessary focus to be given for at least minimizing the problems.

The second guiding question raised was about the means by which teachers commonly identify students with social disabilities. In here, the respondents did not take time in responding to the issue raised for it was vividly practiced in their schools knowingly or unknowingly. A teacher of school "C" specifically noted that:

I do not have a problem with identifying students with social disabilities. I most of the time observe them deviated from their peers. Sometimes, I also use parents', teachers' and students' nomination. For I am a social studies teacher, my friends assume that I deal with students' adjustment problems. My closer attachment with students and parents also helped me in identifying those students with sever social disabilities.

Similarly, the responses of the focus group discussion also confirmed that the common means was observation, inside and/or outside the class room. That is, students with social disabilities were easily identified by observation for they seemingly demonstrate interaction difficulties both inside and outside the classroom. Additional means of identification used by teachers were also teacher nomination, parents' nomination and peer nomination. In fact, the latter three had been used for children with vivid social disabilities.

Though teachers in the three schools were able to identify students with social disabilities using the mechanisms described above, there also seem to exist some gaps in using other informative mechanisms for identifying children with social disabilities. For example, as indicated by Serna (1993), Johnson and Johnson (2001), and Greshman, (1998) respectively methods like sociometric-survey, mapping friendship patterns, and peer ratings are very helpful in identifying children with social deficits. Actually, these gaps could be attributed to the teachers' lack of supportive trainings, lack of leadership support from schools, and lack of adequate focus for the issue itself, as was possible to understand from the focus group discussion conducted and from the interview results.

The third issue raised to the respondents was about the causes of those social disabilities identified. In here, there seemed to exist some differences across the schools. For example, a teacher from school "B" expressed that:

In my school, students are getting depressed and worried because of economic problems. In some cases, I get students who are not allowed to eat their breakfast. Surprisingly, I also get students who eat only once a day. On the other hand, I get students getting worried with parental adjustment problems. May be because of the living condition of the nearby locality, conflict with parents seems a daily agenda for the husbands usually drink 'Tela', 'Araki' and 'Tej'. When I ask those depressed students, they tell me that they did not sleep the whole night because of parental problems. In some cases, I see these students crying because of the father's cruel action on the mother.

A teacher from school "C" on her part also noted that:

There is a Kechenie Child Rearing Center near to our school. Significant number of students of this center gets enrolled in our school each year. Most of the students of this center have similar characters that they complain about the mistreatment of foster mothers, and they have also identity confusion. Some of them also worry about their future fates. An insult by foster mother which is called 'wof-zerash' seems a common occasion which disappoints the orphans.

Generally, the respondents in their focus group discussion expressed that in school "B", economic and parental adjustment problems seemed to be the prevalent cause; and in school "C", the problems related to orphans like mistreatment by foster mothers, identity confusion, worry for future fate were the prevalent causes. An attempt was also made to investigate the reasons attributed to these two schools. Consequently, for school "B", the problems related to feeding, clothing, and lack of other instructional resources were attributed to socioeconomic status of the population; where as in the case of school "C", it was found out that a significant number of orphan children drew from Kechene Children's Rearing Institution. That is, as the results of the study showed, most of the children who drew from this institution complain about the problems of foster mothers, and this in fact contributed to the behavioral problems of students.

A teacher from School "A" in particular further indicated the causes in that:

The common causes for the social disabilities identified in my school include: overloaded responsibilities of children; age difference with their class mates, for some students who came from rural areas in Oromia region; family adjustment problems like conflict between parents, parents' hatred towards their child, parents' frequent cruel punishment and neglect; age related biological factors, especially for girls at the time of early menstrual periods; physical handicapped ness; economic problems related to feeding, clothing, and worry for other resources required for schooling; family health related problems like having HIV positive parent/s; having single parents; having alcoholic addicted parents; environmental related factors like growing in a locked compound having no friends or growing being over protected; mistreatment by foster mothers especially for orphans.

In addition to the existence of similarities and some differences across the experiences of those schools under study, this issue of foster mothers seems to have been a serious problem as was reported by teachers that foster mothers usually say to orphans that they are "Wef- zerash" and other similar expressions. Besides, it was reported that foster mothers at Kechene Child Rearing Center, for they are not trained, have not been genuinely serving the kids, for example in feeding, clothing, caring and other related services.

Cooper and McEvoy (1996) noted that social disabilities are causing learning disabilities, and it is for this reason that establishing good social relationships with other children has been described as one of the most important goals of education. So, appreciating the consequences that are likely to be observed in the efficiency of the education system, the fourth issue raised to the respondents was about the strategies that have been used in improving social skills of students with those disabilities identified. Some differences were observed among the orientation and commitment of teachers with respect to employing strategies for improving social interaction. The cause for the difference seemed to be attributed to two major reasons: one was the lack of adequate training and orientations on how to support socially disabled students and on how to improve their social skills; the other was the lack of the necessary focus and support from the principal's office for such issues. In general, the following were the major strategies that have been used by the respondents in improving students social skills: advising and initiating them to frequently play with their peers at school; deliberately initiating them to form friends/ peers; dealing with their parents on the problems and mechanisms for improvement; forcing them to join and participate in social clubs at schools; inviting them to observe the activities of socially active students in especially arranged programs; forcing them to undertake some short minutes discussion on a certain topic; forcing them to read sentences, paragraphs and passages in front of the class; forcing them to undertake a debate on a certain issue; teaching them to use the appropriate gesture while speaking, especially by language teachers; deliberately and frequently asking questions, and giving special responsibility in the classroom; arranging group activities and making them group representatives; forcing them to undertake a prompt speech on a certain topic; arranging their seats with socially active peers; creating links with donor agencies for support in feeding and stationary materials, especially for those with economic problems; and providing extra tutorial sessions, for most of the socially disabled children encounter learning difficulties.

Though the strategies discussed above are helpful in promoting students' social skills, it seems also important to devise mechanisms for training teachers in a way that could enable them successfully promote students' social skills through influencing attitudes, facilitating social interaction, promoting group work, and social skills trainings as was indicated by Barnes (1998), Canfield and Wells (2001), Punam (1997) and others.

4. CONCLUSION AND REFLECTIONS

From the discussions made and the findings obtained, it seems possible to conclude that there are significant numbers of students in our primary schools who are seeking help in promoting their social skills. Despite this, however, schools seem to lack the necessary attention for the issue under study, except a few teachers who are personally committed in supporting students with social skill problems.

In general, for positive social interaction and the establishment of friendship to occur among children with disabilities, at least the presence of three conditions seem very crucial: opportunity, continuity, and support.

The opportunity that is being with in proximity of other children frequently enough for meaningful contacts to be made, shall be ensured in the process of schooling. That is, when students are given deliberate opportunities to play, discuss, exchange ideas, work etc...with others, they are more likely to develop their social skills, for social skill development requires informed and meaningful practices or exposures.

In promoting continuity, these socially disabled students shall also be involved with the same group of children over a relatively long period of time. In some cases, parents may prohibit children not to play with their peers with the fear that they could be spoiled. However, this may unfortunately, develop some disabilities with children's emotional and social developments, which may also cause learning disabilities. So, in case when such condition happen with students in any school set up, the school and the parents need to work jointly to arrange situations for children with disabilities to be involved in social interaction with their peers both at school and out of school hours on continuous basis so that it would be possible to pave the way for the production of informed, rational, and responsive citizens. Supporting them to make contact with other children in order to work and play with them; and if possible being directly supported in maintaining friendship out of school, for example, by being driven to a friend's home or being allowed to sleep over at a friend's house at weekends is also another important action that needs to be taken. That is, inclusive schooling is likely to provide the opportunity for friendships to develop in terms of proximity and frequency of contact, and in terms of potential continuity. It is also likely to create the best possible chances for children with disabilities to observe and initiate the social interactions and behaviors of others. So, what inclusive classrooms must provide is the necessary support for positive social interaction to occur. This, particularly, seem to be important for students who are low in self-esteem and confidence and who are missing some of the basic social skills.

Besides, schools shall also take the lead in arranging trainings for teachers on improving students' social skills and ensure that the conditions are favorable; special group of teachers shall be organized in the form of guidance and counseling club so that it would be possible for the group to provide continuous support for children with social disabilities. Moreover, strong attempts shall also be made in strengthening parents' awareness on the education of their children so that their responsiveness to teachers' requests for dealing with children's problems is likely to increase.

To sum up, helping your students learn to get along with you and with others can make a huge difference in their future. Learning about the particular challenges faced by these students can cause you to feel rewarded even if they are students who others find unrewarding to work with. Help your students to learn social skills and you will assist them for the rest of their life.

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RELATIONAL SOCIAL CAPITAL AND CUSTOMER LOYALTY IN RETAIL BANKING IN KENYA: THE CASE OF NAKURU COUNTY

DR. DANIEL ONWONGA AUKA
LECTURER
DEPARTMENT OF BUSINESS ADMINISTRATION
EGERTON UNIVERSITY
NAKURA

JOSEPH BOSIRE
PROFESSOR
BONDO UNIVERSITY COLLEGE
BONDO

ABSTRACT

This study examined the effect of relational social capital on customer loyalty in retail banking. Social capital is an asset embedded in the relationship of individuals, committees, networks or societies. The investigated the effect of relational social capital constructs of trust, communication, commitment and conflict handling on customer loyalty in order to create competitive advantage. To achieve this, data were collected using a questionnaire from 381 respondents who were selected through stratified random and systematic sampling procedures. Data analysis was done through Pearson correlation and regression. The findings reveal that there was a positive and significant relationship between relational social capital and customer loyalty. This study also found that trust, communication, commitment and conflict handling influence the competitiveness of an organization. It is therefore recommended that banks should develop relational social capital as a way of creating and maintaining customer loyalty so as to improve their perform and create competitive advantage. .

KEYWORDS

Relational Social Capital, Trust, Communication, Commitment, Conflict Handling and Loyalty.

INTRODUCTION

As the banking sector becomes more competitive, many banks recognise the importance of retaining and maintaining loyal customers. In order to remain competitive, banks need to build and enhance customer relationships that deliver value beyond that provided by the core product (Zineldin, 2006). The benefits associated with such an approach include improved firm performance, profitability, business referral and publicity, customer share and competitive positioning (Hennigh-Thurau et al., 2002).

In the banking sector, loyal customers are more profitable because they are attached to the bank and thus are easier to serve than those who are non-loyal (Tepeci, 1999). Bowen & Shoemaker (1998) maintain that a small increase in loyal customers can result in a substantial increase in profitability. Furthermore, the longer a loyal customer stays with a firm, the more profitable it is to that firm (Kim & Cha, 2002)

There are benefits associated with customer loyalty to an organization including lower costs associated with retaining existing customers, rather than constantly recruiting new ones especially within mature, competitive markets (Ehrenberg and Goodhardt, 2000). Loyal customers also act as information channels, informally linking networks of friends, relatives and other potential customers to the organisation (Shoemaker and Lewis, 1999). Due to the similarity of the offers of many financial services, loyal customers have a huge value, since they are likely to spend and buy more, spread positive word-of-mouth, resist competitors' offers, wait for a product to become available and recommend the service provider to other potential customers.

The competitive banking environment has resulted in the need to build stronger firm-customer relationships. Ndubisi (2004) reported that more and more firms are capitalizing on strong firm-customer relationship to gain invaluable information on how best to serve customers and keep them from defecting to competing brands. Hence customer relationship building creates mutual rewards (Rapp and Collins, 1990) which benefits both the firm and the customer.

There are significant developments in the banking sector that are affecting the marketing of their products. Firstly, the changing customer behaviour that is characterized by longer life spans, increasing urbanization, more women in employment, increased home ownership, higher incomes and increased living standards. Customers are more demanding, more financially educated or informed, more cost and price conscious than hitherto. Secondly, reduced prices of services, interest rates and profit margins due deregulation and globalization of financial markets. This has ensued fierce competition resulting in mergers, acquisitions, and a number of major structural reorganizations that include retrenchment and elimination of unprofitable activities as well as closure of some branch operations.

All these changes have led to increased attention to customer relationship and service quality as a way of attracting, maintaining and enhancing long-term multiple-service relationship. Many financial service providers are creating competitive advantage by differentiating their products from their competitors through relationship marketing in terms of on-time delivery, provision of accurate information, customization, trained personnel and quicker complaints resolution. Therefore, relational social capital has become one of the most important strategies customer retention and loyalty.

One approach of building customer relationship is through social capital. Social capital is an asset embedded in the relationship of individuals, committees, networks or societies. It's also viewed as the set of resources embedded within the relationships among actors within a network and represents all the valuable relationships with customers, suppliers and other relevant stakeholders.

The elements of relational social capital in this study include trust which Moorman et al. (1993) defines as a willingness to rely on an exchange partner in whom one has confidence. They further state that a betrayal of this trust by the supplier or service provider could lead to defection.

Moorman et al. (1993) defined commitment as an enduring desire to maintain a valued relationship. Commitment is viewed as useful construct for measuring the likelihood of customer loyalty and predicting future purchase frequency (Gundlach et al., 1995). Communication is seen as an interactive dialogue between the company and its customers, which takes place during the pre-selling, selling, consuming and post-consuming stages (Anderson and Narus, 1990). When there is effective communication between an organisation and its customers, a better relationship will result and customers will be more loyal.

Ndubisi and Chan (2005) found a significant relationship between conflict handling and customer loyalty, indirectly through trust and perceived relationship quality. The ability of the firm to handle conflict well will directly influence customer loyalty. This study sought to assess the effects of relational social capital on customer loyalty within commercial banks in Nakuru Municipality.

STATEMENT OF THE PROBLEM

Creating long lasting and strong relationships with customers is critical in achieving and maintaining competitive advantage. A critical challenge for most enterprises is how to achieve and sustain competitive advantage. According to resource and capabilities theory, if the firms resources and capabilities that are unique, rare, difficult to imitate and non-substitutable they create competitive power and above average performance (Barney, 1991). Therefore, the traditional

product-oriented banks became more and more customer-oriented, focusing on protecting and retaining actual customers' loyalty as the main source of competitive advantage. Most research work that has been done on customer loyalty have focused on the effects of customer satisfaction, service quality and relationship marketing on customer loyalty. In all these research works it has been established that these variables together with value, trust and commitment are the most significant in creating and maintaining customer loyalty.

However, little research has been done on the effect of relational social capital as a strategic resource on customer loyalty. Even on instances where the elements of relational social capital such as trust, commitment, communication, collaboration and conflict handling have been used to determine customer loyalty they have either been viewed as elements of relationship marketing (Ndubisi, 2005) or as the important attributes of strategic alliance (Cobianchi, 1994). This study therefore centred on determining the effect of relational social capital on customer loyalty in retail banking in Nakuru County. Relational social capital was operationalized in terms of trust, commitment, communication and conflict handling.

OBJECTIVES OF THE STUDY

This study specifically sought to achieve the following objectives:

1. To determine the effect of Trust on customer loyalty within commercial banks in Nakuru County.
2. To determine the effects of Commitment on customer loyalty within commercial banks in Nakuru County.
3. To determine the effects of Communication on customer loyalty within commercial banks in Nakuru County.
4. To determine the effects of Conflict Handling on customer loyalty within commercial banks in Nakuru County.
5. To establish the composite effect of relational social capital (trust, communication, commitment and conflict handling) on customer loyalty within commercial banks in Nakuru County.

STUDY HYPOTHESES

- HO₁: There is no significant relationship between trust and customer loyalty within commercial banks in Nakuru County.
 HO₂: There is no significant relationship between commitment and customer loyalty within commercial banks in Nakuru County.
 HO₃: There is no significant relationship between communication and customer loyalty and within commercial banks in Nakuru County.
 HO₄: There is no significant relationship between conflict handling and customer loyalty and within commercial banks in Nakuru County.
 HO₅: There is no single form of social capital that has a significant effect on customer loyalty.

CUSTOMER LOYALTY

Customer loyalty conceptualisation has received remarkable attention in the literature over the past two decades because practitioners have observed the intricate relationship with a firm's profitability. Thus customer loyalty is now accepted as indispensable in strategic decision making because it costs more to attract new customers than to retain old ones.

Loyalty conceptualisation has two dimensions- attitudinal and behavioural. Attitudinal loyalty reflects a situation whereby different feelings create an individual's overall attachment to a product, service or organisation (Fornier, 1994). These feelings define the individual's cognitive degree of loyalty (Hallowell, 1996). The other dimension is behavioural which reflects the degree to which attitudinal feelings are translated into loyalty behaviour. In other words it reflects intentions being translated into actions.

Loyalty can be defined as the biased (i.e. non-random), behavioural response (i.e. purchase), expressed over time, by some decision making unit, with respect to one or more alternative brands out of a set of such brands, and is a function of psychological (i.e. decision making, evaluation) processes (Dick and Basu, 1994). (Oliver, 1999) defines customer loyalty as "... a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, causing repetitive same brand or same brand-set purchasing, despite situational influences and marketing efforts"

SOCIAL CAPITAL

Social capital is an asset embedded in the relationship of individuals, committees, networks or societies. It's also viewed as the set of resources embedded within the relationships among actors within a network (Robert et al., 2008). It represents all the valuable relationships with customers, suppliers and other relevant stakeholders. Hence, social capital comprises of both the network of relationships and the network assets incorporated within it that can be accessed by those who are a part of the relationship network (Bourdieu, 1986; Burt, 1992).

Nahapiet and Ghoshal (1998) have identified three distinct dimensions that can be examined to determine how social benefits positively affect their outcomes; they are the structural, relational and cognitive dimensions. Nahapiet and Ghosal (1998) define structural social capital as the pattern of network connections and the interconnectedness of the members in the network. The structural dimension of social capital describes the physical structure or links between people in networks. In other words, as Burt (1992) explained, it refers to whom you reach and how you reach those social relationships. Moreover, Nahapiet and Ghoshal (1998) in their fundamental proposition of social capital addressed that network ties provided access to resources, which provided the enterprise with not only a wide range of opportunities but also constraints. Thus social capital can be analyzed from two different points: how social capital can improve the performance of enterprises (benefit) and how much risk enterprise should take in order to maintain and support its social capital (risk). Social relations are also information channels, which reduce the amount of time and investment required for collecting necessary information (Nahapiet, Ghoshal 1998); also they encompass individual ties as well as formal and informal relationships, strategic and spontaneous action, and, moreover, rationalities and irrationalities (Coleman 1990).

The second component of social capital is cognitive social capital which refers to those resources that represent shared understanding of common goals and the proper ways of acting — for example, shared language and codes (Yli-Renko 1999). Llewellyn and Armistead (2000) noticed that cognitive dimension differs from relational one because it captures the extent, to which shared ways of thinking and interpreting events support the generation of social capital, while relational dimension of social capital purpose is to access the emotional bonds that hold those networks together. The cognitive dimension of social capital is important because through its standards and unified codes, it helps to understand other network members and leads them to act accordingly to their expectations.

The last element is relational social capital is defined as the behavioral assets rooted in a relationship such as trust and trustworthiness (Yli-Renko 1999). The relational social capital has been examined by identifying the rules and norms about trusting, reciprocity and obligation behaviours within firms (Adler and Kwon, 2002; Uzi, 1996). Trust is a very rich concept, covering a wide range of relationships, conjoining a variety of objects (Colesca 2009). That is why trust is usually analyzed as the fundamental element to social capital's existence and growth because trust and friendship are vital in development of social network ties. Because of this tight connection between trust and social capital, there is some confusion about whether social capital is the result of trust or they are virtually interchangeable. In this study, relational social capital was conceptualized as consisting of trust, commitment, communication and conflict handling.

TRUST

Moorman et al., (1993) defines trust as the willingness to rely on an exchange partner in whom one has confidence. A betrayal of this trust by the supplier or service provider could lead to defection. Schurr and Ozanne (1985) defined the term as the belief that a partner's word or promise is reliable and a party will fulfil his/her obligations in relationship. Fulfilling promises that have been given is equally important as a means of achieving customer satisfaction, retaining the customer base and securing long-term profitability besides fanning the fire of trust.

In marketing literature, Trust has been defined as the willingness to rely on an exchange partner in whom one has confidence (Ostrom and Iacobucci, 1999) or confidence in an exchange partner's reliability and integrity (Morgan and Hunt, 2004). Morgan and Hunt (1994) define brand trust as the customer's willingness to rely on the ability of the brand to perform its stated function. Trust causes dedication because it reduces the costs of negotiating agreements and lessens

customers' fear of opportunistic behaviour by the service provider. In social psychology trust is considered to consist of two elements: trust in the partner's honesty, and trust in the partner's benevolence. Honesty is the belief that a partner stands by his word, while benevolence is the belief that the partner is interested in the customer's welfare, and will not take actions with negative impact on the customer. In the marketing literature, Morgan and Hunt (1994) also suggest that brand trust leads to brand loyalty and commitment because trust creates exchange relationships that are highly valued.

COMMITMENT

Moorman et al., (1993) have defined commitment as an enduring desire to maintain a valued relationship. This implies a higher level obligation to make a relationship succeed and to make it mutually satisfying and beneficial (Gundlach et al., 1995). Since, commitment is higher among individuals who believe that they receive more value from a relationship, highly committed customers should be willing to reciprocate effort on behalf of a firm due to past benefits received and highly committed firms will continue the benefits of such reciprocity.

Commitment is frequently defined as a desire to maintain a relationship (Moorman, Deshpande and Zaltman 1993; Morgan and Hunt, 1994). Dwyer et al. (1987) describe it as a pledge of continuity and as resistance to change. In a conceptualization and study of employees' commitment to an organization, there are three types of commitment to an organization: affective, continuance and normative. Affective (or emotional) attachment exists when a strongly committed individual identifies with, is involved in, and enjoys membership in an organization. Affective commitment is defined as an affective state of mind that is based on a person sharing, identifying with and internalizing the values of an organization and thereby implies liking and emotional attachment (Morgan and Hunt, 2004). Trust in a relationship partner has been positioned as a central factor for customer loyalty and is a principal factor causing dedication.

COMMUNICATION

Communication refers to the ability to provide timely and trustworthy information. Communication may be viewed as an interactive dialogue between the company and its customers, which takes place during the pre-selling, selling, consuming and post-consuming stages (Anderson and Narus, 1990). It's the communicator's task in the early stages to build awareness, develop consumer preference, convince interested buyers, and encourage them to make the purchase decision (Ndubisi and Chan, 2005). Communication also tells dissatisfied customers what the organization is doing to rectify the causes of dissatisfaction. When there is effective communication between an organization and its customers, a better relationship will result and customers will be more loyal.

Communication between partners is critical for building a successful relationship. In order to achieve the benefits of collaboration, effective communication between partners is essential. Communication refers to the ability to provide timely and trustworthy information. Today, there is a new view of communications as an interactive dialogue between the company and its customers, which takes place during the pre-selling, selling, consuming and post-consuming stages (Anderson and Narus, 1990). It's the communicator's task in the early stages to build awareness, develop consumer preference, convince interested buyers, and encourage them to make the purchase decision (Ndubisi and Chan, 2005). Communication also tells dissatisfied customers what the organization is doing to rectify the causes of dissatisfaction. When there is effective communication between an organization and its customers, a better relationship will result and customers will be more loyal.

Conflict Handling

Dwyer et al., (1987) defined conflict handling as a supplier's ability to avoid potential conflicts, solve manifest conflicts before they create problems, and discuss solutions openly when problems do arise. How this is done will determine whether the outcome is loyalty or not. The

Dwyer et al., (1987) defined conflict handling as a supplier's ability to avoid potential conflicts, solve manifest conflicts before they create problems, and discuss solutions openly when problems do arise. How this is done will determine whether the outcome is loyalty or not. The ability of the product or service provider to handle conflict will also directly influence customer loyalty.

CUSTOMER SATISFACTION

Customer satisfaction and service quality are the most frequently explored antecedents of customer loyalty. The services literature is replete with examples of the attention directed to the study of satisfaction (Rust and Oliver, 1994) and typically identifies a positive relationship between satisfaction and loyalty-related outcomes (Cronin & Taylor, 1992; Fornell, 1992).

Satisfaction is the customer's post-purchase evaluation and affective (emotional) response to the overall product or service experience. It is a measure of how customer's needs, wishes, desires or expectations have been met or exceeded. Like customer loyalty, it is a behavior that customers explicitly vocalize or exhibit. It is a strong indicator for behavioral variables such as repurchase intentions, word-of-mouth communications and loyalty. However, several studies indicate, customer satisfaction is no guarantee for customer retention or loyalty.

Oliver (1996) considers customer satisfaction as "a pleasurable fulfillment" of needs, desires, and goals. However, recent studies conceptualize satisfaction as a cumulative evaluation as opposed to the early transaction-specific view. This view suggests that a single dissatisfying event is often not enough to engender switching behavior, and a single satisfying purchase is also not likely to result in a long-term loyal customer. The link between satisfaction and loyalty suggests that cumulative satisfaction is directly and positively related to customer loyalty.

Empirical studies show that satisfied customers tend to be more loyal than less satisfied ones and are therefore crucial to the firm's profitability (Reichheld & Sasser 1990). Conversely, dissatisfaction may lead to customers' defections (Reichheld, 1996). Satisfaction thus relates positively to customer loyalty and dissatisfaction may result in customer defections. Bowen and Chen (2001) say that maintaining satisfied customers alone is not sufficient, there has to be extremely satisfied customers to ensure loyalty. However, customer satisfaction in itself will not translate into customer loyalty but can foster loyalty to the extent that it is prerequisite for maintaining a favorable relative attitude, recommending others and repurchasing from a firm. Once customers recommend a firm, it fosters repatronage and loyalty towards the firm.

Theoretical Background

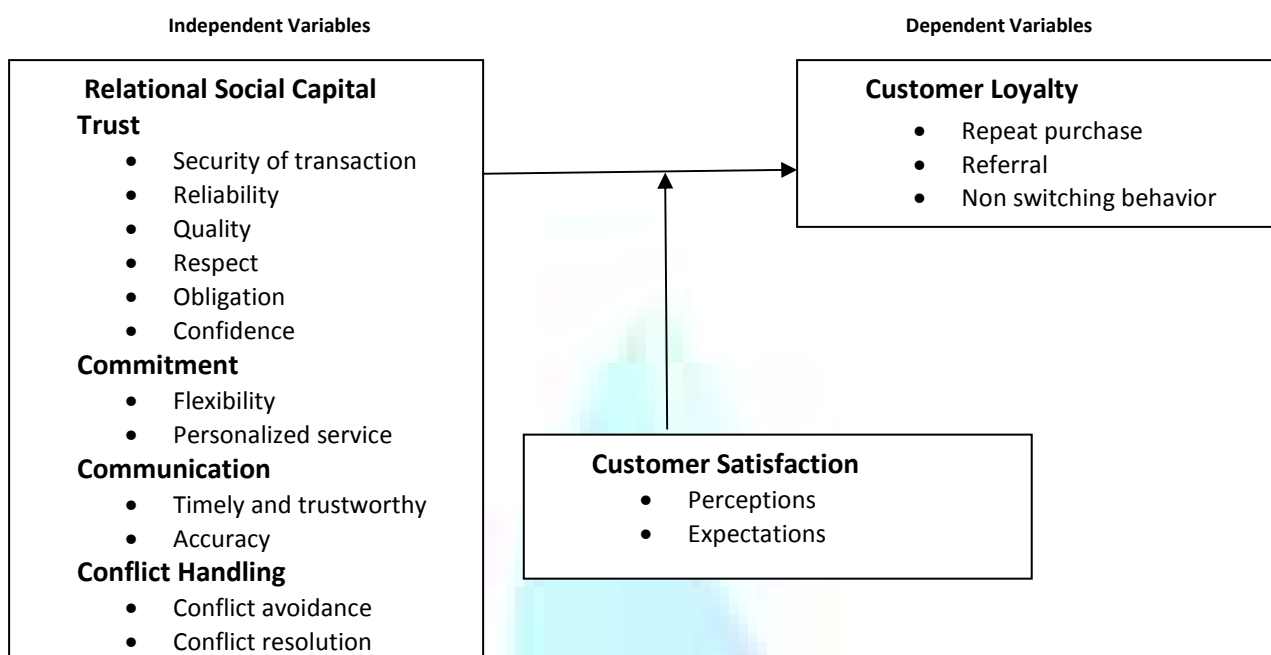
The theoretical foundation of this study will be the Social Capital Theory. Social Capital Theory is a theory that entails an economic idea that refers to the connections between individuals and entities that can be economically valuable. Social networks that include people who trust and assist each other can be a powerful asset. These relationships between individuals and firms can lead to a state in which each will think of the other when something needs to be done. Along with economic capital, social capital is a valuable mechanism in economic growth (<http://www.investopedia.com/terms/s/socialcapital.asp>).

SCT is considered one of the more useful perspectives for theorising the nature of connection and cooperation between organisations (Adler and Kwon, 2002; Starkey and Tempest, 2004). SCT supports the idea that people and relationships between organisations are instrumental to competitive advantage. The basis of social capital theory (SCT) within a firm is that both employees and the owner/manager can benefit because of the workplace relationships between them (Taylor et al., 2004). This then affects their access to a range of resources (Lin, 2001).

Conceptual Frame Work

Relational Social Capital was the independent variable conceptualized as constituting Trust, Commitment, Communication and Conflict Handling. Customer Loyalty was the dependent variable that was operationalized as comprising of repeat purchase, referral and None switching behavior. In this conceptual framework, the moderating variable is Customer Satisfaction. The conceptual framework for this study is illustrated in Figure 2.2.

RELATIONSHIP BETWEEN RELATIONAL SOCIAL CAPITAL AND CUSTOMER LOYALTY



METHODOLOGY

RESEARCH DESIGN

This study used descriptive survey which involves collection and analyzing of data from members of a population in order to determine the current status of the subject of study. This is a research design where the researcher does not have the direct control of independent variables and there is no treatment or manipulation offered to any variables. It attempts to describe such things as possible behavior, attitudes, values and characteristics, (Mugenda and Mugenda, 1999). A description survey research technique is the most appropriate when the purpose of the study is to explore and create a detail description of a phenomenon.

SAMPLE SIZE AND SAMPLING PROCEDURE

The commercial banks for this study had been purposively selected to capture three categories of ownership: public (state owned), private domestic and foreign owned banks within the municipality. Drawing a sample from across these categories ensured adequate representativeness of the various commercial bank characteristics.

Stratified random sampling was used to obtain the sample size. The population was stratified according to ownership (public, private and foreign), market share period of operation within the Municipality. A sub-sample size was determined for each stratum. The total sample size for the study was obtained using the following formula recommended by Borg and Gall (2006) for survey studies.

$$S = \frac{P(1-P) \cdot 100}{\frac{A^2}{Z^2} + \frac{P(1-P)}{N}}$$

Where

S = Sample size required

N = Number of people in the population

P = Preliminary estimate of percentage of people in the population who possess attributes of interest (50% or 0.5)

A = Accuracy (or precision) desired, expressed as a decimal (0.05 or 5%)

Z = The number of standard deviations of the sampling distribution (Z units) that corresponds to the desired confidence level, 1.96 for 95% confidence level

The total sample size of 384 respondents was determined. The sub-sample size for each bank was determined using the formula by Krejcie and Morgan (1970) given as:

$$s = \frac{xS}{P}$$

Where:

s = Sub-sample size for each bank

x = Sub population of customers in each bank

S = Total sample size for the study

P = Total population for all the banks

This number of respondents is above or more than the minimum of 100 recommended by Borg and Gall (2006) for survey studies. The formula was also preferred for its acceptable level of accuracy in generating a representative sample size at 0.05 level of confidence.

Once the population had been stratified and the sample size for each stratum determined, individual respondents were selected through systematic sampling. This was achieved by picking the customers from each stratum coming to the bank according to Zikmund (2003). This technique was preferred because it ensured representative coverage of all elements being considered in the study.

FINDINGS AND DISCUSSIONS

To determine the relationship between the independent variables and the dependent variable, correlation analysis was used. Correlation analysis was used to test hypotheses Ha1 to Ha3 and the results are provided in table I below.

Hypothesis 1: There is a relationship between trust and customer loyalty

The table below shows the correlation analysis on the relationship between trust and customer loyalty. The results show that trust positively and significantly influenced customer loyalty ($r = 0.255^{**}$). This implies that increasing trust among the customers results in increased customer loyalty.

Hypothesis 2 : There is a relationship between a relationship between commitment and customer loyalty

The correlation analysis shows that commitment positively and significantly influenced customer loyalty at $r = 0.309$, $p < 0.001$. This means that increased perception of commitment by the customer leads to increased customer loyalty.

Hypothesis 3: there is a relationship between communication and customer loyalty

The correlation analysis showed that communication positively and significantly influenced customer loyalty ($r = 0.396$, $p < 0.01$). This suggests that increased application of effective communication by the banks result into increased customer loyalty. On the other hand, failure by the banks to enhance effective communication may lead to decreased customer loyalty.

Hypothesis 4 : there is a relationship between conflict handling and customer loyalty

Finally, the correlation analysis showed that conflict handling positively and significantly influenced customer loyalty ($r = 0.455$, $p < 0.01$). These findings indicate that increased application of conflict handling by banks leads to increased customer loyalty. These findings showed that relational social capital positively influences customer loyalty among customers of commercial banks within Nakuru County. The results of correlation analysis show that one aspects of relational social capital, that is, conflict handling had the highest, significant positive relationship with customer loyalty ($r = 0.455$, $p < 0.01$).

Hypothesis 5: there is no single relational social capital element that influences customer loyalty

The relative contribution of the independent variables on customer loyalty was analyzed using the following regression model

$$CL = \beta_0 + \beta_1 TR + \beta_2 CM + \beta_3 CT + \beta_4 CH + e$$

Where:

β_0 = Intercept constant

$\beta_1, \beta_2, \beta_3 \& \beta_4$ = Regression coefficients that indicate the relationship between the dependent and independent variables,

e = the error

CL = customer loyalty

TR = Trust

CM = communication

CT = commitment

CH = conflict handling

EFFECT OF RELATIONAL SOCIAL CAPITAL ON CUSTOMER LOYALTY

| Variables | | Trust | Commitment | Communication | Conflict Handling | Customer Loyalty |
|------------------|-------------------------|--------|------------|---------------|-------------------|------------------|
| Trust | Correlation Coefficient | 1.000 | .317** | .307** | .306** | .255** |
| Commitment | Correlation Coefficient | .317** | 1.000 | .567** | .333** | .309** |
| Communication | Correlation Coefficient | .307** | .567** | 1.000 | .428** | .396** |
| Conflict | Correlation Coefficient | .306** | .333** | .428** | 1.000 | .455** |
| Customer Loyalty | Correlation Coefficient | .255** | .309** | .396** | .455** | 1.000 |

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

REGRESSION MODEL SUMMARY

| R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| .507(a) | .257 | .249 | .38478 | .257 | 32.350 | 4 | 374 | .000 |

a Predictors: (Constant), Conflict index, Trust index, Commitment index, Communication index

REGRESSION ANALYSIS RESULTS

| Model | | Un-standardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-------------------|------------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .909 | .137 | | 6.638 | .000 |
| | Trust | .079 | .043 | .090 | 1.849 | .065 |
| | Commitment | .037 | .051 | .041 | .717 | .474 |
| | Communication | .158 | .043 | .215 | 3.642 | .000 |
| | Conflict Handling | .292 | .048 | .308 | 6.144 | .000 |

a Dependent Variable: Customer Loyalty index

The regression analysis shows that Conflict Handling ($\beta = 0.308$, $p < 0.000$) and Communication ($\beta = 0.215$, $p < 0.000$) were found to be significant predictors of Customer Loyalty where as Commitment ($\beta = 0.041$, $p > 0.01$) and Trust ($\beta = 0.090$, $p > 0.01$) were insignificant predictors. This results show that there is a significant direct relationship between conflict handling and customer loyalty. This implies that bank customers in Nakuru Municipality tend to be loyal if their banks are able to handle conflicts which normally manifest as complains in a professionally and also if banks are effective in their communication. The other elements of relational social capital i.e trust and commitment though were found to positively and significantly influence customer loyalty. But at a closer look of the results, correlation analysis showed that conflict handling and communication had relatively greater impact on customer loyalty. This is in consistent with the results of regression analysis. From the Beta results in the table above, it clear that no single element of relational social capital entirely contributed to customer loyalty but every element contributed to a certain extent to customer loyalty as seen in table 4.8.

Consequently, regression summary model confirms that the observed change in customer loyalty attributed to the elements of social relational capital (Trust, Commitment, Communication and Conflict handling) is only 25.7% ($r^2 = 0.257$). On the basis of the correlation and regression analyses, relational social capital influences customer loyalty to some extent in commercial banks in the study area. Thus the study hypothesis that "Relational social capital significantly influences customer loyalty in commercial banks within Nakuru Municipality" is confirmed.

Ndubisi (2006) categorized the elements of relational social capital as the underpinnings of relationship marketing. The study found that trust, communication, commitment, and conflict handling contributed 29% of the variation in customer loyalty ($F = 21.12$; $P < 0.001$). This shows that there are consistencies in as far as the effects of elements of relational social capital on customer loyalty are concerned.

CONCLUSION

This study characterized elements of relational social capital (Trust, Commitment, Communication and Conflict handling) among commercial banks in Nakuru municipality. Furthermore this study has highlighted the level of customer satisfaction and customer loyalty in the commercial banks within Nakuru Municipality. In addition, the study has also investigated effects of relational social capital on customer loyalty among the commercial banks. The study findings may be useful in providing clear understanding of the subject of relational social capital and its application by commercial banks. Based on the survey findings, the study made the following conclusions:

Relational social capital (Trust, Commitment, Communication and Conflict handling) has been achieved in commercial banks within Nakuru Municipality to a varying extent. According to the study findings, elements of relational social capital such as trust, communication, conflict handling were had been moderately achieved.

The study also concluded that the overall level of customer satisfaction and customer loyalty among commercial banks in Nakuru Municipality was found to be moderate. The findings suggest that application of relational social capital had translated into improved customer satisfaction and loyalty in the respective commercial banks.

The study further concluded that relational social capital (Trust, Commitment, Communication and Conflict handling) was positively correlated to and significantly influenced customer loyalty in commercial banks. In addition, aspects of relational social capital such as conflict handling and communication were found to significantly influence customer loyalty in the commercial banks. Therefore banks strategists and researchers need to pay more attention to all elements of relational social capital and more so conflict handling and customer satisfaction if they are to achieve or nurture loyal customers.

The research examined the extent to which the elements of relational social capital influenced customer loyalty in banks within Nakuru Municipality. The study concluded that relational social capital (Trust, Commitment, Communication and Conflict handling) was positively correlated to and significantly influenced customer loyalty in commercial banks. In addition, aspects of relational social capital such as conflict handling and communication were found to more significantly influence customer loyalty in the commercial banks. This has serious implications for banks aiming to retain and build up loyal customers. Ndubisi, (2004) noted that loyal customers are valuable communicators of favorable word-of-mouth about organizations and products to which they feel loyal. The study has clearly shown that any bank aspiring to retain and build up loyal customers must pay close attention to elements of relational social capital which include Trust, Commitment, Communication and Conflict Handling.

MANAGERIAL IMPLICATIONS

It is evident from the study findings that elements of relational social capital such as trust, communication and conflict handling had been moderately achieved in the commercial banks in the study area. This study recommends the need to strengthen these particular aspects as well as other elements of relational social capital.

The study also concluded that the overall level of customer satisfaction and customer loyalty among commercial banks in Nakuru Municipality was found to be moderate. The findings suggest that application of relational social capital has not translated into improved customer satisfaction and loyalty in the respective commercial banks. Consequently, this study recommends effective application of relational social capital in order to achieve measurable improvement in the customer loyalty.

The study noted the influence of intervening variable such as the customer satisfaction had on customer loyalty in majority of the commercial banks. In this regard, this study recommends that in application of strategies including relational social capital that improved customer satisfaction and hence customer loyalty. The study also noted that the elements of relational social capital contributed only 25.7% towards achieving customer loyalty.

Strategist and managers in the banking sector must ensure that they develop the highest form of trust with their customers as their loyalty to the bank is pegged on it. They can achieve this by in house training their staff and more so the employees dealing directly with customers such as tellers, customer service assistants, personal bankers and any other customer facing staff on the importance of being trustworthy to their customers. These employees should build trust by ensuring that they keep any promise they make to the customers as they are the face of the bank. Fulfilling promises to customers will go a long way in archiving customer satisfaction which in turn will enhance customer loyalty.

The aspect of effective communication is also an area where serious consideration should be put by the strategists and managers. The banks should always provide reliable, accurate and useful information to their customers promptly. This could be done through letters, brochures, posters, advertisement in the print and electronic media and even verbally. The most important thing is that this information should be very honest.

The importance of genuine commitment in as far as building customer loyalty is concerned cannot be wished away and therefore banks should recognize the effectiveness of commitment in maintenance of loyal customers. Bank strategist and managers must carefully look at the needs of their customers and design products and services that directly address these needs. They should also try as much as possible to ensure flexibility in terms of their relationship with customers as long as it does not compromise the control measures put in place by their respective banks.

Finally, the study has shown that among all the elements of relational social capital, conflict handling had a greater influence on customer loyalty to a greater extent than the other factors. This means that the way we handle conflicts which are normally expressed as complaints in the banking sector really matters as far as our relationship with the customer is concerned. It is important to note that there will always be complaints in spite of the measures put in place to prevent them. The most important thing is how these complaints are handled by the banks. To achieve this, banks should develop an elaborate complaint/conflict handling mechanism that will enhance effective complaint resolution. The mechanism should also be in such a way that it can prevent any anticipated conflict with the customers. All employees especially customer facing ones must be well trained on conflict management. This training should highlight the different types of complains so that each staff would know which type of complaint he or she can handle and the one that needs escalation or fast tracking. This will ensure timely resolution of conflicts and hence customer loyalty will be achieved.

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JOB INVOLVEMENT AS A MEDIATOR OF THE RELATIONSHIP BETWEEN ORGANIZATIONAL COMMITMENT AND JOB PERFORMANCE IN THE SYSTEMICALLY IMPORTANT BANKS IN SRI LANKA

U.W.M.R. SAMPATH KAPPAGODA
RESEARCH SCHOLAR
SCHOOL OF GRADUATE STUDIES
MANAGEMENT AND SCIENCE UNIVERSITY
MALAYSIA

ABSTRACT

The purpose of this study was to investigate the relationship among organizational commitment, job involvement and job performance of non - managerial employees in the systemically important banks in Sri Lanka. The sample consisted of 400 non - managerial employees randomly selected from Systemically Important Banks. A questionnaire was administered among the non - managerial employees as the measuring instrument. The correlation analysis and regression analysis were used to analyze the data. The results of the study indicated that there was a significant positive relationship among organizational commitment, job involvement and organizational commitment. Job involvement was found to be a partial mediator of the relationship between organizational commitment and job performance of non-manual employees in the systemically important banks in Sri Lanka.

KEYWORDS

Job Involvement, Job Performance, Mediating Effect, Organizational Commitment.

INTRODUCTION

The banking sector is the dominant sub sector within the financial sector in Sri Lanka. Banks play a vital role in shaping up the economy of any country. The failure of a single bank can lead to the failure of the entire economy. The overall performance of the banking sector directly affects to the other industrial and service sectors of the economy. The success of the banking sector as a service organization largely depends on the customer satisfaction. The employees are the key factor in providing better service to their customers and ultimately it helps to improve the overall performance of the banks. The bank employees play an important role in delivering high quality services, promoting the corporate image and improving customer satisfaction (Karatepe and Tekinkus, 2006). According to Gabbott and Hogg (1997) employees' job performance is a key individual outcome in the financial and banking sector. Thus, the enhancing the job performance of the employees is a high priority of any manager in the banking sector. Lots of researchers and practitioners have focused their researches to find out the antecedents of job performance. Among them, organizational commitment (Baugh & Roberts, 1994; Meyer et al., 1993; Blau, 1986) and job involvement (Brown, 1996; Blau, 1986; Robbins, 2003) have been identified as important determinants of job performance. Organizational commitment and job involvement are two work related attitudes that can be affected different ways to work outcomes, behaviors and other work attitudes. Organizational commitment has widely been defined as identification and involvement with the organization via believing in the organization's values and goals, exerting effort on behalf of the organization, and desiring to remain with the organization (Mowday, Steers, & Porter, 1979). It has received substantial attention in the past research due to its significant impact on work outcomes. Some researchers point out that organization whose members have higher levels of commitment show higher performance, productivity and lower levels of absenteeism and tardiness. This implies that employees with a high level of commitment tend to take greater effort to perform and invest their resources in the organization. Job involvement is how people see their jobs as both a relationship with the working environment, the job itself and how their work and life are commingled. Many researchers found that direct relationship between job involvement and employee outcomes, organizational performance and organization success (Bates, 2004; Baumruk, 2004; Richman, 2006). In reviewing the literature, there exists a substantial amount of research on the relationship between organizational commitment and job performance whereas some researchers have found that direct relationships between organizational commitment and job involvement and job involvement and job performance. Anyway, the mediating effect of job involvement on the relationship between organizational commitment and job performance has received little attention in previous researches. In Sri Lanka, there are few researches on organizational commitment, job involvement and job performance but nothing can be found in the mediating effect of job involvement on the relationship between organizational commitment and job performance in the systemically important banks. Therefore, it seems that there is a research gap in this field in Sri Lanka.

PROBLEM STATEMENT

Lots of researchers have found direct relationship between organizational commitment and job performance. In turn, relationships between organizational commitment and job involvement, job involvement and job performance have been empirically established. In reviewing the literature, few researches can be found on the mediating effect of organizational commitment and job performance. However, there were no researches on the mediating effect of job involvement in the banking sector in Sri Lanka. Therefore, the problems addressed in this study are to investigate:

1. How and in what ways does organizational commitment and job involvement influence on job performance of non - managerial employees in systemically important banks in Sri Lanka?
2. Does job involvement mediate the relationship between organizational commitment and job performance of non-manual employees in systemically important banks in Sri Lanka?

OBJECTIVES OF THE STUDY

1. To identify the relationship between organizational commitment and job performance of non-manual employees in the systemically important banks
2. To investigate the impact of organizational commitment and job involvement of non-manual employees in the systemically important banks
3. To identify the relationship between organizational commitment and job performance of non-manual employees in the systemically important banks
4. To identify the mediating effect of job involvement on the relationship between organizational commitment and job performance among the non-manual employees in the systemically important banks

LITERATURE REVIEW

JOB PERFORMANCE

Motowidlo, Borman and Schmit (1997) define job performance as behaviors or activities that are oriented towards the organization's goals and objectives. Similarly, Campbell, McHenry, & Wise (1990) define job performance as the observable behaviors that people do in their jobs that are relevant to the goals of the organization. Traditionally, job performance was evaluated in terms of the proficiency with which as individual carried out the tasks that were specified in their job description. It has been conceptualized in terms of the execution and completion of well-defined task as a one dimension (Borman & Motowidlo, 1993). According to Moorhead and Griffin (1999), job performance is all of the total set of work related behaviors that the organization expects from the individuals to

display. However, the changing nature of work and organizations has challenged traditional views of job performance. Today, job performance is defined as a multidimensional construct.

The Task Performance (TP) and Contextual Performance (CP) have been received the most attention in the recent research (Borman and Motowidlo, 1993). According to Borman and Motowidlo (1993) the TP is the behavior that is directly linked with completion of the job. Behaviour in the domain of TP is usually recognized as a formal requirement of an individuals' job. Job description often explicitly stipulates that the job holders must perform these activities. According to another conceptualization on TP refers to activities that are formally part of a worker's job. These activities are two types. The first type includes activities that contribute directly to the "technical core" of the organization and the second type includes activities that support the technical core. TP involves all behaviors that are directly relevant to main job functions and in short, is the proficiency of activities that formally are recognized as part of workers "job" (Borman and Motowidlo, 1993). Borman and Motowidlo (1993) define CP as an individual's performance, which maintain and enhances an organization's social network and the psychological climate that supports technical tasks. CP is comprised of interpersonal behaviors or actions that benefit the organization. This type of performance is often not written in a job description but it is considered to be an important component of job performance. CP consist the behavior of volunteering for extra work, persisting with enthusiasm, helping and cooperating with others, following rules and procedures and supporting or defending the organization (Motowidlo and Schmit, 1999).

ORGANIZATIONAL COMMITMENT

Organizational commitment researchers can be divided into two major camps, those who view organizational commitment as an attitude and those who view it as behaviors (Meyer and Allen, 1991). According to Poteret al., (1974) an attitudinal perspective refers to the psychological attachment or Affective Commitment (AC) formed by an employee in relation to his identification and involvement with the respective organization. They further explain this as "an attachment to the organization, characterized by intention to remain in it, identification with the values and goals of the organization, and a willingness to exert extra effort on its behalf." It is considered to be the linkage between the individual employee and the organization because of individuals consider the extent to which their own values and goals related to that of the organization as part of organizational commitment.

Behavioral perspectives of organizational commitment is explained under the side bet theory (Becker, 1960) Side bets theory refers to the accumulation of investments valued by the individual which would be lost if she or he were to leave the organization (Becker, 1960). According to this theory individuals are committed to the organization as far as they hold their positions, irrespective of the stressful condition they experience. However, if they have been given alternative benefits, they will not to leave the organization. Mowday, Poter and Steers (1982) support the Becker's view and describe organizational commitment as a behavior relating to the process by which individuals become locked in to a certain organization.

Mayer and Allen (1990) viewed organizational commitment as multidimensional concept. They proposed a Three-Component Model, including: Affective Commitment (AC), continuance commitment (CC), and normative commitment (NC). AC refers to the employee's emotional attachment to, identification with, and involvement in the organization. CC refers to commitment based on the costs that the employee associates with leaving the organization due to the high cost of leaving. NC refers to an employee's feeling of obligation to remain with the organization based on the employee having internalized the values and goals of the organization.

JOB INVOLVEMENT

Job involvement is about to what degree one identifies with a job, how involved one is and if one believes in self-worth assured by his job. Highly involved employees identify with and care a lot about what they do (Robbins, 2001). According to Allport (1943), JI is the degree to which the job meets the need for prestige and self-respect or the level of importance to one's self esteem. Furthermore he conceptualizes JI as the degree to which one is actively participating in one's job. Lodahl and Kejner (1965) define JI as the degree of importance of one's work in one's total self-image. This definition also implies the significance of the job on the individual's work and non-work life. Kanungo (1982) defines JI as the extent to which one identifies psychologically with one's job. These individuals really care about the kind of work they do on their jobs. He describes JI as a belief descriptive of the present job and tends to be a function of how much the job can satisfy present needs. It is a specific belief resulting from the relationship with one's present job. Furthermore he explains that employees do not get involved in the job only for self-rational interest fulfillment; they also get involved in the job because they let their emotions play a role. Becoming highly involved in the job is often times a response to emotional rather than rational needs (Carmeli, 2003).

ORGANIZATIONAL COMMITMENT, JOB INVOLVEMENT AND JOB PERFORMANCE

Many studies revealed a strong positive correlation between job involvement and organizational commitment (Morrow, 1993; Mowday et al., 1979; Mowday et al., 1982; Schaufeli and Bakker, 2004; Sonnentag, 2003; Janis, 1989; Loui, 1995; Brown, 1996). The positive relationship between job involvement and commitment suggests that those employees who are committed to their jobs are likely to be committed to their employing organizations. On the other hand, job involvement has positively related to employee performance (Bates, 2004; Brown, 1996; Baumruk, 2004; 2008; Diefendorff et al., 2002; Kahn, 1990; Kappagoda, 2012; Lawler, 1986; Schaufeli and Bakker, 2004; Sonnentag, 2003). Previous research have studied the relationship between organizational commitment and job performance and found positive relationship (Baugh and Roberts, 1994; Brett et al., 1995; Kappagoda, 2012; Keller, 1997; Matheiu & Zajac, 1990; Meyer & Allen, 1997; Meyer et al., 1989; Mitchell & Larson, 1987; Mowday et al., 1982; Randall, 1990; Rao, 2000; Riketta, 2002). This finding suggests that employees who are committed to their organizations are more likely not only to remain with the organization but are also likely to exert more effort on behalf of the organization and work towards its success and therefore should be better performers than the uncommitted employees. Based on these empirical evidences, the following hypotheses are formulated.

H1: There is a positive relationship between organizational commitment and job performance of non-managerial employees in the systemically important banks.

H2: There is a positive relationship between organizational commitment and job involvement of non-managerial employees in the systemically important banks.

H3: There is a positive relationship between job involvement and job performance of non-managerial employees in the systemically important banks.

H4: Job involvement mediates the relationship between organizational commitment and job performance of non-managerial employees in the systemically important banks.

RESEARCH METHODOLOGY

THE RESEARCH DESIGN

The current study employed a correlational research design in order to explore the relationship between non-managerial employees' organizational commitment (independent variable) and non-managerial employees' job performance (dependent variable). Job involvement is the mediating variable. This field study is conducted in natural environment in banking sector under non-contrived settings. The unit of study is individual.

POPULATION AND SAMPLE

The population of this study is all the permanent non-managerial employees who work in Systemically Important Banks (highly performed commercial banks) in Sri Lanka. The sample for this study was randomly selected 400 non-managerial employees employed in Systemically Important Banks.

THE SAMPLING METHOD

Firstly, The Systemically Important Banks (SIBs) - Bank of Ceylon, Peoples Bank, Commercial Bank, Hatton National Bank, Sampath Bank and Seylan Bank- were selected. The convenient sampling method is used to select the branches of the bank which was situated in Colombo, Kurunegala and Anuradhapura. Then, with the consultation of the branch manager, four permanent non-managerial employees were selected in random basis.

MEASURES

Job performance, organizational commitment and job involvement are the variables of this study. These variables were measured using a questionnaire which was originally developed by the researcher. The questionnaire was separated into four sections for demographic data, organizational commitment, job involvement and job performance. Six questions were included to get the demographic information. The job performance was measured including 19 questions under two dimensions (Task performance and Contextual performance). Nine questions were included to test the organizational commitment of the non-

managerial employees under two dimensions (Willingness to display effort and desire to belong to the organization). Ten questions for job involvement were included into the questionnaire under two dimensions (Psychological identification of the job and active participation in the job). The total questions were 44.

VALIDITY AND RELIABILITY

The questionnaire which was prepared for non-managerial employees consists of 03 instruments (organizational commitment, job involvement and job performance). All these instruments have been developed after correctly identifying the relevant dimensions and indicators. Therefore, it can be assured that the instrument has content validity. In developing organizational instrument, affective organizational commitment scale, which was created by Meyer, Allen and Smith (1993), organizational commitment questionnaire, created by Meyer, Allen (1997) were considered. When developing job performance questionnaire, Motowidlo and Van Scotter's (1994) 15 items scale of organizational citizenship behavior and task and overall performance scale of Borman, and Ackerman (1994) were considered. Lodahl and Kejner (1965), job involvement scale, Kanungo (1982) job involvement questionnaire were considered in developing job involvement instrument for the Non – Managerial employees.

TABLE 01 - ALPHA VALUE FOR TEST RETESTS RELIABILITY

| Variables | Alpha value |
|---------------------------|-------------|
| Job Performance | 0.87 |
| Job involvement | 0.79 |
| Organizational Commitment | 0.74 |

It can be concluded that the instruments possesses high test retest reliability as there is a significant high correlation between the responses of the two administrations.

The table 02 shows the Cronbach coefficient alpha for each instrument. According to the data, each item is correlated with other item across the entire sample and the internal consistency reliability is satisfactory.

TABLE 02 - CRONBACH COEFFICIENT ALPHA VALUE FOR INTERNAL CONSISTENCY

| Variables | Alpha value |
|---------------------------|-------------|
| Job Performance | 0.91 |
| Job involvement | 0.81 |
| Organizational Commitment | 0.73 |

METHODS OF DATA ANALYSIS

The data analysis included univariate, bivariate and multivariate analyses. Collected data were analyzed using the SPSS data analysis package.

RESULTS

The results of the univariate data are given in table 03. According to the data, the level of organizational commitment, job involvement and job performance are above the moderate level among the non-managerial employees in the systemically important banks.

TABLE 03 - THE RESULTS OF UNIVARIATE ANALYSIS

| | Mean | Std. Deviation |
|---------------------------|------|----------------|
| Organizational Commitment | 3.56 | 0.52 |
| Job involvement | 3.41 | 0.51 |
| Job Performance | 3.26 | 0.42 |

TABLE 04 - CORRELATION COEFFICIENT BETWEEN INDEPENDENT AND DEPENDENT VARIABLES

| Variables | 1 | 2 | 3 |
|------------------------------|--------------------|--------------------|---|
| 1. Organizational Commitment | - | | |
| 2. Job involvement | 0.67 ^{**} | - | |
| 3. Job Performance | 0.53 ^{**} | 0.56 ^{**} | - |

** Correlation is significant at the 0.01 level.

TABLE 05 - RESULTS OF SIMPLE REGRESSION ANALYSIS

| β | R | R Square | Adjusted R Square | Std. Error of the Estimate | F value | P value |
|---------|-------|----------|-------------------|----------------------------|---------|---------|
| 0.53 | 0.530 | 0.281 | 0.279 | 0.445 | 155.52 | 0.00 |

Predictors: (Constant), Organizational Commitment

Dependent Variable: Job Performance

TABLE 06 - RESULTS OF SIMPLE REGRESSION ANALYSIS

| β | R | R Square | Adjusted R Square | Std. Error of the Estimate | F value | P value |
|---------|-------|----------|-------------------|----------------------------|---------|---------|
| 0.67 | 0.667 | 0.445 | 0.443 | 0.391 | 318.68 | 0.00 |

Predictors: (Constant), Organizational commitment

Dependent Variable: Job involvement

TABLE 07 - RESULTS OF SIMPLE REGRESSION ANALYSIS

| β | R | R Square | Adjusted R Square | Std. Error of the Estimate | F value | P value |
|---------|-------|----------|-------------------|----------------------------|---------|---------|
| 0.59 | 0.559 | 0.313 | 0.311 | 0.429 | 181.03 | 0.00 |

Predictors: (Constant), Job involvement

Dependent Variable: Job performance

Table 05 to 07 present the results of the regression analysis. According to the table, organizational commitment and job involvement have significantly and positively correlated to job performance whereas organizational commitment has also significantly and positively correlated to job involvement. Based on the results on correlational coefficient and regression analysis, hypotheses one, two and three can be accepted.

TABLE 08 - REGRESSION ANALYSIS OF JOB INVOLVEMENT MEDIATING ORGANIZATIONAL COMMITMENT-JOB PERFORMANCE RELATIONSHIP

| | Step 01 | Step 02 |
|-----------------------------------|---------------------|---------------------|
| Organizational Commitment β | 0.398 ^{**} | 0.213 ^{**} |
| Job involvement β | - | 0.282 ^{**} |
| R | 0.530 | 0.598 |
| R ² | 0.281 | 0.357 |
| F value | 155.52 | 110.28 |

** Correlation is significant at the 0.01 level.

According to the results of table 08, the introduction of job involvement in the analysis reduces the impact of organizational commitment. The β has dropped from 0.398 ($P < 0.01$) in step 01 to 0.213 ($P < 0.01$) in step 02.

DISCUSSION

The main objectives of this study were to investigate the mediating effect of job involvement on the relationship between organizational commitment and job performance and to identify the relationship among organizational commitment, job involvement and job performance of the non-managerial employees in the systemically important banks in Sri Lanka. For this purpose, four hypotheses were formulated.

By considering the hypothesis one, the results of correlation coefficient and regression analysis indicated that organizational commitment of the non-managerial employees has positively and significantly correlated with their job performance. This finding suggests that non managerial employees who are committed to their banks are more likely not only to remain with the bank but are also likely to exert more effort on behalf of the bank and work towards its success and therefore should be better performers than the uncommitted employees. According to the results of the analysis, the R Square is 0.28 which is significant at 1% ($p = 0.01$) suggest that the commitment of non-managerial employees has significantly explained 28% of the variance of their job performance. Furthermore, F value (155.52) suggests that there is a significant linear relationship between organizational commitment and job performance.

A positive relationship between organizational commitment and job involvement was predicted as the second hypothesis. The data show that the relationship between organizational commitment and job involvement of non-managerial employees in the systemically important banks has significantly and positively correlated. The results indicate that non managerial employees who are committed to their employing banks are also likely to be committed to their jobs. Organizational commitment of non-managerial employees has significantly explained 44.5% of variance of their job involvement. There was a significant linear relationship between organizational commitment and job involvement ($F=318.68$). It was the strongest correlation among the variables.

There is statistical evidence to accept the third hypothesis which was formulated in this study. The job involvement of the non-managerial employees has significantly and positively correlated to job performance. It means that the non-managerial employees who are highly involved with their jobs are high performers in the systemically important banks. It has significantly explained 31.3 % of the variance in job performance.

Furthermore, the researcher formulated a hypothesis to investigate the mediating effect of job involvement on the relationship between organizational commitment and job performance. For this purpose, the three steps which were recommended by Baron and Kenny in 1986 were used. According to these authors, as the first, the mediator should be predicted by the independent variable. Table 06 already showed that job involvement can be predicted by the organizational commitment. The dependent variable should be predicted by the mediator and the independent variable as the second step. The results in tables 05 and 07 showed that job performance can be predicted by organizational commitment and job involvement. The data suggested that there is an evidence to prove the first and second steps of Baron and Kenny's procedure. Finally, the dependent variable should be regressed on the independent variable, controlling for the mediator. According to the results of table 08, the introduction of job involvement in the analysis reduces the impact of organizational commitment. The β has dropped from 0.398 ($P<0.01$) in step 01 to 0.213 ($P<0.01$) in step 02. Both organizational commitment ($\beta =0.213$, $P<0.01$) and job involvement ($\beta =0.282$, $P<0.01$) remains a significant predictors in the last analysis. Therefore, according to Baron and Kenny (1986), it can be assumed that there is a partial mediation in this case. Thus, the final hypothesis can be accepted.

CONCLUSION

Based on the results of the study, it can be concluded that there is a partial mediating effect of job involvement of the non-managerial employees on the relationship between organizational commitment and job performance of the non-managerial employees. In addition to that, the correlation between organizational commitment and job performance, organizational commitment and job involvement, job involvement and job performance are significant and positive. Understanding these relationships will be helpful to the strategists in the banking sector when they are formulating strategies regarding their human resources.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The results must be considered in the context of several limitations. The first has to do with its generalizability as the data collection was confined to selected branches of systemically important banks. Second limitation was of relying on self-reported data. The level of organizational commitment, job involvement and job performance were measured according to the employees' own attitudes. Thirdly, the difficulty of exploring the psychological factors like organizational commitment, job involvement and job performance through the structured questionnaire was another limitation of this study.

The present study has been provided many potential paths for future researchers. In this study organizational commitment, job involvement and job performance were the major variables of interest. The research study attempted to demonstrate the mediating effect of job involvement. The further researches would be advantages to explore potential mediators except job involvement and moderators for the relationship between organizational commitment and job performance. This research focused only the systemically important banks but other researchers can expand the sample to the other banks, service organizations or different organizations in Sri Lanka.

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A STUDY ON EXISTING CAR CUSTOMERS (ALL BRANDS) ON THEIR REPLACEMENT PLANS**S. SHRILATHA****RESEARCH SCHOLAR, THIRUVALLUVAR UNIVERSITY, VELLORE; &
ASST. PROFESSOR
AUXILIUM COLLEGE
VELLORE****DR. A. ARULAPPAN****PRINCIPAL
VOORHEES COLLEGE
VELLORE****ABSTRACT**

In today's competitive world, Marketing does not stop with selling a product. It has become a continuous process where the companies are trying to retain their customers for years together. The above statement is highly suitable for a car industry. The manufacturers believe in customer delight as well as customer retention. In order to retain customers and increase their customer base, they regularly study the customer's perceptions and behaviours in various areas. One such area what they have selected falls under "Existing car customers (all brands) and their Replacement plans". This study is to postulate and analyze when and why consumers try to replace their cars and to understand the key factors that affect their replacement decisions. To focus on the existing owners and their trends followed while switching to new cars, to focus on utility factor w.r.t cars, to focus on upgradation as an issue for replacement of cars w.r.t customers, to determine the preference for fuel while replacement, to study the financial preference of the customers for purchase of cars, to bring out the various needs of future cars and car industry, and to measure the worth of brands w.r.t to certain criteria's for different car manufacturers.

KEYWORDS

Customer's perception and behaviours, existing owners, replacement, financial preference.

INTRODUCTION

The first motor cars on the streets of India were in the year 1898. Mumbai had its first taxicabs in the early 1900. Then for the next fifty years, cars were imported to satisfy domestic demand. Between 1910 and 20's the automobile industry made a humble beginning by setting up assembly plants in Mumbai, Kolkata and Chennai. The import/ assembly of vehicles grew consistently after the 1920's, crossing the 30,000 mark in 1930. Despite this, head start, the industry has never quite matched up to the performance of its counterparts in other parts of the world. Moreover, the industries considered low priority as cars and an "Unaffordable Luxury".

With the liberalization of the Indian economy, the passenger car industry was finally deregulated in 1993 and many companies, both Indian and foreign, announced their plans to enter the market. The last four years have seen companies like Hyundai, Ford, GM, Honda, Mercedes-Benz, Volkswagen, Skoda, Audi and BMW launch their cars in India. Nonetheless, times have changed significantly the days of the customer chasing the dealer to purchase poor quality cars backed my inefficient service are history. Today, the customer dictates the terms.

OBJECTIVES OF THE STUDY

- To postulate and analyze when and why consumers try to replace their cars.
- To understand the key factors that affects their replacement decisions.

PRESENT SCENARIO OF CAR INDUSTRY

From a very modest beginning, the Indian passenger car industry has come a long way. The industry has the presence of global players like General Motors, Ford, Suzuki, Toyota, Mitsubishi, Honda, Fiat, Hyundai, Daimler Chrysler, Skoda, Nissan, BMW and Renault. MNCs are widening their product portfolio, which will further intensify competition. This also marks the next phase of the Indian auto industry after the sectors were opened up. At present one of the key drivers for the growth of Indian car industry were exchanges of cars.

Phase I (upto 1984) Regulated and restrained market**Phase II** (1985 to 1992) Exploring new technology**Phase III** (1995 to 2000) Hurried entry of world players**Phase IV** (2001-04) Market maturing with intense competition**Phase V** (2005 and after) Globalisation

A new trend in the passenger car market is the exchange schemes launched by car manufacturers. Besides there arise the need for the pre-owned car markets. In 2006-07, an estimated 12.5% of all car sales achieved through exchange of old models on the back of brand loyalty. Maruti has been a major beneficiary selling reportedly 76,500 cars under the scheme. Others benefiting include Hyundai (16%), GM (8 to 10%) and Honda (6%). Maruti's pre-owned car dealings were having their own brand in the name of "True Value". Hyundai's pre-owned car showrooms were known as "Advantage" which has been recently started. Volkswagen were also likely to start their pre-owned car markets with various schemes like insurance and the finances.

The sale of pre-owned (or second hand) cars has caught on. Not only Maruti which sold 84,500 cars through its 'True Value' chain of marketing outlets, even global majors like Porsche (40 cars) and Bentley have also joined the bandwagon. Nearly 20% of the pre-owned market is organized. Nearly 60% of the vehicles sold by individuals through word of mouth, while 20% of the market were controlled by brokers.

Market Segmentation in mid 2008-09 as against 2006-07 as follows

| Segments | 2006-07 | Mid-2008-09 |
|--------------------|---------|-------------|
| Premium and luxury | 0.40% | 0.80% |
| Executive segment | 3.20% | 2.60% |
| Mid-size | 17.20% | 20.30% |
| Small and compact | 79.20% | 76.30% |

Source: SIAM

| Market Growth Rates | |
|---------------------|--------|
| 1990-91-1996-97 | 16.20% |
| 1996-97-2001-02 | 4.50% |
| 2001-02-2006-07 | 17.70% |
| 2006-07-2011-12 | 9.80% |
| 2011-12 - 2019-20 | 8.50% |

Source: SIAM

Sensitivity Coefficient 9.3%

HYPOTHESIS

1. There is no relationship between income and time period for replacement of cars.
2. There is no relationship between age of respondents and time for replacement of cars.
3. There is no relationship between Age of the customer and engine power for cars.
4. There is no relationship between Income and preference for cars while replacement.
5. There is no relationship between Income and preference for upgradation of cars while replacement.
6. There is no relationship between Age of customer and preferences for upgradation of cars.
7. There is no relationship between Income of the customer and the preference for fuel Options w.r.t cars while replacement.
8. There is no relationship between income and seasonal offers while purchasing a car.
9. There is no relationship between age and seasonal offers while purchasing a car.

METHODOLOGY

The study is intended to analyze the customer's perceptions while replacement of their cars. The researcher conducted survey to bring out the various aspects on which customers to validate their process of replacement w.r.t cars by questionnaire. An attempt is also made to assess the brand worth for various cars. The sample size of the study was 400. The data collected at Vellore city by distributing questionnaires. The researcher used primary and secondary data for this study. Chi Square, Rank Correlation and percentage analysis had used for this study.

CHI SQUARE TESTS**HYPOTHESIS NO. 1**

Ho: There is no relationship between income and time period for replacement of cars.

| Income/Replacement | <1yr | 1-2yrs | 2-3yrs | 3-4yrs | >4yrs | Total |
|--------------------|------|--------|--------|--------|-------|-------|
| 5-15k | | 4 | 13 | 13 | 25 | 55 |
| 15-25k | 14 | 8 | 31 | 40 | 54 | 147 |
| >25k | 15 | 26 | 75 | 25 | 57 | 198 |
| Total | 29 | 38 | 119 | 78 | 136 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 33.23406 | 8 |

Table value: $X_{0.05}$ @ 8 d.f. = 15.5

At 5% level of significance the calculated value is greater than table value. Hence, the Ho is rejected. Therefore, there is a relationship between income and replacement of cars.

HYPOTHESIS NO. 2

Ho: There is no relationship between age of respondents and time for replacement of cars.

| Age/Replacement | <1yr | 1-2yrs | 2-3yrs | 3-4yrs | >4yrs | Total |
|-----------------|------|--------|--------|--------|-------|-------|
| 20-30 | 5 | 13 | 23 | 23 | 40 | 104 |
| 30-40 | 2 | 10 | 36 | 18 | 38 | 104 |
| 40-50 | 13 | 13 | 38 | 19 | 25 | 108 |
| 50-60 | 6 | 2 | 16 | 12 | 26 | 62 |
| 60-70 | 3 | | 6 | 6 | 7 | 22 |
| Total | 29 | 38 | 119 | 78 | 136 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 27.99665 | 16 |

Table value: $X_{0.05}$ @ 16 d.f. = 23.6

At 5% level of significance the calculated value is greater than table value. Ho is rejected. Hence, there is a relationship between age of respondents and replacement of cars.

HYPOTHESIS NO.3

Ho: There is no relationship between Age of the customer and engine power for cars.

| Age/ CC | 1000 | 1000-1500 | 1500-2000 | >2000 | Total |
|---------|------|-----------|-----------|-------|-------|
| 20-30 | 17 | 76 | 7 | 4 | 104 |
| 30-40 | 13 | 78 | 10 | 3 | 104 |
| 40-50 | 17 | 75 | 15 | 1 | 108 |
| 50-60 | 10 | 39 | 9 | 4 | 62 |
| 60-70 | 3 | 15 | 4 | | 22 |
| Total | 60 | 283 | 45 | 12 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 10.86437 | 12 |

Table value: $\chi_{0.05} @ 12 \text{ d.f.} = 21.0$

At 5% level of significance the Calculated value is less than table value. Hence, the H_0 is accepted. There is no relationship between Age and engine power for cars.

HYPOTHESIS NO.4

H_0 : There is no relationship between Income and preference for cars while replacement.

| Income/Preference | Indigenous | Imported | Assembled | Total |
|-------------------|------------|----------|-----------|-------|
| 5-15k | 32 | 18 | 5 | 55 |
| 15-25k | 89 | 20 | 38 | 147 |
| >25k | 99 | 65 | 34 | 198 |
| Total | 220 | 103 | 77 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 21.85474 | 4 |

Table value: $\chi_{0.05} @ 4 \text{ d.f.} = 9.49$

At 5% level of significance the calculated value is greater than table value. Hence, the H_0 is rejected. Therefore, there is a relationship between Age and Preference for cars while replacement of the cars.

HYPOTHESIS NO. 5

H_0 : There is no relationship between Income and preference for Upgradation of cars while replacement.

| Income/Preference | High Maintenance | Increase in income | Advance in tech | Need | Total |
|-------------------|------------------|--------------------|-----------------|------|-------|
| 5-15k | 8 | 16 | 20 | 11 | 55 |
| 15-25k | 42 | 35 | 38 | 32 | 147 |
| >25k | 51 | 24 | 77 | 46 | 198 |
| Total | 101 | 75 | 135 | 89 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 17.54724 | 6 |

Table value: $\chi_{0.05} @ 6 \text{ d.f.} = 12.6$

At 5% level of significance the calculated value is greater than table value. Hence, the H_0 is rejected. Therefore, there is a relationship between Income and Preference for Upgradation while replacement of the cars.

HYPOTHESIS NO. 6

H_0 : There is no relationship between age of customer and preferences for upgradation of cars.

| Age/Upgradation | High maintenance | Increase in income | Advance in tech | Need | Total |
|-----------------|------------------|--------------------|-----------------|------|-------|
| 20-30 | 22 | 32 | 36 | 14 | 104 |
| 30-40 | 41 | 22 | 25 | 16 | 104 |
| 40-50 | 23 | 11 | 48 | 26 | 108 |
| 50-60 | 9 | 10 | 21 | 22 | 62 |
| 60-70 | 6 | | 5 | 11 | 22 |
| Total | 101 | 75 | 135 | 89 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 55.25944 | 12 |

Table value: $\chi_{0.05} @ 12 \text{ d.f.} = 21.0$

At 5% level of significance the calculated value is greater than table value. Therefore, H_0 is rejected. Hence, there exists a relationship between age of the customer and his preferences for upgradation w.r.t cars.

HYPOTHESIS NO. 7

H_0 : There is no relationship between Income of the customer and the preference for Fuel Options w.r.t cars while replacement.

| Income/Fuel Options | Diesel | Petrol | LPG | Electric | Total |
|---------------------|--------|--------|-----|----------|-------|
| 5-15k | 13 | 28 | 10 | 4 | 55 |
| 15-25k | 32 | 97 | 11 | 7 | 147 |
| >25k | 66 | 99 | 23 | 10 | 198 |
| Total | 111 | 224 | 44 | 21 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 13.41069 | 6 |

Table value: $\chi_{0.05} @ 6 \text{ d.f.} = 12.6$

At 5% level of significance, the calculated value greater than table value.

Hence, the H_0 is rejected. Therefore, there is a relationship between Income and fuel options while replacement of the cars.

HYPOTHESIS NO. 8

H_0 : There is no relationship between Income and seasonal offers while purchasing a car.

| Income/seasonal offers | Seasonal Offers | | Total |
|------------------------|-----------------|-----|-------|
| | No | Yes | |
| 5-15k | 35 | 20 | 55 |
| 15-25k | 92 | 55 | 147 |
| >25k | 97 | 101 | 198 |
| | 224 | 176 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | df |
| Pearson Chi-Square | 7.837502 | 2 |

Table value: $\chi_{0.05} @ 2 \text{ d.f.} = 5.99$

At 5% level of significance the calculated value is greater than table value.

Hence, the H_0 is rejected. Therefore, there is a relationship between Income and seasonal offers while purchasing a car.

HYPOTHESIS NO. 9

H_0 : There is no relationship between Age and seasonal offers while purchasing a car.

| Age/Seasonal Offers | Yes | No | Total |
|---------------------|-----|-----|-------|
| 20-30 | 46 | 58 | 104 |
| 30-40 | 41 | 63 | 104 |
| 40-50 | 47 | 61 | 108 |
| 50-60 | 30 | 32 | 62 |
| 60-70 | 12 | 10 | 22 |
| Total | 176 | 224 | 400 |

| Chi-Square Tests | | |
|--------------------|----------|----|
| | Value | Df |
| Pearson Chi-Square | 2.373793 | 4 |

Table value: $\chi_{0.05} @ 4 \text{ d.f.} = 9.49$

At 5% level of significance the calculated value is less than table value. Hence, the H_0 is Accepted. Therefore, there is no relationship between Age and seasonal offers while purchasing a car.

RANK CORRELATION

- To find the correlation between professionals, employees and self-employees in terms of utility.

| Criteria's/Occupation | Professional | Employed | Self employed |
|-----------------------|--------------|----------|---------------|
| Safety | 1 | 1 | 1 |
| Convenience | 2 | 2 | 2 |
| Luggage Space | 5 | 5 | 5 |
| Faster pick up | 3 | 4 | 3 |
| Seating Capacity | 4 | 3 | 4 |
| Parking Space | 6 | 6 | 6 |

$$r_s = 1 - 6(d^2) / N^2(N-1)$$

- Professionals and Employees: $r_s = 0.93$
- Employees and Self-employees: $r_s = 0.9$
- Professional and Self-employees: $r_s = 1$

Result: There is a degree of correlation between respondents of different occupations w.r.t to utility for cars.

MAJOR FINDINGS

- 34% of the respondents will go for replacement above 4 years.
- 37.87% of the respondents in the income group above twenty-five thousands per month, 35.19% of the respondents in the age group 40 to 50 and 37.90% self-employed think of replacing their cars within 2 to 3 years.
- 54% of the respondents do not prefer replacement while transfers.
- 33.75% of the respondents will go for replacement when advanced technology.
- 55% of the respondents will go for cars manufactures in India:
 - Technology
 - Availability of spares
 - Low cost
 - Maintenance
 - Suitability to Indian conditions.
- The purchasing behaviour 70.5% of the respondents is influenced by their family.
- 56% of the respondents prefer petrol as the fuel option for low maintenance costs and faster pickup etc.
- 62.25% of the respondents prefer for loans while purchase of cars to get relief on taxes and initial investments. 57.5% of the respondents prefer loans with low interest rates.
- 56% of the respondents in Vellore show no preference for seasonal offers while purchase of cars.

RECOMMENDATIONS

REPLACEMENT

- Studies shows certain people like to replace their cars between 2 to 3 yrs, thus the company has to develop a database of car users above 2 yrs and try establishing contacts and keep mailing them about the new releases.
- Study shows professionals prefer to replace their cars while transfers.
- Study shows people prefer to replace their cars for high maintenance cost.
- Study shows people prefer to replace while change of needs, thus can create a database from its customers (coming for service or any other source) about their extra needs and present trends w.r.t to models, features etc and try to bring in changes frequently in the cars.

PROMOTION

- Since study shows cars to be a high value product and the purchase decisions to be affected by the whole family.
- Study shows banners to be not effective as a media for promotion of cars.

UPGRADATION

- Study shows people prefer for technology as a means to replace their cars with vivid features and availability of spares.
- Study shows people look for safety and convenience as the most important factor for purchase of cars.

CONCLUSION

This study has helped in understanding the perceptions of car users in Vellore. This study clearly suggests that cars are no more perceived as a luxury product and buyers are willing to replace as and when there is a technological advancements.

This project gave an insight into the utility aspect of cars in City life. This study has also given an insight into understanding the car users' perception about various brands.

Based on the findings few suggestions have been given for promoting the car among those who are planning to upgrade their cars. If the company can look into these suggestions, it may prove them helpful in improving their sales and brand image.

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EVALUATION OF RESOURCE MOBILIZED THROUGH MUTUAL FUNDS IN INDIA

DR. RAM SINGH
DY. DIRECTOR
CHANAKYA INSTITUTE OF MANAGEMENT
GHARUAN

PALLAVI MANIK
ASST. PROFESSOR
LRDAV COLLEGE
JAGRAON

ANUBHUTI MODGIL
ASST. PROFESSOR
LRDAV COLLEGE
JAGRAON

ABSTRACT

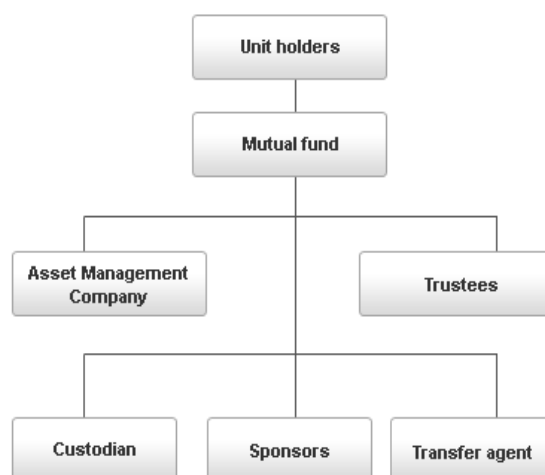
In a volatile stock market, the future of return on investment is uncertain and if investment of an investor is small, then return on that investment can be on negative side. Because small investor in stock market face lots of problems like lack of professional advice, limited resources and lack of knowledge. To overcome these problems, much needed help is provided by mutual funds in India. History of mutual funds in India more than 40 years old. It is an institution which pools the savings of small investors and channelizes those savings with a team of experts who invest savings in a portfolio so as to minimize risk. Mutual funds form an important part of capital market which are helpful in mobilizing the savings of an individual in the capital market of India. Savings which are invested leads to capital formation and at the end overall development of economy. So this paper try to cover total resource mobilized by mutual funds in India and their share in various sectors (public, private and UTI) and also suggest some measures to improve their shares in total resource mobilized.

KEYWORDS

Resource mobilized by mutual funds, share in various sector, measures to improve share.

INTRODUCTION

A mutual fund is a type of professionally-managed collective investment vehicle that pools money from many investors to purchase securities. While there is no legal definition of mutual fund, the term is most commonly applied only to those collective investment vehicles that are regulated, available to the general public and open-ended in nature. There are 3 types of U.S. mutual funds: open-end, unit investment trust, and closed-end. The most common type, the open-end mutual fund, must be willing to buy back its shares from its investors at the end of every business day. Exchange-traded funds are open-end funds or unit investment trusts that trade on an exchange. Open-end funds are most common, but exchange-traded funds have been gaining in popularity. Mutual funds are classified by their principal investments. The four largest categories of funds are money market funds, bond or fixed income funds, stock or equity funds and hybrid funds. Funds may also be categorized as index or actively-managed. Mutual Funds are dynamic Financial Institutions (FIs) which play a crucial role in an economy by mobilizing savings and investing them in the capital market, thus establishing a link between saving and the capital market. The Securities & Exchange Board of India (SEBI) (Mutual Fund) regulations 1993 defines Mutual Funds as, "A fund established in the form of a trust by sponsor, to raise monies by the trustees through the sale of units to the public, under one or more schemes, for investing in securities in accordance with these regulations" Structure of Mutual fund is as under:



The Association of Mutual Funds in India (AMFI) defines; "Mutual Funds is a trust that pools the savings of a number of investors who share common financial goal. Anybody with an investible surplus of as little as a few thousand rupees can invest in Mutual Funds. These investors buy units of a particular Mutual Fund scheme that has defined investment objective and strategy."

Mutual Fund Industry in its true spirit rooted in a free market and oriented towards competitive functioning with the dedicated goal of service to the investors can be said to have settled in India only in 1993. However the industry took its roots much earlier with the setting up of the Unit Trust In India (UTI) in 1964 by the Government of India. During the last 36 years, UTI has grown to be a dominant player in the industry with assets of over Rs.72, 333.43 Crores as of March 31, 2000. The UTI is governed by a special legislation, the Unit Trust of India Act, 1963. In 1987 public sector banks and insurance companies were permitted to set up mutual funds and accordingly since 1987, 6 public sector banks have set up mutual funds. Also the two Insurance companies LIC and GIC established mutual

funds. Securities Exchange Board of India (SEBI) formulated the Mutual Fund (Regulation) 1993, which for the first time established a comprehensive regulatory framework for the mutual fund industry. Since then several mutual funds have been set up by the private and joint sectors. At present, Mutual funds play an important role in mobilizing the household savings for deployment in capital markets. There were 1,131 mutual fund schemes as on March 31, 2011, of which, 679 were income/debt oriented schemes, 376 were growth/equity oriented schemes and 33 were balanced. In addition, there were 28 Exchange Traded Funds, of which 10 were Gold ETFs. Also, there were 16 schemes operating as Fund of Funds which also invested in overseas securities schemes. There were 727 open-ended schemes and 368 close-ended schemes as on March 31, 2011 (SEBI Annual Report, 2011). By taking into account the importance of mutual funds in India and contribution in resource mobilized in Indian economy, this research focus on total amount mobilized by mutual funds industry of India by making a very detailed analysis of resources mobilized scheme wise, fund wise and suggest solution to the problems faced by them.

OBJECTIVE OF THE STUDY

1. To analyze the trends in resource mobilized through mutual funds in India.
2. To measure the performance of mutual funds industry sector wise, scheme wise and checking their trends.

RESEARCH METHODOLOGY

To serve the objective of the study secondary data has been used and data has been taken from the reports of Indian securities market. For measuring the performance of the mutual funds industry various parameters used are Gross mobilization, redemption values, Net inflows and Assets at the end of the period. Analysis of the data has been made sector wise, scheme wise and fund wise by using growth, average and various ratios as a statistical techniques. Time period of the study is 10 years from 2001-02 to 2010-11.

REVIEW OF LITERATURE

Popli, G.S. and Rao, D.N. studied the marketing of Mutual Fund products through banks in India. The study reveals about the reforms in financial Sector and revolutionary developments in information technology have opened new opportunities for retail Banks in India. Research concludes that opportunities are based on customer's high usage rate of Mutual Fund Products, the low penetration of banks to Mutual Fund schemes and customer's willingness to buy these Products from banks.

Deepak Agrawal and Patidar studied about the Mutual Fund of Reliance and HDFC. The study revealed that the performance is affected by the saving and investment habits of the people and at the second side the confidence and loyalty of the fund Manager and rewards affects the performance of the MF industry in India.

Nikita Rao Heeshma Chhatralia (2009) has made a Comparison between the Indian and US Mutual Fund Industry. They have given only a brief idea as to how mutual funds in both the countries are performing; an attempt has been made to represent mutual fund industry of both the countries by taking a few top and best performing companies in each of the country.

Ravi Agarwal and Wasif Mukhtar (2010) studied the Stock Selection Strategies of Growth Mutual Funds in India. There have been many techniques for evaluating equity portfolio performance. Study concludes that investors need to evaluate their own performance and the performance of hired managers. Finally, an evaluation of a portfolio manager should be done many times over different market environments before a final judgment is reached regarding the strengths and weakness of a fund manager.

G.Lenin Kumar, S. Gayathri and Karthika studied the emerging prospectus, issues and challenges of Mutual Fund in India. Study shows that mutual fund is not an alternative investment option to stocks and bonds rather it pools the money of several investors and invests this in stocks, bonds, money market instruments and other types of securities.

Sumalatha.B.S (2007) studied the competition among the Mutual Funds in India. Study detailed the different schemes of Mutual Fund industry with large number of funds indicating product differentiation seems to be a strategic behavior to with stand competition. Study tries to find out the existing competition in the mutual fund industry in India and also analyzed the nature of competition among the sectors and within the sectors.

Boyed et al. (2007) explored customer behavior in relation to the selection of a financial service provider. Research examined customer's scores on selection Criteria, such as reputation and friendliness by taking into account customers Demographic characteristics, e.g. size of household, household income, age and gender of household head. Study concludes that factors such as reputation, interest charged on loans and interest paid for saving accounts were critical, while less important were friendliness of employees and the modern facilities.

TABLE 1: TOTAL RESOURCES MOBILIZED BY MUTUAL FUNDS IN INDIA

| Years | Gross Mobilization | Redemption | Net Inflows | Assets at the end of the period | Net Inflow to Total Assets | Net Inflow to GM | Redemption to GM |
|----------------|--------------------|----------------|--------------|---------------------------------|----------------------------|------------------|------------------|
| 2001-02 | 164523 | 157348 | 7175 | 100594 | 7.13 | 4.36 | 95.63 |
| 2002-03 | 314706 | 310510 | 4196 | 109299 | 3.83 | 1.33 | 98.66 |
| 2003-04 | 590190 | 543381 | 46808 | 139616 | 33.52 | 7.93 | 92.06 |
| 2004-05 | 839708 | 837508 | 2200 | 149600 | 1.47 | 0.26 | 99.73 |
| 2005-06 | 1098149 | 1045370 | 52779 | 231862 | 22.76 | 4.80 | 95.19 |
| 2006-07 | 1938493 | 1844508 | 93985 | 326292 | 28.80 | 4.84 | 95.15 |
| 2007-08 | 4464376 | 4320575 | 153802 | 505152 | 30.44 | 3.44 | 96.77 |
| 2008-09 | 5426353 | 5454650 | (28296) | 417300 | (6.78) | (0.52) | 100.52 |
| 2009-10 | 10019022 | 9935942 | 83080 | 631978 | 13.14 | 0.82 | 99.17 |
| 2010-11 | 8859515 | 8908921 | 49406 | 592250 | 8.34 | 0.55 | 100.55 |
| Average | 3371503 | 3335871 | 46513 | 320394 | | | |
| Growth | 52.85 | 55.62 | 5.89 | 4.89 | | | |

Source: Handbook of Statistics on the Indian Securities Market 2010

Table 1 shows the resource mobilized by Indian Mutual Fund industry over the last 10 years via disclosing the figures for Gross Mobilization, Redemptions values, Net inflows and Assets at the end of the period. Total amount mobilized by mutual funds over the last 10 years increased by 52.85 pc with an average of Rs. 3371503 and amount redeemed over the last 10 years has also grown with a growth rate of 55.65 pc with an average of Rs. 3335871. Net inflows are showing positive figure instead of the year 2008-09. Gross mobilization, Redemption, Net inflows and Assets at the end of the period are showing an increasing trend but all the four elements are showing a downfall in the year 2010-11 and it is due losing faith of investor's in the market.

CHART 1: POSITION OF GROSS MOBILIZATION, REDEMPTION AND NET INFLOWS

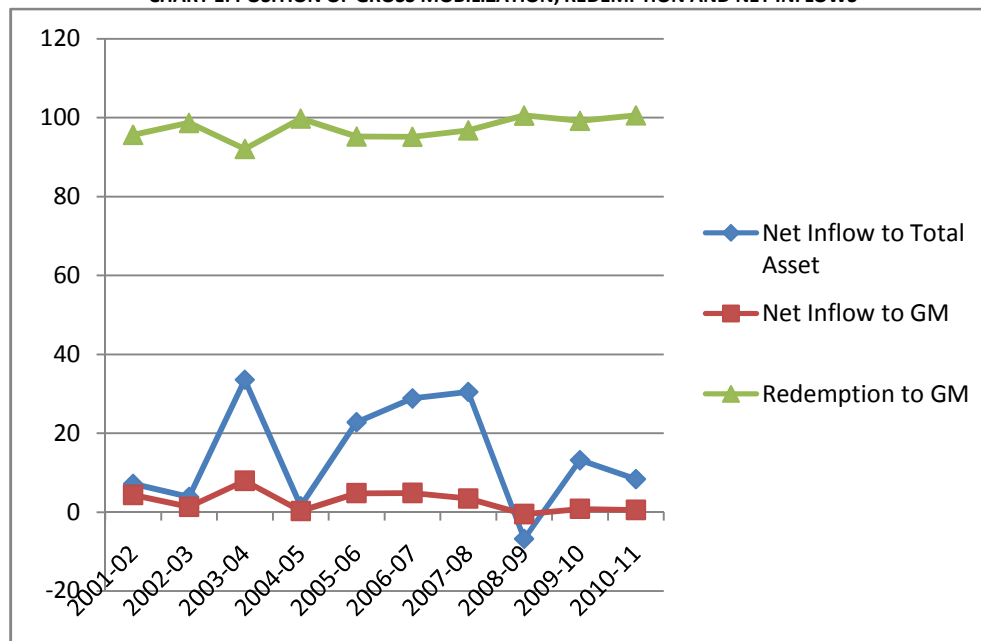


Chart 1 depicts the position of resource mobilized by using various ratios. Redemption to Gross Mobilization and Net inflows to Gross Mobilization are consistent over the decade, but Net inflows to Total Assets is showing variations and goes negative in the year 2008-09. The main reason behind this downfall is the period of depression prevailing in the market in the year 2008-09.

TABLE 2: SECTOR WISE RESOURCES MOBILIZED BY MUTUAL FUNDS IN INDIA

| Years | Gross Mobilization | | | Redemptions | | | Net Inflows | | |
|---------|--------------------|-------------------|-------------------|-----------------|------------------|-------------------|----------------|---------------|---------|
| | Private Sector | Public Sector | UTI | Private Sector | Public Sector | UTI | Private Sector | Public sector | UTI |
| 2001-02 | 147798 (90) | 1208299 (7.3) | 4643 (2.7) | 134748 (86) | 10673 (6.8) | 11927 (7.2) | 13050 | 1409 | (7284) |
| 2002-03 | 284096 (90) | 23515 (7.5) | 7096 (2.5) | 272026 (88) | 21954 (7.1) | 16530 (4.9) | 12069 | 1561 | (9434) |
| 2003-04 | 534649 (91) | 31548 (5.3) | 23992 (3.7) | 492105 (91) | 28951 (5.3) | 22326 (3.7) | 42545 | 2597 | 1667 |
| 2004-05 | 736463 (88) | 56589 (6.7) | 46656 (5.3) | 728864 (87) | 59266 (7.1) | 49378 (5.9) | 7600 | (2677) | (2722) |
| 2005-06 | 914703 (83) | 110319 (10.0) | 73127 (7.0) | 871727 (83) | 103940 (9.9) | 69704 (7.1) | 42977 | 6379 | 3424 |
| 2006-07 | 1599873 (83) | 196340 (10.1) | 142280 (6.9) | 1520836 (82) | 188719 (10.2) | 134954 (7.8) | 79038 | 7621 | 7326 |
| 2007-08 | 37807539 (85) | 346126 (7.8) | 337489 (7.2) | 3647449 (84) | 335448 (7.8) | 3276778 (8.2) | 133304 | 10677 | 9820 |
| 2008-09 | 4292751 (79) | 710472 (13.1) | 423131 (7.9) | 4326768 (79) | 701092 (12.9) | 426790 (8.1) | 34018 | (9380) | 3658 |
| 2009-10 | 7698483 (77) | 881851 (8.8) | 1438688 (14.2) | 7643555 (77) | 866198 (8.7) | 1426189 (14.3) | 54928 | 15653 | 12499 |
| 2010-11 | 6922924 (78) | 1152733 (13.0) | 784176 (9.0) | 6942139 (78) | 166288 (1.9) | 800493 (20.1) | (19215) | (13555) | (16636) |
| Average | 2691249 | 352157 | 328127 | 2658021 | 248252 | 623506 | 33227 | 3904 | -499 |
| Growth | 45.84 | 94.41 | 167.89 | 50.52 | 14.58 | 66.12 | -2.47 | -10.62 | 1.28 |

Source: Handbook of Statistics on the Indian Securities Market 2010

Table 2 depicts the picture of resource mobilized by Indian mutual fund industry sector wise (Public, Private and UTI as an independent sector). Major share in gross mobilization and redemptions values is fetched by private sector ranging from 70 to 90 pc for the decade. But it's showing a declining trend. On the other hand, share of public sector and UTI ranging from 5 to 13 pc respectively. The decreasing share of private sector is in taken by public sector and UTI as their share is showing an increasing trend.

TABLE 3: SCHEME WISE RESOURCE MOBILIZED BY MUTUAL FUNDS IN INDIA

| Year | Open Ended Schemes | | | Close Ended Schemes | | | Interval Schemes | | |
|----------------|--------------------|------------------|----------------|---------------------|-----------------|----------------|------------------|----------------|---------------|
| | Sale | Purchase | Net | Sale | Purchase | Net | Sale | Purchase | Net |
| 2001-02 | 163144 (99) | 153925 (98) | 9220 | 1379 (1.1) | 3424 (2.0) | 2044 | 0 | 0 | 0 |
| 2002-03 | 314239 (99.8) | 302052 (97) | 12187 | 467 (0.2) | 8458 (3.0) | 7991 | 0 | 0 | 0 |
| 2003-04 | 587480 (99.5) | 541447 (99) | 46033 | 2710 (0.5) | 1935 (1.0) | 775 | 0 | 0 | 0 |
| 2004-05 | 822004 (99) | 825977 (98) | (3972) | 17704 (1.0) | 11531 (2.0) | 6173 | 0 | 0 | 0 |
| 2005-06 | 1057118 (96) | 1031334 (98) | 25783 | 41032 (4.0) | 14036 (2.0) | 26996 | 0 | 0 | 0 |
| 2006-07 | 1800158 (93) | 1776258 (96) | 23900 | 138335 (7.0) | 68250 (4.0) | 70085 | 0 | 0 | 0 |
| 2007-08 | 4337041 (97) | 4203588 (97) | 133453 | 127334 (3.0) | 106987 (3.0) | 20348 | 0 | 0 | 0 |
| 2008-09 | 5261429 (97) | 5233301 (96) | 28128 | 111008 (2.04) | 145198 (2.6) | (34191) | 53197 | 76150 | (22233) |
| 2009-10 | 9976363 (99) | 9869736 (99) | 106627 | 25551 (0.26) | 61683 (0.62) | (36132) | 17109 | 4524 | 12585 |
| 2010-11 | 8665727 (98) | 8788945 (98) | (123218) | 122874 (1.39) | 57216 (0.64) | 71658 | 64915 | 62760 | 2154 |
| Average | 3298470.3 | 3272656.3 | 25814.1 | 58839.4 | 47871.8 | 13574.7 | 13522.1 | 14343.4 | -749.4 |
| Growth | 52.12 | 56.10 | -14.36 | 88.10 | 15.71 | 34.06 | NA | NA | NA |

Source: Handbook of Statistics on the Indian Securities Market 2010

Table 3 reveals the situation of Indian mutual fund industry scheme wise (open ended, close and interval scheme). Majority of the investors are investing money in open ended scheme because out of total money 93 to 99 pc is in hands of open ended schemes. Proportion of close ended scheme wise ranging from 1 to 7 pc and interval scheme has negligible share. Till the year 2007-08, the amount of investment in interval scheme is zero and investors has started investing money in this scheme from the year 2008-09 but even then their share is negligible.

TABLE 4: SCHEME WISE PERFORMANCE OF MUTUAL FUNDS IN INDIA

| Schemes/Years | | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---------------------------|----------|------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Income Oriented Schemes | Sale | 162007 (98) | 306972 (98) | 560972 (95) | 798674 (95) | 1008129 (92) | 1839668 (95) | 4317263 (96) | 5383367 (99) | 9944693 (99) | 8777034 (99) |
| | Purchase | 148942 (94.6) | 303892 (98) | 521369 (96) | 803918 (96) | 991508 (95) | 1775601 (96) | 4213396 (98) | 5415528 (99) | 9863485 (99) | 8817377 (99) |
| | Net | 13064 | 578 | 39603 | (5244) | 16621 | 64068 | 103867 | (32161) | 81208 | (40343) |
| Growth Oriented Schemes | Sale | 2040 (1.24) | 4640 (1.50) | 26695 (4.50) | 37280 (4.4) | 86014 (7.8) | 94351 (4.9) | 126286 (2.8) | 32805 (.60) | 64714 (.64) | 66592 (.75) |
| | Purchase | 2575 (1.64) | 4596 (1.48) | 19477 (3.60) | 30180 (3.60) | 50783 (4.86) | 66145 (3.60) | 79353 (1.84) | 28781 (0.52) | 62565 (0.62) | 79730 (0.89) |
| | Net | (535) | 43 | 7218 | 7100 | 35231 | 28206 | 46933 | 4024 | 2149 | (13138) |
| Balanced Schemes | Sale | 477 (0.76) | 394 (0.50) | 2523 (0.50) | 3755 (0.44) | 4006 (0.20) | 4473 (0.10) | 11488 (0.26) | 2695 (0.05) | 4693 (0.05) | 7490 (0.08) |
| | Purchase | 5831 (3.71) | 2022 (0.52) | 2536 (0.40) | 3410 (0.40) | 3079 (0.14) | 2762 (0.40) | 5720 (0.26) | 2634 (0.50) | 5386 (0.054) | 6145 (.068) |
| | Net | (5354) | (1628) | (13) | 345 | 927 | 1711 | 5768 | 61 | (693) | 1345 |
| Electrically Traded Funds | Sale | 0 | 0 | 0 | 0 | 0 | 0 | 9339 | 5719 | 3535 | 7709 |
| | Purchase | 0 | 0 | 0 | 0 | 0 | 0 | 12106 | 6718 | 2752 | 4072 |
| | Net | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | (2767) | (998) | 783 | 3637 |
| (FOF) Fund Overseas | Sale | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1767 | 1387 | 689 |
| | Purchase | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 989 | 1754 | 1596 |
| | Net | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 778 | (367) | (907) |

Source: Handbook of Statistics on the Indian Securities Market 2010

Table 4 portrays an interesting picture scheme wise investment in mutual funds of India. It seems that investors are interested only in three schemes (income oriented, growth oriented and balanced schemes). Among all the scheme majority of the share is in the hands of income oriented scheme. These three schemes have 100 pc share of total investment till the year 2006-07. From the year 2007-08 investors starts investing money in the rest of the schemes (ETF and FOF), but even then their share is negligible.

SUGGESTIONS

1. Need to take some steps to improve the decreasing share of the private sector.
2. Redemption rate is also very high (55.62 pc), which also need attention of the policy makers.
3. For boosting the economy, investors should be encouraged to invest money in close ended scheme and interval scheme.
4. There is need to make people aware about the electronic traded funds and fund overseas.

CONCLUSION

Mutual funds in India are 48 years old. They are considered as one of the safest investment due to the pooling feature it's possess. But with the change of economy, mutual funds area has widened, there are Electronic traded funds and fund overseas which are investing money in the foreign market with the mutual

funds. Mutual funds are providing customized services according to the preferences of the customers. In spite of growth and development in the Indian mutual fund industry has not achieved landmarks and still there are so many targets they still have to achieve which are highlighted in the paper, no doubt open ended scheme, close ended scheme are doing well, but there is need to focus on ETF and FOF to provide boost to the industry and more investors can be attracted.

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EMOTIONAL LITERACY – TEACHERS AND STUDENTS IN SELF-FINANCING ENGINEERING COLLEGES WITH SPECIAL REFERENCE TO TIRUCHIRAPALLI DISTRICT

K. ARUN PRASAD

ASST. PROFESSOR

**DEPARTMENT OF MANAGEMENT STUDIES
SARANATHAN COLLEGE OF ENGINEERING
VENKATESWARA NAGAR**

DR. S.V. DEVANATHAN

HEAD

**DEPARTMENT OF MANAGEMENT STUDIES
SARANATHAN COLLEGE OF ENGINEERING
VENKATESWARA NAGAR**

ABSTRACT

Emotional intelligence consists of the ability to understand emotions of one's own self and others. It facilitates thinking and managing oneself and others in a mutually beneficial manner. The concept of emotional intelligence has valid applications and relevance for the way the teachers teach and the way the teachers perceive their role in contributing to the well being of the students. Emotional intelligence helps in improving self awareness, building a sense of connectedness and trust, communication and empathy and promoting healthy relationships between the teacher and the taught. Emotional literacy is an essential part of emotional intelligence signifying the level of understanding of one's emotions and the way of expressing one's emotions in an appropriate manner. An emotionally literate person has a high degree of self control and is also able to exert a high degree of influence over others. Such a person is able to relate to others effectively and his behaviors and attitudes reflect self esteem, empathy and clarity of thought and rationality. This article discusses the emotional literacy in the self financed engineering colleges of Tiruchirapalli district, Tamilnadu, India based on scholarly competency, scholarly engagement, recognition and respect, rapport and relationship and academic and affairs, as factors.

KEYWORDS

Emotional Intelligence, Emotional Literacy, Perception of student and teacher, Teaching-learning process.

INTRODUCTION

When dealing with people, remember you are not dealing with creatures of logic, but creatures of emotion. – Dale Carnegie
A popular saying goes like this – “You can only take a horse to the pond; you cannot make it drink”.

However, if you are emotionally literate, you can make the horse feel thirsty.

This is the affective or feeling domain which is brought about by emotionally intelligent and literate people. They can connect to their audience well in their relationship with others and make them feel positive, confident and enthusiastic, energized.

Emotionally literate people manage their emotions and display appropriate emotions in their relationships with others and also successfully make the audience reciprocate the appropriate emotions. They manage their selves better and are also good at managing others. They understand others and are also understood well by others.

Teachers and teaching – learning process

That teaching is a mere knowledge transfer process is a misconception. The subjective nature of teaching and the subjective assessment the process lends itself to, the subjective perceptions of students and the parents, the lack of set guidelines and standard operating procedures have meant that teaching as a profession is something which lacks a clear-cut uniform definition.

Transfer of knowledge is just one tiny element of the teaching learning process. Understanding the needs of the students, gauging their moods, understanding and managing their emotions, managing one's own self, managing one's own emotions, regulating one's emotions, empathy, interacting with the students, training them to think and raise questions, fostering positive relations with students, trust, connectedness are some of the other major elements which very often go unnoticed but go a long way in ensuring that the teacher-student relations remain harmonious and the classroom environment remains conducive for learning, fun-filled and pleasant.

A successful teacher is able to positively influence and convince the students, has fruitful interactions with students, commands discipline and compliance from students. In each and every interaction with the students, the teacher is able to gauge the level of understanding and is able to modify his lectures and thoughts so as to be understood by everyone. He has the qualities of empathy and warmth. His interactions are found to be lively, motivating, inspiring. He engages the attention of the class by his gestures, body language and dialogue delivery and exudes confidence, hope and enthusiasm in the class.

As in every sphere of activity, there has been a growing need for improving the standard of teaching learning process and hence a resultant need for quality teachers.

Good teaching requires teachers who are passionate and caring, who fill their classes with joy, challenge, creativity and pleasure. Teachers who can simplify complexities and unite students from diverse backgrounds, connect to students well, respond to their difficulties, recognize and appreciate their unique talents, groom them, understand and solve their issues are the need of the hour.

To state it in a simple yet fashionable term, ‘emotional literacy’ elevates the quality of the teaching – learning process both for the teacher and taught.

Before understanding this term, it is imperative to understand the term emotion and such related concepts.

One of the fundamental aspects of teaching which is very often neglected or under-emphasized is emotions. Emotions are at the heart of teaching.

A good teacher needs to be full of positive emotions so as to arouse, awaken, energize and stir up the students. Teaching process involves emotional labour and emotional understanding.

REVIEW OF LITERATURE

Emotions are located not just in the individual mind; they are embedded and expressed in human interactions and relationships. As such, the capacity for people to use their emotions well in the workplace depends on two other things in addition to individual emotional competence: what people's jobs or professions expect of them emotionally, and how their organization structures human interactions in ways that help or hinder emotional expression and understanding.

Teaching as an emotional practice activates, colours and expresses teacher's own feelings. It simultaneously activates, colours and affects the feelings of the students. The way in which the lectures are given by the teacher can enthuse the students or wear them down. More than what is being taught, the emotions underpinning the way in which it is delivered can impact the students positively or negatively. If a teacher gives vent to anger or frustration or any other emotion

in his lectures, it might not go down well with the students. However, if he is able to manage his emotions and lends it a positive colour, it will be received well by the students.

Secondly teaching requires emotional understanding. Because it is an emotional practice, teaching involves and depends upon emotional understanding. Emotional understanding is an inter-subjective process requiring that one person enter into the field of experience of another and experience for his/her self the same or similar experiences experienced by another. The subjective interpretation of another's emotional experience from one's own standpoint is central to emotional understanding. Shared and shareable emotionality lie at the core of what it means to understand and meaningfully enter into the emotional experiences of another (Denzin, 1984, p.137)

NEED/IMPORTANCE OF THE STUDY

If a teacher can put himself in the shoes of a student (empathy), he can put himself in the student's head. Empathy and compassion are keys to mutual understanding, successful networking and bonding.

When there is emotional misunderstanding, teachers are prone to mistake their feelings for the feelings of the other. It is bound to happen when teachers do not know students well, do not relate to them well and misconstrue exuberance for hostility, respect for agreement etc. Such emotional misunderstanding hits at the root of teacher-student relationships and as a result the quality of teaching learning process is bound to suffer.

Establishing close bonds with students, relating to their needs, identifying and appreciating their feelings and emotions appropriately and taking appropriate actions through display of appropriate emotions are all essential. When there is emotional understanding, teachers can read the students well and conversely the students can also read the teacher better.

Teaching as a profession calls for emotional labour. This labour requires one to induce or suppress feelings in order to sustain the outward countenance that produces the proper state of mind in others. This kind of labour calls for a coordination of mind and feeling.

For this emotional alignment to happen, it demands a high degree of emotional labour. Being careful about emotions that are displayed and sensing if there is an alignment of emotions among the students, between the teacher and the taught require a great deal of tact and diligence which is the core of the emotional labour concept.

OBJECTIVES

1. To discuss the concepts of emotional intelligence, emotional literacy.
2. To understand the relevance of the concepts in managing self and others.
3. To know its impact and implications for teachers and teacher-student relationships.
4. To measure the extent of emotional literacy of teachers in self-financed engineering colleges.

EMOTIONAL INTELLIGENCE AND EMOTIONAL LITERACY

Emotional intelligence has been defined as '...the ability to perceive accurately, appraise and express emotion, the ability to access and/or generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth'

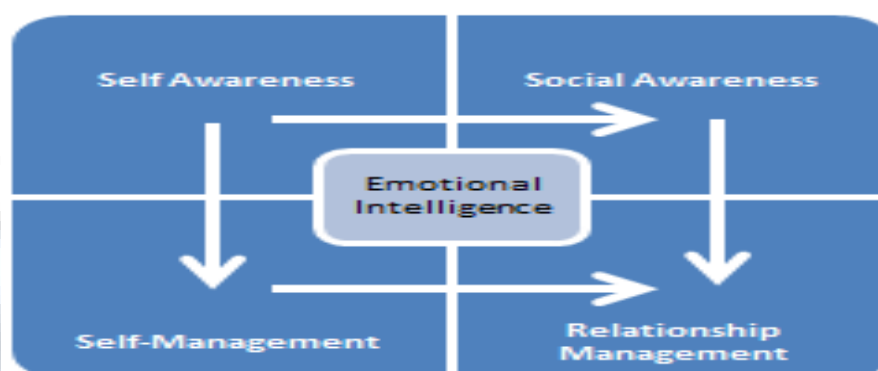
The capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships.

Emotional intelligence - the five domains

Daniel Goleman identified the five 'domains' of EQ as:

- Knowing your emotions.
- Managing your own emotions.
- Motivating yourself.
- Recognizing and understanding other people's emotions.
- Managing relationships, i.e., managing the emotions of others.

Emotional Intelligence Framework



It facilitates thinking, managing oneself better, managing others, promoting healthy social relationships, a high degree of control of one's own self and control over others.

- Understanding of one's emotions and expressing them in an appropriate manner for mutually beneficial relationships.
- Emotionally literate person is tactful in managing emotions and expressing it suitably so that others around him feel and as a result think in a way that he wants them to. He is not influenced by others. He influences others positively.
- Emotional Literacy means being able to recognize what one is feeling, so that it doesn't interfere with one's thinking.

Most often our thoughts and behavior are influenced or driven by how we feel. However we are unable to recognize i.e. we are not conscious of the feelings that drive our thoughts and behavior. By being emotionally literate, we can recognize the feeling attached to thoughts and behavior. We are skilled in reading our emotions and this awareness empowers us to utilize the emotions for effective thinking, making sound decisions and an appropriate behavior.

An emotionally literate person improves his personal power, enhances the quality of his life and also the quality of life of those around him.

IMPLICATIONS OF EMOTIONAL LITERACY**SELF - AWARENESS**

Emotional awareness: Recognizing one's emotions and their effects.

SELF - REGULATION

Self-control

SOCIAL COMPETENCE

Empathy: Sensing others' feelings and perspective, and taking an active interest in their concerns.

Developing others: Sensing what others need in order to develop, and bolstering their abilities.

Leveraging diversity: Cultivating opportunities through diverse people. Teachers with high levels of EQ respect and relate well to people from varied backgrounds

SOCIAL SKILLS

Influence

Communication: Sending clear and convincing messages.

Leadership: Articulate and arouse enthusiasm for a shared vision and mission

Change catalyst

Conflict management: Negotiating and resolving disagreements.

Building bonds: Nurturing relationships.

One manifestation of EQ, according to Goleman, is "the degree of emotional rapport" between individuals, and the ability of one individual to orchestrate this rapport when engaging with another. Such an orchestration, if done correctly, produces "synchrony" and this "facilitates the sending and receiving of [proper] moods" (p. 116).

Goleman elaborates with reference to the teacher/learner relationship:

The synchrony between teachers and students indicates how much rapport they feel; studies in classrooms show that the closer the movement co-ordination between teacher and student, the more they felt friendly, happy, enthused, interested, and easygoing while interacting. In general the high level of synchrony in an interaction means the people involved like each other.

Frank Bernieri, the Oregon State University psychologist who did these studies, told me, "How awkward or comfortable you feel with someone is at some level physical. You have to have compatible timing, to co-ordinate your movements, to feel comfortable. Synchrony reflects the depth of engagement between the partners; if you're highly engaged, your moods begin to mesh, whether positive or negative. (pp. 116-117)

The RULER Approach teaches 5 key emotional literacy skills:

- ✓ Recognizing emotions in oneself and others
- ✓ Understanding the causes and consequences of emotions
- ✓ Labeling the full range of emotions using a rich vocabulary
- ✓ Expressing emotions appropriately in different contexts
- ✓ Regulating emotions effectively to foster healthy relationships and achieve goals

The concept emotional literacy has relevance and valid applications in teaching-learning process, leadership and Managing organizations because an emotionally literate teacher/manager gets his students/subordinates to fall in line with his expectations, can understand them better and can also be understood well by them better.

Teachers with EI influence students positively, motivate and inspire them, fill the classes with creativity, fun, challenge, hope and enthusiasm.

While education is predominantly a cognitive domain, the role/process of teaching is more involved with the affective domain, which often is overlooked. It is the key role of the teacher to demonstrate his love for the subject among the students and also make the students feel a sense of happiness and delight and develop in them a liking for the subject he teaches.

- Cognitive Domain – Knowledge
- Psychomotor Domain – Skills
- Affective Domain – Attitude

Emotions are central to learning. In learning especially in Engineering, Science and Mathematics, cognitive domain is overemphasized since these subjects are considered to be logical and bereft of emotions. However, these are the subjects which especially require a great deal of emotional literacy and understanding on the part of teachers since the affective domain is very much at stake when students need to be filled with enthusiasm and joy in solving problems and experiments.

If at all they tend to commit mistakes which are quite common in experimentation and trials, they have to be taught to overcome fear or anxiety and restore and redeem their confidence and passion in tackling such difficulties and challenges and correcting their mistakes. Remaining calm and focused even in the midst of difficulties and disturbances is the hallmark of an emotionally intelligent person. Only such a teacher will be able to appreciate and groom such students who are committed to the task at hand and determined to complete it whatever be the issues that are bound to crop up. A clear distilled mind, unaffected by disturbing thoughts or negative feelings is central to clarity of thought and rational decision-making, appropriate behavior and successful inter-personal relationships.

With Emotional Literacy one knows how to express one's feelings, when and where to express them, and how they affect others. It improves understanding of one's own self and others and improves empathy.

A person will learn how to let his rational skills work hand-in-hand with his emotional skills, adding to his ability to relate to other people.

RESEARCH METHODOLOGY**LOCALITY OF THE STUDY**

The study is carried out among randomly selected self financing engineering colleges in Tiruchirapalli district.

RESEARCH DESIGN

Exploratory research design was used in this study.

DEFINITION OF POPULATION AND SELECTION OF SAMPLES**TOTAL POPULATION**

The population considered for the study includes teachers and students of various colleges situated at Tiruchirapalli district.

TARGET POPULATION

Since the major aim of the study is to assess if the expectations/requirements of the students about the teachers and the teachers' assessment of what the students want from them are in congruity, the opinions of students and teachers have been collected. Only when there is a compatibility in this regard, teachers are said to possess an emotional understanding of the students and are said to be emotionally literate.

SAMPLING FRAME**SAMPLING DESIGN**

The study adopted a probability sampling design where each and every unit of population had an equal chance to be considered as a sample.

SAMPLING TECHNIQUE

Multistage randomized disproportionate sampling technique was adopted for the study which is explained as under. The segregation of strata is given as under.

NATURE AND UNIT OF SAMPLING

The nature of samples comprise of (a) teachers of self financing engineering colleges and (b) students of self financing engineering colleges.

| | Nature of Strata | Target Strata | Sample Strata |
|---|----------------------|---------------|---------------|
| 1 | Engineering Colleges | 10 | 5 |
| 2 | Teachers | 2,500 | 250 |
| 3 | Students | 15,000 | 300 |

Sources of Data Collection

The data mine for the study includes primary sources and secondary sources, where primary data sources included the opinions of the teachers and students towards ethical teaching. Relevant research articles, publication, books and internet (URL) were the sources of secondary data.

TOOLS OF DATA COLLECTION

Two sets of mutually exclusive structured questionnaire (Teachers and Students) consisting of 44 questions classified under Six domains was administered to the teachers. Subsequently, 6 sets consisting of 38 questions were provided to student respondents. Danielson's framework of teaching performance and Perry's pattern of intellectual and ethical development is adapted and modified for developing a conceptual model of questionnaire.

COLLECTION AND PROCESSING OF DATA

Questionnaire was administered to teachers and students respondents and the enumerated data was codified in SPSS. Data analysis and interpretation was carried out on the basis of results drawn out of SPSS.

ANALYSIS OF TARGET POPULATION FOR GENERAL INFERENCE

A target population of 300 students and 250 faculty members were taken up for examining the student requirements and teachers' perception of students requirements and teachers' priorities and for checking whether student expectations and teachers' priorities match. In general the teachers are the donors of values and the students are the beneficiaries. The bond between the faculty and students should be sound, relevant, and contributory and should match the mutual needs of each other. Any variation of the basic values in the system of administration of knowledge dissemination that is found to be significant in the opinion of students and teachers will lead to aberration and proposes corrective measures.

Both the students population and the faculty were administered a similar type of questionnaire different in demographic values and scalar components. This has been made purposefully, that the values in question are all positive in nature and expected by the students from their teachers. The difference that can be attributed to the response of faculty and students is the level of necessity of the attributes they would like to point out as important. If the attributes are unanimous in case of students and teachers, then there is said to be a significant level of emotional understanding and intelligence on the part of teachers, which signifies that the demands of the students from teachers are being met significantly.

- When each sub-component is rated a Decisive Factor, it is given a numerical coding of 5
- If it is rated as Important Factor, 4
- If it is perceived as Contributing Factor, 3
- If the factor is rated as "Can be ignored, 2
- If the respondent (teacher or student) is not sure, it is 1
- The sub-components that have the maximum mean scores are those with highest priority.

TEACHER – STUDENT PERCEPTIONS

- The study seeks to examine how far the teachers' perceptions of students' expectations and students' expectations coincide.
- A high level of emotional understanding and emotional literacy on the part of the teachers will ensure that there is an alignment between the teachers and students' opinion.

The common factors taken for consideration among teachers and students are –

- Scholarly competency
- Scholarly Engagement
- Recognition and Respect
- Rapport and Relationship
- Enhancement of Academic affairs

Scholarly Competency (SC)

The sub-components:

- SC1 – Teachers possessing appropriate levels of competency
- SC2 – Keeping abreast of developments in the chosen subject
- SC3 – Teachers' awareness of pedagogical advances
- SC4 – Utilizing current teaching techniques
- SC5 – Transforming current teaching practices and constant enrichments

Scholarly Engagement (SE)

- SE1 – Engaging students with current and appropriate study materials
- SE2 – Quote study content with appropriate and contemporary research literature
- SE3 – Prepare competitively to handle teaching activity
- SE4 – Provide knowledge content and practical orientation for students
- SE5 – Utilize appropriate teaching and learning aides for students
- SE6 – Encourage students to initiate new endeavors and inquiries in the subject

Recognition and Respect (RR)

- RR1 – Recognition of students diversified abilities
- RR2 – Promote skill and intellectual development of students
- RR3 – Respect student queries and right of expression
- RR4 – Treat student with respect and dignity invariably
- RR5 – Maintain and stimulate confidence among students
- RR6 – Avoid criticizing students in case of default, failure, etc.
- RR7 – Assess students with utmost fairness and unbiasedness
- RR8 – Moderate with timely feedback backed up by constructive advice

Rapport and Relationship (RRE)

- RRE1 – Care take students in their domestic affairs also
- RRE2 – Offer advices in their career development
- RRE3 – Reinforce students on their official and cultural behavior
- RRE4 – Act as a catalyst in materializing students aspirations
- RRE5 – Maintain time management in all official affairs of the profession
- RRE6 – Insisting official dress code

- RRE7 – Liaison of students grievances and representations to HOD

Enhancement of Academic Affairs (AA)

- AA1 – Augment and stimulate extra knowledge base for the above average students
- AA2 – Extra patronage and care to be provided for slow learners
- AA3 – Churning out students extraordinary individual potentialities for career development
- AA4 – Foster In-house R&D activities for students in their curriculum development
- AA5 – Design and develop co curricular vestibule case research modules
- AA6 – Make students to actively involve in designing and restructuring of syllabus

Among the various items in Scholarly Competency, a majority of the students reckon that the teachers possessing appropriate levels of competency (SC1) and teachers' awareness of the pedagogical advances (SC3) are the decisive factors and a good majority also considers these two components as important factors. SC2 (Keeping abreast of developments in the chosen subject) is the third component which is considered by many to be decisive and important factors. SC4 (Utilizing current teaching techniques) and SC5 (transforming current teaching practices and constant enrichment) are viewed by majority students as only contributing factors.

In the Scholarly Engagement category, SE1 (Engaging students with current and appropriate study material) and SE4 (providing Practical orientation to students) are considered by students in vast majority as decisive and important factors. SE5 (Utilizing appropriate teaching and learning aids) is another component which is found to be decisive and important by many Students.

In Recognition and Respect category, RR2 (promoting skill and intellectual development of students) and RR5 (maintaining and Stimulating confidence among students) are considered by majority students as decisive and important factors.

In Rapport and Relationship category, RRE4 (Act as a catalyst in materializing their aspirations) RRE2 (offer advice in their career Development) RRE7 (liaisoning of student grievances and representation to HOD) are considered by many students to be decisive and important factors. Surprisingly, students give that much importance to RRE6 (insisting on official dress code). RRE2 (Care take students in their domestic affairs also) does not find favour with majority of students.

In Enhancement of Academic Affairs category, AA2 (extra care and attention paid to slow learners) and AA3 (Churning out extraordinary individual potential of students in career Development) are considered by a sizeable proportion of students as decisive and important factors. AA5 (Designing co-curricular Case research modules) and AA6 (Making students involve in designing syllabus) are also given priority by a vast number of students.

The preferences of students for various factors can be seen. It can be inferred looking at the frequency distribution table, that in most cases, location backgrounds of students such as metro, urban, semi-urban, and rural do not make much difference in their choice of factors and importance accorded to factors (priorities).

Apart from frequency distribution, Chi-square test and ANOVA tests have been carried to find out the variance among the sample population.

THOSE COMPONENTS FROM STUDENTS' PERSPECTIVE ARE RANKED IN TERMS OF THEIR MEAN VALUES (FROM HIGH TO LOW).

| | |
|--------|------|
| 4.1667 | RRE2 |
| 4.1667 | RR2 |
| 4.13 | RR5 |
| 4.13 | RRE5 |
| 4.0667 | SE5 |
| 4.0267 | SC1 |
| 4.0233 | SC3 |
| 4.0167 | SC2 |
| 4 | AA6 |
| 3.95 | SE1 |
| 3.95 | SE4 |

THOSE COMPONENTS FROM TEACHERS' PERSPECTIVE ARE RANKED IN TERMS OF THEIR MEAN VALUES (FROM HIGH TO LOW).

| | |
|-------|------|
| 4.536 | RRE1 |
| 4.536 | AA1 |
| 4.536 | RR2 |
| 4.528 | AA3 |
| 4.528 | RRE3 |
| 4.504 | SC2 |
| 4.488 | SC3 |
| 4.484 | RRE4 |
| 4.464 | SE3 |
| 4.46 | RRE2 |
| 4.46 | AA2 |

The objective is to see how the two rankings compare with each other and if there is an agreement between the teachers' perceptions of students' requirements and students' expectations.

It can be seen from the above rankings that SC2 and SC3 find place in the top priorities of both students and teachers. Teachers and students also have similar preferences for RRE2, RR2.

SIMILARLY, COMPONENTS FROM STUDENTS' PERSPECTIVE ARE RANKED IN TERMS OF THEIR STANDARD DEVIATION VALUES (FROM HIGH TO LOW).

| | |
|---------|------|
| 1.50819 | RRE6 |
| 1.33511 | SE3 |
| 1.32367 | RR2 |
| 1.00025 | AA1 |
| 0.98313 | SE2 |
| 0.91107 | RRE3 |
| 0.91036 | SC4 |
| 0.86432 | RR8 |
| 0.83589 | AA4 |
| 0.78913 | SC5 |
| 0.78913 | RRE1 |

Those are components which are highly variable and make the teachers' job of managing the class and aligning the students' expectations difficult.

FROM F-TEST (ANOVA)

Under the head of Scholarly Competence, the mean values of all components for students from various backgrounds (demography) are more or less uniform. The differences in standard deviation values between the groups (backgrounds) are also very small, which means the factor preferences are independent and uniform.

Under the head Scholarly Engagement, SE4 (Provide knowledge content and practical orientation for students) and (Utilise appropriate teaching and learning aids for students) report significant differences SE5 in mean and standard deviation values between groups.

As far as RR-Recognition and Respect is concerned, RR3 (Respect Students' queries and right of expression) and RR7 (Assess students with utmost fairness and unbiasedness) have significant differences in Standard deviation values and mean values between groups. It can be inferred that these two components are highly dependent on demographic categories.

Under RRE – Relationship and Rapport, RRE2 (Offer advice in students' career development) & RRE5 (Maintain time management in all official affairs of the profession) have significant differences in mean values and standard deviation between categories (groups), which shows these components are dependent on the demographic profile of students.

With regard to Enhancement of Academic Affairs, AA1 (Augment and stimulate extra knowledge base for above average students) and AA3 (churning out students' extraordinary individual potential for career development) report significant difference in mean and standard deviation values between groups. So these components are said to be highly dependent on the demographic profile.

Using Chi-square test, it is found that the factor SC1 (Teachers' possession of appropriate level of competence) is significantly dependent on the demographic profile of the students. Within group differences of mean as measured by standard deviation value of SC1 for each group are marginal because of which it is not revealed through F-test as a factor dependent on demographic profile, which it is.

SE5 (Utilise appropriate teaching and learning aids for students) and SE6 (Encourage students to initiate new endeavours and inquiries) are significantly dependent on the demographic profile of the students, as revealed through Chi-square test.

RR2 (promote skill and intellectual development of students), RR7 (Assess students with utmost fairness and unbiasedness) and RR8 (Moderate with timely feedback backed up by constructive advice) are found to have significant dependence and association with the demographic profile of the students.

Significant association with demographic variable is noted in RRE1 (Care take students in their domestic affairs), RRE2 (Offer advices in their career development), RRE3 (Reinforce students on their official and cultural behavior) and RRE7 (Liaisoning of students grievances and representations to HOD).

AA1 (Augment and stimulate extra knowledge base for above average students), AA4 (Foster In-house R & D activities for students in their curriculum development) and AA5 (Design and develop co curricular vestibule case research modules) have significant dependence and association with demographic variable.

COMBINED CORRELATION ANALYSIS OF STUDENTS AND FACULTY OPINIONS

A combined study of the opinions of the students versus faculty has been done for this research. A correlation has been worked out for the attributes as explained by the students and faculties are as follows

- 1) Scholarly Competence (SC)
- 2) Scholarly Engagement (SE)
- 3) Recognition and Respect (RR)
- 4) Rapport and Relationship (RRE)
- 5) Enhancement of Academic Affairs (AA)

It is astonishing to note that the values of 'R' calculated in between the bi-variables are not significant except in the cases of

- 1) Teachers keeping abreast of developments in the field of specialization. (SC 2)
- 2) Care take the student in their domestic affairs (RRE1) and
- 3) Augment and stimulate extra knowledge for above average students (AA1)

CONCLUSION

This point to a serious lack of emotional understanding on the part of the teachers as they are unable to ascertain clearly what is expected out of their relations with students. Emotionally intelligent teachers can get a measure of the students' perceptions and feelings easily.

SCOPE FOR FURTHER RESEARCH

The present study attempts to understand and discuss the implications part of emotional intelligence and emotional literacy at the work place – which in this study is teaching-learning environment.

It would be more appropriate if the emotional state of students is captured and an examination is done to analyse their feelings (what emotion is triggered in situations, which makes them perceive the way they perceive. It would then be the success of an emotionally literate teacher to have contributed to a set of positive feelings among students towards knowledge, people, the society and so forth.

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AN OVERVIEW MODEL ON THE BUSINESS ENVIRONMENT AND GROWTH CHALLENGES OF SMEs IN INDIA

VENKATARAMAN.KK
PROFESSOR
PSG INSTITUTE OF ADVANCED STUDIES
COIMBATORE

ABSTRACT

For any economy, SMEs (Small and Medium Enterprises) and their contribution for GDP (Gross Domestic product) are vital. Not only are the revenue contributions important but also on the human resources front the SMEs have a critical role to play considering a large manpower they employ. SMEs need growth for their success and sustenance. The current scenario in India provides a lot of growth opportunities for the SMEs through globalization. However, the globalisation also brings in challenges to the SMEs in terms of technology, manpower and quality. This paper analyses the need for the growth of SMEs, factors that are crucial for their growth, the alternatives available to overcome the challenges and integrates them into a simplified model which reflects these aspects and a probable solution to the challenges faced by the SMEs for their growth.

KEYWORDS

SMEs (Small and Medium Enterprises), Growth, Challenges, Solutions, Simplified model.

INTRODUCTION

Currently an estimated 26 million SMEs in India employ 60 million people. They contribute 45 per cent of the country's manufactured output and 40 per cent of its exports. "While the contribution to GDP remains 17 per cent, it is expected to touch 22 per cent by 2012 because of investments in technology upgradation" says industry body ASSOCHAM in a report.

The SME sector has over the year's registered faster growth than the gross domestic product (GDP). While GDP grew 6.7 per cent in 2008/09 and eight per cent in 2009/10, the SME sector clocked 11.4 per cent and 11.6 per cent growth, respectively as per report from National Small Industries Corporation (NSIC). Growth is an important aspect of any industry whether small or big. SMEs cannot sustain for a longtime without growth considering the inflation and other cost escalations. The most important factors that decide the growth of SMEs in the current environment are Finances, Manpower and Technology.

LITERATURE SURVEY

A literature study from various authors showed the importance of the SMEs on the Indian economy, various factors influencing their growth and their interrelationships, which is elicited in the following:

A study by Rajesh K Singh et al (2010) indicate that the major challenges of the SMEs (in both India and China) are building product quality, reducing costs, and upgrading technology and conclude that human resource development and quality improvement are highly correlated to competitiveness.

Annapurna Dixit and Alok Kumar Pandey (2009) analysed a time series data on GDP and the contribution of SSIs and conclude that the role played by SSIs are significant for the Indian economy and they need to be developed at par with large industries.

Through interviews with SSI units, GP Sahu and Prabhudatt Dwivedi (2008) identified that infrastructure support from government, information technology, globalization, awareness of policy and programs of government and technology influence the growth of small scale industries.

According to the results of the analysis by Zehir et al (2006) it has been found that global capabilities, product and service capabilities, marketing and sales capabilities and technological capabilities of a firm have positive and significant effect on business performance directly.

A study by Norita Ahmad and Robin G Qiu (2009) demonstrates that the performance of the SMEs is affected by the business environment in which they operate. The success and growth of SMEs will be enhanced by a more global infrastructure which includes human resources, financial markets, advisory services, information access, intellectual property rights etc.

A tool developed by Banham Heather C (2010) helps SMEs to measure the external environment as a level of turbulence and the factors considered for the measurements are the technology advances, customer expectations, supplier expectations, regulatory environment and the level of competition.

A study by Amitesh Kapoor (2012) indicate that SME have quite a large set of options for raising funds for their operations; however they resort to informal sources to a large extent and also strike a balance between the formal and informal resources, in view of the difficulties with the formal resources.

A RBI circular indicates the necessity of the banks to provide easy and additional credit facilities to the SMEs. The literatures and websites of the various public and private sector banks indicate a focus on the SMEs sector towards various financial packages and supports.

It was found in a study by VK Gokuladas (2010) that the students from urban area are more driven by extrinsic factors like brand image of the company, high remuneration, dream company status etc., while the rural / semi-urban students are driven by intrinsic or interpersonal reasons like working environment, training, opportunities, influence by relative, etc. The SMEs need to leverage the relevant job choice factors to their advantage to attract young talents for their growth strategy.

A survey by Leslie T Szamosi (2006) with 55 university students at Greece who identified SMEs as their best opportunity for their career goals – indicated that they expect respect, workplace involvement, concern for employee welfare and support management as critical factors for the SMEs.

NEED AND IMPORTANCE OF STUDY

SMEs are important to the Indian economy not only due to its contribution to GDP and growth but also because of the huge manpower it employs. The SMEs provide an employment opportunity for the huge population and their survival. It is necessary that the SMEs sustain their operation to support their employees and continue to be the human wing of the industry. The same human strength is the weakness for the SMEs as they find it very difficult to get quality manpower, especially skilled engineers, vis-à-vis the large scale industries. The study considers the three major resources of any industry – finance, technology and manpower and tries to find a probable solution for the SMEs to tackle these resources.

STATEMENT OF THE PROBLEM

The major issues facing an SMEs in India is Finance, Technology and Manpower. Growth is essential for survival and hence it is necessary to manage the finance, technology and human resources efficiently. Getting the right manpower is crucial for the SMEs to grow in the current competitive environment.

OBJECTIVES

The objectives of the study was to analyse the various factors associated with the three major resources of the SMEs viz. Finance, Technology and Manpower. Additional emphasis is placed on the manpower issues by combining the study with the student community to ascertain their job choice factors and their willingness to serve a Small scale industry.

A model depicting the set backs and probable solutions is to be developed for a better understanding.

RESEARCH METHODOLOGY

The study is based on the literature surveys, interviews with the owners of SMEs using questionnaire and discussions with students with a structured questionnaire. Most of the SMEs owners were not comfortable with a written questionnaire and hence an informal chat was done to extract the details.

RESULTS AND DISCUSSIONS

GROWTH CONCERNS OF SMEs

Growth is an important aspect of any industry whether small or big. SMEs cannot sustain for a longtime without growth considering the inflation and other cost escalations. Leveraging every factor in the environment is vital for the growth of the organizations. The most important factors that decide the growth of SMEs in the current environment are Finances, Manpower and Technology.

FINANCES AND GROWTH

There are number of measures and initiatives from the Government to support SMEs from the financial front. Banks have separate departments to handle SMEs accounts which have focused attention on the financials of the SMEs. However, the overall cost of doing business has gone up considering the increase in cost of borrowing, delayed payments from customers, raw material and labour cost increases. This increase in costs can be offset only by showing growth in business volumes and expansion programs.

TECHNOLOGY AND GROWTH

Technology is another factor to be considered for growth, taking into account the obsolescence of the technology within very short time. Hence the SMEs need to be up-to-date with the latest technologies that go into products as well as processes. As per ministry of MSME, the Government is setting up a defence technology fund worth Rs. 100 crores. However, the SMEs have to acquire and maintain their own technology in order to have self-sustenance and growth both in product and process.

Some of the SMEs manage to upgrade their technology by serving big companies and manage to use a part of them for their own benefits. However, technology absorption and upgradation is directly related to the availability of engineering manpower in the organization.

MANPOWER FOR GROWTH

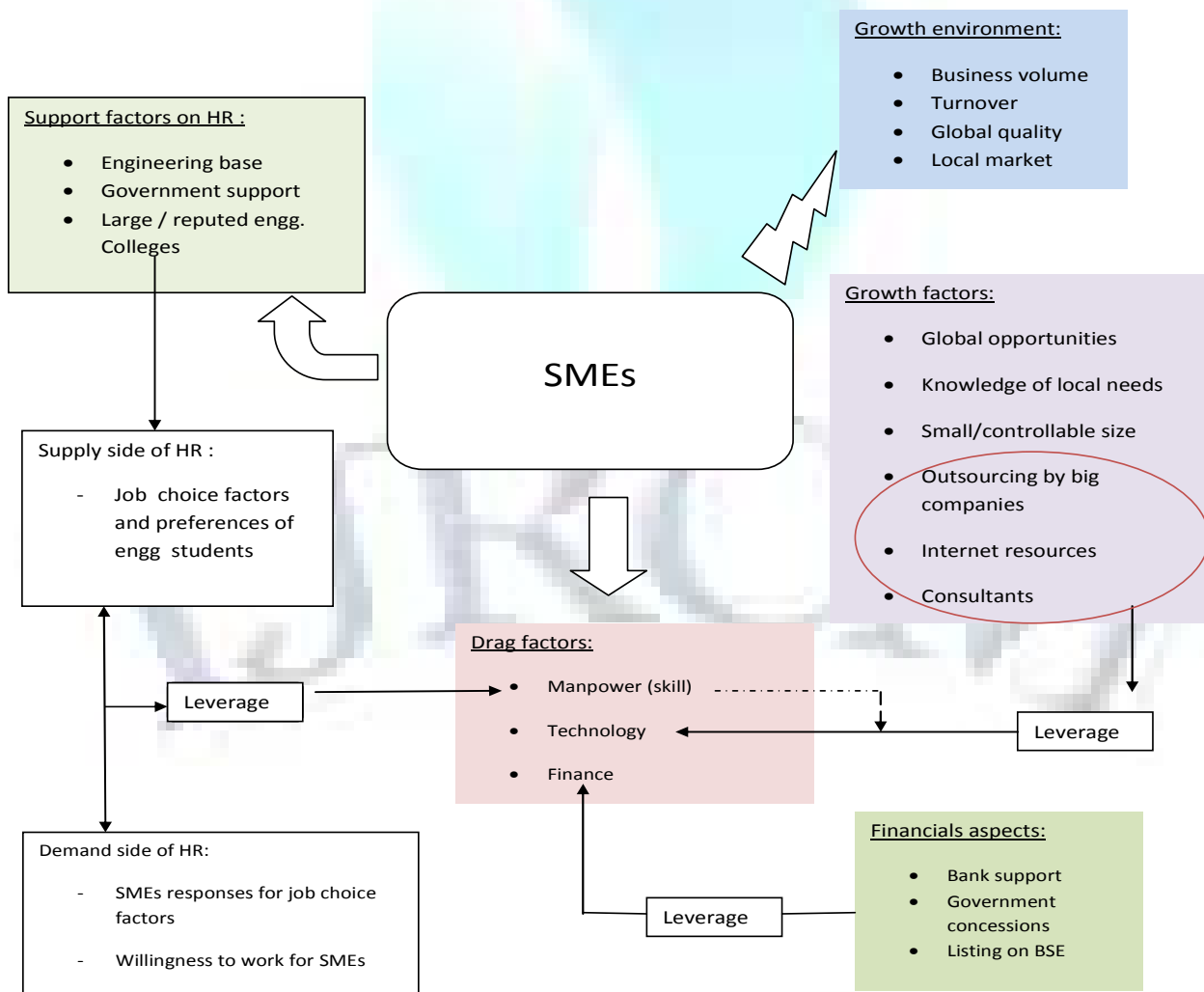
The other important factor for growth is manpower and its capabilities. SMEs rely on the human factor much more than larger organizations. Manpower is one of the core assets of SMEs which dominate the activities of the organization to a larger extent including the absorption of new technologies. The global trends indicate a shortage of skilled manpower in every industry, and the most affected are SMEs. The situation is worsened by the IT industry luring most of the talented manpower, with its high salaries and perks. The shortage of the manpower in the SMEs harms their growth due to globalization and tough market competitions, which need newer and versatile products. Sometimes survival of a SME itself becomes a question mark due to the shortage of a engineering skills. According to a survey by MA FOI RANDSTAD organization, the job seekers, apart from high salary and pleasant working atmosphere, consider job security, work life balance, financial health of the organizations as other factors for choosing a company to work with.

Under these circumstances it becomes much more important for SMEs to understand the Job choice factors of the engineers and device a new strategy to attract talented manpower since the engineering manpower is important for its growth and sustenance.

A MODEL ON THE GROWTH OF SMEs

Integrating all the above inputs, a simplified model has been developed as shown in fig.1.

FIG.1 – MODEL ON THE BUSINESS ENVIRONMENT AND GROWTH CHALLENGES OF SMEs IN INDIA



The model is centered around the SMEs (Small and Medium Enterprises), more specifically Indian SMEs, which are faced by growth factors on one side and the growth challenges on the other side. The growth factors are in the form of Global opportunities, providing a growth environment (volume, new products, quality output) due to globalization of business. At the same time the SMEs need to overcome the challenges like (new) technology, (skilled) manpower and difficult finance (due to economy slow down).

Following are the support factors that are in favour of the SMEs to overcome the challenges:

1. Government and banks on financials (soft loans, grants for special projects etc). There are special counters and branches to serve the SMEs. Tailor made financial assistance and packages from the public sector as well as private sector banks like SBI, Bank of Baroda etc. An informal interview with SMEs owners indicated that the financial supports from the banks are difficult only in start ups. Once the SME is established it is easy to get funding, both for operations as well as expansion and growth.
2. The technology for both product development and process development can be derived from MNCs and Large organizations which outsource jobs to SMEs. Also there is a vast amount of knowledge available on the Internet like patents, ideas etc which can be leveraged to acquire the required technology. Further, SMEs can take the help of freelance technologists and consultants for a relatively small payment.
3. For expansion and support SMEs need quality human resources. Even to handle the acquired technology as above needs a skilled manpower. The lack in the engineering human resources can be tackled by attracting young talents from numerous engineering colleges by understanding and leveraging their job choice factors. A study through questionnaire with around 126 engineering students indicated that around 18% of them are interested in serving the SMEs – they also indicated that salary is not a major concern but the major thrust is on learning and growth in the core area of engineering.

CONCLUSION

The major challenging factors for growth of the SMEs in India are the finance, technology and manpower. The model developed depicts the inter-relationship between these challenging factors viz. financials, technology and the human resources towards growth in SMEs.

The financial supports come from Government and Banks through focused schemes, tax concessions, listing in BSE etc. The technology support is acquired from big industries, consultants and internet resources, and through some training programs from government organizations for the skilled workers. However, it is the human resources front which is a weak link and hence need to be the main focus of the SMEs to run the current system efficiently in the current competitive environment (to absorb new technologies and take the SMEs towards growth). The SMEs should plan a strategy to market their positive aspects (considering the choice factors of the engineering graduates) and take advantage of a large number of engineering graduates from a sizable engineering colleges in India.

LIMITATION

Though the literature study covers all Indian as well as global scenario, the basic questionnaire on students and the interviews with SMEs owners were done within a small region (Coimbatore, Tamilnadu) and with a small population sample. The results may become more focused if taken through large samples as well as cover various regions. However, some of the issues like students' interests in small industries and their job choice factors may have higher variation depending on the region.

SCOPE FOR FURTHER RESEARCH

The study can be enhanced with a region based orientation and with a higher sample of students and the owners of SMEs. The research may be more regionalised due to the characteristic differences in the cultures between different regions in India and their approaches to problems may be different.

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MEASUREMENT OF FINANCIAL PERFORMANCE OF KURUKSHETRA CENTRAL CO-OPERATIVE BANK THROUGH RATIO ANALYSIS

DR. SUDESH
PROFESSOR
UNIVERSITY SCHOOL OF MANAGEMENT
KURUKSHETRA UNIVERSITY
KURUKSHETRA

ARCHANA MAKKAR
RESEARCH SCHOLAR, UNIVERSITY SCHOOL OF MANAGEMENT, KURUKSHETRA UNIVERSITY, KURUKSHETRA
ASST. PROFESSOR
DRONACHARYA INSTITUTE OF MANAGEMENT & TECHNOLOGY
KURUKSHETRA

ABSTRACT

The co-operative banking structure is pyramidal or federal in character. In the deregulated banking environment, the co-operative bank engaged in financing agricultural and non-agricultural activities are also exposed to various types of risks like credit risk, interest rate risk and liquidity risk. Hence an attempt has been made to study the financial performance of kurukshetra central co-operative bank. This paper reflects the financial performance of kurukshetra central co-operative for the period 2006-2007 to 2010-2011. The financial performance was analyzed through the ratio analysis. After a detailed study of the financial statements of the bank, it is clear that although there is increase in deposits an indicator of growth but the profitability of the bank has decreased for the period from 2006-07 to 2010-11. The central cooperative bank should take appropriate steps and means to improve the profitability of the bank.

KEYWORDS

Central Co-operative Banks, Deposits, Deployment, operation.

1. INTRODUCTION

The beginning of cooperative banking in India dates back to about 1904, when official efforts were made to create a new type of institution based on principles of co-operative organization & management, which were considered to be suitable for solving the problems peculiar to Indian conditions. The philosophy of equality, equity and self help gave way to thoughts of self responsibility and self administration which resulted in giving birth of co-operative. The origin on co-operative movement was one such event arising out of a situation of crisis, exploitation and sufferings. Co-operative banks in India came into existence with the enactment of the Agricultural Credit Co-operative Societies Act in 1904. Co-operative bank form an integral part of banking system in India. Under the act of 1904, a number of cooperative credit societies were started. Owing to the increasing demand of co-operative credit, a new act was passed in 1912, which was provided for establishment of co-operative central banks by a union of primary credit societies and individuals. The kurukshetra Central co-operative bank Ltd. came into existence on 1.4.1973 with the primary objective of inculcating banking habits among the rural masses. The bank has its jurisdiction throughout the kurukshetra District. At the time of registration the bank had only 4 branches. Keeping in view the persistence demand from the rural masses the bank has been opening new branches for the facility of its customers. The total branches as on date stands to 38 with 2 Extension counters. Out of these 38 branches 29 are rural & 9 are urban. The bank initially functioned for accepting deposits and advancing loans to agricultural sector. Today with the changing scenario the bank has also diversified its functions and has also entered into the non farm sector to compete with other commercial banks.

2. LITERATURE ON REVIEW

To review the financial performance of the banks and the term-lending institutions, various committees and analysts have presented their expertise as it has been a key area of study for financial institutions and the respective governments at the global level. They have suggested various tools and techniques for effective analysis and interpretation of the financial and operational aspects of the financial institutions specifically banks. Similarly various studies validate the need of better financial performance of these banks.

Urs and Chitambaram (2000) studied performance of 14 District Central Cooperative Banks in Kerala on 23 parameters and found inefficiency in their operations with lower capital and poor deployment of funds in the District Central Cooperative Banks. **Bhaskaran and Josh (2000)** concluded that the recovery performance of cooperative credit institutions continues to be unsatisfactory which contributes to the growth of Non performing assets even after the introduction of prudential regulations. They suggested legislative and policy prescriptions to make cooperative credit institutions more efficient, productive and profitable organization in tune with competitive commercial banking.

Jain (2001) has done a comparative performance analysis of District Central Cooperative Banks of Western India, namely Maharashtra, Gujarat and Rajasthan and found that District Central Cooperative Banks of Rajasthan have performed better in profitability and liquidity as compared to Gujarat and Maharashtra.

Singh and Singh (2006) studied the funds management in the District Central Cooperative Banks of Punjab with specific reference to the analysis of financial margin. It noted that a higher proportion of own funds and the recovery concerns have resulted in the increased margin of the Central Cooperative Banks and thus had a larger provision for non-performing assets.

Mavaluri boppana and Nagarjuna (2006) suggested that performance of banking in terms of profitability, productivity, asset quality and financial management has become important to stable the economy. They found that public sector banks have been more efficient than other banks operating in India.

Pal and Malik (2007) investigated the differences in the financial characteristics of 74 (public, private and foreign) banks in India based on factors, such as profitability, liquidity, risk and efficiency. It is suggested that foreign banks were better performers, as compared to other two categories of banks, in general and in terms of utilization of resources in particular.

Campbell (2007) focused on the relationship between nonperforming loans and bank failure and argued for an effective bank insolvency law for the prevention and control of nonperforming loans for developing and transitional economies as these have been suffering severe problems due to nonperforming loans.

Singla (2008) emphasized on financial management and examined the financial position of sixteen banks by considering profitability, capital adequacy, debt-equity and non performing assets.

Dutta and Basak (2008) suggested that Cooperative banks should improve their recovery performance, adopt new system of computerized monitoring of loans, implement proper prudential norms and organize regular workshops to sustain in the competitive banking environment.

Chander and Chandel (2010) analyzed the financial efficiency and viability of HARCO Bank and found the poor performance of the bank on capital adequacy, liquidity, earning quality and the management efficiency parameters. Centric to the ratio analysis, these studies have customized and blended financial ratios in a model form to examine and predict the financial health. Similarly, comparative performance, recovery Performance, cost reduction, productivity and efficiency are vital areas which have been considered by various analysts. With inquisitiveness the present study has been undertaken with specific objectives as envisaged in the next section

Based on the above literature, it is clear that there are some studies about private and public banks, however, no in depth study has ever been done in cooperative bank in India because of probably lack of sufficient information, and because of their unfamiliarity with the global economy. The main contribution of this study is to make financial comparison based on financial banking activities as credits and deposits to determine the performance and classifications of central cooperative bank in kurukshetra.

3 STATEMENT OF THE PROBLEM

Banks play significant role in the economic development of a country broadly by promoting mobilization of resources and allocating these resources in the form of loans and advances. Central cooperative bank has to take banking facilities to the rural areas and unbanked centers. The Central cooperative banks have to mobilize the available resources and utilize them in the most efficient and profitable manner. A significant problem observed recently in kurukshetra is the low deployment of funds mobilized by Central cooperative banks compared to the volume of deposits. Hence, an attempt has been made to study the financial performance of Kurukshetra central Co-operative Bank.

4. OBJECTIVE OF THE STUDY

The objective of the study is to evaluate the financial performance of Kurukshetra Central Co-operative Bank through ratio analysis.

5. METHODOLOGY

The study was based on data generated from the annual reports of the bank. Moreover journal articles, banking regulations and directives and relevant reports were also used. Period selected for the study was 5yars i.e., from 2006-2007 to 2010-2011. For the purpose of financial performance analysis the study included the variables viz., Share capital, Deposits, Borrowed funds, Loans outstanding, Interest expenses, Net profits or loss and overdue.

THE STUDY USED THE FOLLOWING RATIOS

(A). Efficiency in Mobilization

- Owned funds to working capital Ratio
- Borrowed Funds to Working capital Ratio
- Deposit to working capital Ratio
- Deposit to borrowed funds Ratio
- Owned funds to Borrowed Funds Ratio

(B). Efficiency in Deployment

- Credit to Deposits Ratio
- Credit to working Capital Ratio
- Credit to Borrowed Funds Ratio
- Credit to Total Funds Ratio

(c) Efficiency In operation

- Spread Ratio
- Burden Ratio
- Profitability Ratio

6. RESULT AND DISCUSSION

6.1 Financial performance of Kurukshetra Central Co-operative Bank

TABLE 1: SELECTED PERFORMANCE INDICATORS OF KURUKSHETRA CENTRAL COOPERATIVE BANK FROM 2006-07 TO 2010-11

| year | owned fund | deposits | borrowed fund | working capital | credit | total funds | interest received | interest paid | non interest expenses | non interest income |
|---------|------------|----------|---------------|-----------------|--------|-------------|-------------------|---------------|-----------------------|---------------------|
| 2006-07 | 11.83 | 136.1 | 125.91 | 10.01 | 250.56 | 137.74 | 19.53 | 12.88 | 6.62 | 0.007 |
| 2007-08 | 11.79 | 143.75 | 207.41 | 17.08 | 324.21 | 219.2 | 20.48 | 18.21 | 8.48 | 0.006 |
| 2008-09 | 11.84 | 152.04 | 148.91 | 3.3 | 288.67 | 160.75 | 28.49 | 18.17 | 8.05 | 0.04 |
| 2009-10 | 12.01 | 172.14 | 141.94 | 11.32 | 288.4 | 153.95 | 25.82 | 15.45 | 9.92 | 0.01 |
| 2010-11 | 12.9 | 223.66 | 209.49 | 14.69 | 381.66 | 222.39 | 27.91 | 18.91 | 12.19 | 0.02 |
| CAGR | 0.017 | 0.1 | 0.11 | 0.07 | 0.08 | 0.1 | 0.07 | 0.07 | 0.12 | 0.12 |

Source: Compiled From Annual Reports of Kurukshetra Central Co-operative Bank.

As stated in the methodology the following paragraphs present the brief analysis of Kurukshetra Central Co-operative Bank's performance in three domain areas viz., the efficiency in Mobilization, Efficiency in deployment and Efficiency in operation.

TABLE 2: EFFICIENCY IN MOBILIZATION

| year | owned funds to working capital ratio | borrowed funds to working capital ratio | deposits to working capital ratio | deposits to borrowed funds ratio | owned funds to borrowed fund ratio |
|---------|--------------------------------------|---|-----------------------------------|----------------------------------|------------------------------------|
| 2006-07 | 118.06 | 1257.84 | 1359.64 | 108.09 | 9.38 |
| 2007-08 | 69.02 | 1214.34 | 841.62 | 69.3 | 5.68 |
| 2008-09 | 358.4 | 4512.42 | 4607.27 | 102.1 | 7.94 |
| 2009-10 | 106.09 | 1253.88 | 1520.67 | 121.27 | 8.45 |
| 2010-11 | 87.81 | 1426.07 | 1522.53 | 106.76 | 6.15 |

Source: Compiled From Annual Reports of Kurukshetra Central Co-operative Bank.

6.2. Efficiency in mobilization

The analysis related to efficiency in mobilization facilitates the bankers to identify the right mix of funds and its sources. The banker can reduce the cost of fund significantly if a continuous assessment takes place in this line. For the purpose of working capital analysis the study adopted the definition as the one which includes share capital, reserves, deposits and borrowings less investment on fixed assets and cumulative losses.

Owned fund to working capital ratio

This ratio shows the share of owned funds in the working capital of bank. It was calculated with the following formula;

Owned funds to working capital ratio = owned fund/working capital x 100

Owned fund to working capital ratio reflect the sufficiency of owned funds in bank and hence a higher ratio is preferable. The results will portrait the bank's capacity to mobilize owned funds. From the table 2 it is clear that owned funds to working capital ratio have shown decreasing trend from 118.06 percent in

2006-07 to 87.81 by 2010-11. Higher owned fund to working capital ratio is better, but here it is less, it could be concluded that central cooperative bank has weak capital base.

Borrowed funds to working capital Ratio

This ratio shows the share of borrowed funds in the working capital of bank. It could be calculated by the following formula;

$$\text{Borrowed funds to working capital ratio} = \frac{\text{borrowed fund}}{\text{working capital}} \times 100$$

A lower ratio is advisable for banks to show good performance. This is because this ratio measures the proportion of borrowings and deposits in working capital of bank. If the ratio is high it means that bank's average cost of funds is high. Table 2 depicts that the borrowed funds to working capital ratio was 1257.84 percent during 2006-07 and it increased to 1426.07 percent in the year 2010-11. This means that the ratio has increased and hence the bank's average cost of funds has also increased.

Deposits to working capital ratio

Deposits constitute a major portion of total working capital. This ratio could be calculated by using the following formula;

$$\text{Deposits to working capital ratio} = \frac{\text{Deposit}}{\text{working capital}} \times 100$$

Deposits to working capital ratio show the amount of deposit in total working capital of the bank. Deposits are the total deposits of all types received by the bank. From the table 2 it is clear that the deposit to working capital ratio has increased from 1359.64 percent in 2006-07 to 1522.53 percent in 2010-11. The highest ratio was recorded during the year 2008-09 and the lowest in the year 2007-08. This shows the Bank's ability to mobilize more deposits from the investors and also indicates the faith bestowed upon by the customers on the bank.

Deposits to borrowed funds ratio

This ratio indicates the share of deposits in the borrowed fund. It measures the efficiency of the organization in mobilizing funds. It could be calculated as;

$$\text{Deposits to borrowed funds ratio} = \frac{\text{deposits}}{\text{borrowed fund}} \times 100$$

Deposits serve as a form of borrowings of bank. A higher ratio indicates more amounts of deposits in borrowed fund and lower ratio shows the dominance of borrowings in the borrowed fund. Higher proportions of deposits are deemed as a symbol of self finance. From the table 2 it is clear that the deposits to borrowed funds ratio have decreased 108.09 in 2006-07 to 69.30 in 2007-08 after that it was increasing 69.30 in 2007-08 to 121.27 in 2009-10 and in year 2010-11 it has again decreased to 106.76. Thus there is a dominance of deposits in borrowed fund of central cooperative bank.

Owned funds to borrowed funds ratio

This is the ratio of owned funds to borrowed funds. It could be calculated by using the following formula;

$$\text{Owned funds to borrowed funds ratio} = \frac{\text{owned funds}}{\text{borrowed funds}} \times 100$$

This ratio shows whether the bank depends on owned funds or borrowed funds. Owned funds include share capital and reserves and borrowed funds include deposits and borrowings. Higher ratio is preferable; hence it indicates the increased share of owned funds in the functioning of the bank. From the table 2 it is clear that the owned funds to borrowed fund ratio has decreased from 9.38 percent in 2006-07 to 6.15 percent in 2010-11. This means bank has not satisfactory level of owned fund in the borrowed funds.

TABLE 3: EFFICIENCY IN DEPLOYMENT

| year | credit to deposit ratio | credit to working capital ratio | Credit to borrowed funds ratio | credit to total funds ratio |
|---------|-------------------------|---------------------------------|--------------------------------|-----------------------------|
| 2006-07 | 184.09 | 2503.09 | 198.99 | 181.9 |
| 2007-08 | 225.53 | 1898.18 | 156.31 | 147.9 |
| 2008-09 | 189.86 | 8747.57 | 193.85 | 179.57 |
| 2009-10 | 167.53 | 2547.7 | 203.18 | 187.33 |
| 2010-11 | 170.64 | 2598.09 | 182.18 | 171.61 |

Source: Compiled From Annual Reports of Kurukshetra Central Co-operative Bank.

6.3. Efficiency in Deployment

A series of ratios were being calculated in order to understand the efficiency in deploying funds. The funds collected by the bank through owned fund and borrowed funds should be deployed in profitable avenues. The ratios used for analyzing the efficiency in deployment of funds were:

credit to deposits ratio

Credit to deposits ratio indicates the ability of bank in deploying credit to customers out of the deposits mobilized. It is computed for knowing the performance of bank in converting the cost incurring funds into maximum interest earning assets. The ratio was calculated by using the following formula;

$$\text{Credit to deposits ratio} = \frac{\text{credit}}{\text{deposits}} \times 100$$

Table 3 reveals that the credit to deposit ratio has decreased from 184.09 percent in 2006-07 to 170.64 percent in 2010-11. It could be observed that the ratio has increased to 225.53 percent during 2007-08, which was the highest record. However, credit disbursement has not increased in tune with the significant increase in deposits. It is high time that the bank should take appropriate measure and to find new ways and means to lend ore to creditworthy.

credit to working capital ratio

Credit to working capital ratio is quantitative measure of the loaning operation of the bank. It could be calculated by the formula;

$$\text{Credit to working capital ratio} = \frac{\text{credit}}{\text{working capital}} \times 100$$

This ratio shows the share of credit in working capital. This credit to working capital ratio is necessary to study the efficiency of bank in managing the funds. Higher the Ratio, higher will be the efficiency in managing funds. From table 3 it could be observed that the ratio was 2503.09 percent during 2006-07 and it has increased 2598.09 percent during 2010-11. This means that credit has increased and money mobilized was deployed satisfactory.

credit to borrowed funds ratio

Credit to borrowed funds ratio reveals the measure of the efficiency of the bank in converting the borrowed funds to loans and advances. It could be calculated by the following formula;

$$\text{Credit to borrowed funds ratio} = \frac{\text{credit}}{\text{borrowed funds}} \times 100$$

The cost of the borrowed funds is the major expenditure of the bank. A higher the ratio indicates the efficiency on the deployment of funds. Hence, bank should generate more income by deploying the borrowed funds into loans and advances. From the table 3, it is clear that the credit to deposits ratio has a fluctuating trend. The highest ratio was during 2009-10 i.e. 203.18 percent. The higher ratio implies the efficiency in deploying the funds, so a high ratio is preferred. Even though the ratio has increased from 198.99 percent, during 2006-07 to 203.18 percent by 2009-10, it has again decreased to 182.18 percent during 2010-11.

credit to total funds ratio

Credit includes loans and advances. Bank takes and gives credit. It can be important source of funds. This ratio implies the amount of credit in total funds of bank, where total funds includes owned funds and borrowed funds. From this ratio we can get an idea of quantum of credit that is included in the total funds of bank. The ratio could be calculated by the following formula;

$$\text{Credit to total funds ratio} = \frac{\text{credit}}{\text{total funds}} \times 100$$

Table 3 shows the credit to total funds ratio for 5 years from 2006-07 to 2010-11. From the table it is clear that the ratio was 181.90 percent during 2006-07 and it got decreased to 171.61 percent by 2010-11. Highest ratio was during 2009-10 i.e. 187.33 percent.

TABLE 4: EFFICIENCY IN OPERATION

| year | spread ratio | burden ratio | profitability ratio |
|---------|--------------|--------------|---------------------|
| 2006-07 | 4.82 | 4.79 | 0.03 |
| 2007-08 | 1.03 | 3.86 | -2.83 |
| 2008-09 | 6.41 | 4.98 | 1.43 |
| 2009-10 | 6.73 | 6.43 | 0.3 |
| 2010-11 | 4.04 | 5.47 | -1.43 |

Source: Compiled From Annual Reports of Kurukshetra Central Co-operative Bank.

6.4 . Efficiency in operation

Efficiency in operation indicates the result of all banking transactions. The spread and the burden ratio calculated advocates the way a head of a bank.

Spread ratio

Spread ratio explains the interest margin in total funds owned by bank. In other words spread means difference between interest received and interest paid. Spread plays an important role in profitability of the bank, because it is directly related to profit. Higher ratio is preferable and it is possible only when the interest received on loans are more than the interest paid on deposit and borrowings. The ratio could be calculated by the following formula;

$\text{Spread ratio} = \frac{\text{interest received} - \text{interest paid}}{\text{total funds}} \times 100$

Table 4 shows the spread ratio of bank for 5 years i.e. from 2006-07 to 2010-11. It was 4.82 percent during 2006-07. After that there were great fluctuations mostly positive in nature in the ratio. The bank recorded the highest ratio 6.73 percent during 2009-10. It got decreased to 4.04 percent during 2010-11. However, this is a phenomenal growth and the management deserves a special mention.

Burden Ratio

Burden ratio explains the margin of non interest expenses and non interest income to the total funds owned by bank. It is also a measure of profitability. A low value of this ratio is preferred.

$\text{Burden Ratio} = \frac{\text{Non interest expense} - \text{non interest income}}{\text{total fund}} \times 100$

Where non interest expense = contingency expenses and establishment expenses

Non interest income = miscellaneous income of bank.

Table 4 shows the burden ratio of bank for 5 years i.e. 2006-07 to 2010-11. Here from the table it is clear that the burden ratio has increased 4.79 percent in 2006-07 to 5.47 percent by 2010-11. Highest ratio was during the year 2009-10 i.e. 6.43 percent. It shows the bank was not significantly reduced non-interest expenses and it is not best operational efficiency indicator.

Profitability Ratio

Profitability ratio explains difference between spread and burden of bank. Spread explains the margin of interest received and interest paid and the burden explains the margin of non interest income and non interest expense. This ratio indicates the ability of bank to generate profit. Hence a higher value of this ratio is Preferred.

The overall profitability is expressed in terms of spread and burden ratio;

$\text{Profitability Ratio} = \text{Spread Ratio} - \text{Burden Ratio}$

Table 4 shows the profitability ratio of bank for 5 years i.e. 2006-07 to 2010-11. Here from the table it is clear that the profitability ratio has decreased 0.03 percent in 2006-07 to -1.43 percent by 2010-11. It shows the bank was not good profitability position.

7. FINDINGS OF THE STUDY

Major findings of the study are given below on the basis of analysis and interpretation:

7.1 EFFICIENCY IN MOBILIZATION

1. The Result of the study shows that owned funds to working capital ratio have shown decreasing trend. But the Higher owned fund to working capital ratio is better, but here it is less, so that it could be concluded that central cooperative bank has weak capital base.
2. The Result of the study depicts that the borrowed funds to working capital ratio was increased. So that if the ratio has increased and hence the bank's average cost of funds has also increased.
3. The Result of the study shows that the deposit to working capital ratio has increased. So that it shows the Bank's ability to mobilize more deposits from the investors and also indicates the faith bestowed upon by the customers on the bank.
4. The Result of the study indicates that the deposits to borrowed funds ratio have decreased. Thus there is a dominance of deposits in borrowed fund of central cooperative bank.
5. The Result of the study shows that the owned funds to borrowed funds ratio has decreased. This means bank has not satisfactory level of owned fund in the borrowed funds.

7.2 EFFICIENCY IN DEPLOYMENT

1. The result of the study found that the credit to deposit ratio has decreased. However, credit disbursement has not increased in tune with the significant increase in deposits. It is high time that the bank should take appropriate measure and to find new ways and means to lend ore to creditworthy.
2. The result of the study found that the credit to working capital ratio has increased. This means that credit has increased and money mobilized was deployed satisfactory.
3. The result of the study found that the credit to borrowed fund ratio has decreased throughout the period of the study.
4. The result of the study found that the credit to total fund ratio has decreased throughout the period of the study.

7.3 EFFICIENCY IN OPERATION

1. The result of the study indicates that the spread ratio has decreased. However, this is a phenomenal growth and the management deserving a special mention.
2. The result of the study indicates that the burden ratio has increased. It shows the bank was not significantly reduced non-interest expenses and it is not best operational efficiency indicator.
3. The result of the study indicates that is clear that the profitability ratio has decreased. It shows the bank was not good profitability position.

CONCLUSION

The present study has been an attempt to identify the financial performance and efficiency of Central Cooperative Banks (CCB) operating in kurukshetra division in Haryana. The results found that the CCB are in weak performance throughout the study period which evident the danger to the banks. The banks should emphasize on proper utilization of the available resources in order to increase the profitability, liquidity, and efficiency. As the banks have been suffering from financial mismanagement and underutilization of resources, so this bank should change their vision besides bringing transparency in their working to sustain in the competition and become dynamic financial institutions.

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PERFORMANCE OF DISTRICT CENTRAL CO-OPERATIVE BANKS (DCCBs) IN INDIA - AN EVALUATION

S. USHA
LECTURER
S. V. ARTS COLLEGE
TIRUPATI

C. SIVARAMI REDDY
PROFESSOR
DEPARTMENT OF COMMERCE
S. V. UNIVERSITY
TIRUPATI

ABSTRACT

The basic focus of co-operatives is to help the most distressed class of the rural people exploited by the rural elite for several years. The co-operative banking, therefore, has emerged in developing countries as India to redress the problems of socio-economic inequality, unbalanced growth, failing agriculture and poverty. As a significant part of the multi-agency approaches to credit delivery of short-term and long-term in India, the co-operative banks hold an important position especially in the rural credit scenario, forming a significant component of Indian financial system. In other countries, the co-operative movement grew on the strength of people's self-will and direct participation. But, in India, it has been initiated and nourished by the government participation. The present paper aims at analyzing the growth of co-operatives in India prior to the independence and during the planning era to assess the progress of the central co-operative banks during the past five decades in terms of certain financial variables and an evaluation of the performance of the central co-operative banks during the last decade 2000-01 to 2009-10.

KEYWORDS

DCCBs, banking.

1. INTRODUCTION

The Co-operatives were introduced in India in 1904 with the enactment of Co-operative Credit Societies Act¹. The main objective of co-operatives is to help the most distressed class of rural people who were exploited by the rural elite for several years. Ever since, the credit through the co-operatives has been significant in the country. The word co-operation is derived from the Latin word "Co-operari". 'Co' means 'with' and 'operari' means 'to work'², which means working together with others for a common purpose. As a significant part of the multi-agency approach to credit delivery of short-term and long-term in India, the co-operatives, hold an important position, especially in the rural credit scenario. The geographical spread of the entire co-operative credit system in India covers over 74 per cent of rural credit outlets.

The origin of the co-operative banking movement in India can be traced to the end of 19th century when, inspired by the success of the experiments related to the co-operative movement in Britain and the co-operative credit movement in Germany, and similar societies were set up in India. The Co-operative banks are an important constituent of the Indian financial system. They are the primary financiers to agricultural activities, small-scale industries and self-employed workers.

The Co-operative Banks in India are registered under the Co-operative Societies Act. The co-operative banks are also regulated by the RBI. They are governed by the Banking Regulations Act 1949 and Banking Laws (Co-operative Societies) Act, 1965. The Co-operative banks function on the basis of 'no-profit no-loss' and they, as a principle, do not pursue the goal of profit maximization. These banks provide most services such as savings and current accounts, safe deposit lockers, loans on mortgage to customers. Co-operative banks are operating for the lower and middle class customers, for whom a bank is one where they can save their money, and take it back easily.

Co-operative banking has special importance in the developing countries like India with socio economic inequalities, unbalanced growth, and dominance of agriculture and the problem of poverty. It is specially suited to Indian condition. In other countries, the co-operative movement grew on the strength of people's own will and direct participation. In India, it has been initiated and nourished by government participation³.

2. CENTRAL CO-OPERATIVE BANKS

The history of co-operative movement in India is broadly divided into two phases, i.e., the co-operative movement in pre-independence era and the co-operative movement in post independence era. During the inception stage, a good number of co-operative credit societies were established in rural and urban areas based on the Co-operative Societies Act 1904. There was no provision for central co-operative banks in the Co-operative Credit Societies Act 1904. A comprehensive Co-operative Societies Act of 1912 was passed. This Act gave legal recognition for the formation of Central Co-operative Banks at district level.

The co-operative credit in India has three-tier federal structure. It consists of the Primary Agricultural Credit Societies (PACS) at village level, Central Co-operative Banks at district level and Apex bank at state level.

Central co-operative banks are in the middle of the three-tier co-operative credit structure. The central co-operative banks are federations of primary agricultural credit societies, belonging to a specific district. The area of operations and jurisdiction of the Central Co-operative Banks is confined to a district. They act as a link between small and scattered primary societies in the districts and the apex bank at the state levels. The DCCBs act as a balancing center of finance for the primary societies in the district by providing funds when they have a shortage, and by serving as a clearing house for their funds, which are surplus. They supervise, guide and control the working of the member-societies. They shall also develop the co-operative movement in the district on sound lines.

3. GROWTH OF CO-OPERATIVES IN INDIA

The growth of the co-operatives in India has passed through various stages, since its inception to the present times. The growth of co-operatives in terms of number of societies, membership and working capital is displayed in Table-1 during 1946-2012.

TABLE 1: GROWTH OF CO-OPERATIVES IN INDIA

| Year | No. of Societies (in Lakhs) | Membership (in Lakhs) | Working Capital (Rs in Crores) |
|------|-----------------------------|-----------------------|--------------------------------|
| 1946 | 1.41 | 91 | 156 |
| 1956 | 1.80 | 137 | 276 |
| 1976 | 3.30 | 743 | 8648 |
| 1986 | 3.00 | 1062 | 20022 |
| 2006 | 9.32 | 3265 | 146084 |
| 2012 | 9.46 | 3976 | 206918 |

Source: RBI statistical statements relating to Co-operative Movement in India (parts I to II), New Delhi: RBI publications and NAFSCOB, www.nafscob.org

Prior to the independence (1947), there were 1.41 lakh societies with a membership of 91 lakh persons having working capital of Rs. 156 crores. The growth of co-operatives was subdued in the next ten year period, after which tremendous growth was recorded in respect of development of the co-operatives. But the growth of the co-operatives during the period ending 1986 once again slipped down, though the working capital rose tremendously. But the period ending with 2006 witnessed significant growth in all the parameters of growth and development of co-operatives. However, the growth of co-operatives in the next five year period is marginal. Thus, it is evident that the growth and development of co-operatives reported an overall increase during the period from 1946-2012. It is projected that by 2012, the number of societies would be around 9.46 lakhs with a membership of 3976 lakh persons and with working capital of Rs.206918 crores.

4. PROGRESS OF THE DISTRICT CENTRAL CO-OPERATIVE BANKS IN INDIA

Basing on the Co-operative Societies Act of 1912, a number of District Central Co-operative Banks (DCCBs) were formed at district levels to which primary societies were affiliated. In some states, there were two or more DCCBs for one district, and in some states one DCCB covering more than one revenue district. Following the recommendations of the All India Rural Credit Survey Committee (1954), the structure of the Central Co-operative Banks was rationalized and these banks were strengthened into viable institutions. The basic principle of one Central Co-operative Bank for each district began to be followed in all states and the excess banks were amalgamated. As a result of this amalgamation, the number of DCCBs declined from 505 in 1950-51 to 380 in 1960-61. After further adjustments, their number stood at 327 at the end of the financial year 2009-10.

The progress of the DCCBs in India in terms of certain important financial variables is displayed in the Table 2.

TABLE 2: PROGRESS OF CENTRAL CO-OPERATIVE BANKS IN INDIA (Rs in Crores)

| Year | Owned Funds Rs | Deposits Rs | Borrowings Rs | Working Capitals Rs | Loans | | |
|---------|-------------------|----------------|------------------|------------------------|---------------|-------------------|----------------|
| | | | | | Advances (Rs) | Out Standing (Rs) | Over Dues (Rs) |
| 1960-61 | 50.86 | 112.02 | 135.09 | 304.05 | 290.10 | 220.13 | 32.80 |
| 1970-71 | 199.05 | 438.55 | 393.14 | 1081.422 | 866.40 | 813.40 | 274.19 |
| 1980-81 | 670.18 | 2323.71 | 1479.03 | 4572.66 | 3210.97 | 2987.13 | 939.87 |
| 1990-91 | 1832.01 | 11180.56 | 5460.31 | 19079.25 | 18771.01 | 12156.22 | 3676.34 |
| 2000-01 | 9765.99 | 61813.20 | 16566.68 | 89541.36 | 55780.39 | 50569.89 | 12761.81 |
| 2010-11 | 27909.49 | 146303.14 | 30354.83 | 206918.44 | 110529.29 | 104997.15 | 23763.32 |
| Mean | 6737.93 | 37028.53 | 9064.847 | 53582.86 | 31574.69 | 28623.99 | 6908.055 |
| S.D | 11006.94 | 58531.05 | 12124.50 | 82452.83 | 44067.91 | 42007.44 | 9546.80 |
| CV | 163.36 | 158.07 | 133.75 | 153.88 | 139.57 | 146.76 | 138.20 |
| LGR | 71.72826 | 71.29097 | 64.17097 | 70.00932 | 66.19225 | 68.10721 | 65.69143 |
| CGR | 126.3 | 149.4 | 113.1 | 135.1 | 125.8 | 127.5 | 130.8 |
| t-value | 2.881* | 3.144* | 4.072* | 3.243* | 3.847* | 3.500* | 3.891* |

*significant at 1 per cent level

Source: Statistical Statements relating to Co-operative Movement in India, Bombay

Reserve Bank of India, 1960-61 to 1991-92.

In absolute values, all the variables of the DCCBs registered an overall rise over the five decade period under observation. In terms of the compound growth rate, it is noticed that deposits reported higher growth followed by working capital and the rate of increase in borrowings is the least of all the variables under observation. All these variables, though depicted an overall uptrend, a steep rise reported during 2001-02 to 2010-11. Further, the 't' value of all these variables is significant at 5 percent level of significance. It indicates that the growth in owned funds, deposits, borrowings and working capital is substantially significant.

As regard the loans and advances, out standings and over dues almost trebled by 2010-11 when compared to 2000-01. It implies that the buoyancy in the Indian economy and its favorable impact on rural economy under reforms led to liberal extension of loans in rural areas. This has also led to escalated outstandings and over dues. An examination of compound growth rates of over dues and out standings also confirms the observation made afore. The 't' value is significant at 5 per cent level and hence it can be inferred that the loans including outstanding and the over dues are highly significant.

5. GROWTH AND DEVELOPMENT OF DCCBS IN INDIA DURING 2000-01 – 2009-10

The growth and development of District Central Co-operative Banks (DCCBs) in India during the last decade 2000-01 to 2009-10 is reviewed, as this period was also influenced by the banking reforms implementation. The details explaining the growth and development of DCCBs are shown in Table-3.

TABLE 3: PROGRESS OF DISTRICT CENTRAL CO-OPERATIVE BANKS IN INDIA DURING 2000-01 TO 2009-10 (Rs. in Lakhs)

| Sl. No. | ITEMS | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | LGR | t-value |
|---------|----------------------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|----------|
| 1 | No of DCC Banks (No) | 370 | 371 | 365 | 367 | 368 | 370 | 371 | 372 | 373 | 372 | 0.13 | 2.073@ |
| 2 | No of Offices including H.O (No) | 12787 | 13068 | 12865 | 12866 | 12858 | 12991 | 12928 | 13151 | 13233 | 13181 | 0.30 | 3.261* |
| 3 | Total Membership (No) | 19863.70 | 18374.33 | 21827.29 | 21463.48 | 21458.76 | 22678.5 | 32648.49 | 33968.81 | 35288.02 | 39756.6 | 8.91 | 7.042** |
| 4 | Paid Up Capital | 3015.78 | 3388 | 3546.78 | 3792.99 | 4115.47 | 4115.47 | 5098.13 | 5829.23 | 6071.41 | 7776.53 | 9.98 | 8.042** |
| 5 | Total Reserves | 6750.21 | 7929.82 | 9620.14 | 1164.55 | 12672.86 | 14082.94 | 15505.12 | 16435.73 | 17808.01 | 20132.96 | 13.30 | 4.513** |
| 6 | Total Deposits | 61813.2 | 66797.21 | 72017.97 | 76796.38 | 80476.36 | 86652.22 | 92081.36 | 105993.72 | 123721.82 | 146303.14 | 9.17 | 8.090** |
| 7 | Total Borrowings | 16566.68 | 18276.05 | 19217.46 | 21049.14 | 21557.1 | 23202.13 | 27940.6 | 3053.34 | 28477.64 | 30354.83 | 3.96 | 0.961@ |
| 8 | Total Working Capital | 59541.36 | 102020.39 | 108562.56 | 118644.09 | 122632.89 | 131241.85 | 146083.63 | 168137.52 | 184037.87 | 206918.44 | 10.29 | 12.366** |
| 9 | Investments | 24478.05 | 28319.59 | 31044.3 | 35656.3 | 34783.22 | 37127.39 | 40791.12 | 48246.62 | 61041.24 | 75624.46 | 11.52 | 6.537** |

Note : @- Not significant **significant at 1 per cent level * significant at 5 per cent level

Source: Basic Data on Performance of DCCBs from 2009 to 2010, NAFSCOB. www.nafscob.org

The progress of DCCBs in India during 2000-01 to 2009-10 is analyzed by considering their key components. The number of DCCBs which stood at 370 in 2000-01 rose to 372 in 2009-10 with marginal variations and 't' value is 2.073 which indicates insignificant growth. However, the number of branches of these DCCBs for the period under reference has shown significant growth with t value of 3.261 at 5 percent level. The membership of these DCCBs too increased from 19864 to 39,756 recording t value of 7.042 which is significant at one percent level. The paid up capital, the reserves, deposits and working capital and investments have also reported an overall uptrend with a minimum linear growth rate of 9.172 and the highest of 13.30. Further, their t values are significant at one percent level, denoting impressive growth over the years in these key variables in the past one decade. But, it is noted that the growth in borrowings is not significant. It is deduced that in spite of insignificant growth of DCCBs as well as their borrowings, all other key variables denote reasonable progress of DCCBs in India during the period under reference.

TABLE 4: PERFORMANCE OF DISTRICT CENTRAL CO-OPERATIVE BANKS IN INDIA DURING 2000-01 TO 2009-10 (Rs. in Lakhs)

| Sl. No. | ITEMS | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | LGR | t-value |
|---------|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-------|----------|
| 1 | Total Loans Issued | 55780.39 | 61302.49 | 59033.66 | 57529.01 | 65355.78 | 69317.61 | 76703.81 | 87229.09 | 88028.69 | 110529.29 | 7.32 | 6.615** |
| | (a) Short Term | 40817.45 | 45472.37 | 42864.12 | 41952.23 | 45767.71 | 52273.99 | 58243.36 | 68290.65 | 68893.87 | 88258.79 | 8.48 | 6.219** |
| | (b) Medium Term | 5133.85 | 6260.67 | 6834.37 | 6946.47 | 9444.7 | 8044.5 | 8730.26 | 9228.6 | 9960.36 | 11355.78 | 7.23 | 8.056** |
| 2 | Total Loans Outstanding | 50569.89 | 60165.62 | 62050.49 | 63619.84 | 72089.61 | 76737.38 | 85460.75 | 95974.23 | 97206.82 | 104997.15 | 7.79 | 18.572** |
| | (a) Short Term | 31448.9 | 35638.5 | 36513.95 | 38885.38 | 40840.11 | 43411.91 | 56275.24 | 59229.24 | 44725.63 | 66263.57 | 7.29 | 5.071** |
| | (b) Medium Term | 10694.97 | 14863.64 | 16107.37 | 15885.45 | 20714.72 | 21794.65 | 23201.86 | 24807.41 | 23623.39 | 25294.67 | 7.98 | 9.325** |
| 3 | Total Demand | 36089.14 | 41666.02 | 45813.41 | 50059.33 | 54857.97 | 57226.94 | 64943.37 | 73977.12 | 80889.6 | 88896.16 | 9.56 | 17.997** |
| 4 | Total Collection | 23327.33 | 27043.14 | 28762.85 | 31585.73 | 36826.22 | 39090.87 | 43557.55 | 46756.28 | 54446.08 | 65132.84 | 10.64 | 11.939** |
| 5 | Overdues (Balance) | 12761.81 | 14622.88 | 17050.56 | 18473.6 | 18031.75 | 18136.07 | 21385.82 | 27220.84 | 26443.52 | 23763.32 | 7.39 | 6.613** |
| 6 | Percentage of Overdues to Demand | 35.36 | 35.1 | 37.4 | 36.9 | 32.86 | 31.69 | 32.93 | 36.53 | 32.69 | 26.73 | -2.00 | -2.384@ |
| 7 | Cost of Management | 2659.89 | 2898.34 | 3237.02 | 3345.79 | 3680.12 | 3013.04 | 3779.84 | 3748.76 | 4227.24 | 4437.37 | 4.93 | 6.166* |
| 8 | Total No of Employees (No) | 113012 | 113088 | 110018 | 110058 | 109124 | 105885 | 91768 | 90035 | 89259 | 87554 | -3.29 | -7.616** |

Note : @- Not significant **significant at 1 per cent level * significant at 5 per cent level

Source : Basic Data on Performance of DCCBs from 2009 to 2010, NAFSCOB. www.nafscob.org

The performance of DCCBs in India during 2000-01 to 2009-10 is examined by considering the key financial and administrative variables such as loans issued, out standings, over dues, cost of management and the like. The data relating to these aspects is presented in the Table-4. Loans and advances progressed steadily from Rs.55780 lakhs in 2000-01 to Rs 110529 lakhs in 2009-10. The linear growth rate of 7.23 percent and 't' value of 6.615 which is significant at 5 percent level. Thus, it is evident that loans advanced over the period under reference registered significant growth. Of the loans, short-term loans recorded linear growth rate of 8.48 percent, where as the medium term loans 7.23 percent. But the intensity of growth is more pronounced in medium-term loans as is evident from their 't' values. On par with the loans advanced, out standings too rose gradually. The growth in outstanding short-term loans is marginally less than the medium-term loans. The quantum of short-term and medium-term out standings almost more than doubled. The demand for collections which was at Rs.36089 lakhs in 2000-01 reached a staggering figure of Rs.88896 lakhs whose linear growth rate accounted to 9.96 percent with the 't' value of 17.997 implying significant growth. Collections also steadily increased recording a linear growth rate of 10.64 percent. Its 't' value is 11.939 denoting that reasonable efforts were made in making the collections. In spite of reasonable collection efforts, overdues grew at a linear growth rate of 7.39 percent. The over dues too almost doubled over the study period. Coming to the cost of management, in spite of declining number of employees, the cost per employee rose from Rs. 2,660 to Rs.4,437 during the period of analysis. The Co-operatives tried to reduce their staff strength over the years. But the cost per employee rose significantly in view of wage revision.

6. CONCLUSION

The Co-operative banking has a special importance in the developing countries like India with socio economic inequality, unbalanced growth, dominance of agriculture and problem of poverty. The growth of co-operatives reported an overall increase during the period from 1946 to 2012, but the growth is highly impressive during the period from 1976 to 2006. The number of DCCBs however declined and stood at 327 in view of amalgamations effected. The growth in their owned funds, deposits, borrowings and working capital are substantially significant. The advances, outstandings and over dues during the last decade reported significant growth rate indicating liberal extension of loans to beneficiaries under the banking reforms implementation. But the overdues figure has been alarming. The outstanding marginal loans are marginally less than medium-term loans in DCCBs. It is distressing to observe that borrowings on one hand declined whereas overdues escalated. In spite of declining staff strength the cost per employee raised substantially indicating increased cost of human resources.

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A STUDY ON ECONOMIC RETURNS IN POULTRY FARMING WITH SPECIAL REFERENCE TO SUGUNA BROILER CONTRACT FARMS IN COIMBATORE DISTRICT

A. SRIDHARAN
RESEARCH SCHOLAR
KARPAGAM UNIVERSITY
COIMBATORE

DR. R. SARAVANAN
DIRECTOR
SCHOOL OF MANAGEMENT
SRI KRISHNA COLLEGE OF TECHNOLOGY
KOVAIPUDUR


ABSTRACT

India with over 60% of its living in villages has not found out alternate livelihood for its rural poor, where farmers live in abject poverty due to frequent failure of monsoon, resulting in crop loss and financial loss. During the last 20 years, Poultry Integrators like Suguna Poultry have given the Indian Farmers a second life through contract poultry farming. The farmers without any investment and marketing risk of selling the produce – chicken get extra income once in 45 days, throughout the year. With the growth in urban population, strong belief in good and clean food habits, increased income and higher purchasing power, the chicken industry has been growing phenomenally, thereby making the lives of farmers happier and richer. This research studies the economic returns of the farmers, when they grow chicken on contract basis in and around Coimbatore District.

KEYWORDS

Indian Farmers, Poultry Farming, Contract Farming, Integrators, Economic Returns.

INTRODUCTION

 Agriculture is often described as the backbone of the Indian Economy. Its complementarity with other sectors and its ability to trigger growth is due to the following reason:

- (a) Agriculture contributes a significant share in the generation of the country's National Income, though the share has declined from 55% in the early 1950s to about 25% currently ;
- (b) More than half of India's workforce is employed in the agriculture sector ;
- (c) The growth of other sectors in the overall economy depends on the performance of agriculture to a great extent.

Though tremendous progress has been made in the exploitation of the irrigation potential of the country by means of major, minor, small irrigation works, yet 2/3rds of are under cultivation is un-irrigated and there is thus, heavy dependence on the vagaries of nature, i.e., monsoon.

Thus, the overall agricultural growth remained stagnant and slow (below 3%) in the country. Apart from this, agricultural growth has remained confined to a few well – endowed pockets which has created regional disparities.

Poverty in rural India is caused by low level of assets holding, coupled with low and uncertain returns. Land and livestock like poultry are considered to be the major assets of rural households for livelihood support in general and small and marginal households in particular. As distribution of land holdings in rural India is highly skewed towards medium and large farmers, rearing of livestock like poultry are considered to be the potential options for the poor households to earn their livelihood on sustainable basis.

(A) Poverty Reduction and Poultry Sector

Thus, the alternate livelihood, lesser dependence on monsoon, healthy and continuous working conditions made the Indian Poultry Industry a big success story. From a backyard venture, it has made a quantum leap to emerge as a dynamic industry. Over the last 3 decades, there have been significant developments in the poultry industry with each decade focusing on different sectors. The 70's saw a spurt in egg production ; the 80's an acceleration of broiler production ; the nineties advances in poultry integration, automation and feed production. In the current decade broiler industry is poised to exploit value added products and explore global trade.

(B) Poultry India : World Vs. India

The traditional poultry farming view of the domestication of the chicken is stated in Encyclopædia Britannica (2007): "Humans first domesticated chickens of Indian origin for the purpose of cockfighting in Asia, Africa, and Europe. Very little formal attention was given to egg or meat production.

Modern commercial broilers are specially bred for large scale, efficient meat production and although they are the same species, grow much faster than egg laying hens or traditional dual purpose breeds. They are noted for having very fast growth rates, a high feed conversion ratio, and low levels of activity. Broilers often reach a slaughter weight of 1.5 kg. to 2.5 kg. (dressed) in only five weeks.

India is currently ranked as the fifth largest poultry producer in the world, behind the United States, Brazil, the European Union (EU), and China in the year 2012. Of late India is the world's fourth largest egg producer and fifth major producer of broilers .

India produced 3.16 million tons of broiler meat in 2012, up from 1.8 million tons in 2005, 1.65 million tons in 2004 and 1.6 million tons in 2003. According to US Department of Agriculture estimates, India's poultry meat production grew about 6% annually during the 1980's, accelerated to 11% annually in the 1990s and to nearly 19% during 2007 – 2011.

The rearing of poultry also provides an excellent opportunity for underemployed members of the rural families. Poultry of 1000 birds either Layer or Broilers can support at least 15-20 persons upstream, direct and downstream, beginning from the input end (upstream), to farming (direct) and transport, processing and marketing (downstream)

The growth of the poultry sector in India is also marked by an increase in the size of the poultry farm. In earlier years broiler farms had produced on an average a few hundred birds (200-500 chicks) per cycle of 40 days. Today units produce minimum of 5,000 birds units 5000 to 50,000 birds per cycle are common.

STATEMENT OF THE PROBLEM

While poultry farming does provide alternative livelihood to the small and marginal farmers, they also face various obstacles like lack of institutional credit, shortage of labour force, cost escalation of coal, electricity, high mortality of birds especially in summer, loss owing to bird flu, payment issues with integrators either delayed or FCR related losses. Under this background, the present study has been undertaken in Coimbatore District with the aim of exploring the cost

and returns in broiler farms under the given changed condition of contract farming and the problems like above mentioned ones, faced by broiler contract farmers in Coimbatore District.

SCOPE OF THE STUDY

The study would look into the various economic aspects of broiler production. The study covers the broiler production units under Suguna Poultry Limited, which are run on contract basis in Coimbatore District. The survey has been conducted for the period 2006 - 2010 and the interview has been conducted between June, 2011 and May, 2012.

The Coimbatore District has been purposively selected as it alone accounts for more than 30% of total broiler production in India. Coimbatore also reflects the agricultural oriented rural life where people have started taking broiler production on commercial basis to supplement their income.

The study on the cost and returns and problems of contract broiler farming will help the contract broiler farmers to understand whether their units are running in profit or loss and help the farmers in their investment decision in this sector.

OBJECTIVES OF THE STUDY

1. To examine the input purchase and other expenses and output sale arrangements and estimate the net returns in broiler farming,
2. To identify the constraints in broiler farming and suggest remedial measures

METHODOLOGY USED

The following methodology is used in the study

i) Study Area

The study area refers to Coimbatore District.

ii) Sampling Procedure

Tamil Nadu comprises of 32 districts. However, in it, Coimbatore has a unique role to play as it is the birth place and protector, promoter and developer of broiler industry, as can be seen by the fact that 30% of Indian Broiler Production is mainly concentrated in Coimbatore District.

Tamil Nadu, Andhra Pradesh, West Bengal, Maharashtra, Karnataka and Punjab are the major broiler producing states of the country. The Coimbatore-Salem belt of Tamil Nadu is in the forefront of broiler production of the country. 75% of the broilers produced and consumed in this region come from integrated farms.

Tamil Nadu is leading the states in broiler production with a record production of 397 thousand tonnes in 2009-10. Tamil Nadu accounts for 17.71 per cent of the poultry population of the country.

Poultry integrators have been expanding most rapidly in southern India, particularly in the Coimbatore district of Tamil Nadu, reportedly has a large integration, which now accounts for about 75% of production and consumption.

The major integrators and contract growers operating in the southern region of the country include Venkateswara, Suguna, Pioneer, Star chick, Godrej real gold, Godrej agro vet, Santhi, Peninsula, Skylark. Some of these integrators are also selling their processed chicken products in brand names like Venkateswara with brand name Venky, Godrej-Realgold, Suguna – Suguna Fresh.

Hence the sample contract farmers were selected from Coimbatore District. We have selected the entire 254 farms of Suguna Poultry Farm Limited, operating in Coimbatore District. We have selected farms, by adopting census sampling technique.

The 254 sample contract farms selected for the study was further classified in to small, and large farms based on the number birds reared.

Out of the 249 contract farms, 96 (38.0%) come under the category of small farms (less than 5000 birds), 143 (56.0%) come under medium category (5,000 – 10,000 birds) and 15 (6.0%) belonged to the large farms (more than 10,000 birds) category.

(iii) Data Sources

- a. **Primary Data** : The study has used primary data, which was collected using interview schedule.
- b. **Secondary Data** : The Secondary data was collected from various Poultry Magazines, Journals, Websites, Conference Papers, Indian and Foreign Government Records, Balance Sheets of various Poultry Manufacturers.

(iv) Tools used for collection of data

An interview schedule was constructed for the purpose of collecting data. A pilot study was conducted on 62 contract poultry farmers, based on which the interview schedule was restructured to meet the accuracy and reliability of data.

v) Framework of analysis

Suitable statistical tools have been used to draw inferences using SPSS (21.0 version) for Windows. The following tools are used in the study:

1. Chi Square Analysis

HYPOTHESIS

Suitable null hypothesis has been framed and applied wherever necessary.

LIMITATIONS OF THE STUDY

The following are the limitations of the study

1. Most contract poultry farmers who were administered detailed interview schedules were found to be keeping improper records of farm management details.
2. The results and findings are based on the opinion of the respondents of Coimbatore District, and it cannot be generalized.

REVIEW OF LITERATURE

Ramaswami, B, et. al. (2009), surveyed randomly 25 contract and equivalent number of non-contract growers during 2002-2003 to collect information for the year 2001-2002. A majority of the contract growers were associated with a leading poultry integrator.

From regression analysis, the team found that the marginal cost of producing a kg. of bird under contract production was Rs.30 while it was Rs.26.22 under non-contract production. When the team reflected competitive prices for feed and medicine, they recalculated the contract production costs using the prices paid by non-contract growers. When this was done, they obtained the marginal (and average) costs for contract grower as Rs.24.80, compared to the marginal costs for the non-contract grower of Rs.26.20 per kg. Contract production thus saved an amount of Rs.1.40 for every kg. of bird.

Kalamar, (2012), carried out a survey in Maharashtra, The study was based on the primary data collected from the broiler units in Maharashtra. In the total costs, variable costs accounted for 98.7 per cent, while fixed costs formed only 1.3 per cent in non-contract group. The corresponding shares were 75.8 per cent and 24.2 per cent, respectively in contract group. The average cost per kg of live bird was estimated to be ` 3.02 in contract farming and ` 48.47 in non-contract category. The average cost per kg of live weight decreased as the size of unit increased in both the cases. The average live weight of the bird was 2.15 kg in contract and 2.10 kg non-contract group. Across different farming categories, body weight was highest in medium-size units of contract farms and large-size units of noncontract farms.

KEY RESULTS: COST AND RETURNS IN BROILER CONTRACT FARMING: CHI-SQUARE TEST**1. AGE AND LEVEL OF INCOME IN POULTRY FARMING**

In order to find the relationship between Age and Level of Income in poultry farming of the respondents, a Chi-square test has been applied and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between Age and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between Age and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|--------|------------------|-------------|-----|-------------------------|
| Age | 13.963 | 12.6 | 6 | Significant at 5% Level |

From the above analysis, the calculated value of chi-square (13.963) is more than the table value (12.6). Hence the null hypothesis is rejected. Hence, it is disclosed that there is a close significant relationship between Age and Level of Income towards poultry farming.

2. GENDER AND LEVEL OF INCOME

With a view to study the relationship between gender and Level of Income in poultry farming of the respondents, a Chi-square test has been applied and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between gender and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between gender and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|--------|------------------|-------------|-----|-----------------------------|
| Gender | 0.957 | 5.991 | 2 | Not Significant at 5% Level |

From the above analysis, the calculated value of chi-square (0.957) is less than the table value (5.991). Hence the null hypothesis is accepted. Hence, it is inferred that there is no significant relationship between Gender and Level of Income towards poultry farming.

3. EDUCATIONAL QUALIFICATION AND LEVEL OF INCOME :

In order to find the relationship between Educational Level and Level of Income in the poultry farming of the respondents, a Chi-square test is used and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between Educational Level and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between Educational Level and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|---------------------------|------------------|-------------|-----|-------------------------|
| EDUCATIONAL QUALIFICATION | 13.829 | 12.6 | 6 | Significant at 5% Level |

From the above analysis, the calculated value of chi-square (13.829) is more than the table value (12.6). Hence the null hypothesis is rejected. Hence, there is a close significant relationship between Educational Level and Level of Income towards poultry farming.

4. AREA OF AGRICULTURAL LAND HOLDING AND LEVEL OF INCOME

In order to find the relationship between an Area of agricultural land holding and Level of Income towards poultry farming of the respondents, a Chi-square test is used and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between Area of Agricultural Land holding and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between Area of Agricultural Land holding and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|---------------------------|------------------|-------------|-----|-------------------------|
| Area of Agricultural Land | 13.247 | 12.6 | 6 | Significant at 5% Level |

From the above analysis, the calculated value of chi-square (13.247) is more than the table value (12.6). Hence the null hypothesis is rejected. Thus, it is concluded that there is a close significant relationship between an Area of Agricultural Land holding and Level of Income towards poultry farming.

5. OTHER OCCUPATION OF POULTRY FARMERS AND LEVEL OF INCOME

For analysing the relationship between other occupation of poultry farmers and Level of Income in poultry farming of the respondents, a Chi-square test is used and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between other occupation of poultry farmers and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between other occupation of poultry farmers and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|-------------------------------------|------------------|-------------|-----|-------------------------|
| Other occupation of poultry farmers | 12.940 | 9.49 | 4 | Significant at 5% Level |

From the above analysis, the calculated value of chi-square (12.940) is more than the table value (9.49). Hence the null hypothesis is rejected.

Hence, there is a close significant relationship between other occupation of poultry farmers and Level of Income towards poultry farming.

6. YEAR OF STARTING THE POULTRY FARM AND LEVEL OF INCOME

In order to find the relationship between the year of starting poultry farm and Level of Income towards poultry farming of the respondents, a Chi-square test is used and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between the year of starting poultry farm and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between the year of starting poultry farm and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|-------------------------------|------------------|-------------|-----|-----------------------------|
| Year of starting poultry farm | 5.643 | 9.49 | 4 | Not Significant at 5% Level |

From the above analysis, the calculated value of chi-square (5.643) is less than the table value (9.49). Hence the null hypothesis is accepted. Thus, there is no relationship between the year of starting the poultry farm and Level of Income towards poultry farming.

7. NUMBER OF BIRDS IN THE POULTRY FARM AT BEGINNING AND LEVEL OF INCOME

In order to find the relationship between number of birds in the poultry farm at beginning and Level of Income in poultry farming of the respondents, a Chi-square test is used and the result of the test is given below.

Null Hypothesis (H_0) : *"There is no significant relationship between Number of birds in the poultry farm at beginning and Level of Income in poultry farming".*

Alternative Hypothesis (H_1) : *"There is a close significant relationship between Number of birds in the poultry farm at beginning and Level of Income in poultry farming".*

| Factor | Calculated Value | Table Value | D.F | Remarks |
|---|------------------|-------------|-----|-------------------------|
| Number of birds in poultry in farm – at beginning | 62.041 | 12.6 | 6 | Significant at 5% Level |

From the above analysis, the calculated value of chi-square (62.041) is more than the table value (12.6). Hence the null hypothesis is rejected.

Hence, it is disclosed that there is a close significant relationship between number of birds in the poultry farm at beginning and Level of Income in poultry farming.

8. NUMBER OF BIRDS IN THE POULTRY FARM AT PRESENT AND LEVEL OF INCOME

In order to find the relationship between number of birds in the poultry farm at present and Level of Income in poultry farming of the respondents, a Chi-square test is used and the result of the test is given below.

Null Hypothesis (H_0) : "There is no significant relationship between Number of birds in the poultry farm at present and Level of Income in poultry farming".

Alternative Hypothesis (H_1) : "There is a close significant relationship between Number of birds in the poultry farm at present and Level of Income in poultry farming".

| Factor | Calculated Value | Table Value | D.F | Remarks |
|---|------------------|-------------|-----|-------------------------|
| Number of birds in poultry in farm – at present | 42.367 | 12.6 | 6 | Significant at 5% Level |

From the above analysis, the calculated value of chi-square (42.367) is more than the table value (12.6). Hence the null hypothesis is rejected.

Hence, there is a close significant relationship between number of birds in the poultry farm at present and Level of Income towards poultry farming.

CONCLUSION

1. It is disclosed that there is a close significant relationship between Age and Level of Income towards poultry farming.
2. It is inferred that there is no significant relationship between Gender and Level of Income towards poultry farming.
3. There is a close significant relationship between Educational Level and Level of Income towards poultry farming.
4. It is concluded that there is a close significant relationship between an Area of Agricultural Land holding and Level of Income towards poultry farming.
5. There is a close significant relationship between other occupation of poultry farmers and Level of Income towards poultry farming.
6. There is no relationship between the year of starting the poultry farm and Level of Income towards poultry farming.
7. It is disclosed that there is a close significant relationship between number of birds in the poultry farm at beginning and Level of Income in poultry farming.
8. There is a close significant relationship between number of birds in the poultry farm at present and Level of Income towards poultry farming.

SUGGESTIONS

Like any other developing country, India is witnessing a growing population, urbanization, income growth, growing middle class, awareness about health benefits, which are all fuelling demand for food of animal origin. Like any other developing countries, population, urbanization and income growth in India is also fuelling demand for food of animal origin. These changes in changes in diet, income growth opportunities, particularly of rural populace are triggering as to what is termed as "Livestock Revolution", and is demand-driven. In India, poultry is one of the fastest growing segments of livestock/agriculture and contributes a major share in terms of protein supplementation, from eggs and poultry meat.

This sector now employs over 3.0 million people. At least 80% of employment in the poultry sector is generated directly by farmers, while 20% is engaged in allied activities like feed production, pharmaceuticals, equipment etc. Additionally there may be a similar number of people engaged in marketing and other channels servicing the poultry sector. It is also estimated that for increase in per capita availability of one egg or 50 gms. of poultry meat, additional 20,000-25,000 job opportunities are created. The value of output at current prices is steadily increasing for eggs and poultry meat during the last few years and during 2010-2011 it was nearly US \$ 9.3 billion. This is equivalent to nearly 10% of the total output from livestock and 2.8% of total agriculture. The value of exports is also increasing slowly with over Rs.372 crores during 2009-10 from a mere Rs. 11 crores, 20 years back. Overall it appears that the poultry sector has tremendous potential for growth and development.

Contract farming of broiler chickens became an alternative source of employment for the farmers in Coimbatore and it gives them additional income. However according to the study, the current growing charges offered by the integrators are not sufficient and some of the farms incurred loss. The poultry farming activity was not remunerative. Integrators should increase the growing charges in order to sustain the interest of the farmers as the survival of hatcheries and feed mills are linked to the farmer's continued interest in poultry farming. There is a need to define the status of poultry as a part of agriculture. Hence, the Government has to declare poultry farming as an agricultural activity and the benefits available to agriculture to be extended to poultry farming also. If all the above suggestions are implemented by the concerned authorities, the broiler farming will move in the right direction and the farmers will get good income. Poultry farming will prove to be an alternative source of income and employment.

SCOPE FOR FURTHER RESEARCH

1. As the demand for poultry products are increasing there is tremendous scope for processed chicken. A study on the acceptability and profitability of broiler processing industry could be carried out.
2. To have a comprehensive knowledge on poultry farming, a comparative study on the cost and returns in broiler and layer farming, a comparative study on integrated farms and individual farms both in broiler and layer farming and a study on cost and returns in Broiler production for the integrators could be undertaken.
3. Layer farming is equally important as that of broiler farming. Hence, a study on poultry farming with special reference to layer farming may be undertaken.
4. India has a tremendous potential to play a major role in the international market. The value of poultry exports from India is increasing that encourages to venture into new markets. Hence, a study on the feasibility of chicken exports in the era of globalization may be carried out.
5. Price is an important factor which decides the profit to the producers and there exists no relationship between the cost of broilers and market price. Hence a study may be undertaken to analyse the pattern of behavior of broiler prices, on existing marketing practices and on the price spread among the different channels in marketing of broiler meat.

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DEVELOPMENT OF KNOWLEDGE BASED FRAMEWORK FOR AGRICULTURE SECTOR: A STEP TOWARDS SUSTAINABLE e-GOVERNANCE IN RURAL INDIA

ALPANA UPADHYAY
HEAD
FACULTY OF MCA
SUNSHINE GROUP OF INSTITUTIONS
RAJKOT

DR. C. K. KUMBHARANA
HEAD
DEPARTMENT OF COMPUTER SCIENCE
SAURASHTRA UNIVERSITY
RAJKOT

ABSTRACT

India is an agricultural country. Indian economy is still based on agricultural productivity. The agricultural sector is often considered as the engine for growth in rural economies in many countries as it is the leading source of rural income, employment and productivity. The implication of usage of ICT has been significantly felt in agriculture sectors for various activities like, crop production, cultivation processes, crop design, weather forecasting, pest control, natural resource management etc. There are some bottlenecks in incorporating ICT in agriculture like, huge investment in infrastructure and network access etc. In the contemporary India, various forces are at work to change the shape of agriculture extension in India, up till now apparent as a process of technology transfer to a process of assisting a wide range of communication and information technology services which are demand driven, sustainable and spread out across entire country. In the middle of this change, experts are struggling with the question of how best to strap up Information and Communication Technologies (ICTs) to improve the quality of life for millions of farmers. Indian Tobacco Company (I.T.C.) had recognized this reality and initiated **e-chaupal** project that is one of the ICT based solution that contributes to agricultural inputs, purchase and use of agricultural output in the field of agriculture and uses the documented best practices for farming. In this paper the perception of best practices has been taken and improved using a knowledge management framework.

KEYWORDS

Agriculture, e-Governance, ICT, Knowledge Based, Knowledge Management Framework.

1. INTRODUCTION

India lives in villages and agriculture is the soul of Indian economy. Agriculture is the backbone of the Indian Economy"- said Mahatma Gandhi six decades ago.

Even today, as we have entered in the new millennium, the situation is still the similar, with almost the entire economy being sustained by agriculture, which is the mainstay of the villages. Not only the economy, but also every one of us looks up to agriculture for our sustenance too. The agricultural sector is often considered as the engine for growth in rural economies in many countries as it is the leading source of rural income, employment and productivity. Rural economies are the keystones of food security. Consequently, rural and agricultural problems were considered to be virtually synonymous and it was often assumed that rural and agricultural objectives could be pursued through a single set of policies focused mainly on commodity price support. We first need to recognize that agriculture is a science that is essential to human well-being. Through continuous innovation over thousands of years, farmers have fed ever-growing populations with an increasing variety of products. Agricultural technology is not lifestyle abundance - it fulfills the right to food by making sure that all people should have the capacity to feed themselves in dignity.

Agriculture is a significant sector of the Indian economy. Though its contribution to the overall Gross Domestic Product (GDP) of the country has fallen from about 30 percent in 1990-91 to less than 15 percent in 2011-12, a leaning that is expected in the development process of any economy, agriculture yet forms the backbone of development. An average Indian still spends almost half of his/her total expenditure on food, while roughly half of India's work force is still engaged in agriculture for its livelihood. Being both a source of livelihood and food security for a vast majority of low income, poor and vulnerable sections of society, its performance assumes greater significance in view of the proposed National Food Security Bill and the ongoing Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme [The State of Indian Agriculture 2011-2012, by Target UPSC].

The practice from BRICS countries points out that a one percentage growth in agriculture is at least two to three times more effective in reducing poverty than the same growth radiates from non-agriculture sectors. Given that India is still home to the largest number of poor and malnourished people in the world, a higher priority to agriculture will achieve the goals of reducing poverty and malnutrition as well as of inclusive growth. Since agriculture forms the resource base for a number of agro-based industries and agro-services, it would be more meaningful to view agriculture not as farming alone but as a holistic value chain, which

includes farming, wholesaling, warehousing (including logistics), processing, and retailing. Further, it may be noted that in the last two Five Year Plans, it is clearly mentioned that for the economy to grow at 9 %, it is important that agriculture should grow at least by 4 % per annum. The report on the State of Indian Agriculture calls for wide-ranging reforms in agriculture sector to enable it to meet the growing demands and meet the challenges posed by various human and environmental factors [The State of Indian Agriculture 2011-2012, by Target UPSC].

The experience of agricultural development in India has shown that the existing systems of delivery of agricultural inputs and purchase and use of agricultural output have not been efficient in reaching the benefits of better linkages between agriculture and agro- processing industry to the farmers or the agro-industry. The timely, quality and cost effective delivery of sufficient inputs still remains a dream despite the marketing attempts of the corporate sector and the developmental programs of the state. The farmers are not able to sell their products remuneratively. There is frequent overabundance in the markets, resulting in low prices and losses to the farmers. On the other hand marketers face problems in acquiring opportune, cost effective, and satisfactory supply of quality raw materials.

Agriculture in OECD (Organization for Economic Co-operation and Development) countries, like other industries, is continuously facing adjustment challenges branching from economic and non-economic factors. [Status of Agriculture in OECD countries, OECD Report] Farm constitutions and changes in them affect rural areas in a variety of ways. Farm households in different farm size classes organize their labor, production methods, financing and marketing arrangements in different ways. The regional distribution of benefits from agricultural support policies is also influenced by the structural characteristics of the sector. Commodity- and input-coupled support, as well as any change in its level or form, has different rural effects because of the varying importance of each commodity among regions. The scope for changes in labor allocation on and off farms by farm families in different regions will also have a fundamental bearing

on the extent to which adjustment process would be smooth in response to market signals or whether there is a need for policy intervention to address particular income or adjustment problems.

"Slow agricultural growth is a concern for policymakers as some two-thirds of India's people depend on rural employment for a living. Current agricultural practices are neither economically nor environmentally sustainable and India's yields for many agricultural commodities are low. Poorly maintained irrigation systems and almost universal lack of good extension services are among the factors responsible. Farmers' access to markets is hampered by poor roads, rudimentary market infrastructure, and excessive regulation."

—World Bank: "India Country Overview 2008".

India has a population of over one billion people. It is considered both internally and externally to have the happening of fast growth in all the important phases relevant to fulfill the requirements of this much big population. But the biggest question that is being asked is about the 'truth' in the use of the word 'Growth'. say for example, "Whether economic growth is being reflected in the social growth?". Dissimilarly to the traditional definitions of growth, the yawning difference between various economic level of the society and the gap between urban India and rural India is actually increasing, in this way it is disproving the symmetry aspect of the definitions of 'Growth'. Indian economy, even though now seems to be moving towards service-based quickly emerging areas, is still disgustingly agriculture based and thereby makes use of maximum workforce. Advancement in agriculture productivity can facilitate in reducing rural poverty, which is often quoted as the root source of all tribulations- poor transportation, poor public health, skills meagerness of sustaining developmental efforts to even poor agricultural performance across a vast ecological field hosting majority of total Indian population.

However, the Government of India gives high concern to reduce poverty by increasing agricultural productivity, following issues of agricultural sector should be resolved to build a solid foundation for a highly productive, internationally competitive, and diversified agricultural sector.

ISSUES OF AGRICULTURE SECTOR

- 1) **Slow Down in Agricultural and Rural Non-Farm Growth:** Both the poorest as well as the more prosperous 'Green Revolution' states of Punjab, Haryana, Andhra Pradesh and Uttar Pradesh have recently witnessed a slow-down in agricultural growth and it ultimately lead for farmer's suicide.
- 2) **Population Pressure:** India has a huge population of over one billion and it is increasing at a very fast rate. This is likely to increase further in future. This has created great demand for land. Every bit of land has been brought under the plough. Even the hill slopes have been cut into terraces for cultivation.
- 3) **Inadequate infrastructure and services in rural areas:** Infrastructure is also a momentous factor in the process of development but country like our rural India does not have the infrastructure such as roads, electricity, fertilizer and pesticides availability which caused the vulnerable harm to the growth of agriculture.
- 4) **Weak Framework for Sustainable Water Management and Irrigation:** Many states lack the policy, regulatory, and institutional framework for the efficient, sustainable, and equitable allocation of water. Public spending in irrigation is spread over many incomplete projects. In addition, existing infrastructure has rapidly declined as operations and maintenance is given lower priority.
- 5) **Insufficient Access to Land and Finance:** While India has a large network of rural finance institutions, many of the rural poor remain excluded, due to inefficiencies in the formal finance institutions, the weak regulatory framework, high transaction costs, and risks associated with lending to agriculture. While land distribution has become less skewed, land policy and regulations to increase security of tenure.
- 6) **Weak Natural Resources Management:** One quarter of India's population depends on forests for at least part of their livelihoods. The forest sector is also faced with weak resource rights and economic incentives for communities, an inefficient legal framework and participatory management, and poor access to markets.
- 7) **Lack of modern farm implements:** Mechanization of farming has taken place in some parts of the country, most of the farmers are poor and do not have enough resources to purchase modern farm implements and tools. This obstructs the development of agriculture.
- 8) **Deficient in proper storage of food grains:** Storage of food grains is a big problem. Nearly 10 % of our harvest goes waste every year in the absence of proper storage facilities. This massive wastage can be avoided by developing scientific ware-housing facilities.
- 9) **Small and Fragmented Land Holdings:** The pressure of increasing population and the practice of dividing land equally among the heirs has caused excessive sub divisions of farm holdings. Consequently, the holdings are small and fragmented. The small size of holdings makes farming activity uneconomical and leads to social tension, violence and discontentment.
- 10) **Inadequate Irrigation Facilities:** By and large the irrigation facilities available in India are far from satisfactory. So for half of the total area under food crops has been brought under irrigation and the remaining half is left to the leniency of monsoon rains which are unpredictable in time and space. [Jac Stienen with Wietse Bruinsma and Frans Neuman]

2. PURPOSE OF THE STUDY

Information and Communication Technologies can play a progressively more important role in crop production and natural resource management in the field of agriculture. "ICT in Agriculture" is a promising field focusing on the enrichment of agricultural and rural development in India. Information and communication have always mattered in agriculture. In view of the fact that people have grown-up crops, elevated livestock, and caught fish, they have sought information from one another. What is the most effective planting stratagem on sharp slopes? How can a person obtain a land title? From where can a person buy the improved seed or feed this year? How can I participate in the government's credit program? Who is paying the highest price in the market?

Producers rarely find it easy to find answers to such questions, even if similar ones arise season after season. Farmers in a village may have planted the "same" crop for centuries, but over time, weather patterns and soil conditions change and scourge of pests and diseases come and go. Updated information allows the farmers to cope up with and even getting advantage from these changes. Offering such knowledge can be exigent, however, because the highly localized nature of agriculture means that information must be tailored specifically to distinct conditions. This purpose can be solved by development of knowledge management framework for agriculture sector for sustainable e-Governance in Rural India.

3. INCORPORATING ICT IN AGRICULTURE SECTOR

Involving ICT in agriculture sector can help in many ways,

- To provide more and effective information that can decrease the uncertainty farmers or producers face in decision making and unmeasured unpredictability in farming conditions.
- To educate the farmers to use natural resources efficiently, learning from others' experiences and mistakes there by not repeating it in other places or then the years after years, plummeting waste etc.
- To assimilate the entire agricultural population in rural India impeccably by using convergent technology solutions and promoting not just data sharing but also an information and knowledge sharing environment.
- Conservation of land.
- Timely and adequate availability of inputs.
- Development of minor irrigation.
- Support for marketing infrastructure.
- Increasing flow of credit particularly to the small and marginal farmers.
- Enhancing public sector investment in agricultural research and effective transfer of technology along with institutional reforms and two-way linkages between agriculture and rural development.
- To provide the farmers with the latest available technologies and also make them aware about a range of financial options available to them to make them manage to pay for it in terms of

1. Cultivation processes.
2. Crop design - this can be done if supported with structured information-based analysis to develop product portfolios or product mixes are designed by industrial/ service organizations.
3. Various irrigation techniques.
4. Providing weather information.
5. Developing new concepts in fertilizers, pest control and farming etc. e.g. bio-farming, as and when developed by agriculture professionals and agriculture research institutes.

Five main drifts can be the key aspects of the use of ICT in agriculture, particularly for poor producers:

1. adaptable and more affordable tools
2. low-cost and pervasive connectivity
3. advances in data storage and exchange
4. innovative business models and partnerships
5. the democratization of information, including the open access movement and social media.

These aspects are expected to continue shaping the prospects for using ICT effectively in developing country agriculture. But the need is, to have synchronized efforts by a nodal agency under the central government with full participation of the industry, state governments/local administration and agriculture sectors, to provide widespread access to ICTs with important services/information integrated to the rural masses. Even the World Summit on Information Society (WSIS) convened by ITU in December 2003 at Geneva has outlined a target to bring ICTs within the reach of half the world's population and with all schools, villages and hospitals by 2015. [John W. Berry, 2006]

4. A CASE STUDY OF E-CHAUPAL : AN ICT BASED SOLUTION

e-Choupal project has been initiated and set up by the International Business Division of International Tobacco Company (ITC). It is an ICT based project, which aims to build effective farmer-agribusiness linkages, to establish a more efficient agriculture supply chain that can reciprocally benefit the company as well as the farmers by almost eliminating the layers of middlemen that swindle the almost illiterate farmers for the right price for their crop and their hard work. In Madhya Pradesh, the agribusiness division of the company has set up e-Choupal for soyabean that provides the farmers access to market information and quality inputs. The model of the project has been planned and deployed effectively to undertake the challenges pretense by weak infrastructure, fragmented farms, and involvement of numerous intermediaries, as it is seen in rural India. It was launched in the year 2000, and it reaches more than 18,000 villages through 3000 kiosks across five states and adding more links is increasing the chain. [Sukhpal Singh "Leveraging ICT for Agricultural Development: A case study of e-Choupal of ITC"]

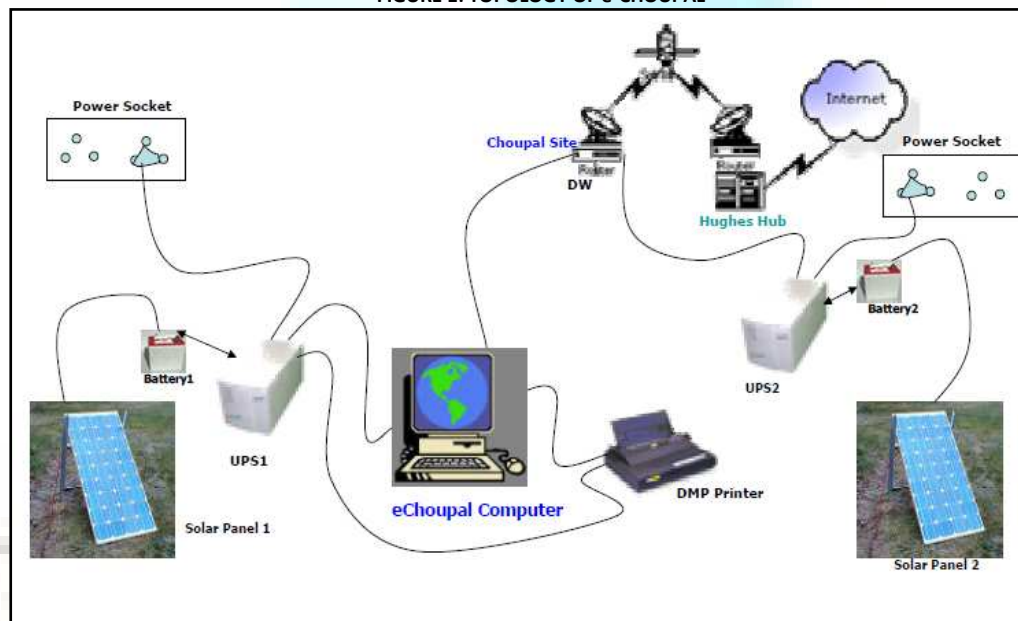
The technology infrastructure supporting e-chaupal has following layered elements:

1. Organization Architecture – Training, support, planning, people, and processes
2. Information Architecture – Data gathered and managed
3. Application Architecture – Applications, goals, resources occupied, performance metrics
4. Technical Architecture – Servers, Clients, Network, System Software

All the four layers are distinct but profoundly unified and contribute to goals and constraints collaboratively.

TOPOLOGY OF E-CHOUPAL

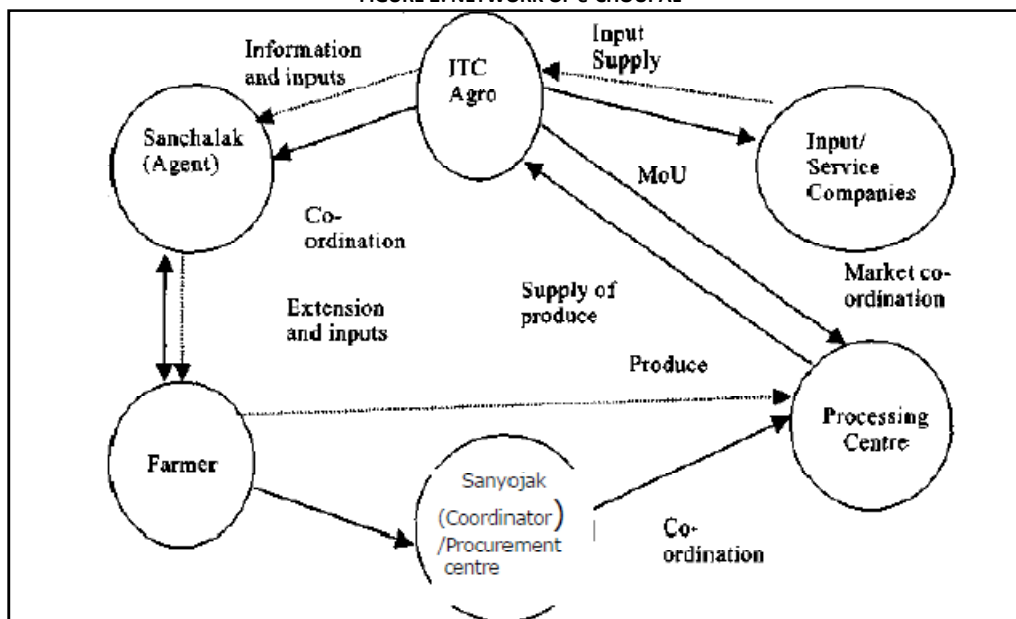
FIGURE 1: TOPOLOGY OF e-CHOUPAL



Source: Sanjiv Sharma (2006)

Figure 1 demonstrates the topology of e-Choupal project. Within this topology, the computer hardware used is PC with Intel Celeron processor. Other devices used are Dial-up modem for dial up connectivity, VSAT modem, VSAT: Solar battery charger, antennae, UPS, Power Solar battery charger, Printer.

FIGURE 2: NETWORK OF e-CHOUPAL



Source: Sukhpal Singh (2004)

Figure 2 describes the network of e-Choupal. First of all farmer takes only a sample of his crop product to the local Sanchalak and receives a spot price quote from the Sanchalak. Sanchalak is located in the village. Sanchalak is the agent of the company who interacts with farmers for input transaction and output transaction. Sanchalak is an interface between the computer terminal and the farmers. Then farmer takes his product to the ITC procurement center situated at the block or district level. Sanyojak or coordinator at there, manages physical flows in the supply chain, collects price information from local mandis and maintains records of it. Farmer has the option to sell the product to the company warehouse, factory and collection center. e-Choupal portal <http://www.echoupal.com> is the access point, protected by userID and password for login. Sanchalaks are the only registered users. Website provides various services like pricing of agro-products at different markets, weather forecasts, best farming practices, risk management, question & answer feature, financial services – life, general, health & crop Insurance. Above and all, the feature which can be improved by using Knowledge based framework is “Best Farming Practices” so that producers can salvage their accumulated pragmatic knowledge and can dig out best possible benefits, in a way stepping towards converting existing system into an expert system.

5. DEVELOPMENT OF KNOWLEDGE BASED FRAMEWORK FOR AGRICULTURE SECTOR

To narrate ICTs and knowledge, a comprehensive definition of knowledge has been specified by Davenport and Prusak (1998) as: “Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower. In organizations, it often becomes embedded not only in documents but also in organizational routines, processes, practices and norms.”

A knowledge base is an information storage area that provides a mean for vital information to be collected, organized, shared, searched and utilized. It can be either machine-readable or intended for human usage. A Knowledge Based System (Expert System) is a problem solving and decision making system based on knowledge of its task and logical rules or procedures for using knowledge. Both the knowledge and the logic are acquired from the experience of a specialist in the relevant area. During the various phases of processes, in order to take rectifying actions for any variations, one often needs timely information and analysis reports to assist in making more informed and precise decisions.

In this way when knowledge management comes in to the picture, it essentially means that to deliberately provide an environment that is contributing to knowledge creation, knowledge incorporation and knowledge propagation in making appropriate decisions. Now an Expert System is software based solution that imitates the interaction a user might have with a human expert to solve a problem. The end user provides input by selecting one or more answers from a list or by entering data. The program will ask questions until it has reached to a conclusion. The conclusion may be the selection of a single solution or list of possible solutions arranged in order of likelihood. This is where this paper proposes a Knowledge Based Framework for sustainable e-Governance in agriculture sector of India. This framework can work on the top of the existing smoothly functioning system.

FIGURE 3: PROPOSED NEW MODEL FOR KNOWLEDGE BASED FRAMEWORK

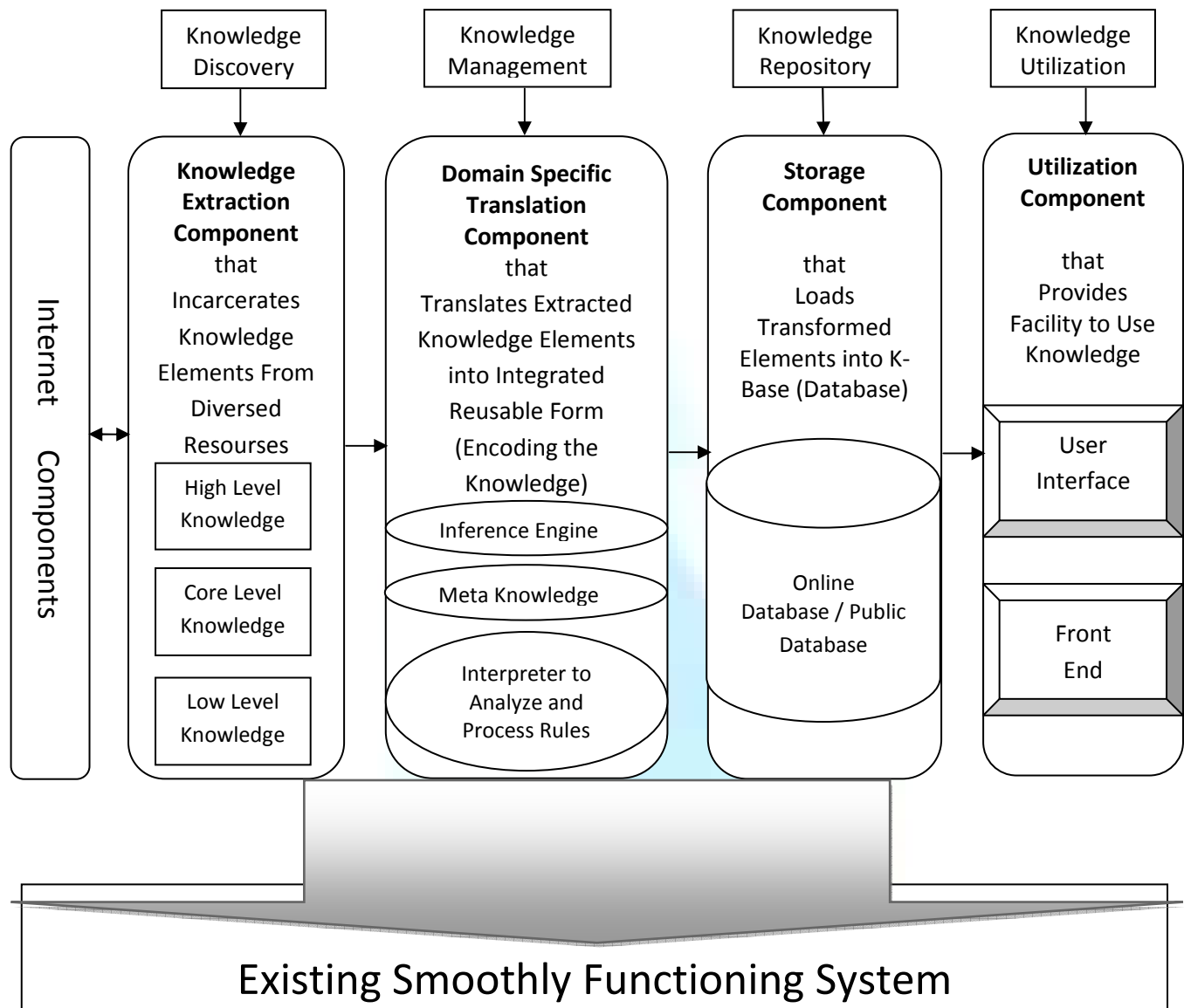


Figure 3 demonstrates the new Knowledge Based Framework that can be built up on any existing smoothly functioning e-Governance system, so that the existing framework can be converted to Knowledge Based Framework.

SUPPLEMENTARY NECESSITIES TO IMPLEMENT SUGGESTED MODEL

Step-1 : **CREATE A SOFTWARE MODULE USING ANY RAPID APPLICATION DEVELOPMENT LANGUAGE CONTAINING FOLLOWING BASIC COMPONENTS.**

1. Reusable Extraction component, Translation component, Loading Component for Knowledge Management (Rule based reasoning or Code base reasoning).
2. Knowledge base (K-base) for knowledge repository with appropriate knowledge representation design.
3. The Front End or User Interface through which the queries can be processed and knowledge can be retrieved from K-base. The interface should preferably be very simple having natural language based query system with translator software to translate the query into English phrases and a query processor with a proficient pattern matching algorithm for retrieval of an appropriate answer to the submitted query.

Step-2 : **CREATE AN INTERFACE BETWEEN KNOWLEDGE BASED MODULES AND EXISTING SYSTEM MODULES.**

In this way, the existing e-Governance system can be converted into Knowledge Based system, in away converting existing e-Governance system into an expert system for sustainable e-Governance in rural sectors of our country.

6. CONCLUSION

In this paper, new knowledge based framework can provide many of the advantages like

1. Timeliness : Information is available sooner for decision making
2. Completeness : An expert system can review all the possible solutions for an agricultural problem
3. Risk reducing : Proper decision always reduce risk of farmers
4. Consistency : Provides consistency in decision making process
5. Expertise : Gives expertise to producers in various decision making situation
6. Persistence – Expert system does not forget, but human experts may be, Knowledge can be preserved so available at any given time
7. Cost Effective - Although expert system is expensive to build and maintain, they are inexpensive to operate. Development and maintenance costs can be spread over many users

By looking at these advantages the model proposed in this paper has significant potential for application as an additional feature to improve the performance and to provide sustainable e-Governance as well as it is having further research opportunities in various magnitudes.

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HEALTH INSURANCE STRUCTURE IN INDIA – CURRENT PRACTICES AND CHALLENGES

DR. SHIBU JOHN
ASSOCIATE PROFESSOR
DEPARTMENT OF MANAGEMENT
JAMIA HAMDARD (HAMDARD UNIVERSITY)
HAMDARD NAGAR

ABSTRACT

The paper examines the issues and challenges faced by the health insurance sector in India. One of the critical issues in front of policy makers today is to provide basic health care to the 1.3 billion poor population that lives in low and middle income countries across the world. The burden of a disease is far more critical for these people. They live from hand-to-mouth and their health expenditure relies on out-of-pocket payments. One of the answers to this problem is Health Insurance. Health Insurance, as we know, permits people to prefer the convenience of making small payments for medical care periodically, rather than large contributions at one time during a medical emergency. It is one of the mechanisms to protect against catastrophic healthcare spending. In India the health insurance coverage has been significantly low due to the inability of the poor to pay the premium, cumbersome and time-consuming paperwork required for enrolment and claims. The health insurance can be only successful if issues like adverse selection, renewal rate, administrative cost ratio, exclusion of poor people and equity issues were taken into consideration

KEYWORDS

Health financing, Health insurance, Moral hazard, Third party administrator (TPA), Insurance premium.

INTRODUCTION

The probable distribution of future state of health is based on its present and past states (Hopkins and Kidd, 1996). The most important and critical issue which we face today is financing and providing health care for the 1.3 billion strong poor population that lives in low and middle income countries across the world (Dreschler & Jutting, 2005). These poor people live from hand-to-mouth and their health financing relies on out-of-pocket payments, which are insufficient. On the poor, the burden of a disease is far more critical (Ahuja, 2004). One of the difficult processes in providing the basic medical care is identifying the groups that need subsidized care. In this context, the Planning Commission (PC) has recently told the Supreme Court that poverty line for urban and rural areas in India could be provisionally placed at Rs.965 per capita per month and Rs.781 per capita per month respectively. This means that those earning over Rs.32 a day in urban areas and over Rs.26 a day in rural areas will no longer be getting Below Poverty Line (BPL) benefits. There was an outrage over this suggestion put forward by Planning Commission on how many people should be included in Below Poverty Line (BPL) and thereby covered under various welfare schemes like the Public Distribution System (PDS). Such a demarcation does not give us a clear picture of the number of people to be covered under various welfare programs (Looking for the poor, EPW, 5 November 2011).

REVIEW OF LITERATURE

Globally, the financing of health research remains a big concern due to a remarkable difference in buying capacity of healthcare services. According to the estimates of Global Forum for Health Research, only 10% of the world's resources allocated for health research and development are spent on studying 90% of the world's health issues. The Commission on Health Research for Development had recommended in as early as 1990 that the developing countries should spend at least 2% of their national health expenditure in research and research-capacity strengthening and stressed that such investments are one of the most important, cost-effective and sustainable means of advancing health and development. Although information on funding for health-related research and development is available to some extent for high-income countries, there is very little or fragmented information from low- and middle-income countries like India.

While social security for medical emergencies is not a new concept for India, health insurance, as we know it today, was introduced in 1912 when the first Insurance Act was passed (Devadasan et al, 2004). While the current version of the Insurance Act was introduced in 1938, there was no change till 1972, when the insurance industry was nationalized and 107 private insurance companies were brought under the umbrella of the General Insurance Corporation (GIC). In 1999, private and foreign insurance companies were allowed to enter the market with the enactment of the Insurance Regulatory and Development Act (IRDA). The Act allowed the entry of private sector entities in the Indian insurance sector, including health insurance, and created a regulatory authority. The IRDA is supposed to protect the interests of the policyholders, promote efficiency in the conduct of insurance, regulate the rates and terms and conditions of the policies offered by insurers and direct the maintenance of solvency margins. It is also required to provide sufficient protection for capital and solvency margins and has wide powers for accounting and auditing insurers. The IRDA lays down a code of conduct for insurance agents and also allows for a Tariff Advisory Committee to oversee premium rates and insurance plans and to prevent discrimination.

Keeping in mind the country's inequity, inequality and budget deficits, the government has initiated a mix of mandatory social health insurance, voluntary private health insurance, and community-based health insurance. While social security for medical emergencies is not new to India, with villagers taking a *piruvu* (collection) to support a household with a sick patient, the penetration of health insurance in India has been low. It is estimated that only about 12 to 14 percent of all Indian citizens are covered under any form of health financing. The health insurance coverage in India has been significantly low and several reasons for this low health insurance coverage. Chief among them are: the inability of the poor to pay the entire premium at one time for a future benefit; the excessive, cumbersome and time-consuming paperwork required for enrolment and claims; the limited supply of service providers, particularly because government hospitals are not permitted to treat patients insured under these schemes; and lastly, setbacks due to health insurance companies refusing to renew previous year's policies. For the majority of Indian citizens, the public health system is out of reach due to distance, lack of money, or lack of confidence in the system (Ravichandran 2009). Given the poor road connectivity in rural India, the uncertainty of finding the provider at the health centre, and the indirect costs for transport and wages foregone, many of the poor opt for the local quack. Furthermore, even when initial care is accessed, no continuity of care is guaranteed. This has resulted in the dilution of the concept of the integral nature of health, where curative services are a continuum of preventive and promotional health care. Shortage of funds has been primarily responsible for the lack of availability of facilities in accordance with the norms set by the government. Likewise, there is inadequate provision of critical inputs such as drugs, equipment, and facilities like operation rooms. Due to the lack of budgets and the pressure to achieve targets, several states have upgraded the two-room sub-centres to primary health centres with no space for a laboratory, examination room, or pharmacy. One of the most vital components of health care is pharmaceutical drugs, as they account for a substantial part of household health expenditure. The market for drugs, particularly in the allopathic category, has been growing rapidly in India in terms of production, cost, trade, investment and employment (Financing and Delivery of Health Care Services in India, NCMH, 2005). However, the industry is characterized by supplier-induced demand, uncertain demand from patients, oligopoly elements, monopoly profits and other factors. These have far reaching implications for the health care of the masses, whose essential problem lies in low purchasing power, lack of access and lack of sufficient knowledge of health financing mechanism. On the whole, roughly ten percent of the national health budget goes into procuring drugs at the same time three fourths of the total out-of-pocket health expenditure is spent on drugs alone (Sakthivel, 2005). However, the component of drugs and medicines in the overall budget of both the central and state governments is only a minor share.

CURRENT STATUS OF PRIVATE HEALTH INSURANCE IN INDIA

Currently India has a dual system of health care—a private fee-for-service based sector, where the fee is borne by individual households, and a tax-based public sector. Utilization of insurance under these systems is restricted by the spending capacity of the individual households in the former and the budget availability in the latter. On the other hand, insurance as a means of financing is a far more sophisticated mechanism, requiring a comprehensive understanding of the failures that characterize health insurance markets. For example, a problem such as asymmetry in information puts the patient and the insurer at a disadvantage due to their inability to resist or challenge medical opinion regarding an existing condition or future treatment. Besides, in the absence of knowledge of prices, the provider can shortchange the two by overcharging. Second, cashless insurance creates disincentives to control costs as it appears to be a 'free' good for the patient and the provider, often resulting in excessive treatment by the provider (induced demand) and frivolous use by the patient taking treatment even for a condition which he would normally have ignored or cured with a home remedy (moral hazard). Third, since health insurance is sought after by those in need of health care, this puts the onus on insurance agencies to conduct an extensive selection process, such as medical examination, before enrolling customers, thus increasing the loading fee and consequently the cost of premium. For these reasons, private commercial health insurance is known to select as its customers young, healthy, rich males, leaving the riskier population to the government.

Health insurance in India is usually associated with the 'Mediclaime' policy of the GIC, which was introduced in 1986 as a voluntary health insurance scheme offered by the public sector. The premium is based on the age, risk and the benefit package opted for, ranging from a minimum premium of Rs 201 for those less than 25 years of age, to a maximum benefit of Rs 15,000 with discounts for group memberships. In 2001, there were 7.8 million persons covered under Mediclaime (Gupta & Dasgupta, 2002). The subscribers were usually from the middle and upper class, especially since there was a tax benefit in subscribing to Mediclaime. The standard Mediclaime policy covers only hospital care and domiciliary hospitalization benefits. Most medical conditions are reimbursed; however there are important exclusions, such as pre-existing diseases, pregnancy and child birth and HIV/AIDS. Hospitals with more than 15 beds and registered with a local authority can be identified as providers.

Enacted in 1948, the Employees' State Insurance (ESI) Act was the first major legislation on social security in India. The scheme applies to power-using factories employing ten persons or more, and non-power and other specified establishments employing 20 persons or more, with employees earning up to US\$ 150 per month being covered, along with their dependents. The benefit package goes beyond the cost of medical care to include cash benefits (sickness, maternity, permanent disablement of self and dependent) as well as other benefits such as funeral expenses and rehabilitation allowance. The Central Government Health Scheme (CGHS), established in 1954, covers employees and retirees of the central government and of certain autonomous, semi-autonomous and semi-government organizations. It also covers Members of Parliament, Governors, accredited journalists and members of the general public in specified areas.

One of the problems plaguing the industry is the long delays in settling of claims by insurance companies. Being an indemnity scheme, the patient pays the hospital bills and submits the necessary documents to the insurance company or the Third Party Administrators (TPAs) where applicable. The company in turn reimburses the patient; however there is a significant delay between submission of documents and reimbursements. A study of 621 GIC claims for the year 1998–99. Bhat and Reuben (2001) showed that the average time between submission of documents and reimbursement is 121 days! This study also showed that while 33 percent of the claims were due to adverse selection, 38 percent of the claims were also due to doctor's fees and 25 percent charges for diagnostic services. The provider-induced claims thus accounted for 63 percent. Yet another interesting insight was that 22 percent of the total claims were for the treatment of communicable diseases, while 64 percent were for non-communicable diseases.

In addition to the above, there is also uncertainty about the amount that will be reimbursed by insurance companies. There are times when the patient is reimbursed only partially, the usual reason being insufficiency of documentation. The policy is not renewed automatically and is dependent on the timely payment of premium. Ellis Randall et al, (2000) observed that the GIC spent a great deal of time investigating whether the claim pertained to an existing disease or whether the facility was qualified or not, but spent little time on detecting fraud. With claims exceeding 30 percent a year, the problem of moral hazard would clearly need close monitoring more than household spending.

Second, it was observed that the GIC sets a premium on the filing of claims and not on the actual amounts settled, giving it a cushion year on year as settled claim amounts are always lower than those filed, and remain unadjusted. During 1994, 4.4 percent of the insured persons made a claim, of which only 75 percent of claims were settled. The claims ratio was 45 percent. However, of late, the claims ratio is growing at a fast rate, allegedly because of collusion between the patients, insurance agents and hospitals.

ROLE OF THIRD PARTY ADMINISTRATORS (TPAs)

With the entry of TPAs under the IRDA Regulations Act, 2001, the insurance industry is slowly graduating to the concept of 'Managed Care'. TPAs are registered under the Companies Act, 1956 and licensed by the IRDA, and must be contracted by one or several insurance companies 'for the provision of health services'. The original role of a TPA is to provide the back-office administrative set-up to insurance companies— issuing ID cards to subscribers, processing claims, making payments, etc. Taking advantage of the lack of clarity on the specific role and responsibilities of TPAs, some among them are rapidly developing the capacity to establish provider networks to service the needs of the insured, collecting and analyzing data, fixing and negotiating rates for procedures with providers, contracting providers, processing claims and making direct payment to them and arbitrating any dispute between the subscriber and the provider. This system, often referred to as 'cashless payment', has resulted in relieving the patients of the psychological stress of having to mobilize resources at short notice. By scrutinizing provider claims, TPAs also help in safeguarding the interests of the insuring company against any fraudulent claims by the providers. For all these services, the insurance companies pay 5.5 percent of the total amount of premium collected under the policy to the TPA. In addition, TPAs were also to be given a bonus from insurance companies for reduced claim ratios or for promoting the companies with the insurers. This then would have given them the financial incentives to develop systems for provider control (contracting through predetermined rates for procedures and treatment, undertaking utilization reviews, pre-authorizing expensive surgeries, etc.) and also to ensure that patients do not resort to frivolous use of services. However, with the administrative fee being low and the idea of bonus not operationalized yet, there is really no incentive for the TPAs to reduce the claim ratios.

While the system of TPAs has facilitated cashless payments and expanded access to providers, it is yet to show evidence of having been able to control cost or provide appropriate care. As the system of TPAs expands, there are apprehensions about the success of the TPA: (i) whether patients will get adequate treatment and appropriate care; (ii) whether quality of medical care will be compromised with the gradual loss of control and autonomy of the physician on the kind of treatment to be given to his/her patient; (iii) whether costs will go up due to the substantial administrative cost placed on the providers for record maintenance, filling claim and infrastructure; (iv) whether there are possibilities of collusion between the TPA and some providers in the network, resulting in processing higher claims even if not justified and thus adversely affecting the interests of the insurance agency; (v) whether TPAs, as they get organized over time may acquire monopoly control over the processes and dictate higher administrative fees (in the current system the TPA bears no risk); and finally (vi) whether the ambiguous and unclear framework of the functioning of TPAs will give rise to legal uncertainty in the future.

UNIVERSAL HEALTH INSURANCE SCHEME (UHS)

In 2003 the Government of India announced the UHS for providing financial risk protection to the poor. Under this scheme, health care for an assured sum of Rs. 30,000 was provided for a premium of Rs 365 per year per person, Rs 548 for a family of five and Rs 730 for a family of seven. Families "below the poverty line" (BPL) were given a premium subsidy of Rs 200 per annum. The scheme was redesigned in May 2004 with higher subsidies and restricting eligibility to BPL families only. The subsidy was increased to Rs 200, Rs 300 and Rs 400 to individuals, and families of five and seven, respectively. To make the scheme more saleable, the insurance companies provided for a floater clause that made any member of the family eligible as against the Mediclaime Policy which is for an individual member.

Yet in the last two years of its implementation, the coverage has only been around 10,000 BPL families in the first year and 34,000 in the second year (as of 31 January 2005). The reasons for failing to attract the rural poor are many. First, the public sector companies who were required to implement this scheme find it to be a potentially loss-making exercise and do not invest in promoting it, resulting in very low levels of awareness, which is reflected in the low enrolment and

very poor claim ratios. In fact, it is learnt that several field officers pay up the premium under fictitious names in order to meet their targets. Secondly, a major problem has been the identification of eligible families. Identification becomes cumbersome as the family needs to have some form of certification, which is difficult to obtain from revenue authorities. Second, the really poor also find it difficult to pay the entire premium money at one time for a future benefit, foregoing current consumption needs. Third, the procedures are cumbersome and difficult for the poor - the paperwork required for enrolment as well as for getting claim amounts is very time consuming. Fourth, in most places there is a deficit in the supply or availability of service providers, particularly because government hospitals are not eligible. For example, in Uttaranchal, only 17 hospitals could be accredited under this scheme, which could have gone up to 37 if government hospitals were allowed to be included and also expanded access and choice to the enrollees. Besides, in several areas there are just no doctors available. Fifth, there was a setback when health insurance companies refused to renew the previous year's policies. Finally, the TPAs are also not willing to implement this scheme at 5.5 percent of premium amount as their administrative costs of covering rural populations in dispersed villages are much higher.

During 2004, the Government of India also provided an insurance product, under which, for a premium of Rs 120 the sum assured was Rs 10,000. This was intended to be available only for self-help groups (SHGs). However, the response is reportedly negligible. With the Common Minimum Programme (CMP) committed to having a UHIS, there has been much effort and debate to evolve a suitable and sustainable design. To expand the health insurance business, recommendations are also being made to reduce the minimum pre-qualification of Rs 100 crore equity as it will require 15 years to break even. Another set of recommendations is for permitting TPAs and hospitals to introduce health insurance products. There are, however, doubts regarding this model as it may lead to a conflict of interest. In combining various aspects of provisioning and insuring there could be perverse interests to provide low quality of care, over-diagnose or under-treat— all for making profits.

COMMUNITY BASED HEALTH FINANCING- APPROACHES AND BENEFICIARIES

The Community Based Health Financing (CBHF) as a method of raising funds at the community level was initiated by UNICEF in 1987 under its Bamako Initiative for Africa. The initiative had the following objectives: (i) to revitalize public health systems; (ii) to decentralize decision-making; (iii) to mobilize resources to cover local operating costs; (iv) to encourage community participation through management of services and locally generated funds; and (v) to define the minimum package of essential health services. (UNICEF 1987).

While the CBHF movement is vibrant in Africa, it is slowly picking up momentum in India. India's voluntary sector demonstrates considerable experimentation and innovation with community and self-financing methods, including user charges, community-based prepayment schemes, fund raising, commercial schemes, and in-kind contributions, (Dave, 1991). A disturbing factor in these programmes (barring one or two) is the very low claim ratio, ranging from 0.25 to 0.66 percent, which indicates that the scheme is not able to overcome the barriers hindering access or that the cover provided is too inadequate or that members are too ignorant about their entitlements. It is also seen that the poorest of the poor get excluded on account of their inability to pay their share within the specified time limit. Again, some of the schemes cover very small numbers and so the potential for scaling-up is restricted. Finally, many of the schemes see health insurance as an end in itself and do not seek to either promote preventive health care or extend adequate provider linkages.

CONCLUSION

In India the acceptance of health insurance has been a slow process despite the 'huge market', estimated to range between Rs 7,500 and Rs 20,000 crores. Very few studies have tried to analyze reasons for this low penetration (Bhatt, Jain, 2006, Bhat and Mavalankar 2001). Various studies conducted worldwide, Andrew M. Jones, Xander Koolman and Eddy van Doorslaer, 2004 and; Cameron, Trivedi et al (1988) in Australia and Hurd and McGarry (1997) in USA revealed that income has an association with health insurance purchase decisions. According to National Commission on Micro-economics and Health Report, 2005, factors that may explain the slow expansion of health insurance in the country are Insufficient Regulatory Framework, High cost of premiums, Lack of product innovation, Too many exclusions and cumbersome administrative procedures, Inadequate availability of services etc. In India, as in most countries, there is a clear urban-rural, rich-poor divide. Affluent sections, urban populations and those working in the organized sector are covered under some form of health insurance but the rural population and those working in the unorganized sector have only the tax-based public facilities to depend on for free or subsidized care, and private facilities depending on their ability to pay. Population, who are depended on tax based public healthcare facilities, do not prefer to pay in advance as insurance premium for some illness, which they cannot foresee. Therefore, the purchase of health insurance is limited to only for those who are already suffering from some disease or old age population. This makes the entire system more costly due to adverse selection and moral hazard.

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A STUDY ON THE CUSTOMERS SUCCESS ON THEIR INVESTMENTS IN A RESIDENTIAL FLAT AND THEIR GUARANTEE

DR. P. RAMAN
ASSOCIATE PROFESSOR
DEPARTMENT OF MANAGEMENT STUDIES
PANIMALAR ENGINEERING COLLEGE
POONAMALLEE

ABSTRACT

Construction Business in India is now a booming and a dream come true business for all builders and real estate owners in India. There are more than 200 builders approximately in a city and all are getting their business. People started going to builders as they are engaged in all the works of the profession. There are lot of reasons and factors that make the investment of the customers meaningful. The aim of the study is to know the success rate of customers who has made the investment in new homes a successful one and thought the results would be guidelines for the rest to succeed with the investment. Today, all people are wishing to own a home. This survey would deal on to study about; a) To bring out the success of the clients that will help in investment this has less problems. b) To visualize the offers provided by a construction company and the benefits people has obtained c) To study on the guarantee that the construction company is providing after construction. To study the customer's success on their investments in a residential flat and their guarantee assured by the builders. A well structured questionnaire was used to conduct the survey on and the data analysis was conducted by using the statistical tools like Chi-Square, Weighted Average, ANOVA, correlation coefficient, etc. From the analysis it is found that majority of the customers are getting success in investment on residential flats, which has less problems. And the existing customers are highly satisfied with the offer and guarantees provided by the builder. The study revealed about the customer's mind about the builders so as to satisfy them.

KEYWORDS

Real estate industry, Customer expectation, Customer satisfaction, Improved quality service.

1. INTRODUCTION

Real estate sector will especially enhance greatly in Tier 1 and Tier 2 cities. Elaborating on the trends for the real estate sector in 2011 Mr. Samarjit Singh, Managing Director, Agni Property stated, "We envisage a recovery for the sector this year. Different cities will grow at different rates but overall we expect an 8% growth rate." Mr. Singh spearheads the operations at the company and has previously pioneered promotional marketing industry in India. "Another interesting trend is that the age group of ownership of a house is getting younger. Plus according to a recent report by ASSOCHAM, the average age of a person buying a property has come down to 30-38 years as compared to an age of 55 to 58 years 20 years ago" he added. Agni Property offers home buyers the best advice and assistance in buying property in India

2. REAL ESTATE INDUSTRY PROFILE

Construction Business in India is now a booming and a dream come true business for all builders and real estate owners in India. There are more than 200 builders approximately in a city and all are getting their business. People started going to builders as they are engaged in all the works of the profession. A builder has various procedures to be done for the customer. They are

1. Safety
2. Economic
3. Perfection
4. Legal problem free
5. Satisfaction
6. Style and so on.

Currently the majority of buildings are designed and constructed as bespoke creations to suit a particular use at a certain time, with little thought for the future. The Adaptable Futures project, introduced in this paper, aims to facilitate the development of adaptable buildings in the UK that take account of an often uncertain future. This paper gives a brief overview of the project and then goes on to describe the two industrial case studies being used as the main sources of data collection for the project. These are a pre-configured concept, new ways, developed by Pharmaceutical organization, GSK, and a re-configurable concept, Multi space, created by architects 3DReid.

3. SOME OTHER TRENDS IN 2012

- o Many new roads to be constructed in 2012
- o The industry will grow at 10%-12%
- o The housing market will witness very good growth rates of up to 14%. Almost 60% of investments are done in the private sector and the trend is increasing.
- o By the end of 2011 in only the seven major cities 367,000 flats in multiply story houses will be finished.
- o By 2013, 20 million square meter of office space will be completed. Half of the demand will come from the three cities Delhi NCR, Mumbai and Bangalore.
- o Retail will be a strong driver of the industry that will keep super and hypermarkets companies busy in the coming year.
- o 2012 will also see expansion of the hotel sector. Investments are likely to increase to 11 billion USD. This can majorly be contributed to the increasing flow of tourists coming to India. Owing largely to this, construction of hotels will rise from budget to five-star.

4. MARKETING A CONSTRUCTION COMPANY

The most important aspect of marketing is to know who your customers are, and how to best reach them. In construction, your customers may be individual homeowners (consumers), businesses (i.e. builders, real estate managers, etc.) or a combination of both. Each target market responds to different marketing activities. Builders and real estate managers are considered business-to-business prospects, while homeowners fall under the group of consumer marketing. Despite which market you are targeting, keep in mind that every person you come in contact with is a potential client or a potential source of referral.

In construction, word-of-mouth will play a vital role in your success. Most people ask for a recommendation from their friends, neighbors and business associates before hiring a contractor. So make sure that you always project a professional image, that your clients are always satisfied and that you have business cards readily available to hand out. Also, invest in a nice marketing brochure or informational folder with inserts that pertain to either the business customer.

5. NEED FOR THE STUDY

The main need for this study is to find the success of the customers by investing in residential house and their awareness level. It is needed to study the quality of both pre and post sales services in which to find the high level of customer satisfaction. The study is needed to evaluate the various factors which affect the customer buying behavior like cost, material, Financial assistance etc.,. It may look as simple as we read but the impact would be higher than expected.

6. OBJECTIVE OF THE STUDY

PRIMARY OBJECTIVE

To study the customer's success on their investments in a residential flat and their guarantee

SECONDARY OBJECTIVE

1. To bring out the success of the clients that will help in investment, which has fewer problems.
2. To visualize the offers provided by a construction company and the benefits people has obtained.
3. To study on the guarantee/ services that the construction company is providing after construction.
4. To realize the present competitive market of construction business and how far people are aware on the same.

7. LIMITATIONS OF THE STUDY

During the period of the study the following limitations are observed:-

The survey did not directly questions on the price of any land, materials etc which plays a major role in building a new home. The sample size is restricted to only 280. The study is confined with only in and around Chennai city.

8. RESEARCH METHODOLOGY

This study is based on descriptive research design.

8.1 SOURCES OF DATA COLLECTION

The two main sources of data for the present study have been considered both primary data as well as secondary data. The primary data collected from the real estate customer and the secondary data referred from the available books, journals, magazines, newspaper and through websites.

8.2 TOOLS USED FOR DATA ANALYSIS

Analysis techniques are used to obtain finding and arrange information in a logical sequence from the raw data collected. After the tabulation of data the statistical tools used for this study are Percentage analysis, non parametric Chi-square Test, ANOVA and Pearson's correlation test

9. DATA ANALYSIS AND INTREPRETATION

From the demographic factors analysis, it is found that majority of (65%) of the respondents are male. Most of the (42%) the respondents' age group between 41 and 45 years. It is found that majority of 56% of the respondents are under graduates and their annual salary range between Rs.4,00,001 to Rs.4,50,000.

The majority of the respondents (42%) considering the builder's efficiency while selecting the construction company, 38% of the respondents are agree that per square feet cost is less in this construction company when compared to other construction company. It is observed that 64% of the respondents are not having awareness about the current market which allows the agent to fix the price.

From the data analysis, majority of (82%) of the respondent's mode of purchase of residential property is home loans. 92% of the respondents are opted for loan from banks for the purchase of the flat. It is found that majority of the respondents are feeling permanent asset is the advantage of investing in residential property.

It is found that majority of that 42% of the respondents are highly satisfied on reference to the bank loans. Most of i.e. 52% of the respondents are feeling neutral on sales and marketing service. 48% of the respondents are satisfied on the customer service. 54% of the respondent's opinion is very good on the end quality of Electrical fittings and furnishing. 42% of the respondent's opinion is very good on the end quality of plumbing work and fittings. Most of the (35%) respondent's opinion is good on the end quality of flooring. 36% of the respondent's opinion is excellent on the end quality of parking. It is found that majority of 39% of the respondents are ranking 2 to the maintenance service on Rain water harvesting.

It is found that majority of 44% of the respondents are satisfied on investment guaranteed by the builder for the asset. 74% of the respondents are saying that property handed over with the promised specification. 43% of the respondents are agreeing with the lifelong free maintenance service to the existing customers. It is found that majority of 62% of the respondents are satisfied with the problem resolution given by the construction company.

From the hypotheses, it is observed that the quality of construction influence more on the level of satisfaction of customers. It is inferred that there is no relationship between salary of the respondents and option on the importance before choosing an investment.

10. SUGGESTIONS

The suggestions given below are on the basis the respondents' views on the service quality.

- It is suggested that the management has to create the awareness about the current market which allows the agent to fix the price.
- To improve the technical team for construction to satisfy the customer.
- It is suggested to improve the maintenance service of the company on water tank cleaning to avoid the dissatisfaction raised among the customers and to improve the maintenance service on electricity, common security, and drainage to improve the rating of the maintenance service of the company.

11. CONCLUSION

The Entire Study was conducted to know and suggest different suggestions regarding the successful investment of the customers in the residential flat. The study was conducted in a systematic way and the information collected is used to know the customer's perception towards the builders. From the analysis it is concluded that majority of the customers are getting success in their residential flat investment, which has less problems. And the existing customers are highly satisfied with the offer and guarantees provided by the builder.

The study revealed about the customer's mind about the builders so as to satisfy them. This study is useful to know how a construction company management system works for the welfare of the customer and how flexible a company is for their growth. This study has also put forth some areas where the company has to improve. Over all, is concluded that Customer Satisfaction is one area where the company focuses and they take the responsibility of each investment of the customer.

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THEORETICAL COMPARISON CRITERIA FOR SOFTWARE RELIABILITY MODELS

SANJEEV KUMAR
RESEARCH SCHOLAR
SINGHANIA UNIVERSITY
PACHERI BARI

DR. AMIT GUPTA
ASSOCIATE PROFESSOR
MAHARAJA AGRASEN INSTITUTE OF MANAGEMENT STUDIES
ROHINI

ABSTRACT

A set of criteria is proposed for the comparison of software reliability models. The intention is to provide a logically organized basis for determining the superior models and for the presentation of model characteristics. It is hoped that in the future, a software manager will be able to more easily select the model most suitable for his/her requirements from among the preferred ones.

KEYWORDS

Model comparisons, predictive validity, software failures, software reliability.

1. INTRODUCTION

The measurement of software reliability has become increasingly important because of both the impact of software failures and the development costs of reducing them. One wishes to select the "best" value of reliability, in a tradeoff with other product characteristics, and then track a software component or system during test and operation to determine if the goal has been achieved, and if not, when it will be. A number of models have been proposed for characterizing software reliability and its dependence on various variables related to the software product and the software development process [1]-[4]. This proliferation, although permitting the exploration of many possibilities, has resulted in confusion on the part of the software manager or engineer. It may or may not be possible to do this, but it should at least be feasible to reduce the number of models and provide some guidance for selecting one among the educed set. Some attempts have been made to compare some of the different models. These attempts, while laudable, have generally been handicapped by lack of satisfactory data or lack of agreement in the software reliability community as to the evaluation criteria to be employed. Recently there has been a substantial improvement in the quality of failure data that are available [6]. Consequently, it seemed highly desirable to determine if a consensus could be reached among software reliability researchers on the evaluation criteria to be used. This paper represents a comparison criteria based on theoretical concept that is predictive validity, capability, applicability, quality of assumption. Comments from many reviewers who are involved in the software reliability field have also been incorporated. It is hoped that this effort will facilitate model comparisons.

Some background information applicable to all models may be appropriate at this point. The generally accepted definition of software reliability is the probability of failure free operation of a software component or system in a specified environment for a specified time [7]. A failure is any departure of program output (taken in the most general sense; includes control signals, commands, transmitted data, printout, displays, etc.) from requirements as the program is executed. The term "environment" reflects the operational profile of the program; i.e., the relative probabilities of occurrence of various types of runs, which are characterized by their input states. If a program is used in different environments, the reliability may be different for each environment. It is assumed that input states are presented randomly to the program in accordance with the relative probabilities indicated. This assumption is generally realistic with respect to programs in the operational phase. It is also generally realistic for programs in test except that the probabilities may be altered to increase testing efficiency (in which case an adjustment must be made to the reliability by using the testing compression factor [2]).

Reliability refers to the consistency of a number of measurements taken using the same measurement method on the same subject. If repeated measurements are highly consistent or even identical, then the measurement method or the operational definition has a high degree of reliability. If the variations among repeated measurements are large, then reliability is low. For example, if an operational definition of a body height measurement of children (e.g., between ages 3 and 12) includes specifications of the time of the day to take measurements, the specific scale to use, who takes the measurements (e.g., trained pediatric nurses), whether the measurements should be taken barefooted, and so on, it is likely that reliable data will be obtained. If the operational definition is very vague in terms of these considerations, the data reliability may be low. Measurements taken in the early morning may be greater than those taken in the late afternoon because children's bodies tend to be more stretched after a good night's sleep and become somewhat compacted after a tiring day. Other factors that can contribute to the variations of the measurement data include different scales, trained or untrained personnel, with or without shoes on, and so on.

A software reliability model is a representation of a random process through which software reliability [or a directly-related quantity such as mean-time-to-failure (MTTF) or failure rate] is characterized as a function of time and properties of the software product or the development process. It specifies the general form of the dependence of software reliability on the variables mentioned. The specific form is determined from the general form by statistical inference procedures, which are usually based on the known failure data. A model generally has a statistical inference procedure associated with it. A model may be applied to a software module, subsystem, or system, although reasonable predictive validity may not be attainable for a small software component with a resultant small sample of failures. Note that models that do not consider time are excluded by definition from consideration, although such models may provide some insight. Models can be expressed in terms of either calendar time or execution time; models expressed in execution time incorporate the effects of varying workload. This paper does not address the relationship between the reliabilities of software components and the reliability of a software or software-hardware system (e.g., a distributed system).

2. COMPARISON CRITERIA

It is recommended that software reliability models be compared on the basis of the criteria discussed in this section. It will be noted that some of these criteria are general ones that apply to all types of models; however, they are described and discussed here in the specific context of software reliability. Only "intrinsic" criteria have been selected; it is assumed that such attributes as documentation quality and human interface quality depend on the implementation and are not characteristic of the model per se. The criteria can be used for assessment (determining the absolute worth of a model) as well as comparison. Comparison should be done with relation to a variety of software systems; it does not appear likely that the evaluation of the models will be application-dependent, but one must watch for this possibility. The data must, of course, be collected with care; it would not be reasonable to compare models with poor quality data, or worse, data of unequal quality. However, as will be noted in Section 2.4, tolerance to or capability to compensate for certain types of poor data is a desirable quality in a model. It is expected that comparisons will cause some models to be rejected because they meet few of the criteria discussed in this paper. On the other hand, there may or may not be a clear choice between the more acceptable models. The relative weight to be placed on the different criteria may depend upon the context in which the model is being applied. However, the criteria have been ranked in approximate order of importance (rank is indicated by the section

numbers). When comparing two models, all criteria should be considered simultaneously (i.e., models should not be eliminated by one criterion before other criteria are considered, with the possible exception of models whose predictive validity is grossly unsatisfactory). [5] is not expected that a model must satisfy all criteria to be useful.

The Problem

Before we examine the used in modeling, we need to specify clearly what question we are trying to answer. Too often, we believe, there has been an unthinking use of classical reliability concepts which were originally developed for hardware systems. It may be that some ideas from hardware reliability will be appropriate for software, but a positive justification must be made in each case in order not to end up with quantified nonsense. Perhaps the most common example is the wide use of mean time between failure (MTBF) as a measure of software reliability.

2.1. PREDICTIVE VALIDITY

Predictive validity is the capability of the model to predict future failure behavior during either the test or the operational phases from present and past failure behavior in the respective phase. The ultimate goal is to predict operational failure behavior from failure behavior in either test or operational phases or both. However, the relationship between test and operational behavior needs to be understood more fully before prediction across the test/operational boundary can be made with high confidence. Predictions are normally made during a period in which the software is being maintained (at least some portions of failures are being corrected).

Ideally, one would like to determine that predictive validity is "adequate" in some absolute sense. However, no criterion for determining adequacy has been established at present. At best, one should keep in mind the differences between models that should be larger than sources of error (especially measurement error) before any advantage can be attributed to one model over another. There are two general ways of viewing predictive validity, based on the two equivalent approaches to characterizing the failure random process, the failure interval approach and the number of failures (counting process) approach. Various methods (some representing approximations to predictive validity) may be applied; it has not been determined if one is superior at the present time. In the failure interval approach, the failure random process is characterized in times (execution or calendar) between failures T_1, T_2, \dots (in this section we will follow the customary practice of indicating random variables by upper case letters and their realizations by lower case). The description of the random process is provided by the cumulative distribution functions (cdf's). All other quantities such as MTTF (if it exists), failure rate, reliability, etc. may be obtained from these. Typically, each model has also implicitly incorporated a procedure for making inferences about the parameters of the cdf's from the failure data t_1, t_2, \dots, t_m . The predictor distribution for the random variable T_i , which incorporates model and inference procedure, may be written.

$$\hat{F}(t_1', t_2', \dots, t_m') \quad \text{----- (1)}$$

Assumption used:

i= failure interval

m= number of failure interval (i>m)

Let k = i-m. (Prediction length) ----- (2)

Cases:

m fixed, k varies

m varies, k fixed

Here i varies in both the cases.

In the former case, we are examining predictions of various lengths using a fixed sample size. In the latter case, we are examining prediction of a fixed length based on different sample sizes. It is recommended that predictive validity be checked from both viewpoints. If one model has equal predictive validity with another but attains this capability earlier (i.e., for a smaller failure sample), it may be superior.

The number of failures approach may yield a method that is more practical to use than the failure interval approach. In this approach, the alternative characterization of the failure random process is employed, where the random process is described by $\{M(t), t > 0\}$,

Where $M(t)$ represents the number of failures experienced by time t .

Such a counting process is characterized by specifying the distribution of $M(t)$, including the mean value function $\mu(t)$.

Assumption

q= failures have been observed at the end of test time t_q .

t_e = failure data up to time ($t_e > t_q$)

These variables are used to estimate the parameters of $\mu(t)$.

Then, the number of failures by t_q can be predicted by substituting the estimates of the parameters in the mean value function to obtain $\hat{\mu}(t_g)$ which is compared to the actually observed number q . This will be repeated for various values of t_e .

The predictive validity can be checked visually by plotting the relative error $\{(\hat{\mu}(t_g) - q)/q\}$ against the normalized test time t_e/t_q . The error will approach zero as t_e approaches t_q . If the points are positive (negative), the model tends to overestimate (underestimate). Numbers closer to zero imply more accurate prediction and hence the better model.

The use of normalization enables one to overlay relative error curves obtained from different failure data sets. For an overall conclusion as to the relative predictive validity of models, we may compare plots of the medians (taken with respect to the various data sets). The model which yields the curve that is the closest to zero will be considered superior. Although most models have been developed in association with a particular inference procedure, other inference procedures should be considered if prediction is poor. The quality of inference can be examined by generating simulated failure intervals based on the model with assumed parameter values and using them in the prediction, scheme (combination of model and inference procedure). This method removes any effects of the model; any consistent differences between the represent the effect of inference alone. Alternatively, the distributions of the parameter estimates may be compared to the actual values to evaluate inference quality.

2.2. CAPABILITY

Capability refers to the ability of the model to estimate with satisfactory accuracy quantities needed by software managers, engineers, and users in planning and managing software development projects or controlling change in operational software systems.. The degree of capability must be gauged by looking at the relative importance as well as number of quantities estimated. The quantities, in approximate order of importance, as denoted by the numbers, are

1) Present reliability, MTTF, or failure rate;

2) Expected date of reaching a specified reliability, MTTF, or failure rate goal (It is assumed that the goal is variable and that dates can be computed for a number of goals, if desired. If a date cannot be computed and the goal achievement can be described only in terms of additional execution time or failures experienced, this limited facility is preferable to no facility although it is very definitely inferior.);

3) Human and computer resource and cost requirements related to achievement of the foregoing goal(s).

Any capability of a model for prediction of software reliability in the system design and early development phases would be extremely valuable because of the resultant value for system engineering and planning purposes. It appears that these predictions must be made through measurable characteristics of the software (size, complexity, structure, etc.), the software development environment, and the operational environment.

2.3. QUALITY OF ASSUMPTIONS

The following considerations of quality should be applied to each assumption in turn. If it is possible to test an assumption, the degree to which it is supported by actual data is an important consideration. This is especially true of assumptions that may be common to an entire class of models. If it is not possible to test the assumption, its plausibility from the view-point of logical consistency and software engineering experience should be evaluated. For example, does it relate rationally to other information about software and software development? Finally, the clarity and explicitness of an assumption should be judged; these characteristics are often necessary to determine whether a model applies to particular circumstances.

2.4. APPLICABILITY

Another important characteristic of a model is its applicability. A model should be judged on its degree of applicability across different software products (size, structure, function, etc.), different development environments, different operational environments, and different life cycle phases. However, if a particular model gives outstanding results for just a narrow range of products or development environments, it should not necessarily be eliminated.

There are at least five situations that are encountered commonly enough in practice that a model should either be capable of dealing with them directly or should be compatible with which the model may diverge from reality in an application. Parameters should have readily understood interpretations; this property makes it more feasible for software engineers to estimate the values of the parameter where data is not available. Finally, a model must be readily implementable as a program that is a practical management and engineering tool. This means that the program must run rapidly and in expensively with no manual intervention required (does not rule out possibility of intervention) other than the initial input.

3. CONCLUSIONS

The systematization of comparison criteria presented above has been planned to encourage comparison of software reliability models on a common basis. Much better data than here and there are available can now be employed. Thus the ground work has been laid for evaluation efforts leading to a narrowing down of the number of models. The organized framework of comparison criteria and the information gathered for each model in regard to them should provide a basis for selection among the better models with respect to the needs of a particular situation. The question arises, whether we should be concerned so much with failures and the simple reliability study. It is quite obvious that something must be done for the future point of view that one should make a new model to compare with and analyze the result which could be able to solve the problem in better way.

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INVESTIGATING SERVICE QUALITY DIMENSIONS THROUGH EXPLORATORY FACTOR ANALYSIS IN A HEALTHCARE SETTING

DR. MUSHTAQ AHMAD BHAT
ASSOCIATE PROFESSOR
DEPARTMENT OF BUSINESS & FINANCIAL STUDIES
UNIVERSITY OF KASHMIR
SRINAGAR

DR. MOHD. YASEEN MALIK
LECTURER
ISLAMIA COLLEGE OF SCIENCE & COMMERCE
SRINAGAR


ABSTRACT

In today's highly competitive healthcare environment, hospitals increasingly realise the need to focus on service quality for gaining a sustainable advantage over competitors. Patients' decision to patronize one and not the other is based on quality services offered to him. However, quality does not improve unless it is measured. The most widely accepted research instrument to measure quality services is the SERVQUAL instrument. Since the SERVQUAL instrument was developed outside the domain of healthcare and has limited examination in the healthcare literature, present study, therefore, is aimed to develop a comprehensive measure of patient evaluation of healthcare service quality. The study is based on a sample of 520 patients of four major hospitals in Jammu and Kashmir State and Union Territory of Chandigarh. The responses have been integrated into important factors by applying factor analysis to validate a domain specific measure of service quality. Thus, a new service quality instrument applicable to healthcare organisations called HEALQUAL emerged from the study.

KEYWORDS

service quality dimensions, healthcare.

BACKGROUND

 Service quality has become an important research topic in view of its significant relationship to costs (Crosby, 1979), profitability (Bhat and Joo, 2005; Buzzell and Gale, 1987; Rust and Zahorik, 1993; Zahorik and Rust, 1992), customer satisfaction (Bolton and Drew, 1991; Boulding et al., 1993; Ostwald et al., 1998; Parasuraman et al., 1988), customer retention Reichheld and Smith, 1987; 1990), employees retention (Bhat and Rainayee, 2007; Krishna and Mummalaneni, 1993) and service guarantee (Kandampully and Butler, 2001). Satisfied customers, through positive word-of-mouth communication, promote the company's products/services to others resulting gradual expansion in customer base. The benefit of this form of promotion is the high degree of credibility of the information transmitted. Further, satisfied customers are likely to be loyal customers providing repeat businesses to the company. Service quality has become so important that some businesses, not only need high levels of service quality for success, but in some cases, need it for survival (Buzzell and Gayle, 1987; Howcroft, 1991; Rust, et. al., 1995). Improved service quality also cuts costs because companies have fewer customers to replace, less corrective work to do, fewer inquiries and complaints to handle, and less employee turnover and dissatisfaction to deal with (Devlin and Dong, 1996). The cost of poor quality, on the other hand, communicates lack of responsiveness to the customer, dissatisfied customers, complaints and adverse word-of-mouth communications and dissatisfied employees (Crosby 1979; Goodman et al., 1986).

REVIEW OF LITERATURE

Service Quality: Concept

Despite the significance of service quality for corporate success, there are no clear cut definitions of quality for setting quality standards and measuring subsequently quality delivered and received. Most of the suggested definitions focus on meeting customer needs and requirements. For example, a popular definition of service quality proposed by Berry et al., (1988) is "conformance to customer specifications" - that is, it is the customer's definition of quality that matters, not that of management. Evens and Lindsay (1999) proposed the view that customer satisfaction results from the provision of goods and services that meet or exceed customer needs or "providing the customer with what he wants, when he wants it, and at acceptable cost, within the operating constraints of the business" (Lewis 1991) or "providing a better service than the customer expects" (Lewis 1988). Gronroos (1984) perceived service quality as a result of what consumers receive (technical quality) and how they receive it (functional quality). Technical quality in health care is defined primarily on the basis of the technical accuracy of the diagnosis and procedures. Functional quality, in contrast, relates to the manner of delivery of health-care services. Berry (1980) along with Booms and Bitner (1981) argue that, due to intangible nature of services, customer use elements associated with the physical environment when evaluating service quality. Managing the evidence and using the environmental psychology are often seen as important marketing tools. Levitt (1981) proposes that customers use appearances to make judgements about realities, and less tangible a product the more powerful is the effect of packaging while judging that product. Parasuraman et al. (1985) viewed quality as "the degree and direction of discrepancy between customers' service perception and expectations". Previous researches on service quality support this notion that perceived service quality stems from customers' comparison of what they wish to receive from firms and what they perceive actual service performance to be - which are formed on the basis of previous experience with a company, its competitors, and marketing mix inputs (Gronroos, 1982; Lehtinen and Lehtinen, 1982; Parasuraman et al., 1985, 1988; Smith, 1987).

To sum up, healthcare services being high in credence attributes cannot be assessed well by their patients. In other words, it means that patients do not possess the medical knowledge sufficient to evaluate technical quality of medical services accurately, functional quality, therefore, becomes the primary determinant of patient's perceptions of quality (Donabedian, 1980, 1982). There is a growing evidence to suggest that this perceived quality is the single most important variable influencing consumer's perceptions of value that affects their future purchase intentions (Bolton and Drew, 1988; Zeithaml, 1998).

Service Quality: Measurement

As the understanding of service quality grew, the measurement scale that became most popular was the SERVQUAL instrument developed by Parasuraman, et.al, (1985; 1988). The instrument consists of five essential service quality dimensions, namely tangibility (appearance of physical elements), reliability (ability to perform the promised service dependably and accurately), responsiveness (promptness and helpfulness), assurance (courtesy, credibility and competence) and empathy (easy access, good communications and customer understanding). The basis for identifying the five components was a factor analysis of the twenty-two-item scale developed from focus groups and from the specific industry applications undertaken by the authors (see Parasuraman, et.al. 1985, 1988; and Zeithaml, et.al. 1990 for a comprehensive review). Though the veracity of conceptualizing the SERVQUAL scale has been questioned (Babakus and Boller 1992; Babakus and Mangold, 1990; Brown, et. al., 1993; Carman, 1990; Cronin and Taylor, 1992; Dabholkar et. al., 1996), the validity of the 22 individual performance scale items that make up the SERVQUAL scale appears to be well supported both by the procedures used to develop the items and by their subsequent use as

reported in some most cited studies (Berry and Parasuraman, 1997; Brown and Swartz, 1989; Fick and Ritchie, 1991; Lewis, 1987,1991; Saleh and Ryan, 1991; Young et.al., 1994; Zeithaml, et al., 1990; 1992; 1993; 1996).

Many researchers have recommended SERVQUAL application with some modification before it can be used by different firms in different industries. Babakus and Boller (1992), for example, argue that the five-dimension factor structure of SERVQUAL is unstable across various sectors of the economy. In fact, they found that as few as two dimensions emerge, while Carman (1990) concluded that as many as eight dimensions exist. With these discrepancies across industries, several researchers have tailored the SERVQUAL instrument to meet their specific company's and/or industry's situation, such as banking (Blanchard and Galloway, 1994; Howcroft, 1993; Lewis, 1991), car retailing (Carman, 1990), healthcare (Brown and Swartz, 1989), hospitality (Saleh and Ryan, 1991) and travel and tourism (Fick and Ritchie, 1991).

OBJECTIVES OF THE STUDY

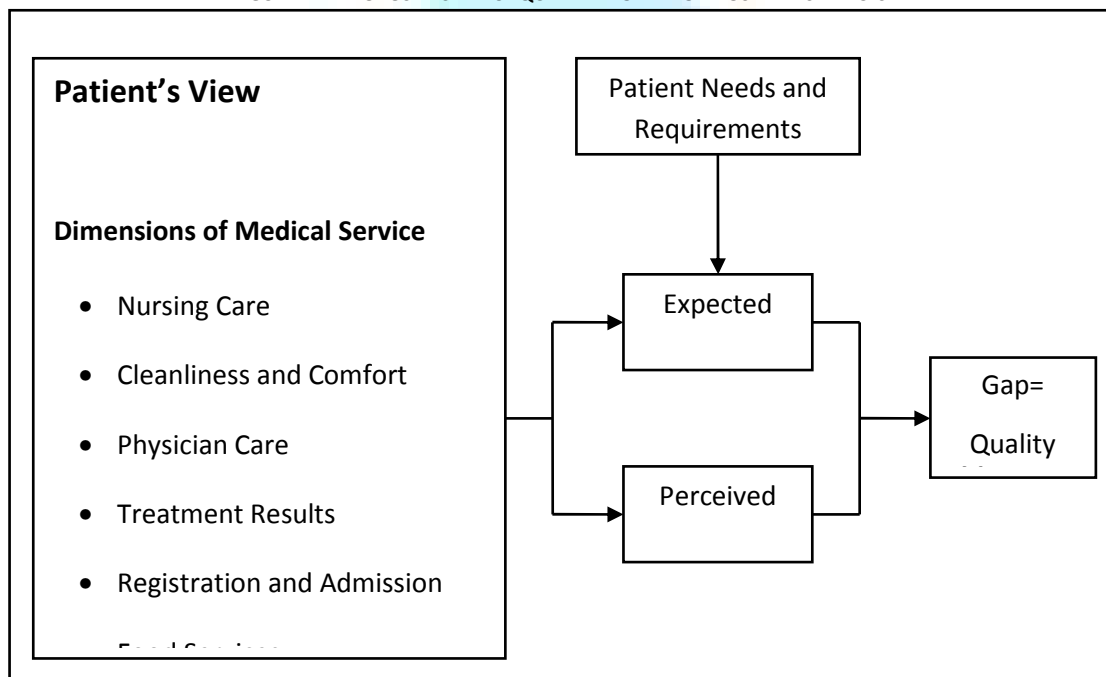
Since the SERVQUAL instrument was developed outside the domain of healthcare and has limited examination in the healthcare literature, there is a need to develop a comprehensive measure of patient evaluation of healthcare service quality. Naturally, hospital administrators would prefer specific questions about the quality of various aspects of their services to determine their own relative performances. The more specific the questions are to the administrator's own contextual circumstances, the better he/she will be able to use the information. In summary, the existing instruments for measuring service quality lack construct validity and suffer from inapplicability to the hospital setting. Given that administrators prefer and can make better use of domain specific measures, development of new measure for a complex, multifaceted construct like service quality in the hospital setting becomes imperative.

GAP MODEL

Customers judge service quality relative to what they want. They view a firm's service quality by comparing their perceptions of service experiences with their expectations of what the service performance should be. A service quality gap results when service perceptions fall short of expectations (see Figure 1). Defining quality in this way is more discriminating than is the traditional concept of satisfaction (Susan and Dong, 1994). The research findings of Berry and Parasuraman (1997), Brown and Swartz (1989), Gronroos (1982), Lehtinen and Lehtinen (1991), Lewis (1987, 1991), Saleh and Ryan (1991), Smith et. al., (1987) and the extensive focus group interviews conducted by Parasuraman et.al., (1985) unambiguously support the notion that service quality, as perceived by consumers, stems from a comparison of what they feel service firms should offer (expectations) with their perceptions of what they actually offer (performance). Service quality, therefore, is the degree and direction of the discrepancy between consumer's perceptions and expectations.

The Gap Theory of Service Quality, developed by the marketing research team of Parasuraman et. al., (1985), was, therefore, chosen as an ideal concept for studying quality of medical services in hospitals.

FIGURE 1: PROPOSED SERVICE QUALITY MODEL FOR HOSPITAL SERVICES



RESEARCH METHODS

Sample Profile

The present study has been carried out in the Jammu and Kashmir State and the Union Territory of Chandigarh. However, the study was confined to urban areas only keeping in view the concentration of hospitals in these areas, which is relatively high, as well as the paucity of time and financial resources of the researchers. The study is further limited to four major hospitals, namely Shri Maharaja Hari Singh Hospital (SMHS) in Srinagar, Shri Maharaja Gulab Singh Hospital (SMGS) in Jammu, Shri Acharya Chandra Medical College and Hospital (SACMH) in Jammu and FORTIS in Chandigarh. These Hospitals have been purposely selected for the present study keeping in view that they are the largest teaching hospitals in respective states. Also in terms of employee and bed strength, these hospitals stand at the top.

The survey was conducted over a period of three months in August, 2006. The size of the sample consisted of five hundred twenty respondents comprising of two hundred eighty from public sector hospitals (54%) and two hundred forty from private hospitals (46%). The data was collected in a period of three months by spending 3-4 hours a day and investigators took every care that the patients already contacted should not be repeated. The questionnaires were personally distributed and collected. Out of five hundred seventy-six (576) distributed questionnaires, five hundred twenty (520) questionnaires were found usable, thus representing a response rate of 90.27%. In order to seek balanced opinion regarding quality of medical services, respondents bearing varied demographic characteristics such as age, income, education, gender and profession were selected from different wards (in-patient) and from different out-patient departments. Stratified random sampling for both in-patients and out-patients was followed. Before approaching a respondent, the importance of medical service for both the receiver and the service provider used to be discussed first.

The demographic make-up of respondents is given on Table 1 which clearly shows that bulk of the respondents (39%) belonged to the age group of thirty-six to fifty followed by the age group of twenty to thirty-five (35%) while as the remaining (26%) were in the age group of above fifty-one. Male respondents were 63%. Respondents who had obtained secondary level education constituted majority of respondents (42%) followed by the graduates (39%) and post-graduates (19%). Large number of respondents (40%) were in the income group of ten to twenty thousand rupees per month followed by the income group of up to ten

thousand rupees (38%) and twenty to thirty thousand (13%) and the remaining (9%) belonged to higher income group of above thirty thousand rupees per month. Occupation-wise, respondents in services had the highest participation (63%) followed by business group respondents. An equal number (50%) of respondents (in-patients and out-patients) of all the hospitals, under reference, participated in the present study.

TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS

| Demographic Characteristics | | Hospitals | | | | Percent (%) |
|---------------------------------|-----------------------|------------|------------|------------|------------|-------------|
| | | SMHS | SMGS | SACMH | FORTIS | |
| Age in years | 20—35 | 60 | 48 | 39 | 35 | 35 |
| | 36—50 | 49 | 60 | 55 | 39 | 39 |
| | Above 51 | 31 | 32 | 26 | 46 | 26 |
| | Total | 140 | 140 | 120 | 120 | 100 |
| Gender | Male | 83 | 91 | 78 | 76 | 63 |
| | Female | 57 | 49 | 42 | 44 | 37 |
| | Total | 140 | 140 | 120 | 120 | 100 |
| Level of education | Up to secondary level | 53 | 72 | 62 | 31 | 42 |
| | Graduation | 49 | 57 | 48 | 49 | 39 |
| | Post Graduation | 38 | 11 | 10 | 40 | 19 |
| | Total | 140 | 140 | 120 | 120 | 100 |
| Level of income per month (Rs.) | Up to 10,000 | 68 | 58 | 50 | 23 | 38 |
| | 10,000-20,000 | 56 | 55 | 47 | 48 | 40 |
| | 20,000-30,000 | 15 | 15 | 15 | 25 | 13 |
| | Above 30,000 | 01 | 12 | 08 | 24 | 09 |
| | Total | 140 | 140 | 120 | 120 | 100 |
| Profession | Business | 44 | 59 | 53 | 36 | 37 |
| | Service | 96 | 81 | 67 | 84 | 63 |
| | Total | 140 | 140 | 120 | 120 | 100 |
| Types of patients | In-patients | 70 | 70 | 60 | 60 | 50 |
| | Out-patients | 70 | 70 | 60 | 60 | 50 |
| | Total | 140 | 140 | 120 | 120 | 100 |

Development of Questionnaire and Data Collection

The study is based on the primary data collected from the patients (both in-patients and out-patients) through a questionnaire designed and developed after consultations and discussions on the aforesaid research problem with the panel of patients, medical experts/administrators and academicians as well as after reviewing the relevant literature. The expectation questionnaire asked patients what they felt hospitals and their staff should do and provide. The same questions formed the basis of the perception questionnaire. A five-point Likert scale, ranging from strongly disagrees which scored 1 to strongly agree which scored 5, was used for this study and all questions were phrased positively. The questionnaire was piloted on twenty patients in medical wards of SMHS Hospital, Srinagar. After the elimination, addition and rephrasing of several questions, the final questionnaire was prepared consisting of forty-eight questions (Annexure 1).

The data collected from patients was analysed and purified through factor analysis with the help of 13.0 version of Statistical Package for Social Sciences (SPSS) software to identify the factors that explain the pattern of correlation within a set of observed variables and to simplify and reduce the data to identify a small number of factors that explained most of the variances observed in the much larger number of manifested variables (Foster, 2002). The study used R-mode Principal Component Analysis with a Varimax Rotation and Eigen value equal to or more than 1 (Kinnear and Taylor, 1987). Initially, the first exercise failed in providing any stable factorial framework within 25 iterations. In the first round of 2nd exercise, 7 factors were extracted with loadings equal to or above 0.50, thereby deleting 5 items within 12 iterations with 68.72% variance explained. In the 2nd and final round, 3 items with factor loadings less than 0.60 were dropped and loadings equal to or above 0.70 were retained in order to get clear factorial design. Hence, six factors with 71.13% variance explained emerged and the process of factor analysis got completed within 7 iterations (Table 2).

TABLE 2: FACTOR PROFILE OF PATIENTS

| Rounds | Number of Factors | Variance Explained | Items Retained | Iterations | No. of items Deleted | Extent of factor Loadings of the Related Dimensions | KMO | Bartlett |
|--------|-------------------|--------------------|----------------|------------|----------------------|---|------|----------|
| 1 | 7 | 68.72 | 51 | 12 | 5 | Above .50 | .955 | 13531.45 |
| 2 | 6 | 71.13 | 48 | 7 | 3 | Above .60 | .939 | 12733.06 |

The factors finally selected have been named indicating various variables/statements grouped under the given set. Thus out of 55 statements, 48 got grouped under six factors, viz., Nursing Care (14.57% VE (Variance Explained), Cleanliness and Comfort (13.44 % VE), Physician Care (13.23% VE), Treatment Results (11.19% VE), Registration and Admission (9.40% VE) and Food Services (9.29% VE) [Table 3]. The values obtained in each round to measure KMO sampling proved meritorious (Stewart, 1981) as they fall in the group ranging from 0.955 to 0.939. The reliability of the scale was tested by using Cronbach's alpha. The present generated scale achieved the score of 0.960 which is highly acceptable reliability coefficient (Nannaly, 1978). The Cronbach's alpha was also applied to each factor/dimension. All the six factors/dimensions scored more than the suggested cut-off value of 0.70, revealing an acceptable level of reliability. This new research instrument, to measure service quality in hospitals, has been named as **HEALQUAL**.

TABLE 3: SUMMARY OF RESULTS FROM SCALE PURIFICATION: MEAN EXPECTATION, MEAN PERCEPTION, MEAN QUALITY GAP SCORES, FACTOR LOADINGS, VARIANCE EXPLAINED AND CRONBACH ALPHA VALUES

| Factor | Dimensions of Medical Service | Mean Expectation Score | Mean Perception Score | Mean Quality Gap Score | Factor Loadings | % Variance Explained | Cronbach's Alpha |
|--------|--|------------------------|-----------------------|------------------------|-----------------|----------------------|------------------|
| 1 | Nursing Care | | | | | 14.572 | 0.964 |
| | 1. Sympathy and politeness of nurses | 4.16 | 4.05 | -0.11 | 0.751 | | |
| | 2. Promptness of nurses | 4.10 | 3.85 | -0.25 | 0.786 | | |
| | 3. Intelligence of nurses | 4.05 | 3.83 | -0.22 | 0.776 | | |
| | 4. Interaction with patients | 4.09 | 3.83 | -0.26 | 0.767 | | |
| | 5. Supportive and helpful nurses | 3.97 | 3.78 | -0.19 | 0.784 | | |
| | 6. Quick response from nurses | 4.22 | 3.92 | -0.30 | 0.787 | | |
| | 7. Confident and trustworthy nurses | 4.03 | 3.9 | -0.13 | 0.791 | | |
| | 8. Nurses treat patients with courtesy and respect | 4.13 | 4.04 | -0.09 | 0.800 | | |
| | 9. Nurses respond to queries from patients | 4.16 | 4.02 | -0.14 | 0.705 | | |
| | Total | 4.10 | 3.91 | -0.18 | | | |
| 2 | Cleanliness and Comfort | | | | | 13.442 | 0.954 |
| | 10. Neat and clean corridors | 3.70 | 4.09 | 0.39 | 0.753 | | |
| | 11. Bathrooms and toilets are clean and functioning | 3.57 | 3.75 | 0.18 | 0.787 | | |
| | 12. Neat and clean waiting rooms | 3.63 | 4.05 | 0.42 | 0.864 | | |
| | 13. Fresh and clean garments and curtains | 3.65 | 3.95 | 0.30 | 0.786 | | |
| | 14. Clean drinking water area | 3.57 | 3.74 | 0.17 | 0.775 | | |
| | 15. Ventilation of wards | 3.77 | 4.29 | 0.52 | 0.768 | | |
| | 16. Bedding etc. is regularly changed | 3.67 | 4.14 | 0.47 | 0.769 | | |
| | 17. Floors are regularly cleaned | 3.62 | 4.26 | 0.64 | 0.790 | | |
| | Total | 3.64 | 4.03 | 0.38 | | | |
| 3 | Physician Care | | | | | 13.236 | 0.929 |
| | 18. Sympathy and politeness of doctors | 4.25 | 4.35 | 0.10 | 0.733 | | |
| | 19. Promptness of doctors | 4.25 | 4.04 | -0.21 | 0.705 | | |
| | 20. Intelligent doctors | 4.37 | 4.28 | -0.09 | 0.742 | | |
| | 21. Supportive and helpful doctors | 4.17 | 3.92 | -0.25 | 0.708 | | |
| | 22. Doctors instil confidence in patients | 4.18 | 4.03 | -0.15 | 0.719 | | |
| | 23. Doctors explain reason/s for test/s | 4.20 | 3.92 | -0.28 | 0.731 | | |
| | 24. Enough time is spent by doctors on treatment and care | 4.35 | 4.09 | -0.26 | 0.764 | | |
| | 25. Doctors answer to queries from patients | 4.37 | 4.27 | -0.10 | 0.728 | | |
| | 26. Confident and trustworthy doctors | 4.32 | 4.20 | -0.12 | 0.765 | | |
| | Total | 4.27 | 4.12 | -0.15 | | | |
| 4 | Treatment Results | | | | | 11.197 | 0.925 |
| | 27. Improvement in conditions after consulting the doctors | 3.98 | 3.72 | -0.26 | 0.724 | | |
| | 28. Medicines are always adequately available | 3.71 | 3.95 | 0.24 | 0.759 | | |
| | 29. Medical test facilities adequately available | 4.55 | 4.63 | 0.08 | 0.782 | | |
| | 30. Result of tests comes quickly | 4.41 | 4.02 | -0.39 | 0.855 | | |
| | 31. Blood bank services | 4.43 | 4.21 | -0.22 | 0.803 | | |
| | 32. Procedure of treatment | 4.22 | 3.83 | -0.39 | 0.827 | | |
| | 33. Method of explaining result of tests | 4.10 | 3.75 | -0.35 | 0.799 | | |
| | 34. Attention from nurses regarding drips and wound dressing | 4.30 | 4.06 | -0.24 | 0.773 | | |
| | 35. Information about health progress given | 4.22 | 3.76 | -0.46 | 0.709 | | |
| | 36. Politely treated | 4.26 | 4.13 | -0.13 | 0.842 | | |
| | Total | 4.21 | 4.00 | -0.21 | | | |
| 5 | Registration and Admission | | | | | 9.400 | 0.931 |
| | 37. Behaviour of gatekeepers | 3.37 | 3.48 | 0.11 | 0.790 | | |
| | 38. Employees at registration counter are polite and helpful | 3.92 | 3.88 | -0.04 | 0.873 | | |
| | 39. Attendants act honestly | 3.75 | 3.62 | -0.13 | 0.712 | | |
| | 40. Employees providing admission tickets act honestly | 3.85 | 3.85 | 0.00 | 0.716 | | |
| | 41. Overall procedure of registration | 3.93 | 3.80 | -0.13 | 0.734 | | |
| | 42. Waiting time to be attended | 3.96 | 3.71 | -0.25 | 0.738 | | |
| | Total | 3.79 | 3.72 | -0.07 | | | |
| 6 | Food services | | | | | 9.290 | 0.913 |
| | 43. Meal delivery quite in time | 3.79 | 4.49 | 0.70 | 0.789 | | |
| | 44. Taste of food | 3.71 | 4.19 | 0.48 | 0.831 | | |
| | 45. Temperature of food | 3.82 | 4.37 | 0.55 | 0.855 | | |
| | 46. Range and appeal of menus | 3.46 | 3.83 | 0.37 | 0.742 | | |
| | 47. Behaviour of staff serving food | 3.67 | 4.12 | 0.45 | 0.763 | | |
| | 48. Overall food service | 3.71 | 4.9 | 1.19 | 0.864 | | |
| | Total | 3.69 | 4.31 | 0.62 | | | |
| | Total | 3.95 | 4.01 | 0.06 | | 71.136 | 0.960 |

KMO AND BARTLETT'S TEST

| | |
|--|-----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .939 |
| Bartlett's Test of Sphericity (Approx. Chi-Square) | 12773.06* |

* Significance at 1% level

ANALYSIS OF FINDINGS

The SPSS for Windows computer package was used to analyse the data. The mean scores for the forty-eight expectation and perception statements are also given in Table 3 as are the mean service quality gap scores between the corresponding statements and dimensions, which is a good indicator of any service deficiency. The service quality gaps were calculated using the SERVQUAL principle - (Service Quality = Performance-expectations).

Expectation Scores (E)

The mean scores of expectations are high, ranging from 3.37 to 4.55 (Table 4). Highest number of highest expectation statements are in Physician Care dimension (eight statements), the second highest in Treatment Result (seven statements) followed by Nursing Care (one statement). However, highest expectation mean scores (E29, E31, E30) are in Treatment Results followed by Physician Care (E20, E25, E24, and E26) dimension. The patients' choice clearly shows that Physician Care and Treatment Results are the two critical dimensions of hospital services. The results when considered collectively imply an important message from patients to hospital managers: be reliable, be courteous, be responsive, provide information about health progress and have adequate facilities for medical tests and blood bank services. This research finding is in line with the research findings of Chahal (2002); Jayanti (1993); Oliver (1993); Ramsaran-Fowdar (2005); Sharma and Chahal (1995; 1999); Tomes and Stephen (1995) and Ware et. al., (1983). Hence, to improve patients' perception of quality in medical services, hospital administrators should focus more on the functional aspects of service delivered, i.e, Physician Care and Treatment Results. The data in Table 4 clearly show that Cleanliness and Comfort dimension has the highest number (eight statements) of low expectation statements followed by Food Services dimension (five statements), Registration and Admission (two statements) and Treatment Results (one statement). The lowest expectation scores on Cleanliness and Comfort statements followed by the Food Services statements brings to light that physical comforts like bathroom facilities (E11), clean drinking water (E14), cleanliness (E17; E12), ventilation (E15), bedding (E13; E16), food and food related services are relatively of less concern to patients (E46, E47, E44, E48, E43).

TABLE 4: SIXTEEN HIGHEST AND LOWEST PATIENT EXPECTATION STATEMENTS

| St. No. | Highest Expectation Statements | Mean Score | St. No. | Lowest Expectation Statements | Mean Score |
|---------|--|------------|---------|---|------------|
| 29 | Medical test facilities adequately available | 4.55 | 37 | Behaviour of gatekeepers | 3.37 |
| 31 | Blood bank services | 4.43 | 46 | Range and appeal of menus | 3.46 |
| 30 | Result of tests comes quickly | 4.41 | 11 | Bathrooms and toilets are clean and functioning | 3.57 |
| 20 | Intelligent doctors | 4.37 | 14 | Clean drinking water area | 3.57 |
| 25 | Doctors answer to queries from patients | 4.37 | 17 | Floors are regularly cleaned | 3.62 |
| 24 | Enough time is spent by doctors on treatment and care | 4.35 | 12 | Neat and clean waiting rooms | 3.63 |
| 26 | Confident and trustworthy doctors | 4.32 | 13 | Fresh and clean garments and curtains | 3.65 |
| 34 | Attention from nurses regarding drips and wound dressing | 4.30 | 47 | Behaviour of staff serving food | 3.67 |
| 36 | Politely treated | 4.26 | 16 | Bedding etc. is regularly changed | 3.67 |
| 18 | Sympathy and politeness of doctors | 4.25 | 10 | Neat and clean corridors | 3.70 |
| 19 | Promptness of doctors | 4.25 | 44 | Taste of food | 3.71 |
| 06 | Quick response from nurses | 4.22 | 48 | Overall food service | 3.71 |
| 32 | Procedure of treatment | 4.22 | 28 | Medicines are always adequately available | 3.71 |
| 35 | Information about health progress given | 4.22 | 39 | Attendants act honestly | 3.75 |
| 23 | Doctors explain reason/s for test/s | 4.20 | 15 | Ventilation of wards | 3.77 |
| 22 | Doctors instil confidence in patients | 4.18 | 43 | Meal delivery quite in time | 3.79 |

Perception Scores (P)

The mean scores of perception statements ranged from 3.48 to 4.90 for the sample organisation. Data in Table 5 clearly show that there are five highest perception statements in Food Services followed by Physician Care (four statements), Cleanliness and Comfort (four statements) and the last Treatment Results (three statements). These responses show that hospitals, under reference, are providing satisfactory food services (P48), deliver meal quite in time (P43), maintain food temperature (P45), provide tasty food (P44), and the staff serving food behave nicely (P47). The data also reveal that hospitals, under reference, have professional doctors (20), and possess a wide spectrum of knowledge and their attitude instils confidence in patients (P18, P25, and P26). Hospitals are clean and comfortable with good ventilation of wards (P15), clean floors and corridors (P17, P16, P10). Hospitals are also well perceived on medical test facilities (P29) followed by availability of blood bank services (P31, P36).

Registration and admission has the highest number (five) of relatively low perception statements followed by Nursing Care and Treatment Results (four in each dimension). The lowest perception statements are in Food Services (one) followed by Cleanliness and Comfort (two). These dimensions demand more attention from hospital administrators to improve the overall quality of medical service.

TABLE 5: SIXTEEN HIGHEST AND LOWEST PATIENT PERCEPTION STATEMENTS

| St. No. | Highest Perception Statements | Mean Score | St. No. | Lowest Perception Statements | Mean Score |
|---------|--|------------|---------|--|------------|
| 48 | Overall food service | 4.9 | 37 | Behaviour of gatekeepers | 3.48 |
| 29 | Medical test facilities adequately available | 4.63 | 39 | Attendants act honestly | 3.62 |
| 43 | Meal delivery quite in time | 4.49 | 42 | Waiting time to be attended | 3.71 |
| 45 | Temperature of food | 4.37 | 27 | Improvement in conditions after consulting the doctors | 3.72 |
| 18 | Sympathy and politeness of doctors | 4.35 | 14 | Clean drinking water area | 3.74 |
| 15 | Ventilation of wards | 4.29 | 11 | Bathrooms and toilets are clean and functioning | 3.75 |
| 20 | Intelligent doctors | 4.28 | 33 | Method of explaining result of tests | 3.75 |
| 25 | Doctors answer to queries from patients | 4.27 | 35 | Information about health progress given | 3.76 |
| 17 | Floors are regularly cleaned | 4.26 | 05 | Supportive and helpful nurses | 3.78 |
| 31 | Blood bank services | 4.21 | 41 | Overall procedure of registration | 3.80 |
| 26 | Confident and trustworthy doctors | 4.20 | 03 | Intelligence of nurses | 3.83 |
| 44 | Taste of food | 4.19 | 04 | Interaction with patients | 3.83 |
| 16 | Bedding etc. is regularly changed | 4.14 | 32 | Procedure of treatment | 3.83 |
| 36 | Politely treated | 4.13 | 46 | Range and appeal of menus | 3.83 |
| 47 | Behaviour of staff serving food | 4.12 | 40 | Employees providing admission tickets act honestly | 3.85 |
| 10 | Neat and clean corridors | 4.09 | 02 | Promptness of nurses | 3.85 |

Service Quality Gap Scores (SQ)

The data analysis of Table 6 brings to light that there are seven highest service quality gap statements in Treatment Results, four statements in each Nursing Care and Physician Care and one statement in Registration and Admission. The largest service quality gaps (perceptions/ expectations) are in Treatment Results. Patients were unhappy with information given about health progress (SQ35; SQ27), test results (SQ30), procedure of treatment (SQ32), method of explaining tests (SQ33) and attention from nurses regarding drips and wound dressing (SQ34). Service quality gaps on quick response from nurses (SQ06 and SQ02), their interaction with patients (SQ04) and their acumen (SQ03) reveal relatively poor quality services of the hospitals under reference. Patients have also reported their differences with the doctors explaining reason/s for test/s (SQ23), time devoted for treatment and care (SQ24), helpfulness and promptness of doctors (SQ21, SQ19) and long waiting time (SQ42).

Hospitals, under reference, collectively exceed the expectations of their patients on Food Services. There are relatively high positive service quality scores on overall food services (SQ48), meal delivery in time (SQ43), temperature and taste of food (SQ45; SQ44), behaviour of staff serving food (SQ 47), and range and appeal of menus (SQ46). Hospitals expectedly have to be clean and comfortable. All the eight statements on Cleanliness and Comfort dimension have scored positive which is a good visible indicator of quality. Availability of adequate medicine in hospitals (SQ28) followed by gatekeepers' response (SQ 37) have also positive service quality scores.

TABLE 6: SIXTEEN HIGHEST AND LOWEST SERVICE QUALITY GAP SCORES

| St. No. | Highest Service Quality Gap Scores | Mean Score | St. No. | Lowest Service Quality Gap Scores | Mean Score |
|---------|--|------------|---------|---|------------|
| 35 | Information about health progress given | -0.46 | 37 | Behaviour of gatekeepers | 0.11 |
| 30 | Result of tests comes quickly | -0.39 | 14 | Clean drinking water area | 0.17 |
| 32 | Procedure of treatment | -0.39 | 11 | Bathrooms and toilets are clean and functioning | 0.18 |
| 33 | Method of explaining result of tests | -0.35 | 28 | Medicines are always adequately available | 0.24 |
| 06 | Quick response from nurses | -0.30 | 13 | Fresh and clean garments and curtains | 0.30 |
| 23 | Doctors explain reason/s for test/s | -0.28 | 46 | Range and appeal of menus | 0.37 |
| 04 | Interaction with patients | -0.26 | 10 | Neat and clean corridors | 0.39 |
| 24 | Enough time is spent by doctors on treatment and care | -0.26 | 12 | Neat and clean waiting rooms | 0.42 |
| 27 | Improvement in conditions after consulting the doctors | -0.26 | 47 | Behaviour of staff serving food | 0.45 |
| 02 | Promptness of nurses | -0.25 | 16 | Bedding etc. is regularly changed | 0.47 |
| 21 | Supportive and helpful doctors | -0.25 | 44 | Taste of food | 0.48 |
| 42 | Waiting time to be attended | -0.25 | 15 | Ventilation of wards | 0.52 |
| 34 | Attention from nurses regarding drips and wound dressing | -0.24 | 45 | Temperature of food | 0.55 |
| 03 | Intelligence of nurses | -0.22 | 17 | Floors are regularly cleaned | 0.64 |
| 31 | Blood bank services | -0.22 | 43 | Meal delivery quite in time | 0.70 |
| 19 | Promptness of doctors | -0.21 | 48 | Overall food service | 1.19 |

Analysis of the results related to quality of medical services provided by the hospitals, under study, is not the objectives of this article. However, some of the findings may be of more general interest for hospital administrators. The data in Table 3 clearly demonstrate that by and large patients are satisfied with the overall quality of medical services provided by the hospitals. Hospitals are exceeding the expectations of their patients on overall quality of medical services (SQ 0.06) but are deficit in Treatment Results (-0.21), Nursing Care (-0.18), Physician Care (-0.15) and Registration and Admission (-0.07) as is quite evident from the negative service quality gap scores of respective dimensions.

CONCLUSIONS

Present study substantiated the need to develop and test a measurement scale specific to healthcare service domain. The validity and reliability tests support the instrument which has been named as **HEALQUAL**. It has six dimensions, namely, Nursing Care, Cleanliness and Comfort, Physician Care, Treatment Results, Registration and Admission and Food Services. Thus, a contribution of the present research is that it added to the large body of previous research on service quality, corroborating that SERVQUAL is not a generic measure of service quality for all industries. By using the gap model, authors have demonstrated how the instrument could help hospitals identify the service characteristics that are considered important by patients. An understanding of expectations is necessary to avoid service shortfalls. The study has clearly shown the areas in which hospitals have met or exceeded or are below the expectations of their patients. By and large, patients are happy with the overall quality of medical service provided by hospitals, however, improvements are needed in Treatment Results, Nursing Care, Physician Care and Registration and Admission. In this way, hospitals can improve their level of quality and the effectiveness of total quality management (TQM) can be monitored over time, with resources being shifted to those areas which most heavily influence patients' perceptions of service quality.

LIMITATIONS AND FUTURE RESEARCH

Though sincere efforts were made to maintain objectivity, reliability and validity of the study, yet the presence of subjectiveness could not be ruled out. A major limitation of this study is that it was conducted in the urban areas of Jammu and Kashmir State and Union Territory of Chandigarh only. Even if results coincide with other studies, future research should consider samples from hospitals of different states to better ensure that HEALQUAL is unanimously relevant. Some services like parking, transportation and entertainment have not been covered in the present study. The scope of the instrument could be broadened in future studies by including these services as they also influence patients overall quality evaluation. Future research should also investigate other measures of performance such as quality, productivity and profitability.

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ANNEXURE

ANNEXURE 1 SECTION - A

Instructions: I would like your impressions about how well this hospital provides medical services relative to your expectations. For each of the following statements, please indicate: (a) your expected medical service by marking tick (✓) on one of the numbers in the expected column, and (b) your perception of medical service that truly reflects your feelings based on your experience by marking tick (✓) on one of the numbers in the perception column. You may tick mark (✓) any of the numbers in the middle that shows how strong your expectations/perceptions are. There is no right or wrong answers – all I am interested in, is a number that best shows your expectations and perceptions about hospital services.

| DIMENSIONS OF PATIENT CARE | Expectations | | | | | Perceptions | | | | |
|--|-------------------|----------|------|-------|----------------|-------------------|----------|------|-------|----------------|
| | Strongly Disagree | Disagree | Fair | Agree | Strongly Agree | Strongly Disagree | Disagree | Fair | Agree | Strongly Agree |
| 1. Nursing Care | | | | | | | | | | |
| 1. In this hospital the nurses are polite and sympathetic. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 2. In this hospital the nurses are prompt in their services. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 3. In this hospital the nurses are very intelligent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 4. In this hospital the nurses regularly interact with patients. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 5. In this hospital the nurses are supportive and helpful. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 6. In this hospital the nurses respond quickly when you call them. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 7. In this hospital the nurses are confident and trustworthy. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 8. In this hospital the nurses treat you with courtesy and respect. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 9. In this hospital the nurses answer your questions/ queries in the way you could understand. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

2. Cleanliness and Comfort

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10. In this hospital the corridors are neat and clean. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 11. In this hospital the bathrooms and toilets are clean and functioning. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 12. In this hospital the waiting rooms are neat and clean. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 13. In this hospital the garments and curtains are fresh and clean. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 14. In this hospital the drinking water area is clean. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 15. In this hospital the ventilation and temperature of wards is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 16. In this hospital the bedding etc. is regularly changed. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 17. In this hospital the floors are regularly cleaned. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

3. Physician Care

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18. In this hospital the doctors are polite and sympathetic | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 19. In this hospital the doctors are very prompt in their services | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 20. In this hospital the doctors are intelligent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 21. In this hospital the doctors are supportive and helpful. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 22. In this hospital the doctors are able to instil confidence in patients. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 23. In this hospital the doctors explain the reason/s for test/s. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 24. In this hospital the doctors spent enough time on your care and treatment | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 25. In this hospital the doctors answer your questions in a way you could understand. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 26. In this hospital the doctors are confident and trustworthy. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

4. Treatment Results

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 27. In this hospital the condition improves after consulting the doctors. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 28. In this hospital the medicine/s you need is/are always adequately available | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 29. In this hospital the medical test facilities are adequately made available to patients. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 30. In this hospital the result of tests comes quickly from the laboratory. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 31. In this hospital the blood bank services are excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 32. In this hospital the overall procedure of treatment is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 33. In this hospital the method of explaining the result of tests is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 34. In this hospital you get attention from nurses regarding drips and wound dressing | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 35. In this hospital the information about your health progress is given regularly. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 36. In this hospital you were treated with politeness. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

5. Registration and Admission

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18. In this hospital the behaviour of gate keepers is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 19. In this hospital the employees at registration counter are polite and helpful. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 20. In this hospital the attendants act honestly when you are in queue. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 21. In this hospital the employees providing admission and consulting tickets act honestly. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 22. In this hospital the overall procedure of registration is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 23. In this hospital you don not have to wait for too long to be attended to. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

***6. Food Services**

| | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|
| 24. In this hospital the meal delivery is quite in time. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 25. In this hospital the taste of food is good. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 26. In this hospital the temperature of food served is good. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 27. In this hospital the range and appeal of the menus are good. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 28. In this hospital the behaviour of staff serving food is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 29. In this hospital the overall food service is excellent. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

* This dimension is only for in-patients

SECTION - B**PERSONAL DATA**

Instructions: Please tick mark (v) the information relevant to you.

1. Age in years: (a) 20-35 (b) 36-50 (c) Above 51
2. Gender: (a) Male (b) Female
3. Education (a) Up to secondary level (b) Graduation (c) Post Graduation
4. Level of Income: (a) Up to 10,000 p.m. (b) 10,000—20,000 p.m. (c) 20,000---30,000 p.m. d) Above 30,000 p.m.
5. Hospital: (a) Government / Private (b) Srinagar / Jammu / Chandigrah
6. Occupational Status: (a) Business (b) Service c) Any other.....

WORKING CAPITAL MANAGEMENT OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) IN MANIPUR- AN EMPIRICAL STUDY

MOIRANGTHEM BIREN SINGH
RESEARCH SCHOLAR
DEPARTMENT OF COMMERCE
MANIPUR UNIVERSITY
MANIPUR

DR. TEJMANI SINGH
ASSOCIATE PROFESSOR
DEPARTMENT OF COMMERCE
MANIPUR UNIVERSITY
MANIPUR

ABSTRACT

The Micro, Small and Medium Enterprises (MSMEs) are playing a very important role in the economic development of our country. The MSMEs are the second major contributor to the industrial economy. The distinguishing features of MSMEs lie in its potential for creation of gainful employment and specially self employment opportunities to the youths. Working capital is the amount of funds which is required for the day-to-day operations of every enterprise. Efficient management of working capital is one of the pre-conditions for the success of an enterprise. Inadequate working capital has the potential to disrupt operations of a well-managed business enterprise, while excess working capital has an adverse impact on the profitability of the enterprise. Thus, the management of working capital is an integral part of business finance for the MSMEs. In this study, an attempt is made to examine the various aspects of working capital management of MSMEs in Manipur selected for this purpose. And we have selected a sample of 100 units to analyze and examine the management of various components of working capital viz. inventories, cash and account receivables.

KEYWORDS

Working Capital, Potential, Dimension, Investment, Development.

INTRODUCTION

With the increase of economic development associated with the pace of industrial growth and its activities, the need for the development of Micro, Small and Medium Enterprises (MSMEs) earlier known as Small-Scale Industries in India has been the objective of the Government, since independence. Over the years, Micro, Small and Medium Enterprises have gained increasing significance in the economic development of our country. They have achieved a high degree of sophistication and made significant progress in quality up gradation and standardization.

Beginning with simple consumer goods like soap, detergents, leather goods, etc. the micro, small and medium enterprises have made strides and now entered into sophisticated fields of production including electronics and electro-medical devices, ITs. Etc. The importance of Small Scale Industries (SSIs), presently MSMEs was specifically spelt-out in the Industrial Policy Resolution dated 6th April, 1948. And Section 4 of the New Industrial Policy of Manipur 2002. These industries are particularly suited to the better utilization of local resources and for the achievement of local- self sufficiency in respect of certain types of essential consumer goods.

The distinguishing characteristics of the MSMEs lie in its potential for creation of gainful employment and specially self-employment opportunities which is engaged in the processing, preserving, manufacturing or servicing activities including of all those modern manufacturing and repairing units. In fact, the MSMEs are the second major contributor to the industrial growth of our country. Thus, the significance of MSMEs as one of the keys to rural development hardly needs to be emphasized. Where the motivation of development is present among the rural population, the MSMEs acts as a stimulant, where motivation is lacking, it acts as a lubricant.

MICRO SMALL AND MEDIUM ENTERPRISES (MSMEs)

The Government of India passed in June 2006 an Act regarding the Micro Small and Medium Enterprises. This Act came to be known as the Micro Small and Medium Enterprises Development Act, 2006 (MSMEDA).

The Act defines the MSMEs by the level of Investment in Plant and Machinery (P&M) as follows:

| | |
|----------------------------------|--|
| Micro Manufacturing | : Investment in Plant and Machinery less than Rs. 25 lakhs |
| Micro Service | : Investment in Plant and Machinery less than Rs. 10 lakhs |
| Small Manufacturing | : Investment in Plant and Machinery less than Rs. 5 crore |
| Small Service | : Investment in Plant and Machinery less than Rs. 2 crore |
| Medium Enterprises Manufacturing | : Investment in P&M Less than Rs. 10 crore |
| Medium Enterprises Service | : Investment in P&M less than Rs. 5 crore |

WORKING CAPITAL MANAGEMENT

The term working capital is particularly appropriate expression for denoting the wealth of an enterprise, which is continuously revolving through the stages most desired by the customers (inventories) and the firm (cash). The intervening stage (account receivable) identifies the current relationship between the firm and its customers. Almost every activity of business or everything that happens in the business is related to working capital decision. The problem of managing working capital has got a separate entity as against different decision-making issues concerning current assets individually. The skills for working capital management are somewhat unique, though the goals are the same as in managing current assets individually, viz. to make an efficient use of funds for minimizing the risk of loss to attain profit objectives. Hence, working capital management is concerned with the problems that arise and inter-relationship that exist between them.

IMPORTANCE OF THE STUDY

Entrepreneur needs cash to buy raw materials and put the raw materials into production process. The goods so produced are either sold for cash or on credit. After a disposal of the turnover, cash is again needed for buying and manufacturing purposes. Under the manufacturing process raw materials are to be purchased and wages are to be paid. Thus, it enlightens the necessity of working capital and therefore, sufficient working capital is necessary to sustain sales

activity. The management of working capital has assumed added significance in respect of MSMEs in India in general and Manipur in particular, as the most of the firms/units/enterprises have weak financial base and limited access to financial institutions to supplement their scarce resources.

No significant and comprehensive study as well as enquiry into the functioning of all the various aspects of MSMEs and its policies of working capital management in Manipur, has been done before as well as experienced over the entire plan period. Hence, the present study on the "Working Capital Management of MSMEs in Manipur" is an attempt to fill up the gap.

The Micro Small and Medium Enterprises have been accorded a vital role by the Government of India for achieving socio-economic objectives. The proper calculation and maintaining of the working capital provides the business the right amount of cash to maintain regular flow of its operation and enhances the credit of the concern.

LITERATURE REVIEW

National Council of Applied Economic Research (1966) conducted a study entitled "Structure of working capital" with special reference to three industries, namely fertilizers, cement and sugar. This study was mainly devoted to the analysis of composition of working capital in these industries for the period 1959 to 1963. However, NCAER failed to put into sharp focus the various components of working capital.

Ram Kumar Mishra (1975) made a study at the University of Rajasthan under the title "Problem of working capital" with special reference to public enterprises during the period 1960-61 to 1967-68. No doubt, the basic issues outlined in Dr. Mishra's study and finding therein are relevant to many of the units in the public sector even today, but due to the functional and structural changes that public enterprises have witnessed in the post- 1968 era, a repeated effort on a different sample is called for to bring the prescriptions up to date.

Dr. N.K. Agrawal (1977) made a study at the University of Delhi on the "Management of Working Capital" in respect of certain large manufacturing and trading public limited companies. The sample of this study covered 34 companies in all and related to the period 1966-67 to 1973-74. Dr. Agrawal observed that although most of the companies were making use of modern techniques in the areas of inventory, receivables and cash management, there appeared a sufficient scope for reduction in investments in almost all the segments of working capital.

Rajeswara Rao thoroughly examined the managerial aspects of inventories, receivables and advances and cash of certain central public enterprises in India. The study revealed that inventories formed a major proportion of total current assets investment which recorded 63% in 1971-72 and 66% by 1976-77 in the public sector. The inventory of finished goods proportion had been increasing year after year. He pointed out that the policies of public enterprises for achieving the working capital objectives were not clearly defined. His impression is that the prudent management of working capital shall be recognized as an important area for the enterprises studies.

Jain, Yadav and Surendra made a study on working capital management practices of public sector enterprises in India. This study was based on an analysis of 13-year period data from 1991 to 2003 of 137 public sector enterprises and stated that, a business organization has to be conscious that inadequate working capital can disrupt its operations and may lead to illiquidity. At the same time excessive working capital is also not desirable since it adversely affects profitability.

Burgstahler and Dichev (1997) found evidence that two components of earnings, viz., cash from operations and working capital changes can be used effectively to manage earnings and increase them.

Deloof, M. (2003) posits that managers can increase profitability by reducing the number of days of accounts receivables and inventories.

Banomyong (2005) highlighted that a company with a lower cash conversion cycle is more efficient because it turns its working capital over more number of times in a year, which means that it generated more sales per unit of money invested in working capital management.

Gupta (2010) highlighted that better working capital management can significantly help companies to improve their growth rates vis-à-vis competitors and ultimately increase the wealth of their shareholders.

All the above studies provide us a solid base and give an idea regarding working capital management and its components. They also give us the results and conclusions of those researches conducted on the same area for different countries and environment from different aspects. On the basis of these researches done in different studies, we have developed our own methodology for research.

OBJECTIVE OF THE STUDY

In order to bring out the clear analysis of the working capital and functioning of Micro Small and Medium Enterprises in Manipur, the specific objectives of the present study is to analyze and examine the management of inventories, management of cash and management of account receivables with some findings and conclusions.

The management of working capital is one of the important aspects of overall financial management. Since Manipur remains mainly as a state of small scale production, it is necessary to analyze the issues concerning working capital to the possible extent. The present study which covers the various dimensions and aspects of working capital management in MSMEs in Manipur examines how far the objectives of the MSMEs are fulfilled, accelerated or weakened of financial assistance and assessing the regional gap.

And this empirical study highlights the working capital management of selected 100 MSMEs/ units in Manipur and the components of working capital have been intensively examined with the help of different accounting and statistical techniques such as ratios, averages and percentages, etc.

METHODOLOGY ADOPTED

To analyze and evaluate the objective of the present study primary data from the sample units were collected by the researchers through personal interviews, on the basis of a pre-tested structured Questionnaire in all the 9 districts of Manipur namely Imphal East, Imphal West, Senapati, Churachandpur, Tamenglong, Chandel, Thoubal, and Bishenpur. Here, Imphal East and Imphal West districts were combined together as 'Imphal' district. Keeping in view of this 100 units were collected from the District Industries Centres(DICs) Manipur, registered Small Industries Development Organization(SIDO) and secondary data for the present study were collected through various records from the publications and bulletins of District Industries Centres (DICs), Department of Industries, Government of Manipur, Manipur industrial Development Corporation (MANIDCO), Industrial Development Bank Of India (IDBI), National Small Industrial Development Corporation (NSIC), Planning Department Government of Manipur, Economics and Statistics Department, Government of Manipur, Information and public Relations, Government of Manipur and also from different Financial Institutions in the state.

The study has come out with the findings and suggestions, which may be of practical advantage to various Micro Small and Medium Enterprise units in Manipur, in managing their working capital effectively and efficiently to sustain the liquidity as well as profitability position of the selected sample units. Since the main components of the working capital management are management of cash, management of Account Receivable and management of Inventories. The analysis of these parameters in the selected sample units in Manipur is present in the following paragraphs.

SELECTION OF SAMPLE UNITS

The Researcher has selected 100 units (MSMEs) for sample survey from each and every districts of Manipur through the concerned General Manager of the District Industry Centre, which were working smoothly or properly in Manipur. And the selected sample units are categorized in the following manner (depicted in Table-1).

TABLE - 1: SELECTED SAMPLE UNITS (NO. OF UNITS FOR EACH DISTRICT)

| Sl.No. | INDUSTRY GROUP | IMP | UKL | SPT | CCP | TML | CDL | TBL | BPR | Total | Total in P.C. |
|--------|---|-----|-----|-----|-----|-----|-----|-----|-----|-------|---------------|
| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
| 1. | Engineering and Metal Based Industries | 10 | 02 | 03 | 03 | 03 | 03 | 03 | 04 | 31 | |
| 2. | Printing and Publishing | 02 | 01 | 00 | 02 | 01 | 00 | 01 | 02 | 09 | |
| 3. | Agro Based Industries | 02 | 01 | 00 | 01 | 02 | 03 | 02 | 02 | 13 | |
| 4. | Ready Made and Garment | 02 | 02 | 03 | 02 | 03 | 02 | 01 | 02 | 17 | |
| 5. | Forest Based Industries | 03 | 02 | 04 | 02 | 02 | 05 | 05 | 04 | 27 | |
| 6. | Miscellaneous (including Brick fields, Hotel Keeping, Bee Keeping etc.) | 01 | 00 | 01 | 00 | 00 | 00 | 01 | 00 | 03 | |
| | | 20 | 08 | 11 | 10 | 11 | 13 | 13 | 14 | 100 | |

Source: Compiled personally from questionnaire.

Note: IMP = Imphal (East + West) UKL = Ukhrul, SPT = Senapati,

CCP= Churchandpur, TML = Tamenglong CDL = Chandel,

TBL = Thoubal, BPR= Bishnupur

TABLE - 2: DISTRIBUTION OF SAMPLE UNITS BY TOTAL INVESTMENT

| Sl.No. | INVESTMENT GROUP(in Rs.) | IMP | UKL | SPT | CCP | TML | CDL | TBL | BPR | TOTAL |
|--------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1. | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1. | BELOW 10 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 03 |
| 2. | 10-20 | 0 | 1 | 3 | 1 | 6 | 2 | 2 | 3 | 18 |
| 3. | 20-30 | 1 | 2 | 3 | 1 | 1 | 2 | 2 | 1 | 13 |
| 4. | 30-40 | 2 | 2 | 2 | 0 | 1 | 2 | 1 | 1 | 11 |
| 5. | 40-50 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 09 |
| 6. | 50-60 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 10 |
| 7. | 60-70 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 04 |
| 8. | 70-80 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 05 |
| 9. | 80-90 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 05 |
| 10. | 90-100 | 2 | 0 | 0 | 2 | 0 | 1 | 2 | 0 | 07 |
| 11. | 100 & above | 09 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 15 |
| | Total | 20 | 08 | 11 | 10 | 11 | 13 | 13 | 14 | 100 |

Source: Compiled personally from questionnaire.

Note: Rupees in thousand ranges.

Working Capital analysis has acquired significance primarily because the investment in current assets bears a direct relation with the growth in sales. Out of 100 units selected, there were 15 units in the investment groups of above Rs. 100 thousand which was the highest category of this range of investment group with the second highest number of units. The lowest number of units was found in the total investment range of below Rs. 10 thousand to the extent of only 3 units (depicted in Table -2).

In the present study, only 70 units could secure loans from the Financial Institutions like MANIDCO, UBI, SBI, PNB, NSIC, AFC, etc. and the remaining 30 units were not aware of the loan facilities which are shown in Table- 3.

TABLE-3: VARIOUS INSTITUTIONS PROVIDING LOANS TO THE SAMPLE UNITS

| Sl. No | Districts | MANIDCO | MRB | UBI | SBI | PNB | NSIC | URBAN BANK | DIC | AFC | Total | No Response Response |
|--------|---------------|---------|-------|--------|-------|-------|-------|------------|-------|-------|-------|----------------------|
| 1. | Imphal | 09 | 01 | 03 | 02 | 01 | 02 | 00 | 00 | 01 | 19 | 01 |
| 2. | Ukhrul | 00 | 00 | 01 | 01 | 00 | 00 | 00 | 03 | 00 | 05 | 03 |
| 3. | Senapati | 00 | 00 | 02 | 00 | 00 | 00 | 01 | 03 | 00 | 06 | 05 |
| 4. | C.C.Pur | 00 | 00 | 02 | 00 | 00 | 02 | 00 | 01 | 00 | 05 | 05 |
| 5. | TamIng. | 00 | 00 | 00 | 01 | 00 | 00 | 00 | 04 | 00 | 05 | 06 |
| 6. | Chandel | 00 | 00 | 04 | 00 | 00 | 00 | 00 | 05 | 00 | 09 | 04 |
| 7. | Thoubal | 04 | 00 | 04 | 00 | 00 | 01 | 00 | 02 | 00 | 11 | 02 |
| 8. | Bshnpr. | 03 | 00 | 01 | 00 | 00 | 00 | 00 | 06 | 00 | 10 | 04 |
| | Total | 16 | 01 | 17 | 04 | 01 | 05 | 01 | 24 | 01 | 70 | 30 |
| | Total in p.c. | 22.85% | 1.43% | 21.43% | 5.72% | 1.43% | 7.14% | 1.43% | 37.1% | 1.43% | 48.6% | 3 % |

Source: Personal Field Survey.

Note: MRB = Manipur Rural Bank, UBI = United Bank of India, SBI = State Bank of India, PNB = Punjab National Bank, NSIC= National Small Industries Corporation, DIC= District Industries Centre, AFC= Assam Financial Corporation

The purpose for keeping cash balance by the sample units (Table No.4) as revealed by the study that only 29 units hold cash balance to meet their current obligations followed by 18 units and 16 units hold the cash balances to meet their contingencies as well as for other purposes. Only 09 units were keeping their cash in order to make available of their advantages accruing through price changes/ fluctuations.

TABLE – 4 PURPOSE FOR KEEPING CASH BALANCE

| Sl.No. | District | To meet current obligation. | To meet contingencies | To take advantage in percentages | Any other purpose | No Response | Total |
|--------|---------------|-----------------------------|-----------------------|----------------------------------|-------------------|-------------|--------|
| 1. | Imphal | 05 | 04 | 04 | 02 | 05 | 20 |
| 2. | Ukhrul | 03 | 02 | 01 | 01 | 01 | 08 |
| 3. | Senapati | 04 | 03 | 01 | 02 | 01 | 11 |
| 4. | C.C.Pur | 03 | 01 | 00 | 01 | 05 | 10 |
| 5. | Tamenglong | 04 | 02 | 00 | 03 | 02 | 11 |
| 6. | Chandel | 05 | 02 | 00 | 02 | 04 | 13 |
| 7. | Thoubal | 03 | 02 | 00 | 04 | 04 | 13 |
| 8. | Bishenpur | 02 | 02 | 03 | 01 | 06 | 14 |
| | Total | 29 | 18 | 09 | 16 | 28 | 100 |
| | Total in p.c. | 29 % | 18% | 9% | 16% | 28% | 100.00 |

Source: Field Survey.

The Statistical evidence on the procedures adopted by the selected units for their collection of debts accounts revealed that compromise and persuasion as well as writing reminders appears to be the main strategy of the sample units, which shows 30 units and 27 units in respect of compromise and persuasion as well as writing reminders (depicted in table No. 5)

TABLE-5: COLLECTION OF CREDIT INFORMATION FOLLOWED BY SAMPLE UNITS

| Sl.No. | District | Writing Reminders | Compromise & Persuasion | Collection Agent | Legal Action | No Response | Total |
|--------|---------------|-------------------|-------------------------|------------------|--------------|-------------|--------|
| 1. | Imphal | 06 | 03 | 04 | 01 | 06 | 20 |
| 2. | Ukhrul | 03 | 01 | 01 | 00 | 03 | 08 |
| 3. | Senapati | 04 | 03 | 00 | 00 | 04 | 11 |
| 4. | C.C.Pur | 02 | 05 | 01 | 00 | 02 | 10 |
| 5. | Tamenglong | 01 | 05 | 01 | 00 | 04 | 11 |
| 6. | Chandel | 04 | 02 | 00 | 02 | 05 | 13 |
| 7. | Thoubal | 05 | 04 | 01 | 01 | 02 | 13 |
| 8. | Bishenpur | 05 | 04 | 01 | 02 | 02 | 14 |
| | Total | 30 | 27 | 09 | 06 | 28 | 100 |
| | Total in p.c. | 30% | 27% | 9% | 6% | 28% | 100.00 |

Source: Field Survey.

The maximum level of inventory maintained by the various units is approximately 15% only to take the advantage of opportunity cost. Out of 100 units, 56 units and 23 units prepared the inventory report monthly and quarterly respectively. And 40 units could not supply the information due to certain reasons. This is shown in table – 6.

TABLE- 6: FREQUENCY OF INVENTORY REPORT IN THE SAMPLE UNITS

| Sl.No. | Districts | Monthly | Quarterly | Half-Yearly | Yearly | No Response | Total |
|--------|---------------|---------|-----------|-------------|--------|-------------|--------|
| 1. | Imphal | 07 | 05 | 00 | 03 | 05 | 20 |
| 2. | Ukhrul | 02 | 01 | 00 | 01 | 04 | 08 |
| 3. | Senapati | 05 | 02 | 01 | 00 | 03 | 11 |
| 4. | C.C.Pur | 04 | 02 | 01 | 02 | 01 | 10 |
| 5. | Tamenglong | 03 | 00 | 00 | 04 | 04 | 11 |
| 6. | Chandel | 05 | 02 | 01 | 01 | 04 | 13 |
| 7. | Thoubal | 04 | 02 | 00 | 03 | 04 | 13 |
| 8. | Bishenpur | 06 | 03 | 01 | 01 | 03 | 14 |
| | Total | 36 | 17 | 04 | 15 | 28 | 100 |
| | Total in p.c. | 36% | 17% | 4% | 15% | 28% | 100.00 |

Source: Field Survey.

FINDINGS

The present study is related to the efficient management of working capital in MSMEs in Manipur (100 Units have been selected). Working Capital analysis has acquired significance primarily because the investment in current assets bears a direct relationship with rate of growth in sales. Failure to prepare comprehensive financial plan is one of the main causes for the sickness of some industries. In the survey it was found that even banks / financial institutions have financed to the MSMEs indiscriminately to achieve their targets either in pressure or with over enthusiasm, without an adequate and critical evaluation of the project/ units. Most of the times feasibility report is not prepared by many units and sometimes reports depict a rosy picture to satisfy the requirements of the lending institutions.

The list of debtors prepared by the Units did not indicate the length of the period for which different accounts had remained unpaid after the due dates, but according to the length of period they remained unclear. Hence, the entrepreneurs should follow a clear-cut debtor's collection procedures to speed up the collection of dues from the debtors.

The availability of raw materials at the subsidized rate through the Govt. agencies found most irregular and uncertain. Many of the units seldom prepared the inventory reports as they do not have the sound knowledge of inventory management..

CONCLUSIONS AND SUGGESTIONS

Entrepreneurs need cash to buy raw materials and put the raw materials into production process. The goods so produced are either sold for cash or on credit. After a disposal of the turnover cash is again needed for buying and manufacturing purposes. In the manufacturing process raw materials are to be purchased and wages are to be paid. Thus, it enlightens the necessity of Working Capital .To conclude sufficient working capital is necessary to sustain sales activity and growth of the entrepreneurs.

Therefore, while sanctioning loan for a unit, the qualities of the entrepreneurs like risk-taking, organizing ability, competence, integrity, honesty, creativity, and so on must be X-rayed. Further, the entrepreneurs should actively participate in the short-term training programmes in the area of Finance, Marketing, Production, Planning to update their knowledge. They should chalk out to forecast the requirements of various types of raw materials and stores and spares on continuous basis to run the production operation smoothly and efficiently. And in order to improve competitive base and resources, joint marketing programmes should be undertaken properly with standardized and identified trademarks

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PERFORMANCE ANALYSIS OF AODV PROTOCOL UNDER BLACK HOLE ATTACK**MONIKA SINGH****SCHOLAR****DEPARTMENT OF COMPUTER ENGINEERING
KAMLA NEHRU INSTITUTE OF TECHNOLOGY
SULTANPUR****RAKESH KUMAR SINGH****ASSOCIATE PROFESSOR****DEPARTMENT OF COMPUTER ENGINEERING
KAMLA NEHRU INSTITUTE OF TECHNOLOGY
SULTANPUR****ABSTRACT**

A mobile ad hoc network (MANET) is an autonomous network that consists of mobile nodes that communicate with each other over wireless links. In the absence of a fixed infrastructure, nodes have to cooperate in order to provide the necessary network functionality. One of the principal routing protocols used in Ad hoc networks is AODV (Ad hoc on demand Distance Vector) protocol. The black hole problem is one of the security attacks that occur in mobile ad hoc networks (MANETs). In this paper we analyze the effect of black hole attack on AODV routing protocol under the light of various parameters such as packet loss, throughput, and end-to-end delay with black hole and without black hole on AODV in MANET. Here NS2 simulator is used for the simulation. The simulation result shows that the packet loss increases with the increase in the number of black hole node.

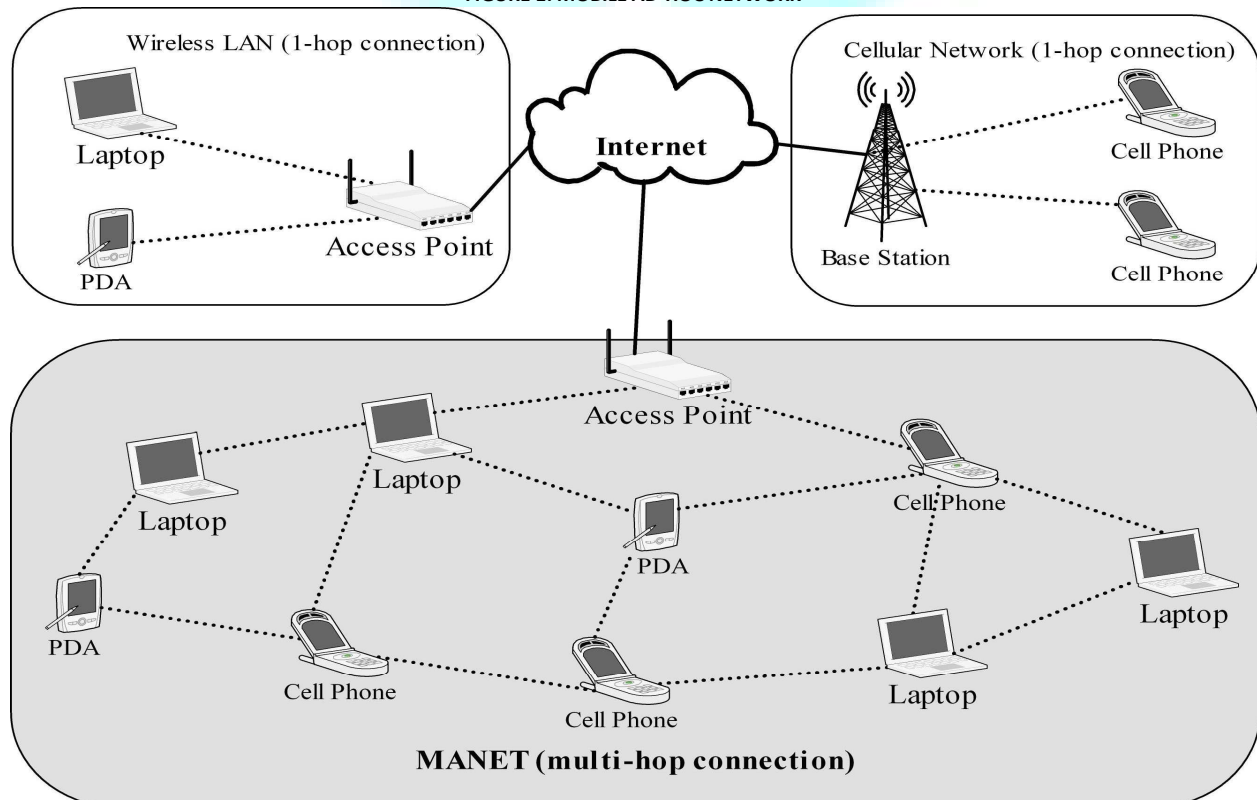
KEYWORDS

MANET, AODV, Black hole.

1. INTRODUCTION

Mobile Ad Hoc Networks [5] are autonomous and decentralized wireless systems. MANETs consist of mobile nodes that are free in moving in and out in the network. Nodes are the systems or devices i.e. mobile phone, laptop, personal digital assistance, MP3 player and personal computer that are participating in the network and are mobile. These nodes can act as host/router or both at same time. They can form arbitrary topologies depending on their connectivity with each other in the network.

MANETs must have a secure way for transmission and communication and this is quite challenging and vital issue as there is increasing threats of attack on the Mobile Network. In order to provide secure communication and transmission engineer must understand different types of attacks and their effects on the MANETs. Wormhole attack, Black hole attack, Sybil attack, flooding attack, routing table overflow attack, Denial of Service (DoS), selfish node misbehaving, impersonation attack are kind of attacks that a MANET can suffer from. MANET is more open to these kinds of attacks because communication is based on mutual trust between the nodes, there is no central point for network management, no authorization facility, vigorously changing topology and limited resources.

FIGURE 1: MOBILE AD-HOC NETWORK

Several technique exist to deal with the security issue in MANET .Previously the works done on security issues i.e. attacks (Dos attack) involved in MANET were based on proactive routing protocol like OLSR and its effects are elaborated by stating how these attacks disrupt the performance of MANET. Very little attention has been given to the fact to study the impact of Black Hole attack in MANET on the reactive protocol like AODV [2][4]. Thus our aim is to:

- 1 The study focus on analysis of Black Hole attack in MANET.
- 2 Analyzing the effects of Black Hole attack in the light of packet delivery ratio (PDR), number of packet lost and the network throughput in MANET.
- 3 Simulating the Black Hole attack using NS-2.34 for AODV Protocol.

This paper is organized as follows section 2 describe the black hole problem in manet after that in section 3 we had discussed some of the previous research work in this field. Section4 provides the various performance metrics used in our simulation and in section 5 we had provided our simulation work on AODV protocol using NS-2 simulator and finally section 6 conclude the whole research work followed by some of the future scope in section 7.

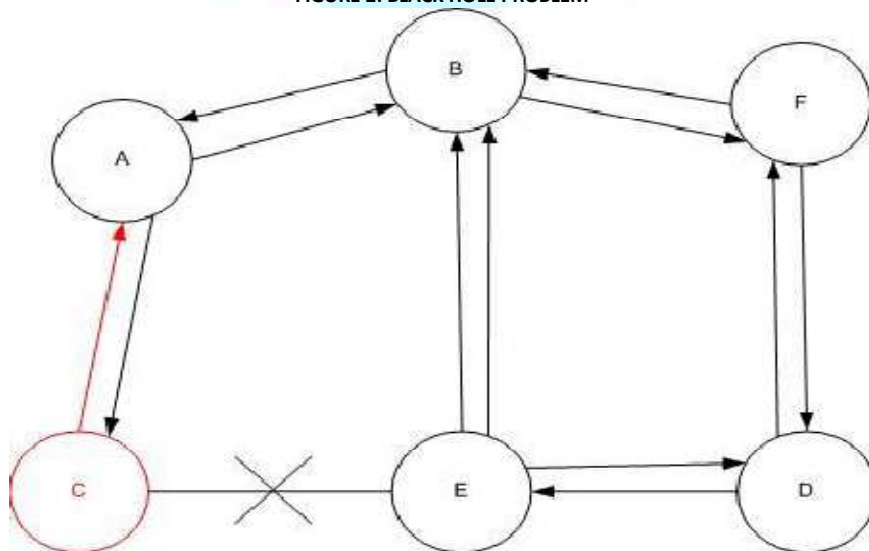
2. BLACK HOLE ATTACK

In black hole attack, a malicious node uses its routing protocol in order to advertise itself for having the shortest path to the destination node or to the packet it wants to intercept.

This hostile node advertises its availability of fresh routes irrespective of checking its routing table. In this way attacker node will always have the availability in replying to the route request and thus intercept the data packet and retain it [8]. In protocol based on flooding, the malicious node reply will be received by the requesting node before the reception of reply from actual node; hence a malicious and forged route is created. When this route is establish, now it's up to the node whether to drop all the packets or forward it to the unknown address [3].

The method how malicious node fits in the data routes varies. Figure 2 shows how black hole problem arises, here node "A" want to send data packets to node "D" and initiate the route discovery process. So if node "C" is a malicious node then it will claim that it has active route to the specified destination as soon as it receives RREQ packets. It will then send the response to node "A" before any other node. In this way node "A" will think that this is the active route and thus active route discovery is complete. Node "A" will ignore all other replies and will start seeding data packets to node "C". In this way all the data packet will be lost consumed or lost.

FIGURE 2: BLACK HOLE PROBLEM



3. LITERATURE REVIEW

Several researchers have studied the vulnerabilities of MANETs and black hole attack in particular. Black hole attack is one of the active DoS. Many researchers have proposed their solutions which are available in literature.

Mohd Al-Shurman *et al* [12] proposed two solution to overcome the problem of black hole. The first proposed solution for black hole is to find more than one route to the destination (redundant routes, at least three different routes). Then, the source node unicasts a *ping* packet to the destination using these three routes (we should assign different packet IDs and sequence number, so any node who receive the first packet will not drop the second one if it exists in both paths). The receiver and the malicious in addition to any intermediate node might have a route to the destination will reply to this ping request. The source will check those acknowledgements, and process them in order to Figure out which one is not safe and might have the malicious node. The second proposed solution exploits the packet sequence number included in any packet header. The node in this situation needs to have two extra tables; the first table consists of the sequence numbers of the last packet sent to the every node in the network, and the second table for the sequence number received from every sender. During the RREP phase, the intermediate or the destination node must include the sequence number of last packet received from the source that initiates RREQ. Once the source receives this RREP, it will extract the last sequence number and then compare it with the value saved in its table. If it matches the transmission will take place. If not, this replied node is a malicious node, so an alarm message will be broadcast to warn the network about this node. **Computer simulation shows that compared to the original *ad hoc on-demand distance vector (AODV)* routing scheme, the second solution can verify 75% to 98% of the route to the destination depending on the pause times at a minimum cost of the delay in the networks.**

The solution proposed in [9] require that the requesting node should wait for a predetermined set time to receive RREPs with next hop details instead of from other neighboring node sending data packets immediately after receiving a reply. After the time out, it first checks in CRRT table whether there is any repeated next hop node. If any next hop. node is present in the reply path it assumes the path is correct or the chance of malicious path is limited .Extra overhead is added in the process of finding repeated next hop and adds a delay.

In [3], the author proposed route confirmation request message (CREQ) and route confirmation reply (CREP) in order to avoid Black Hole attack. In this proposal when intermediate sends RREPs to the source node its send CREQ to its next hop node in direction of destination node. After receiving CREQ, the next hop look for route in its destination in cache. If its receive CREP during this time it will confirm the validity of path in RREP and in CREP. Upon matching the source node will recognize the route being correct. Its drawback is that it cannot detect multiple Black Hole attacks.

The protocol implement in [14] propose Secure Ad-Hoc On-Demand Distance Vector Routing (SAODV) which verify the destination node by exchanging random numbers. SAODV can effectively prevent Black Hole attack in Mobile Ad-hoc network and maintain better routing efficiency. It is better than AODV in terms of security and routing efficiency.

In [13], the author showed that malicious node should increase the sequence number of destination to assure the source node of its route. The author proposed a statistics based detection for Black Hole which is based on the difference between destination sequence numbers of received RREP's. Its drawback is the false positives approach because of the nature of anomaly detection.

The solution proposed in [10] focus on the requirement of a source node to wait unless the arrival of RREP packet from more than two nodes. When it receives multiple RREPs the source node check that there is any share hops or not. The source node will consider the routed safe if it finds the share hops. Its drawback is the introduction of time delay it has to wait for the arrival of multiple RREPs before it judges the authentication of node

In[11] author consider the limitations (battery power, storage and processing power) of nomadic computing paradigm, and devise an algorithm that prevents from black hole attack at the cost of only marginal processing overhead. The proposed algorithm is simple and does not affect workings of either intermediate or destination node. It does not even modify the working of normal AODV but calls a pre process called Pre_Process_RREP. The Process continues to accepts RREP packets and calls a process called Compare_Pkts(packet p1, packet p2) which actually compares the destination sequence number of two packets and selects the packet with higher destination sequence number if the difference between two numbers are not significantly high. Packet containing exceptionally high destination sequence number is suspected to be a malicious node and an ALERT message containing the node identification is generated which is broadcasted to neighbour nodes so that any message receive from such malicious node is discarded. A list of such malicious nodes can be maintained by the nodes participating in communication which can be used to prevent black hole attack

4. PERFORMANCE METRICS

This chapter focuses on result and its analysis based on the simulation performed in ns-2. Our simulated results are provided in Figures (6.1-6.9) gives the variation in network nodes while under Black Hole attack. To evaluate the behaviour of simulated intrusion based black hole attack, we considered the performance metrics of packet loss, throughput and packet delivery ratio.

4.1 PACKET LOSS

Mobility-related packet loss may occur at both the network layer and the MAC layer. Here packet loss concentrates for network layer. When a packet arrives at the network layer the routing protocol forwards the packet if a valid route to the destination is known. Otherwise, the packet is buffered until a route is available. A packet is dropped in two cases: the buffer is full when the packet needs to be buffered and the time that the packet has been buffered exceeds the limit.

$$\text{PACKET LOSS} = \text{DATA AGENT SENT} - \text{DATA AGENT RECEIVE} \quad \text{Equation 1}$$

4.2 PACKET DELIVERY RATIO

The ratio between the number of packets originated by the “application layer” CBR sources and the number of packets received by the CBR sink at the final destination.

$$\text{PDR} = \left(\frac{\sum \text{CBR packets received by all sinks}}{\sum \text{CBR packet sent by all source}} \right) \quad \text{Equation 2}$$

4.3 THROUGHPUT

It is the ratio of total amount of data which reaches the receiver from the sender to the time it takes for the receiver to receive the last packet. It is represented in bits per second or packets per seconds. In MANETs throughput is affected by various changes in topology, limited bandwidth and limited power. Unreliable communication is also one of the factors which adversely affect the throughput parameter.

5. SIMULATION RESULT

To calculate network performance, we simulate black hole node behaviour in AODV in large number of nodes and connections with the help of Network Simulator 2 [15] [6]. We set the parameters for our simulation as shown in Table 6.1. Xgraph [7] is used for plotting the result in form of graph in NS2[16]. The simulation parameters are shown below [1].

TABLE 1: SIMULATION PARAMETER

| | |
|--------------------------|-------------------------|
| Simulator | NS-2.34 |
| Simulation time | 10sec |
| Number of nodes | 40 |
| Number of blackhole node | 1 |
| Topology | 750m x 750 |
| Routing Protocol | AODV |
| Traffic | Constant Bit Rate (CBR) |
| Maximum Connection | 9 |
| Packet size | 512 |

In this section we present a set of simulation experiments to evaluate the effect of black hole attack on AODV protocol in MANET. First we had explained black hole attack in detail via simulation in NS-2. We have generated a small size network with 40 nodes in a flat grid of 750m x 750m including black hole node. We have generated 9 connections between various nodes. We have also introduced some movements in our scenario. duration of the scenario is 10 seconds. Node 25 is the source node, node 38 is the destination node and node 36 is the black hole node.

Figure 5.1 shows the snapshot of initially network. The route discovery process is shown in the Figure 5.2 for some seconds, the link breaks and all data that send from source node get lost as shown in Figure 5.3. Now Figure 5.4 shows that node 36 starts acting as black hole node. Nodes further rebroadcast the request if they are not the destination nodes. Node 36 i.e. black hole node, claims that it has the route to destination whenever it receives RREQ packets and sends the response to source node. All other nodes that have the fresh route also send a reply. But the reply from node 36 reaches the source node first. Node 25 accepts it and ignores all other reply messages and begins to send data packets to node 38 via black hole node and node 36 being a black hole node absorbs all the packets and then instead of forwarding the packets to the destination it start dropping it and thus the packet will never reached its intended destination. This was shown in Figure 5.5.

FIGURE 5.1: INITIALLY NETWORK OF 40 NODES

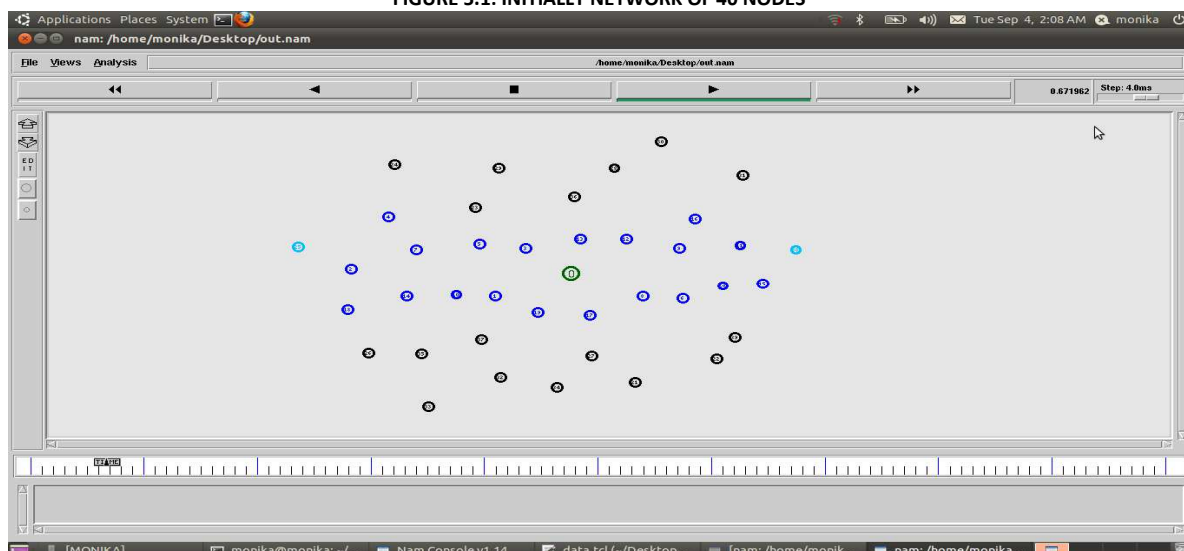


FIGURE 5.2: ROUTE DISCOVERY PROCESS

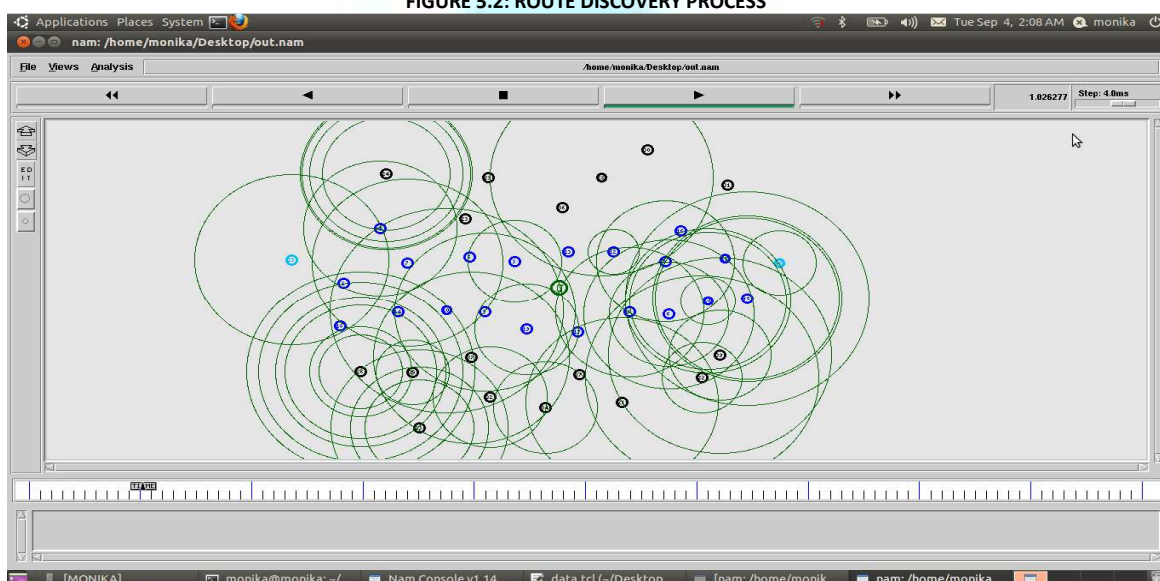


FIGURE 5.3: PACKET LOSS BEFORE ATTACK

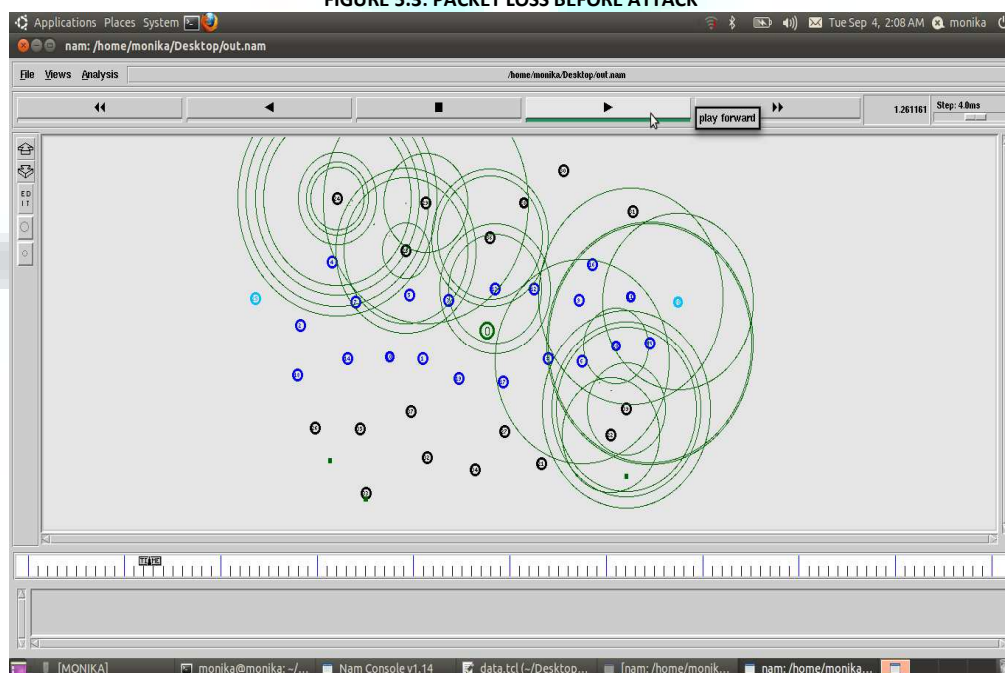


FIGURE 5.4: NODE 36 ACTING AS BLACK HOLE

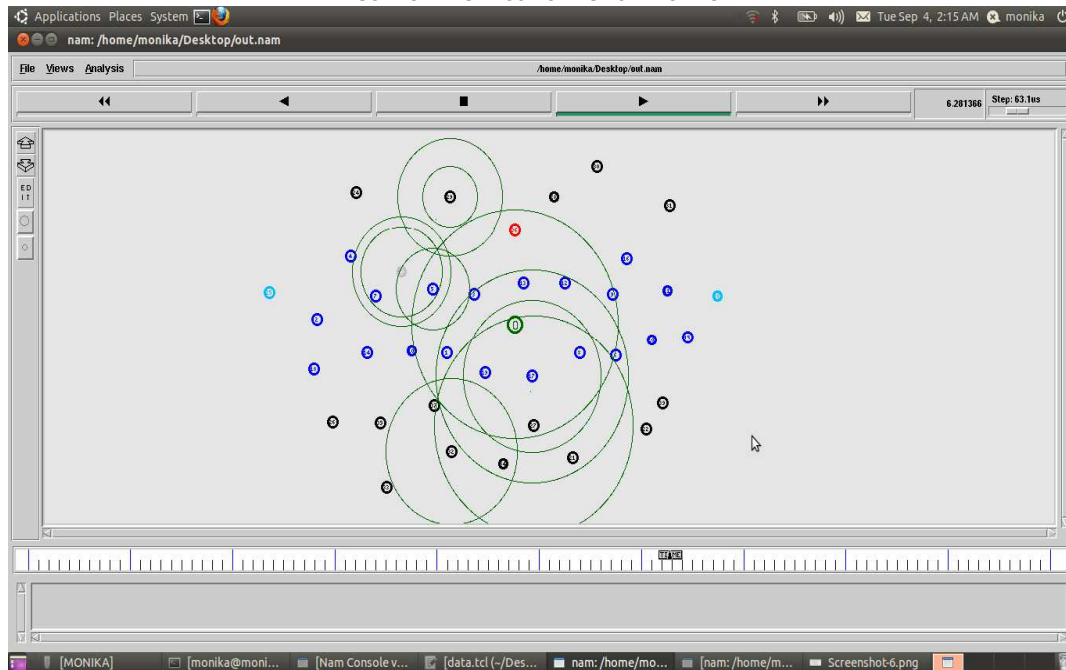
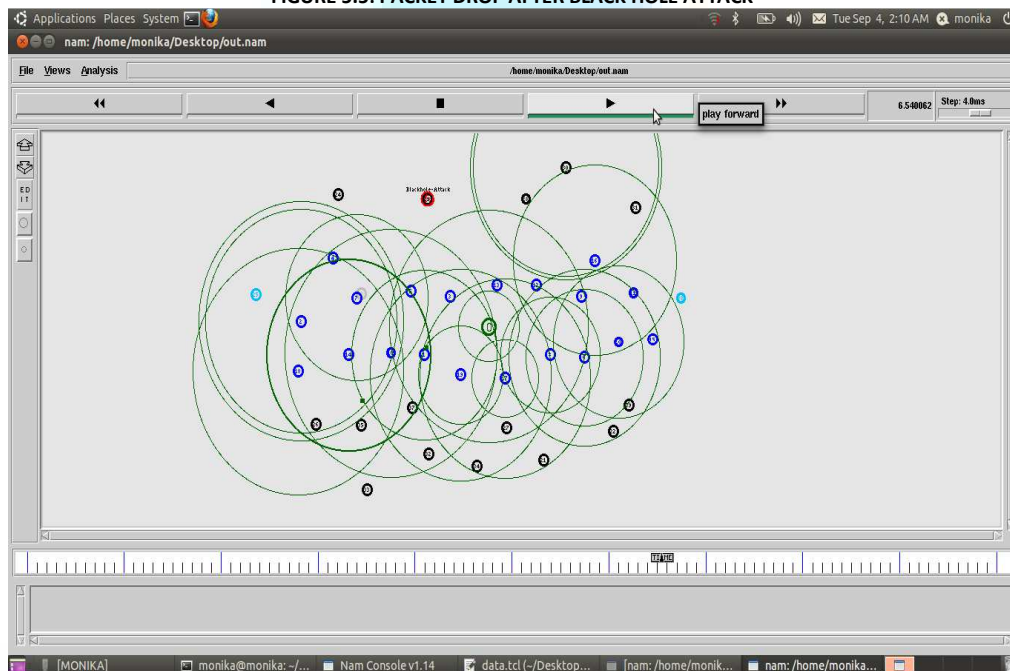


FIGURE 5.5: PACKET DROP AFTER BLACK HOLE ATTACK



We have taken different scenarios of defined parameters for our simulation with or without black hole node. We have taken different positions and movements of nodes for each scenario. Then we had entered the black hole nodes and simple nodes to evaluate the performance. The metrics are used to evaluate the performance are packet loss, throughput and end-to-end delay. We calculate data loss with black hole and without black hole node. Then we compare the results of these two simulations to understand the network and node behaviours. The result of the simulation shows that the packet loss in the network with a black hole increases beyond that dropped without the black hole node.

Our simulation results show that AODV network has normally 2.50 % data loss and if a black hole node is introducing in this network data loss is increased to 89.38%. As 2.50 % data loss already exists in this data traffic, black hole node increases this data loss by 86.88 %. We have also analyzed the throughput of received packets with the presence and absence of black hole node with respect to the simulation time of 450(s) in Figure 5.8. Figure 5.9 illustrates the graphic representation of packet loss percentage with and without black hole node with respect to simulation time.

Figure..8 shows the effect of black hole attack on throughput of received packets of network. The result shows both the cases with black hole and without black hole attack. With our simulation, we analyzed that the throughput of received packets in AODV is very high than the throughput of received packets in black hole AODV. Because the packet loss in black hole AODV is higher than the AODV protocol.

We also studied the performance with varying the number of nodes. Figure.5.7 shows the impact of number of nodes on throughput without black hole attack. The number of nodes is varying from 10 to 40 with the step of 5. Simulation results show that when the number of nodes increases, the throughput increases for AODV protocol.

Figure.5.6 shows the impact of simulation time on throughput and packet delivery ration .It shows that as the simulation time increases the throughput and packet delivery ration also increases as there is low packet loss. This is the case when there in no black hole node in the network.

FIGURE 5.6: THROUGHPUT AND PDR VS SIMULATION TIME FOR AODV

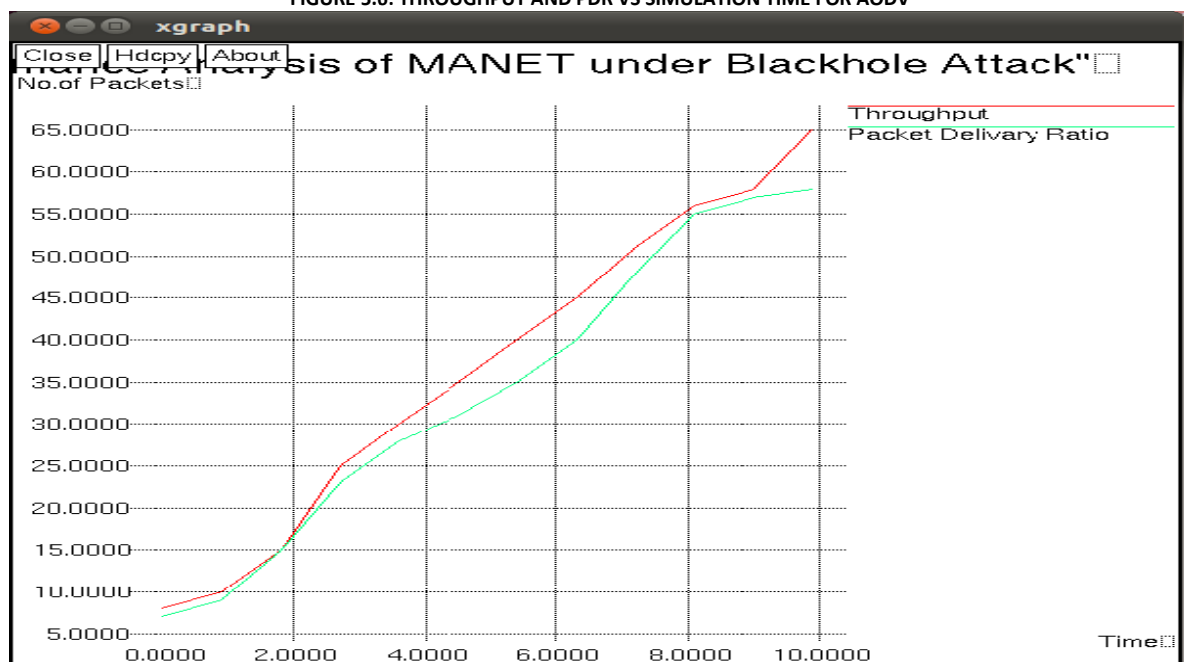


FIGURE 5.7: THROUGHPUT VS NUMBER OF NODES FOR AODV PROTOCOL

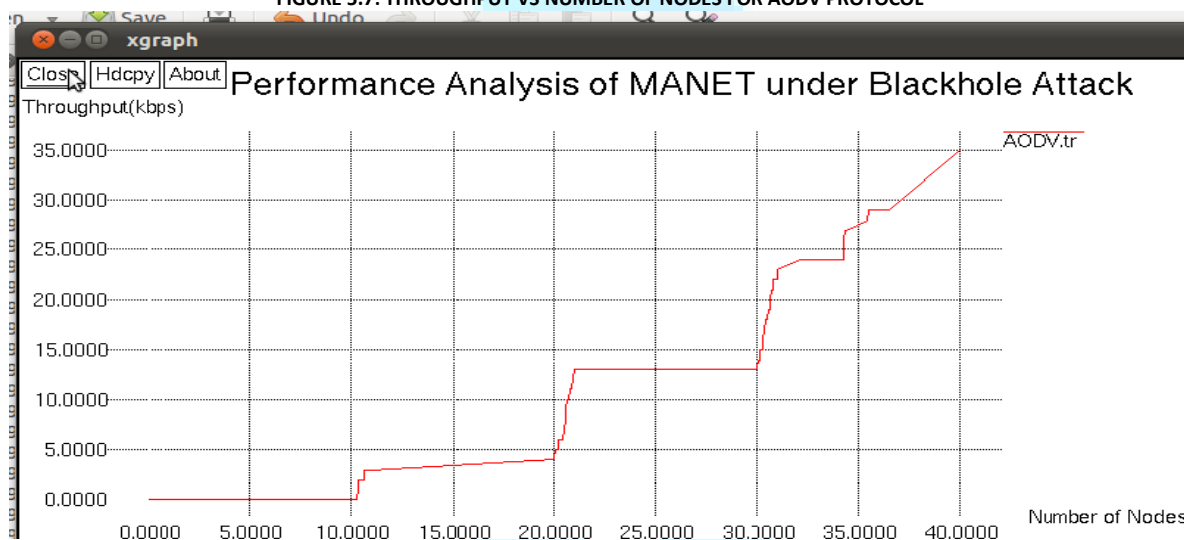


FIGURE 5.8: IMPACT OF BLACK HOLE NODE ON THROUGHPUT OF RECEIVED PACKET

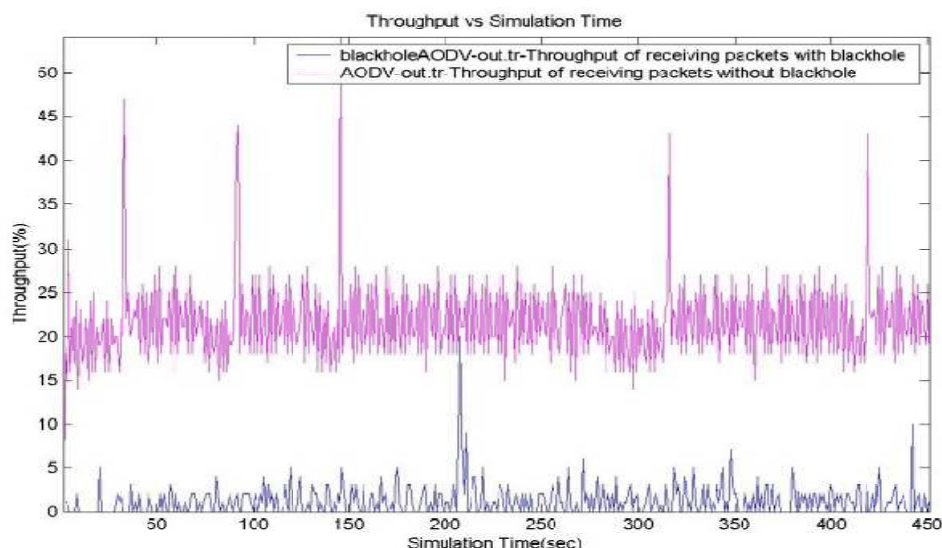
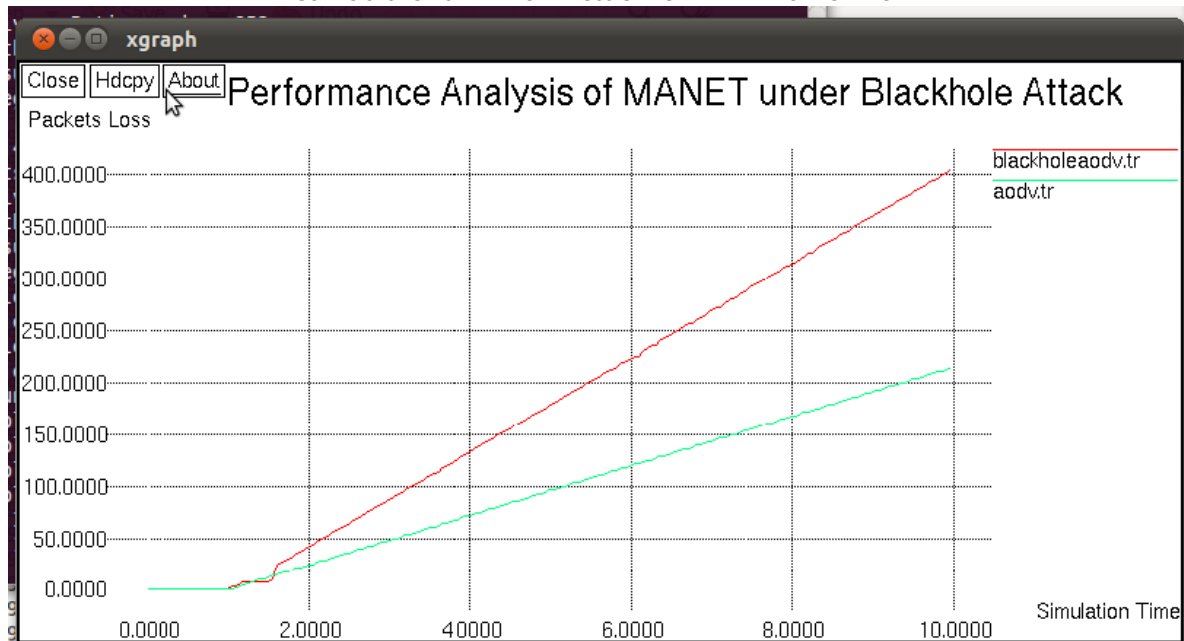


FIGURE 5.9: SHOWS THE PACKET LOSS OF AODV AND BLACK HOLE AODV



6. CONCLUSION

Thus we have analyzed the effect of Black Hole attack on very popular on demand routing protocol AODV, by means of various performance metrics such as PDR, throughput & packet loss, as well obtained simulation results by varying number of nodes in the network & found that there is non linear change in the values of these metrics also we realized that if the number of black hole nodes increased the network performance will be decreased.

7. FUTURE SCOPE

The research on MANET is still in an early stage. Existing proposals are typically based on one specific attack. They could work well in the presence of designated attacks, but there are many unanticipated or combined attacks that remain undiscovered. A lot of research is still on the way to identify new threats and create secure mechanisms to counter those threats. More research can be done on the robust key management system, trust-based protocols, integrated approaches to routing security, and data security at different layers

Mobile Ad Hoc Networks has the ability to deploy a network where a traditional network infrastructure environment cannot possibly be deployed. With the importance of MANET comparative to its vast potential it has still many challenges left in order to overcome. Security of MANET is one of the important features for its deployment. In our thesis we have analyzed the behavior and challenges of security threats in mobile ad hoc networks with solution finding technique with special attention to the black hole attack.

Mobile Ad hoc networks are widely used networks due to their flexible nature i.e. easy to deploy regardless of geographic constraints. These networks are exposed to both external and internal attacks as there is not centralized security mechanism. A lot of research work is still need in this area. We tried to discover and analyzed the impact of black hole attack in MANETs using AODV. There is a need to analyze black hole attack in other MANETs routing protocols such as DSR, TORA and GRP. Other types of attacks such as Wormhole, Jellyfish and Sybil attacks are needed to be studied in comparison with black hole attack. They can be categorized on the basis of how much they affect the performance of the network. The detection of unpredictable behavior of black hole attack as well as the elimination strategy for such behavior has to be carried out for further research.

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21ST CENTURY ADS- ADDS MORE

PRIYANKA SRIVASTAVA
VISITING WAC READER
INDIAN INSTITUTE OF MANAGEMENT
UDAIPUR

ASHISH RAMI
ASST. PROFESSOR
RAI UNIVERSITY
AHMEDABAD


ABSTRACT

'Need' generates a 'need to innovate'. To match steps with the progressing time, smart generation and increasing competition, companies are changing their advertising strategies, to generate a unique brand positioning. This article explores how the advertising companies design ads keeping in mind the present lifestyle of the consumers and closely relating to their day to day life patterns. The advertisers splendidly know how to magnetize their TV audience to their ads and they keep on studying the changing preferences and mood shifts of the audience. They generate ads keeping in mind their target audience and those who could be their future customers. This article studies the creative ideas and innovative advertising strategies used in TV commercials these days. It talks about 15 such tricks and approaches used by advertisers to connect with the audience. It further reflects on the nuances of advertisements, provides examples and portrays an in-depth analysis of the tactics that are being adopted by the advertisers to pull the consumers to buy or at least feel connected with the ads and therefore the product. The main aim of the article is to touch the corners of TV advertising and prepare a platter of innovative advertising tactics used nowadays. To name some of the strategies discussed, 'To be continued... ads', 'Consumers as celebrities', 'Technology driven ads', 'Popular daily soap character ads', 'Kids façade ads, etc.

KEYWORDS

Advertising Strategies, Audience Connect, Creativity, Innovation, TV Advertisement.

INTRODUCTION

 *every advertisement should be thought of as a contribution to the complex symbol which is the brand image."*

David Ogilvy

Advertisements are integral part of marketing, which is the backbone of business. The main aim of an advertisement is to hook the audience and try to persuade them to become their potential customers or the ultimate consumers. Earlier advertising was more to do with informing the consumers about the product; it was used as a marketing tool to create awareness about the product and to make the product visible. Majority of viewers find these ads as dull and unexciting and the general perception is that, it is a 30-second commercial that consistently interrupts during TV shows. Today, to shatter this perception the advertisers have taken a 360 degree turn from where the concept of advertising actually began. The bottom line off-course remains the same 'to inform and persuade the audience' however; the challenge will be to change the audience perception of advertisements from an interrupting element to an interesting advertisement. The taste, lifestyle and preferences of the audience are changing constantly and therefore advertisers have to bring revolutionary concepts and techniques to keep a pace with the audience preferences and frame of mind.

A lot of companies are now making ads to portray themselves as one amongst the common people. They want to touch the audience in one or the other way and establish a connect with them. Earlier the focus of the advertisements was more on the informative pitch than persuasive. But today, the focus of the advertisement varies from just being an informative ad to more **persuasive** and **innovative**, touching random colors of a common man's life.

In order to understand some of the innovative and persuasive techniques used, let us analyze the following strategies adopted by the advertisers of 21st century.

1. Social Connect
2. Eco friendly ads (Green marketing)
3. Ads during TV shows (Covert advertising)
4. Animation ads
5. Incomplete ads
6. Emotional ads
7. Jingles/tunes
8. Variety of ads
9. Identity creation ads
10. Occasion based ads
11. Kids façade ads/ Ads using kids as model
12. Consumer- Celebrity ads
13. Popular daily soap character ads

1. SOCIAL CONNECT

Connecting with society here refers to advertising with a social message or a social appeal. Socially focused advertising is initiated nowadays where a social message is laced and is expressed along with the products in the commercials. The main aim of the companies behind these kinds of advertising is to share a sense of belongingness, enhance company's reputation, create a better audience connect and to craft a positive image of those who use these products.

Apart from specific Corporate Social Responsibility (CSR) initiatives, companies also make efforts through their advertisements to spread affirmative messages for the betterment of the society and to revive the human element. **Tata Tea's Jaago Re**, **Surf Excel's Daag acche hai**, **Rin's Aage badho**, are few examples where firms have initiated to roll out positive messages in the society by means of advertising (TV Commercials). There are other advertisements also which highlight the power of goodness and motivate people to become good human beings, such as **Nirma's 'Ambulance ad'**, **Kaun Banega Crorepati-5** promo commercial '*Koi bhi insaan chhota nahi hota*', **Officers Choice** ad with a message '*Jagaiye apne andar ka officer*'. These ads not only trigger a thought, but also get admired by its audience.

Apart from Corporates, Countries/States are also leveraging on the idea of social connect through advertisements to promote tourism, cultural awareness and good citizenship etc. Incredible India – *Sharm ka Taaj* campaign by Aamir Khan, Madhya Pradesh Tourism, Gujarat Tourism, etc. are some of the examples to depict the same.

2. ECO-FRIENDLY ADVERTISING (GREEN MARKETING)

Eco friendly advertising is similar to social connect advertising but here the emphasis is on a particular social cause which is 'environment'. Eco friendly advertising, referred here as green marketing illustrates the efforts done by companies to communicate the message of saving our mother earth and environment. According to AMA (American Marketing Association) - Green marketing means marketing of products that are presumed to be environmentally safe. It includes actions such as modification in product, advertisements, production process, and packaging (Pride and Ferrell, 1993). Green marketing is the process of selling services or products based on its ecological compensation. Industries are inflowing a new era of green marketing which will highlight less on companies' own ecological identification and more on encouraging the means in which products can assist customers decrease their carbon impact.

In the era of globalization, companies have taken such initiative to protect the environment by creative ideas and also by creating concept advertising messages. Below are few examples,

- Surf Excel:

Advertisement campaign *Do bucket pani rozana hai bachana* launched by surf excel quick wash in 2005. In the advertisement, Surf Excel claims, its 'Quick Wash Range' has the capacity to reduce water usage significantly. In India, a lot of water is consumed for rinsing as per the traditional habits of washing clothes. The ad conveys a message that by using surf excel, you can save two buckets of water and emphasizes on the fact that by saving two buckets per wash consumers can help reduce water wastage.

- Aircel's Save Tiger Campaign:

Aircel launched 'Save Our Tiger' campaign in association with World Wildlife Fund (WWF) where it intends to draw attention towards dwindling numbers of tigers across the planet and bring forward the seriousness of losing tigers from our planet. It indirectly appealed to save and close the gap in ecological cycle. Their ads include celebrities like Kiran Bedi, MS Dhoni, Suresh Raina and other celebrities conveying the message to save tigers and not only that, they also emphasize on words like bravery, collective efforts, never say die spirit to motivate its audience.

- Idea's Save Paper Campaign:

IDEA Cellular Ltd. Launched 'Save paper' campaign in Jan'2010. The TV commercial focused on how the mobile phone can be used as a resourceful device to read daily newspapers, make payments and transactions, generate e-bills, issue e-tickets and boarding passes etc. which leads to saving tones of paper every day and hence the environment.

- Nerolac's Eco-Clean:

Nerolac paints, in their recent commercial on new range of Nerolac Eco – clean paints displays that the product does not have any smell, is stain proof and above all it does not have any harmful fumes. It emphasizes on the fact that the paint has low Volatile Organic Compounds (VOCs) which helps in protecting against health problems and serious ailments.

There are many other companies who are involved in such kind of initiatives as a part of their Corporate Social Responsibility (CSR) but there are only few companies who are not only involved in such work but they also spread the message through their concept advertising.

3. ADS DURING TV SHOWS (COVERT ADVERTISING)

Covert advertising is coming up as a new trend in promoting services, TV programmes, and products during TV shows. It inserts a product or brand in entertainment and media (movies, game shows, reality shows etc) and brings into action the hidden strategies which turns common entertainment into a comprehensive advertisement. It increases brand value, brand visibility and hence brand image, making it more familiar and memorable to the target audience. The rationale behind introducing these ads is to battle ad-skipping.

The idea is noticeable in many films like, *Krrish*, *Koi Mil Gaya*, *Dhoom*, *Taal* etc via using different branded products. This initiative is now taken by TV shows where they advertise and emphasize on various products, movie stars, TV artists etc.

- Kaun Banega Crorepati - 2011:

In the well known TV show *Kaun Banega Crorepati-2011*, Mr. Amitabh Bachchan, read questions from a screen where 'Samsung Smart TV' is shown. A close-up of the **Axis bank's cheque** is shown when awarded to the contestants. Many Daily Soap and Bollywood celebrities came on the show to promote their programmes and movies, to name some of them: Ram Kapoor and Shakshi Tanwar came on the show to promote their serial *Bade Achhe Lagte Hai*, Vidya Balan for *Dirty Picture*, Anushka Sharma and Ranbir Singh for *Ladies vs Ricky Bahl*, Shahrukh Khan for *Ra.One* and many others.

Cadbury apart from being a sponsor weaved its punchline in the show amazingly. Cadbury's punchline – *Shubharambh* was used by Mr. Amitabh Bachchan as *Khel Ka Shubharambh* (let's begin KBC) before starting the quiz. There is another punchline of Cadbury *Kuchh meetha ho jaye* which was displayed on the screen, when a contestant used to win a handsome amount on the show.

- Masterchef India - 2011:

The products of **India Gate Basmati Rice** and the core sponsor of the show **Amul** were used and highlighted in *Masterchef India-2011*. All contestants used these as core products in making their recipes in the show. **Kenwood** kitchen appliances and **Pigeon** kitchen utensils were used to promote these brands. Place promotion is also done by taking contestants outdoor and shooting the programme in hotels and other venues such as **Suryagarh Palace** at Jaisalmer, **Hotel Renaissance** – Mumbai, **Jumbo Floating Restaurant** at Hong Kong etc.

Apart from the products, ads of other TV shows and movies are also highlighted in the shows. Salman Khan in the daily soap '*Na Ana Is Des Meri Lado*' to promote his movie *Bodyguard*, Ajay Devgan in '*Tarak Mehta Ka Ulta Chashma*' to promote his movie *Singham*, Himesh Reshamiya in '*Comedy Circus*' for *Damadam*, etc. These days we see a lot of celebrities coming in other shows to promote their movie, serials, TV shows etc.

Ads in 'breaks', during a TV show or a movie were eminent but what has changed is the strategy to use them in the shows and movies and create a visual in the minds of the viewers and to conquer ad skipping.

4. ANIMATED/MASCOTS ADVERTISING

Animation in an advertisement gives novelty to the commercial. It has immense power to infuse humor, convey a story and create an identity of its own. If woven correctly with the brand, can create an identity of the brand in its consumer's mind and would encourage the consumer to experience the product. The animated pictures and mascots frame an everlasting image which is easy to differentiate and recall.

These animations can be made live by transforming a 2-D picture in 3-D or by creating real human like identities by making them talk, walk and entertain the mass.

Amul is said to be a pioneer in successfully crafting and using the theme of animated advertising with an 'Utterly Butterly Girl'. Creating these Mascots is not only cost effective but is appreciated and enjoyed by children and youth. It also matches with the product and the brand Amul having milk items as their core product and children as their main target group.

Vodafone implemented an innovative idea of using 'Zoozoo' (real yet animated look alikes) and succeeded to push the brand value by their campaign during IPL 2009. **Bisleri** used a monster and baby monster in its new Arabic theme ad. The ad starts with 2-D animated video converting in the real life characters as sailors facing an attack of an animated monster and baby monster. Squirrels were used as characters in the animated ad **Kit –Kat Break Banta Hai**. **Hippo Round-Round** used animated hippopotamus as the main character in their ads. An animated mama Kangaroo and baby Kangaroo were used in **Nestea** ads.

Many other companies followed the same strategy such as **7 up's** 'Fido Dido', **Asian Paints's** 'Gattu', **Hutch's** 'Puppy', **Kellogg's** 'Monkey and Tiger', **Pampers** 'Pampa', **McDonald's** 'Ronald McDonald' etc.

5. INCOMPLETE ADS

Keeping in mind the aim of persuasive advertising, agencies are creating ads in-parts to generate the curiosity and interest, to watch further parts of the commercial. When people see the first version of the ad, it has a glimpse of characters, incomplete message, a question, mainly a curio element to create inquisitiveness in its audience. It creates eagerness in the mind of viewers to wait for the other versions of the ad and also to think about it more often.

- Zozoo:

Vodafone Zozoo commercials 'UFO or Alien?', 'Dream or Reality?', 'Fact or Fiction?', 'Bird or Plane?' the 'Coming soon...' teasers were used by the company to infuse curiosity and eagerness.

- Nescafe:

Nescafe also used this strategy and made series of Nescafe ads featuring Deepika Padukone and Purab as new neighbors. The beginning parts of the ad had the surprise element- Purab who discovers that his new neighbor is none other than the stunning Bollywood actress Deepika Padukone wants to break the ice and talk to her and while he is having Nescafe and preparing himself, the commercial ends with a caption 'The Action Continues...'. Now this tempts the audience to wait for, and watch the series.

- Maggi:

Maggi also weaved the idea in its new commercial 'Maggi- Guess the Taste?' Maggi's packet had a big Question mark "?" and 'Guess the Taste' caption written on it instead of the flavors. The commercial left people guessing different flavors like *Dhaniya, Mint, Chilli, Haldi, Sarson* and other Indian flavors. This created a desire in the consumers to taste the Maggi at least once to guess the taste.

This kind of advertising is becoming more popular these days. They not only create curiosity but also give audience a variety to watch.

6. EMOTIONAL ADS

Decades before, advertisements were focused mainly to inform people about products and services. Rational thinking and objective information are the cognitive elements which influence heavily on the buying pattern of the customer. At the same time, emotions too play a powerful role. In today's increasingly competitive advertising environment, emotional appeal is being used as a very strong technique in advertising communications. Aim of emotional ad is to touch the heart of audience and to connect with their emotional cords. Emotional advertising finds ways to take advantage of achieving higher volume of sales by considering the feelings and needs of customers. Advertising agencies have to identify the need of people and the driving force that thrust them to fulfill their needs. Emotional ads have appeals that have power to attract the attention of viewers, arouse their hidden desires or feelings and direct them to pay for the products or service. Ads of following emotions are crafted to lure the viewers.

Love, Beauty, Romance: Various ads depicting these emotions include: Close-up's *Pass Aao* ad, Katrina Kaif endorsing *Slice's Aamsutra*, Cadbury's *Shubharambh*-Bus Stop ad, Amitabh Bachchan's Tanishq's *True Diamond*, Anushka Sharma and Rannvijay's ad of Reliance Unlimited Talk and Reliance call connect, Deepika Padukone's new *Fama Di Wills Soap Ad*, Parachute Body lotion etc.

Anger, Fury: Anger occurs when a person is aggravated or spoiled by somebody or some incident. Anger is used in advertisements to persuade a strong sentiment to change something, and the product that is advertised is offered as the remedy. A good example can be Sharman Joshi's new 7 up commercial where the drink is highlighted as a remedy to anger. Other such examples are: Odonil's *Khushboo aisi jo mood badal de*, Kellogg's *All Bran* etc.

Compassion, Mercy, Kindness, Sympathy: These emotions turn-on when we see an advertisement depicting situations or incidents of real life. They touch the heart of audience by gaining their sympathy and raising their concern. To quote some of the examples, National Aids Control Organization (NACO) Blood donation ads *Kar ke dekho aacha lagta ha*, UNICEF's *Polio Campaign* etc.

Disgust: Advertisements that use this emotion emphasize on a feeling of abhorrence or difficulty and then offer a solution to the same. The best example can be of Contraceptive pills, others may include Idea 3g ad campaign about *India over population*, Axe- *Dark temptation*, Wild Stone- *Durga Puja* commercial and many such ads nowadays.

Fear: People always want to avoid fear. Using this emotion, advertisements attempt to put a brand image focusing on 'hope' against 'fear'. Saffola oil 'to prevent from heart attack', LIC, ICICI, are some of the brands who intertwine the element of fear in their advertisements and offer their products as a solution.

Heroism, Bravery: Such ads emphasize on pride, success and other identity elements which help the brand in creating a bond with the audience and craft a heroic image of those who use these products. Various brands that are leveraging on these emotions include Mountain Dew- *Dar ke aage jeet hai*, Officer's choice - *Jagayee Apne Andar Ka Officer*, Dixcy Scott innerwear *The Ultimate Winner*, New Dollar Club *Big Boss* etc.

Wonder, Surprise: Some instances in life bring a wonder or surprise element with them. Advertisers nit these sentiments in their commercials to astonish the viewers. To cite some examples, Tide's *white plus*, Cadbury Dairy milk shots' *Beta man mein laddu futa*, Havells' *Shock laga*, Cadbury's Oreo -*Khane ka secrete*, etc.

Peace, Harmony: Focusing on peace of mind and comfort. Sleep well mattress, Airlines'ad, Malaysia tourism's ad, Pamper diapers and *Aman Ki Asha* - an Indo-Pak Peace Project, initiated by Times of India and Jang group etc. are few examples.

Laughter, Comedy, Humor: Creating fun and entertainment is another best strategy to catch the attention of viewers. It incites laughter and provides fun to spectators. It stops switchover to other channels. Camlin white board marker, Fevicol, Mentos, Center-fresh, Orbit's white chewing gum, Motorola Yuva etc are best ads having comedy appeals. One of the most memorable advertisements which adopt humor in a light-hearted way is Happydent chewing gum, which shows the shiny bright teeth, used as a source of light in a variety of situations.

7. JINGLES/TUNES

Jingle is a musical tune with or without slogans, used in advertising. Music is far memorable than any other commercial element. People cannot remember spoken words of a commercial but can sing the jingle (Tom Altstiel, Jean Grow, 2006) Our mind has the enduring impressions of lasting jingles. Ad agencies try to connect the tune with the brand which helps in getting more business, as customer recalls the brand name just by a jingle. Nowadays these jingles also get spread as ringtones. Some famous Indian ad-jingles are Airtel *Kyunki har ek dost zaroori hota hai...*, Docomo *do do do...*, Heromoto corp *hum me hai hero...*, Amul *The taste of India*, Frooti *Mango frooti fresh and juicy*, Boroplus *Saefed teeka*, *We are Black Berry boys* by Black Berry, and many other such remarkable tunes.

8. VARIETY OF ADS

Some companies try to create commercials which bring novelty factors for its viewers, each time they watch the ad of the same brand. They create different themes around the product and try to emphasize on the unique qualities or features of their product in a series of ads. Viewers enjoy these ads as they are not repetitive but have a different concept or flavor. The ad series made by Pepsi, 'Change the game' campaign during World Cup'11 is the best example of such advertisement series. With this innovative campaign, Pepsi had given cricket a new dimension and changed everything that is unorthodox about the sport; whether it is Virender Sehwag's *Upper Cut*, Mahendra Singh Dhoni's *Helicopter Shot*, Harbhajan Singh's *Doosra*, Tillakaratne Dilshan's *Pallu Scoop*, Kevin Pietersen's *Palti Hit* and Billy Bowden's *Tedi Ungali*. The first commercial of M.S.Dhoni's *Helicopter shot* triggered excitement to see the other ads of the same series.

Other such examples include Vodafone's Zozoo during IPL'11, Mc Donalds' series of ads for the 'I am loving it' campaign. Tata sky's *Poochhne mein kya jata hai*, Anushka Sharma and Rannvijay ad of Reliance Unlimetd Talk and Reliance call connect, Cadbury ads, etc.

9. IDENTITY CREATION

Some advertisements generate specific personality for its product. Personality characteristics are conveyed by advertisers through their choice of actors, stunts or by emphasizing on the qualities of the product. Trustworthiness, credibility, and expertness are all traits that seem to influence positively, the scores of evaluative measures of advertisements (Ohanian 1990).

Mountain dew and Thumps-up depict fearless/daring/brave personality traits to achieve anything far above the ground. **Tata safari, Mahindra Scorpio** depicts ruggedness. So a person matching with such personality is likely to match with the product and prefers to buy those products most. Selection of the brand ambassador also plays a significant role in creating specific identity.

Some other brands and their matching personality traits:

| Ads/brands | Personality/ Identity |
|--------------------------------|---|
| Tata - Tea (Jago - Re) | Strong (raising voice against corruption) |
| Titan-Raga | Lifestyle |
| Bajaj Pulsar, Toshiba Power TV | Power/Passion |
| Parker Pen | Professional, official |
| Dove, Pears | Soft/ Gentle |
| Tata Nano | People's Car |

10. OCCASION BASED ADS

Trend of making ads based on occasions or events help a lot of companies to lure the customers especially for specific time period. Specific occasions create a need for customers to go out and shop. At a point of time such ads work to persuade them to purchase those products. At the time of world cup 2011, ads of Pepsi and Lays were tailor made and became very popular. These products are consumed more at the time of watching cricket match, movies and similar occasions.

Cadbury always comes up with some unique messages whether it is exam results *Pappu paas ho gaya* or Diwali celebrations *Is diwali aap kisko khush karenge* or *Pyar ka shagun* on Rakshabandhan and many other such ads to suit the occasions and mingle with the tradition and culture.

Many other companies such as **Tribhuvandas Zaveri**, **Tanishq**, **Pepsi**, **Coke** etc prepare ads according to the theme of festivals and occasions like Wedding, Diwali, New Year, World cup, etc. Dialogues and themes of such ads are woven around the festivals and specific events and the main aim is to catch and bond with the festive moods of its audience.

11. KIDS FACADE ADS/ ADS USING KIDS AS MODELS

Cute kids can grab anyone's attention. They are usually taken as models for products like Fisher Price (Toys), Complan, Bournvita, Horlics, (Healthdrinks), Pampers, Huggies etc. where the target audience for the product is also kids. Nowadays kids are also used as models in the commercials irrespective of the product or the product type, just to charm the audience and catch their attention.

It creates a positive psychological effect on people when they see innocent kids in the commercials.

To quote some of the examples, **Surf Excel's** *Daag acche hain* ad series, **McDonald's** 'Girlfriend – Boyfriend' ad, **Flipkart.com** 'No Kidding No Worries' ad where children speak in the voice of mature people, **LIC's** *Jeevan Saral 'Gola'* ad and *Jeevan Tarang 'candy'* ad, **Signature blankets** 'I am so happy' ad, and many other such cute ads.

12. CONSUMERS - CELEBRITIES ADS

Taking celebrities in ad films to hook the audience is common. Now days, to capture its young and intelligent audience, the advertisers are looking forward to real life consumers as models for their ads instead of casting reel life celebrities. Advertisers are giving chance to common people to become models and thereby celebrities. Savreen Gadhoke in her article "C'mon let's get ad-real..." explains how celebrities are taking role of common man by participating in different TV reality shows such as *Pati patni aur woh*, *Swaymvar*, *Maa exchange* etc. and the real consumers have become new celebrities of the ad world. Some of the ads where we can see the real consumers as celebrities are shared below:

- Nestle Maggi:

Nestle launched '*Me and Meri Maggi*' campaign where consumers were invited to share their memorable experiences involving Maggi noodles, and some selected entries amongst them were featured on Maggi's packet and also in its TV commercials.

- Hero MotoCorp:

Hero MotoCorp has come up with a new ad campaign '*Hum me hai hero*'. People are invited to sing the title track '*Hum me hai hero*', shoot their video and upload it on heromotocorp.com. These videos then become a part of their latest TV commercials.

13. POPULAR DAILY SOAP CHARACTER ADS

Daily soaps quickly and easily become a part of our lives. Hooking on this idea, these days a new trend of advertising reel life characters is emerging up. Famous daily soap actors perform in the ads with their reel identities (character name and appearance are kept the same as in the show). These ads not only benefit the advertisers to grab the audience attention but also help in increasing the popularity programme. Some of the similar ads are captured below:

- Red Lable tea:

A famous daily soap *Yeh Rishta Kya Kehlata Hai* starrer Hina Khan and Sonali Verma are featured in the ad of Red Lable tea. Keeping the identity of *Bahu-Akshara* (Hina Khan) and *Saas- Gayatri* (Sonali Verma) same as in the serial. Not only this, the background also gives a feel that the ad is picturized on the sets of *Yeh Rishta Kya Kehlata Hai*

- Deluxe paint:

Lead actors of the serial *Iss Pyaar Ko Kya Naam Doon - Arnav* (Barun Sobti) and *Khushi* (Sanya Irani) are seen in the ad of Deluxe paint sharing the onscreen chemistry. In another ad of Deluxe paint we can also see *Akshara* (Hina Khan) and *Naitik* (Karan Mehra), lead actors of *Yeh Rishta Kya Kehlata Hai*.

CONCLUSION

Scenario of advertisement has changed, and is constantly changing in the recent era. Individual's perspective towards advertisements is also changing, they hardly get time to enjoy TV programs in their fast paced life and even when they watch their favorite programs, there are so many ads in-between. Therefore, the task of an advertiser becomes even tougher and they have to constantly think and devise new innovative concepts to bring creativity and uniqueness in their ads, to glue the audience. Ad agencies have to consistently think out of the box and present exclusive content to lure public to see the ads and can reduce the tendency to toggle another program when ads come between their favorite TV shows.

The main aim of advertisers will remain the same i.e. to persuade and inform their viewers about the product but the different tactics involved to persuade the viewers will change. The upcoming trend of designing TV commercials is mounting towards thinking out of the box, pitching inquisitiveness in the mind of viewers, bizarre creation, and exclusive thought generation, and the success of an ad will depend on capturing the audience frame of mind at the right time.

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CORPORATE RESTRUCTURING THROUGH MERGERS AND ACQUISITIONS-A CASE STUDY ON TATA STEEL AND CORUS

NARGIS BEGUM

ASST PROFESSOR

DEPARTMENT OF MBA

TRIDENT ACADEMY OF CREATIVE TECHNOLOGY

BIJU PATNAIK UNIVERSITY OF TECHNOLOGY

ROURKELA

EVELINA MOHAPATRA

ASST. PROFESSOR

DEPARTMENT OF MBA

TRIDENT ACADEMY OF CREATIVE TECHNOLOGY

BIJU PATNAIK UNIVERSITY OF TECHNOLOGY

ROURKELA

ABSTRACT

This paper focuses on Mergers and Acquisitions, one of the modes of corporate restructuring. Mergers and Acquisitions have attained considerable significance in the Corporate World. Mergers and Acquisitions have played an important role in the transformation of the Industrial sector of India and have brought about the external growth of a number of leading companies. Nowadays Mergers and Acquisitions are acting as a facilitating force towards the trend of Globalization of all National and Regional Economies. Both M&A have become necessary and acceptable in the recent times because of Liberalization, Globalization and Modernization and has helped to create more focused, Competitive, viable larger players in each Industry. The objective is to present a panoramic view on Mergers and Acquisitions as a tool of Corporate Restructuring. The effect of Mergers and Acquisitions on the Top Management, Shareholders and Employees has been taken into consideration. This paper also includes the effectiveness of Merger and Acquisitions through the involvement of employees in its process. For a better insight, Acquisition of Corus by Tata Steel has been highlighted with special reference to pre and post acquisition. The Financial status of Tata Steel and Corus has also been stated after the deal. The paper gives a view about Mergers & Acquisitions in general and Tata Steel and Corus deal in particular.

KEYWORDS

Employees, Merger, Post Acquisition, Pre Acquisition.

INTRODUCTION

Mergers and Acquisitions as a tool of corporate restructuring have attained considerable significance in the contemporary corporate scenario which is broadly used for reorganizing the business entities. After the liberalization of Indian Industries in 1991, these were exposed to a plethora of challenges from the national and international markets. The cut throat competition in the international market compelled the Indian Industries to go for Mergers and Acquisitions.

Mergers and Acquisitions also affect the employees of the organizations. Employee related to restructuring involves converting the employees into knowledge & Entrepreneurial employees.

Retrenching redundant employees and redeployment of employees from closed down divisions to growing or new divisions. Restructuring also includes the transformation of loyalist employees to professional employees and also old and lethargic employees to young enterprising employees which in general brings about overall development of employees.

Mergers and Acquisitions are the most popular means of corporate restructuring or business combinations. One plus one makes three: this equation is the special alchemy of a merger or an acquisition. The key principle behind buying a company is to create shareholder value over and above that of the sum of the 2 companies. Two companies together are more valuable than two separate companies at least that is the reason for Mergers and Acquisitions.

Jensen (1986, 1988) has argued that Mergers and Acquisitions are a consequence of a breakdown in the internal governance structure of corporations. Managers in large corporate houses use free cash flows generated by more productive and profitable divisions to subsidise less viable divisions, rather than returning the money to the shareholders and this leads to shareholder's action that is manifested by Mergers and Acquisitions. This view is supported by Kini, Kracaw and Mian(2004) who are of the view that Mergers and Acquisitions is a last resort that is observed when internal governance mechanisms of the firms breakdown and the market is the only source of discipline for managers. But Shleifer and Vishny (1990) are of the view that Mergers and Acquisitions are the mechanisms used by efficiency seeking firms spin off unrelated lines of business and acquire businesses that enhance efficiency. Mergers and Acquisitions of companies are implicit in free enterprise system because of their obvious advantages like infusion of better management, consolidating capacities to economic level by forward and backward linkages & healthy growth of capital market.

OBJECTS OF MERGERS AND ACQUISITIONS DEALS

- Focusing on core strength, operational synergy and efficient allocation of managerial capabilities and infrastructure.
- Consolidation and economy of scale by expansion and diversification to exploit extended domestic and global markets
- Focus on Research and Development to reap the fruits of innovation and new technology.
- Acquiring constant supply of raw materials and access to scientific research and technological developments.
- Capital restructuring by appropriate mix of loans and equity funds to reduce the cost of servicing and improving return on capital employed.

INDIA AS A FAVORABLE PLACE FOR MERGERS AND ACQUISITIONS

- Dynamic government policy
- Corporate investment in industries
- Economic stability
- Ready to experiment attitude of Indian industrialists

PROCESS OF MERGERS AND ACQUISITION

The merger and acquisition process is carried out some steps which are as follows:-

- 1) **Preliminary Assessment or Business Valuation** - In the first step of mergers and acquisitions process, the market value of the target company is assessed. In this process of assessment not only the current financial performance of the company is examined but also the estimated future market value is Considered. The company which intends to acquire the target firm, engages itself in a thorough analysis of the target firm's business history.
- 2) **Phase of Proposal** - After complete analysis and review of the target firm's market performance, in the second step, the proposal for merger or acquisition is given. Generally, this proposal is given through issuing non-binding offer document.
- 3) **Exit Plan** - When a company decides to buyout the target firm and the target firm agrees, then the latter involves in exit planning. The target firm plans the right time for exit. It considers all the alternatives like full sale, partial sale and others. The firm also does the tax planning and evaluates the options of reinvestment.
- 4) **Structured Marketing** - After finalizing the exit plan, the target firm involves in the marketing process and tries to achieve highest selling price. In this step, the target firm concentrates on structuring the business deal.
- 5) **Origination of Purchase Agreement or Merger Agreement** - In this step, the Purchase agreement is made in case of an acquisition deal. In case of merger also, The final agreement papers are generated in this stage.
- 6) **Stage of Integration** - In this stage, the two firms are integrated through merger or acquisition. In this stage, it is ensured that the new joint company carries same rules and regulations throughout the organization.

EFFECTIVENESS OF MERGERS AND ACQUISITIONS THROUGH INVOLVEMENT OF EMPLOYEES

1. Choose the right transition team: The transition team that reports to you needs to be made up of people who have the right temperament and personality to handle a transition. They need excellent people skills and the ability to "finesse" any situation to the benefit of the company. Make sure the transition team is appropriate for the area or department they talk to and can easily relate to people in various employee groups. For example, you probably wouldn't want a team of "suits" to talk to a group of housekeepers and maintenance people in a hospitality merger. Choose a trusted employee from among their ranks and you're far more likely to see good communication as a result.

2. Be in constant, honest communication with employees: All employees want accurate information from management, and they want to know the truth, even if it's difficult. No matter what the news is, good or bad, your employees want to hear it, so always be totally open and honest about what is to come. If your employees feel out of the loop, they'll assume the worst, and you can expect a negative effect on productivity. Both merging entities, the purchaser and the seller, need to both consistently communicate with employees and ensure that whatever they're communicating is 100% accurate. For example, during a recent acquisition, the president of an acquiring company met with all of the employees about two months before the final deal was complete. The group was very well-paid and had a very high level of benefits. The acquiring organization would not provide that same level of benefits, he told the employees, but the loss would be made up in their salaries. At the end of the deal, they brought everybody in at the lower benefit level and at the same level of pay they had previously received. Now the president and his management team are starting off with low credibility because of his false attempt to reassure the employees. To help ensure buy-in, schedule regular employee meetings or send out regular updates via e-mail or a weekly newsletter. You need to be upfront about everything that is happening from the beginning so you don't lose credibility with your employees and, in turn, your customer base, who are in close, constant contact with your front line employees. If you don't treat employees well in the course of a merger or acquisition, six to twelve months down the road, you may find erosion of your customer base. The cost in revenue loss of losing a key player with a great deal of customer contact can be huge. It is not uncommon for revenue loss to reach a million dollars a year in a mid-sized organization. This, of course, would have a huge negative effect on any company and its ability to stay profitable.

3. Provide resources for those who will be displaced: Allow those employees who won't be retained to exit gracefully. Offer career counseling, resume services, contacts with outplacement firms, or anything else you can provide to meet individual needs.

Of course, the most important resource you can provide is a severance package of some sort. For lower level employees, two to four weeks pay may be sufficient; for middle and senior management, six to twelve months pay may be appropriate to help them make the career transition. The severance package should carry the employee the approximate amount of time you would anticipate it will take him or her to find a new position. Many times those coordinating a merger or acquisition wrongly assume that unemployment benefits will carry the departing employee through their transition; however, rarely are those benefits enough to sustain people at their current financial level. By taking these extra steps, your departing employees are less likely to talk negatively about the company to others, and the people who are remaining on staff will feel that the company truly cares about all employees—even those leaving.

4. Give assurance about change: Once the deal is done, retained employees will still experience some fallout, and morale and productivity can take months or even years to return to pre-deal levels, especially if a residual lack of trust remains after a badly handled merger or acquisition. If there's been perceived untruthfulness, management then has to establish a long history of standing by what they say they're going to do. Even if you have a smooth acquisition, you'll have to pay particular attention to assuring employees since change always brings apprehension.

Help your remaining employees to deal with change, even if that change seems minor to you. Maybe all that changes is who they report to, or the company president's name, but people fear change. Executives need to do everything they can to help minimize the anxiety that people naturally have.

Help Your Employees Love Your New, Better Company: When you follow these four tips, the benefits to both your employees and your company will be tremendous. Everything about the deal will go more smoothly from the employee's point of view, and therefore you'll have greater productivity, higher employee morale, and better relationships between employees and customers. As a result, company profits will hopefully soar, before, during, and after the deal.

IMPACT OF MERGERS AND ACQUISITIONS

On Top Management

Impact of mergers and acquisitions on top level management may actually involve a "clash of the egos". There might be variations in the cultures of the two organizations. Under the new set up the manager may be asked to implement such policies or strategies, which may not be quite approved by him. When such a situation arises, the main focus of the organization gets diverted and executives become busy either settling matters among themselves or moving on. If however, the manager is well equipped with a degree or has sufficient qualification, the migration to another company may not be troublesome at all.

On Shareholders

The Shareholders of the acquiring firm

The shareholders of the acquired company benefit the most. The reason being, it is seen in majority of the cases that the acquiring company usually pays a little excess than it what should. Unless a man lives in a house he has recently bought, he will not be able to know its drawbacks. So that the shareholders forgo their shares, the company has to offer an amount more than the actual price, which is prevailing in the market. Buying a company at a higher price can actually prove to be beneficial for the local economy.

The Shareholders of the target firm

They are most affected. If we measure the benefits enjoyed by the shareholders of the acquired company in degrees, the degree to which they were benefited, by the same degree, these shareholders are harmed. This can be attributed to debt load, which accompanies an acquisition.

On workers and employees

Aftermath of mergers and acquisitions impact the employees or the workers the most. It is a well known fact that whenever there is a merger or an acquisition, there are bound to be layoffs. In the event when a new resulting company is efficient business wise, it would require less number of people to perform the same task. Under such circumstances, the company would attempt to downsize the labor force. If the employees who have been laid off possess sufficient skills, they may in fact benefit from the lay off and move on for greener pastures. But it is usually seen that the employees those who are laid off would not have played a

significant role under the new organizational set up. This accounts for their removal from the new organization set up. These workers in turn would look for re employment and may have to be satisfied with a much lesser pay package than the previous one. Even though this may not lead to drastic unemployment levels, nevertheless, the workers will have to compromise for the same. If not drastically, the mild undulations created in the local economy cannot be ignored fully.

TATA STEEL AND CORUS

Reasons behind Bid from Tata Steel

- Tata was looking to manufacture finished products in mature markets of Europe.
 - A diversified product mix will reduce risks while higher end products will add to bottom line.
 - Corus holds a number of patents of Research and Development facilities.
 - Tata is known for efficient handling for labor and it aims at reducing employee cost and improve productivity.
 - It will move from 55th position to 5th in production of steel globally.
 - Reasons for Tata steel to Bid to tap European mature market.
 - Cost of acquisition is lower than selling up of Greenfield plant and marketing and distribution channel.
 - Tata manufacturer's low value, long and flat steel products while Corus produce high value stripped products. Helped TATA to feature in top 10 players in the world.
 - Technology Benefit, Economies of Scale
- Corus holds number of patents and Research and Development facilities.

Reasons from TATA STEEL to Bid

- To tap European mature market
- Cost of acquisition is lower than the setting Greenfield plant and distribution channel
- Tata manufacturers low value long and fast steel products while corus produced high value stripped products.
- Helped Tata to feature in Top 10 Players in the world.
- Technology benefit
- Economies of Scale
- Corus holds number of patents and Research and Development facilities.

Reasons from Corus to Bid

- To extend its Global reach through Tata
- To get access to Indian Ore reserves as well as virgin market for steel
- To get access to low cost materials
- Saturated market of Europe
- Decline in market share and profit
- Total debt of corus is 1.6 BnGbp
- Corus needs supply of raw materials at lower cost
- Though corus has revenues of \$ 18.06 Bn its profit was just \$ 626 million
- Corus facilities were relatively old with high cost of production
- Employee cost is 15% while that of Tata steel is 9%

Events of the Deal

The process has started on September 20, 2006 and completed on July 2, 2007. In the Process both the companies have faced many ups and downs. The details of this process has described below:

- September 20, 2006** : Corus Steel has decided to acquire a strategic partnership with a Company that is a low cost producer
- October 5, 2006** : The Indian steel giant, Tata Steel wants to fulfill its ambition to Expand its business further.
- October 6, 2006** : The initial offer from Tata Steel is considered to be too low both by Corus and analysts.
- October 17, 2006** : Tata Steel has kept its offer to 455p per share.
- October 18, 2006** : Tata still doesn't react to Corus and its bid price remains the same.
- October 20, 2006** : Corus accepts terms of £ 4.3 billion takeover bid from Tata Steel.
- October 23, 2006** : The Brazilian Steel Group CSN recruits a leading investment bank to offer advice on possible counter-offer to Tata Steel's bid.
- October 27, 2006** : Corus is criticized by the chairman of JCB, Sir Anthony Bamford, for its decision to accept an offer from Tata.
- November 3, 2006** : The Russian steel giant Severstal announces officially that it will not make a bid for Corus.
- November 18, 2006** : The battle over Corus intensifies when Brazilian group CSN approached the board of the company with a bid of 475p per share.
- November 27, 2006** : The board of Corus decides that it is in the best interest of its will shareholders to give more time to CSN to satisfy the preconditions and decide whether it issue forward a formal offer.
- December 18, 2006** : Within hours of Tata Steel increasing its original bid for Corus to 500 pence per share, Brazil's CSN made its formal counter bid for Corus at 515 pence per share in cash, 3% more than Tata Steel's Offer.
- January 31, 2007** : Britain's Takeover Panel announces in an e-mailed statement that after an auction Tata Steel had agreed to offer Corus investors 608 pence per share in cash
- April 2, 2007** : Tata Steel manages to win the acquisition to CSN and has the full voting support from Corus' shareholders

The Deal

The deal (between Tata & Corus) was officially announced on April 2nd, 2007 at a price Of 608 pence per ordinary share in cash. This deal is a 100% acquisition and the new Entity will be run by one of Tata's steel subsidiaries. The total value of this acquisition amounted to £6.2 billion (US\$12 billion). Tata Steel the winner of the auction for Corus declares a bid of 608 pence per share surpassed the final bid from Brazilian Steel maker Companhia Siderurgica Nacional (CSN) of 603pence per share. Prior to the beginning of the deal negotiations, both Tata Steel and Corus were interested in entering into an M&A deal due to several reasons. The official press release issued by both the company states that the combined entity will have a pro form crude steel production of 27 million tones in 2007, with 84,000 employees across four continents and a joint presence in 45 countries, which makes it a serious rival to other steel giants. The official declaration of the completed transaction between the two companies was announced to be effective by Court of Justice in England and Wales and consistent with the Scheme of Arrangement of the Tata Steel Scheme on April 2, 2007. According the Scheme regulations, Tata Steel is required to deliver a consideration not later than 2 weeks following the official date of the completion of the transaction.

TATA STEEL AND CORUS AFTER THE DEAL**Highlights of Tata Steel Standalone**

Figures in crores

| Particulars | Tata Steel | | Change |
|---|------------|--------|--------|
| | 2008 | 2007 | |
| Net Sales/Income | 19,693 | 17,552 | 2141 |
| Purchase of Finished and semi-finished products | 447 | 451 | (4) |
| Raw Materials consumed | 3430 | 3121 | 308 |
| Payments to & provisions for Employees | 1590 | 1455 | 135 |
| Purchase of Power | 933 | 922 | 11 |
| Freight and Handling charges | 1098 | 1117 | (19) |
| Depreciation | 835 | 819 | 15 |
| Other Expenditures | 4006 | 3595 | 411 |
| Fixed Assets(Net Block) | 12624 | 11041 | 1583 |
| Stock in Trade | 2047 | 1828 | 220 |
| Sundry Debtors | 544 | 632 | (88) |
| Cash & Bank Balances | 465 | 7681 | (7216) |
| Loans | 18022 | 9645 | 8376 |
| Interest(Net) | 879 | 174 | 705 |

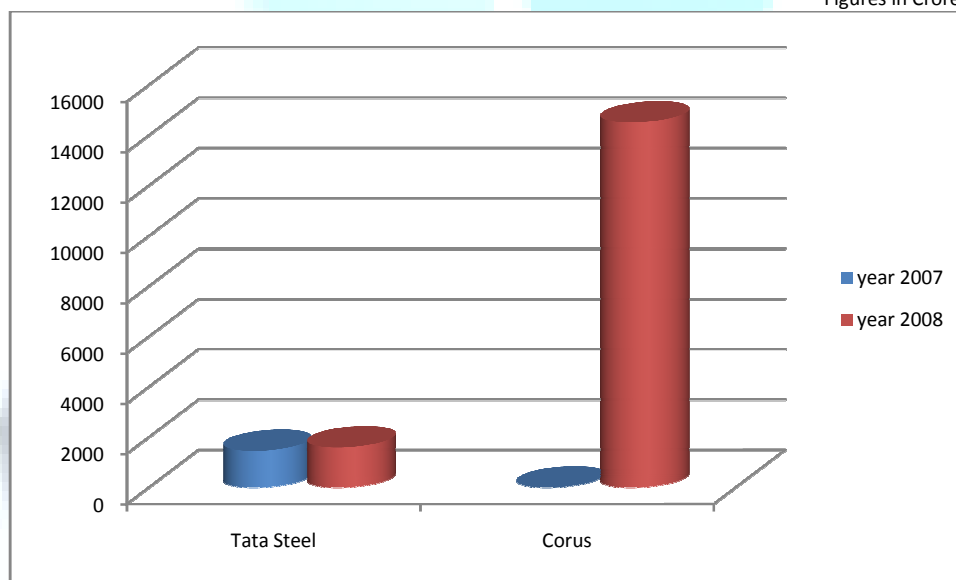
HIGHLIGHTS OF CORUS

Figures in crores

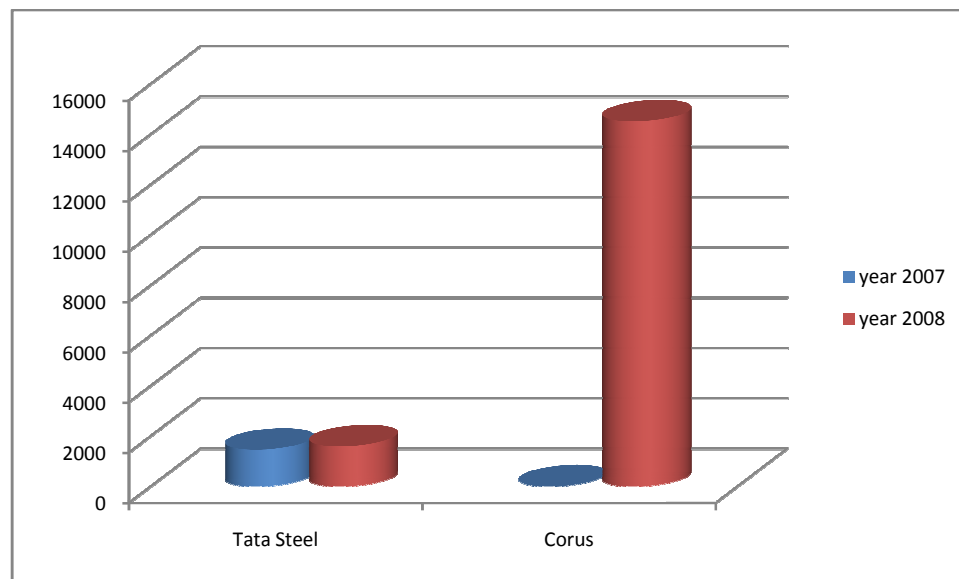
| Particulars | Corus | | Change |
|---|--------|------|--------|
| | 2008 | 2007 | |
| Net Sales/Income | 100218 | - | 100218 |
| Purchase of Finished and semi-finished products | 18411 | - | 18411 |
| Raw Materials consumed | 29317 | - | 29317 |
| Payments to & provisions for Employees | 14513 | - | 14513 |
| Purchase of Power | 3448 | - | 3448 |
| Freight and Handling charges | 4269 | - | 4269 |
| Depreciation | 3059 | - | 3059 |
| Other Expenditures | 21978 | - | 21978 |
| Fixed Assets(Net Block) | 24966 | - | 24966 |
| Stock in Trade | 17447 | - | 17447 |
| Sundry Debtors | 16951 | - | 16951 |
| Cash & Bank Balances | 3174 | - | 3174 |
| Loans | 31836 | - | 31836 |
| Interest(Net) | 2760 | - | 2760 |

GRAPH REPRESENTING NET SALES /INCOME

Figures in Crores



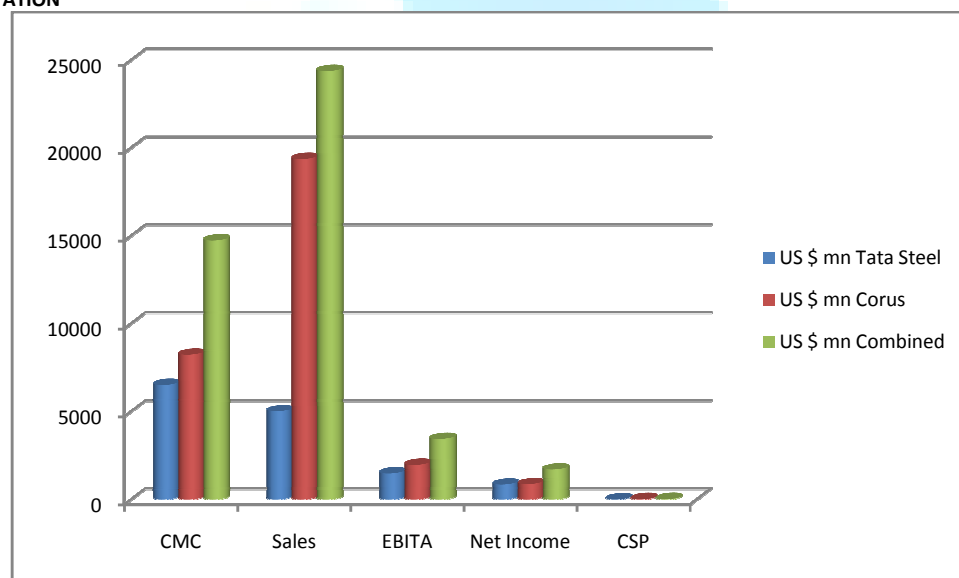
GRAPH REPRESENTING PAYMENTS TO AND PROVISIONS FOR EMPLOYEES



FINANCIAL STATUS PRE AND POST M&A

| Particulars | Tata Steel | Corus | Combined |
|-------------------------------|------------|--------|----------|
| Current market capitalization | 6,510 | 8,227 | 14,737 |
| Sales | 5,007 | 19,367 | 24,374 |
| EBITA | 1,480 | 1,962 | 3,442 |
| Net Income | 840 | 861 | 1,701 |
| Crude Steel Production | 5.3 | 18.2 | 23.5 |

GRAPHICAL REPRESENTATION



POST ACQUISITION ISSUES

Tata Steel's acquisition of Corus was not without controversy. There were substantial issues raised during and after the acquisition that require a more comprehensive discussion, especially in light of the turn of events witnessed in the two years following the acquisition. The current industry woes (in December 2008 global steel production declined by 23.4%) are seen by some experts as an opportunity for expansion and strengthening of the industry in India (Anonymous, 2008, October 7 *Indiaserver.com*).

ANALYSIS IF TATA STEEL OVERPAID FOR ACQUIRING CORUS

There could be different viewpoints that are presented in the case. Most financial analysts familiar with the acquisition felt that Tata Steel overpaid for Corus and acquired significant debt along the way. They felt that there were too many "ifs" along the way for this acquisition to be successful in the long run. Tata's initial offer of \$8 billion at 455 pence per share ended with a final offer of \$12 billion at 608 pence per share. Tata Steel also picked up the responsibility of ensuring that the pension funds of over 47,000 Corus's employees were adequately funded. The opposing view is that of Tata Steel's executives, who felt that they paid a fair price for acquiring Corus Steel. Through this acquisition, they added 19 million tons of production capacity vaulting the new entity to become the fifth largest steel maker in the world. According to Ratan Tata, starting a Greenfield venture in Europe and building a strong brand name would have been more expensive than the current Corus production cost of \$710 per ton. Tata Sons, the holding company, was going to infuse \$4.1 billion in capital through a mixture of debt and equity. Tata Steel's executives always felt that Corus's cash flows were more than sufficient to meet the Journal of Case Research in Business and Economics Tata Steel's Acquisition, Page 16 debt incurred due to the acquisition and that due to synergies and cost savings they would be able to realize a savings of \$350 million. The real answer as to whether Tata Steel overpaid for Corus may lie in the long-term value of the merger to Tata. Having been unable to predict the global drop in demand for steel that began shortly following the merger, Tata has since found itself facing questions of survival that center around issues of

viabilities of economies and international competitiveness. It could be argued that the merger with Corus, which resulted in a marked boost in the company's revenues, has contributed to the long-term viability of the firm. It resulted in bolstering Tata Steel's reputation, putting the company on the Fortune 500 list, and increasing the likelihood that Tata will be able to sustain itself during the economic downturn.

FINDING THE VIABILITY OF TATA STEEL'S ACQUISITION OF CORUS IN THE LONG-TERM

There are many points that support the viability of this acquisition in the long-term. First, the acquisition was part of a well thought and articulated strategy; Ratan Tata had emphasized the need to go global for all companies that were part of the Tata Group. Tata Steel was one of the lowest cost steel producers in the world and had access to abundant supplies of iron-ore. Tata Steel was seeking access to well established European markets. Corus Steel was a well established brand name in Europe but was not cost-effective in its operations.

Having acquired NatSteel and Millennium Steel, the Corus acquisition was part of Tata Steel's long-term strategy to achieve a global presence to service global buyers in multiple locations. Second, the proposed long term synergies involve the low cost resources of Tata Steel combined with the high-tech research aspects of Corus. The potential cross-fertilization of research and development capabilities with transfer of technology and best practices from Europe will help Tata Steel operations. The access to low cost raw materials and exposure to high growth in emerging markets should have combined with price stability in developed markets. The acquisition will position the combined group as the fifth largest steel company in the world by production output and will provide a meaningful presence in both Europe, where Corus is a well-established brand name, and Asia, where Tata is a well-established brand name. Tata Steel quickly formed teams to work on synergies in areas of manufacturing, procurement, logistics, marketing, iron and steel making. The fifteen to eighteen teams consist of 3-4 members from both companies. Each team worked on realizing potential synergies by sharing know-how, adopting best practices, and information to develop efficient practices to aid cost reduction. Third, Tata Steel paid attention to the cross cultural issues that had led to less than successful mergers previously. Tata Group had learned from their overseas acquisition experiences the importance of managing cultural issues to enhance trust between the European and Indian sides. The teams formed to work on synergies should avoid potential cultural difficulties that could emerge from the dynamics of cross-border integration. Many of the Corus top managers have been retained to work with integration issues. Effective in May, Tata Steel appointed four key executives of Corus to its board of directors. One indicator contrary to long-term viability is the encumbrance of Corus's pension fund which Tata Steel had to assume during the merger. That financial obligation may prove to be corrosive as equity markets continue to decline.

EMERGING TRENDS IN THE WORLDWIDE STEEL INDUSTRY AND EFFECTS ON TATA STEEL'S BID FOR CORUS

Worldwide demand for steel continued to increase and steel prices were on an upward trend from 2004 to 2007. Production costs depended on having access to power and raw material and on manufacturing technology. Steel companies increasingly had to decide whether to be an acquirer or an acquisition target. The latest rounds of mergers and acquisition activity were expected to eventually result in a handful of worldwide global giants in the steel industry. The key consolidation in the two years prior to the Tata/Corus merger was Mittal's merger with Arcelor to create the largest steel company in the world. Major Russian steelmakers Evraz Group and Severstal and Swedish steelmaker SSAB made acquisitions in North America and elsewhere and were pursuing more. Pressure on Tata Steel to maintain a competitive major global presence and extend its influence in new and growing markets in view of increasing consolidation in the steel industry necessitated the merger.

CROSS-CULTURAL ISSUES CONCERNING TATA STEEL ACQUISITION OF CORUS

Tata Steel approached the Corus acquisition with full awareness of the concerns that might arise due to cultural and racial obstacles caused by British employees resentful of having managers from a former British colony. There was also considerable concern among the European employees that Tata Steel would move production away from the UK to lower cost Indian markets. Tata Steel addressed these issues by allowing existing management to continue and by setting aside any more comprehensive restructuring for a later date. The top management teams were assigned the specific tasks of working with integration issues and building trust. It is difficult to say that these issues were adequately addressed, especially since much of the resentment created by the merger stemmed from deep-seated animosities toward a country with former colonial attachments to the UK and ownership by new management of different racial and ethnic orientations. The psychic distance between the UK and India is much greater than that perceived to exist between UK and the Netherlands. Thus, the issues raised over the earlier merger were not as virulent.

IMPACT OF CORUS ACQUISITION ON INDIAN CORPORATE MORALE

Judging from the reaction of the popular press in India, Tata Steel's acquisition of Corus was hailed as a bold and visionary move. Many Indian business men and women considered this acquisition as symbolic of India's growing ascendancy in the international business arena. The fact that India was once a British colony seems to have given this acquisition a different flavor the colonizer is now being acquired by the colony! This acquisition did a lot to bolster the confidence levels of not only reputed larger sized Indian firms like Wipro and Infosys to seek overseas targets; it spawned a whole new breed of entrepreneurs who are ready to engage in takeovers of firms in emerging economies like Kazakhstan and other central Asian countries.

CONCLUSION

Mergers and Acquisitions have become a vital part of the Indian Economy which has increased in number over the past two decades. The major factor leading to mergers and Acquisitions of companies is the combination of production capacity as increasing market share besides the reasons like: Synergistic operating economies, diversification, taxation, growth etc. Mergers and Acquisitions have contributed strategically in the restructuring of the companies. M&A in India concentrates on Growth, Expansion, Qualitative Human Resource, Strong Brand presence, Global identity and Leadership. Globally Mergers and Acquisitions have become a major way of Corporate Restructuring and the manufacturing Industry has also experienced Merger waves leading to the emergence of very large companies. The key driving feature for M&A activity is severe competition among firms of the same industry which puts focus on Economies of scale, cost efficiency and profitability. M & A has a tremendous effect both positive and negative on the employees of the organization. With M & A the organization might provide for situations that may be favorable or may be potentially dangerous that employees keep on anticipating. It could be viewed in terms of employee productivity, morale. Customer relationships and ultimately the companies bottom-line.

The Mergers and Acquisitions are mostly Horizontal & Vertical in India. The study of Tata Steel Acquisition of Corus is an excellent example of an effective Restructuring in the Indian scenario. Here various important aspects of the Tata Corus acquisition deal have been put forth and analyzed.

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CLOUD COMPUTING: SMARTER COMPUTING FOR A SMARTER WORLD

DR. IKVINDERPAL SINGH
ASST. PROFESSOR
PG DEPARTMENT OF COMPUTER SCIENCE
TRAI SHATABDI GGS KHALSA COLLEGE
AMRITSAR

ABSTRACT

Cloud computing, one of the emerging topics in the field of information technology is the development of parallel computing, distributed computing and grid computing. It is an emerging buzzword in the Information Technology, and is growing day by day due to its rich features of services. It is a virtual pool of resources which are provided to the users through Internet. Cloud computing is a new flavour of computing where our trend of using Internet changes. It is the future of Internet. It can also concentrate all computation resources and manage automatically through the software without intervene. There are several layers in present cloud computing architecture, service models, platforms, issues i.e. security, privacy, reliability, open standard etc. and types. This paper presents all about the promising cloud computing technology i.e. its architecture, advantages, platforms, issues and challenges, applications of cloud computing.

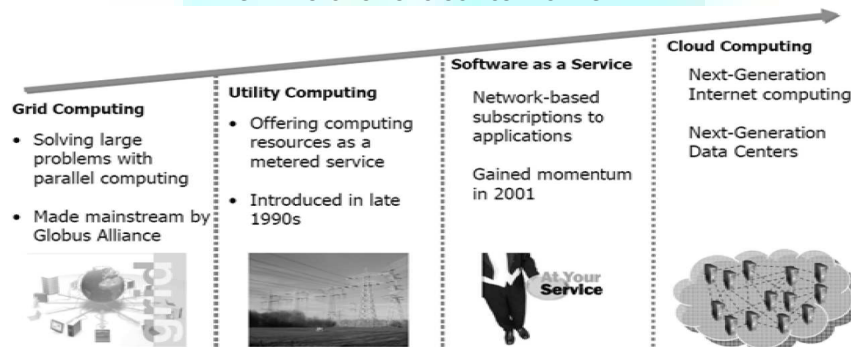
KEYWORDS

Cloud computing, SaaS, PaaS, IaaS, Cloud Security.

I. INTRODUCTION

Cloud computing is relatively new data storage and processing concept that has all the top tech companies competing for cloud domination [1]. Imagine the ability to access your files from any computer at any place on earth, coupled with the fastest processing speed available regardless of your operating system. This is the promise of cloud computing: an internet-based solution to the traditional problems of variable storage, accessibility, and speed of computers. But the implications are more far-reaching than just personal computer use: this development may be the solution that allows start-ups to overcome the traditional hurdle of business investment.

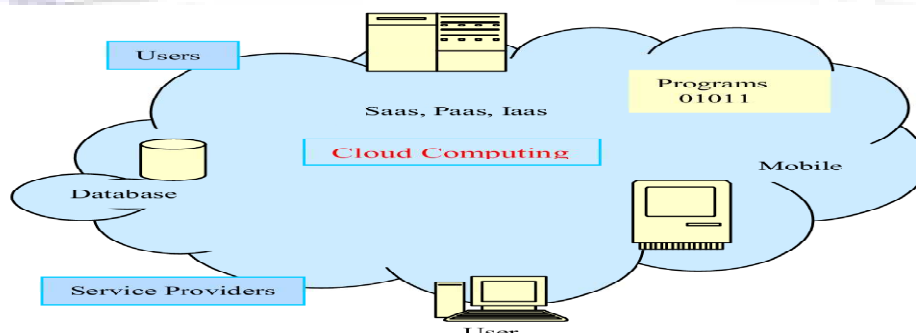
Cloud Computing is the latest developments of computing models after distributed computing, parallel processing and grid computing. Cloud computing achieve multi-level virtualization and abstraction through effective integration of variety of computing, storage, data, applications and other resources, users can be easy to use powerful computing and storage capacity of cloud computing only need to connect to the network. There is no doubt that cloud computing is the most popular topic in IT industry in 2009, Google, Amazon, Yahoo and other Internet service providers, IBM [2] and [3], Microsoft and other IT vendors have put forward their own cloud computing strategy, various telecom operators are also have put a great deal of attention on cloud computing, the very low cost of cloud computing platform becomes the focus of the industry [4]. The characteristics of cloud computing are described as follows: The cloud computing (1) provides reliable and secure data storage centers, by using cloud computing, users do not have to worry about data loss, software updates, viruses attacks and other issues; (2) requires low about the initial configuration of customers' equipment and is also easy to use; (3) realizes processing documents between different places as well as achieves document sharing and applying among diverse devices [5].

FIG. 1: EVOLUTION OF CLOUD COMPUTING IN IT

The term Cloud Computing means that you receive IT processing *as a service rather than as a product or software*. The easiest way to visualize this is to compare to electricity: local computing is comparable to everyone owning a mechanical generator to produce their own electricity [6]. Cloud computing is about centralizing the computing activity, similar to producing electricity in power plants and distributing it via grids.

II. WHAT IS CLOUD COMPUTING?

Cloud computing is an emerging computing technology that uses the internet and central remote servers to maintain data and applications. This technology allows for much more efficient computing by centralizing storage, memory, processing and bandwidth [7] and [8].

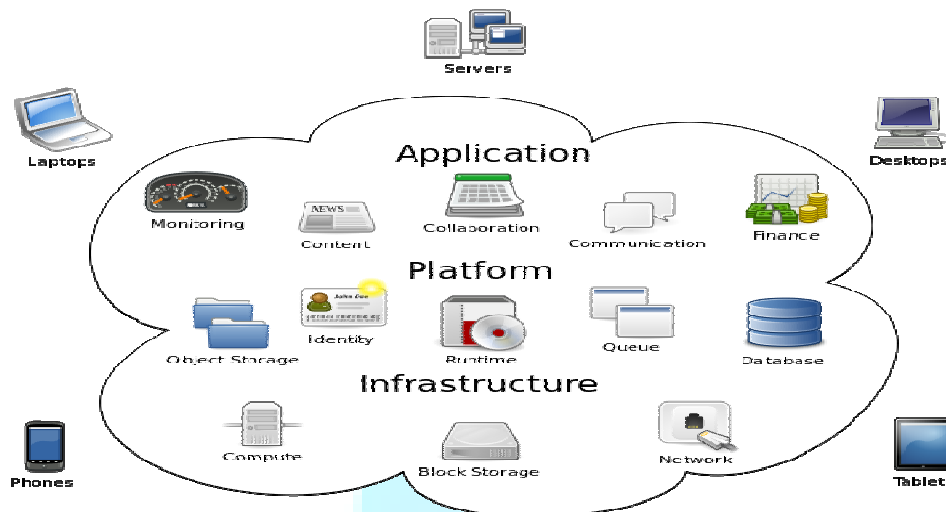
FIG. 2: CLOUD COMPUTING

Cloud: The term cloud is used as a metaphor for the internet, based on how the internet is depicted in computer network diagrams and is an abstraction for the complex infrastructure it conceals.

Computing: The broader term of "Computing" encompasses: Computation coordination logic storage

"Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

FIG. 3: SERVICES OF CLOUD COMPUTING



Cloud computing is also a new mode of business computing, it will be widely used in the near future. The core concept of cloud computing is reducing the processing burden on the users' terminal by constantly improving the handling ability of the "cloud", eventually simplify the users' terminal to a simple input and output devices, and busk in the powerful computing capacity of the cloud on-demand.

III. WHY CLOUD COMPUTING?

Many different networks already use this model of data storage. Facebook or LinkedIn, for instance, maintain all their user data on centralized servers, accessible from the internet anywhere. This is how peer-to-peer networks, social networks, and e-mail providers traditionally operate. Expanding this paradigm to all types of data – from business documents to music storage – would potentially free all personal computers of the cumbersome task of archiving every bit of a user's information. Not only would this increase the ease of personally navigating, opening, and uploading files, but it would also imply dramatically lower capital costs for firms. Instead of having to purchase servers and software capable of being used by multiple employees simultaneously, a firm can subscribe to a cloud provider for a low cost, specify the computing capacity it requires, and capitalize on the provider's economy of scale.

The low investment costs promised by cloud computing would dramatically alter the landscape for start-up firms especially. Without the need to invest heavily in computing equipment, the risk of creating a start-up firm would drop significantly, as would its requirement for outside resources and funding. As such, entrepreneurs would feel more secure in creating new firms with the knowledge that the sunk costs implied would be minimal compared to previous firm creation. The risk of failure, while still present, would not be nearly as significant with the drop in technology expenditures. In a period where the world is working to overcome one of the largest economic crises in recent memory, this technological revolution provides a promising opportunity for getting business – and economic investment – back on track.

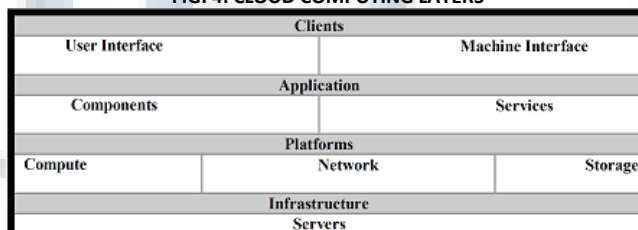
Cloud computing has some downsides and glitches that need to be worked through. For instance, owners of Sidekick mobile phones in October lost tons of personal data, from calendars to address books, which were being stored in a cloud by Danger, a firm related to Microsoft. However, with the amount of investment and research being poured into cloud computing, we should expect to see it become the new paradigm for data storage and processing. The next steps in its development and implementation could go any direction, but one thing is for certain: it promises to revolutionize the way businesses and people use computers.

IV. ARCHITECTURE OF CLOUD COMPUTING

A. CLOUD COMPUTING LAYERS

Cloud computing is broken down into five segments: Clients, applications, platforms and infrastructure and servers [9]. Each segment serves a different purpose and offers different products for businesses and individuals around the world.

FIG. 4: CLOUD COMPUTING LAYERS



1) **Clients:** A cloud client consists of computer hardware and/or computer software that relies on cloud computing for application delivery, or that is specifically designed for delivery of cloud services and that, in either case, is essentially useless without it. And the server layer consists of computer hardware and/or computer software products that are specifically designed for the delivery of cloud services.

2) **Application:** Cloud computing application services, also known as '**Software as a Service (SaaS)**', is used to deliver software as a service over the Internet. Hence it eliminates the need of installing and running the application on the customer's own computers, which in turn simplifies maintenance and support.

The key characteristics of an application include:

Network-based access to the commercially available (i.e. not custom) software, and

Management of the commercially available software.

Some basic activities that are managed from central locations, hence enabling the customers to remotely access applications via the Web, such as:

Application delivery typically closer to a one-to-many model rather than one-to-one model. It includes the basic architecture, pricing options, partnering, and even management characteristics.

Centralized feature updating which necessitates the downloading of various patches and upgrades.

3) *Platforms*: Cloud platform services, also known as '*Platform as a Service (PaaS)*', deliver a computing platform and/or a solution stack, which often consumes cloud infrastructure and sustains cloud applications. Its basic purpose is to facilitate the deploying of applications without the cost and complexity of buying and managing the underlying hardware and software.

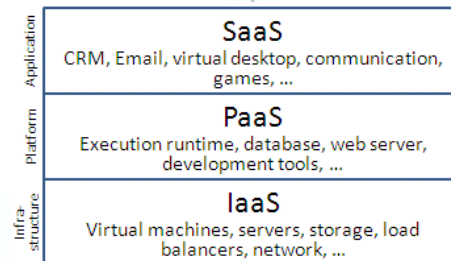
4) *Infrastructure*: Cloud infrastructure services, also known as '*Infrastructure as a Service (IaaS)*', deliver the computer infrastructure as a service, which is a platform virtualization environment. The service is billed on a utility computing basis and the amount of resources consumed typically reflect the level of activity.

5) *Servers*: Server is the set of computer hardware and/or software products which are specifically designed for the services of cloud computing.

B. SERVICE MODELS

At present, almost all the well-known IT providers, Internet providers, and even telecommunications operators march toward cloud computing, and launch their own cloud services [10]. As mentioned earlier, the current cloud computing service model can be divided into three categories: SaaS, PaaS, and IaaS, which is recognized as SPI, as Fig.5 shown below.

FIG. 5: SERVICE MODELS



1) *SaaS (Software as a Service)*: Software as a Service is software which is deployed over the internet and/or is deployed to run behind a firewall in our local area network or personal computer. SaaS is a new form by which users access the software service. Under SaaS model, it is not required for the users to purchase software products installed on their own computer or server, but by the use of the payment model, i.e. to lease software. In some cases the software is free, but users have limited right to use the software. Essentially, SaaS is a computing power which is provided by software service provider to meet with the users' need. At present, the typical applications of SaaS are online services such as e-mail services, web conference, network fax, online antivirus and on-line entertainment applications such as Web search, online games and online video and management services such as online project management and online ordering platform [4]. Hence, SaaS model reduces the deployment cost for business and individuals. SaaS is the development trend of future software industry development. These days not only Microsoft, Salesforce and other major software giant launched its own SaaS applications, but also Yong You and Kingdee, domestic software giant, also joined in.

2) *PaaS (Platform as a Service)*: Platform as a Service is another SaaS, and this kind of cloud computing provides development environment as a service. We can use the middleman's equipment to develop our own program and deliver it to the users through Internet and servers. As a service to customers, PaaS can provide complete computer platforms, including application design, application development, application testing and application hosting. By using this service mode, the client can build web applications without deploying the hardware and software facilities on their own computer. Compared to software development platform based on the data center, the cost of PaaS is much lower. This lower cost is also the maximum value of PaaS [2] and [3]. The typical application examples of PaaS are the Facebook development platform and Microsoft Windows Azure platform. PaaS has a good market prospect. For providers who offer SaaS services, PaaS can help them diversify their product and carry out custom-built services. At the same time, PaaS, reduces the cost of the SaaS application development and improves the efficiency of development.

3) *IaaS (Infrastructure as a Service)*: Infrastructure as a service delivers a platform virtualization environment as a service. Rather than purchasing actual servers, software, data centre space or network equipment, clients instead can use cloud computing technology to access to remote computing resources, which include computing, storage, and application virtualization technology-related functions [2] and [3]. IaaS mode is similar to utility computing as the basic idea of the latter is to provide computing services. No matter whom the end-users are, SaaS providers or PaaS providers can obtain computing power they need from the infrastructure services provider, without paying the original investment cost for the basis of IT hardware and software. At present, Microsoft, Amazon, Century Internet and other providers can provide IaaS services based on hardware. Through cloud computing technology, they can collect memory, I/O devices, storage and computing capacity together into a virtual pool of resources to provide services for end users and SaaS, PaaS providers. As compared to SaaS, the application of IaaS is not very mature, because many key technologies need further research and development.

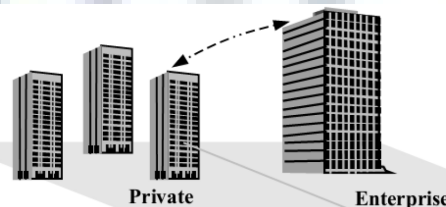
V. TYPES OF CLOUD COMPUTING

There are three types of cloud computing, these are public cloud, private cloud and hybrid cloud [11]. The brief is given below.

A. PRIVATE CLOUD

Private cloud, also can be called internal cloud, whose services are not available for others, but for their own internal staff or affiliates to use. Private cloud is cloud infrastructure operated solely for a single organization, whether managed internally or by a third-party and hosted internally or externally [12]. This is protected by the firewall to form a barrier against outside the world to access hosted services from the private cloud.

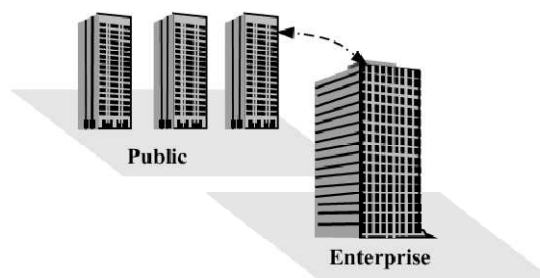
FIG. 6: PRIVATE CLOUD



B. PUBLIC CLOUD

Public clouds, also known as external cloud, provide services for external customers; all of its services are available for others to use, rather than for their own. Public cloud applications, storage, and other resources are made available to the general public by a service provider. These services are free or offered on a pay-per-use model. The services provided in these clouds can be accessed by any organization.

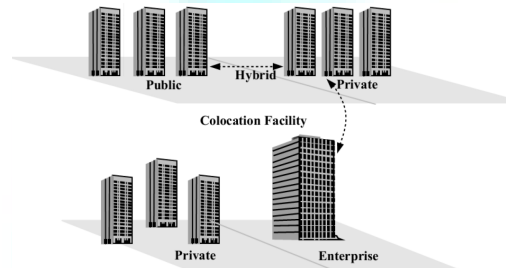
FIG. 7 PUBLIC CLOUD



C. HYBRID CLOUD

Hybrid clouds are the combination of public cloud and private cloud that means the hybrid cloud can provide services for both the creator themselves and their customers. Hybrid cloud is a composition of two or more clouds (private, community or public) that offer services to the limited and well defined number of parties [13]. In order to ensure security, agencies should run the non-core applications on public cloud and use private cloud to support its core program and store internal sensitive data, when they use of hybrid cloud computing model.

FIG. 8 HYBRID CLOUD



VI. CLOUD COMPUTING ISSUES

In the last few years, cloud computing has grown from being a promising business concept to one of the fastest growing segments of the IT industry. But as more and more information on individuals and companies is placed in the cloud, concerns are beginning to grow about just how safe an environment it is. T. Dillon et al say about some issues in their paper [12]. In this section we also describe all potential issues related to cloud computing in brief.

A. SECURITY

There is always a debate on the security of data on the high security servers in the cloud as compared to the data on the local hard driver. Some people argue that the data is more secure when managed internally, while some argue that cloud service providers have a strong incentive for the maintenance of trust and as such employ a higher level of security [14].

However, in the cloud, the customer data is being distributed over individual computers regardless of the location of the base repository of data. Industrious hackers can invade virtually any server, and statistics show that one-third of breaches result from stolen or lost laptops and other devices and from employees' accidentally exposing data on the Internet, with only 16 per cent due to insider theft.

B. PRIVACY

Cloud computing utilizes the virtual computing technology which is a whole lot different from the traditional computing model. The customer's personal data is scattered in various virtual data centres' rather than staying in the same physical location, even across the national borders. Hence data privacy protection has to face the controversy of varying legal systems. On the other hand, users may sometimes accidentally leak hidden information while accessing cloud computing services. Attackers can analyse the critical task depending on the computing task submitted by the users [15].

C. RELIABILITY

Servers in the cloud have the same issues as any users own resident servers. The cloud servers may also experience downtimes and slowdowns. The only difference is that users have a higher dependence on cloud service provider (CSP) in the model of cloud computing. There is a big difference in the CSP's service model, as once a particular CSP is selected you may be locked-in, thus bringing in a potential business secure risk.

D. LEGAL ISSUES

Regardless of all the previous efforts to bring into line the lawful situation, as of 2009, suppliers such as Amazon Web Services provide to major markets by developing restricted road and rail network and letting users to choose "availability zones". On the other hand, there are still some worries which stick with safety measures and confidentiality from an individual all the way through legislative levels [16].

E. OPEN STANDARD

Open standards are very critical to the growth of cloud computing. Most cloud providers expose APIs which are typically well-documented but also unique to their implementation and thus not interoperable. Some vendors have adopted others' APIs and there are a number of open standards under development, including the OGF's Open Cloud Computing Interface. The Open Cloud Consortium (OCC) is working to develop consensus on early cloud computing standards and practices [17] and [18].

F. COMPLIANCE

Numerous regulations pertain to the storage and use of data. They also require regular reporting and audit trails. All the cloud providers must enable their customers to comply appropriately with these regulations. Managing Compliance and Security for Cloud Computing provides insight on how a top-down view of all IT resources within a cloud-based location can deliver a stronger management and enforcement of compliance policies. In addition to the requirements to which customers are subject, the data centres maintained by cloud providers may also be subjected to some additional compliance requirements [19].

G. FREEDOM

In cloud computing, the users are not allowed to physically possess the storage of the data, hence leaving the data storage and control in the hands of cloud providers. Customers will contend that this is pretty fundamental and affords them the ability to retain their own copies of data in a form that retains their freedom of choice and protects them against certain issues out of their control whilst realizing the tremendous benefits cloud computing can bring [20].

H. LONG-TERM VIABILITY

You should be sure about the validity of the data put into the cloud even when your cloud computing provider goes broke or gets acquired and swallowed up by a larger company. Gartner says that one should always ask potential providers about how you would get back your data and whether it would be in a format that you could import into another similar replacement application [21].

VII. ADVANTAGES AND SHORTCOMINGS

A. ADVANTAGES OF CLOUD COMPUTING

- 1) *Benefit to Business*: Businesses can obtain the benefits of the underlying infrastructure without the need for direct implementation and administration.
- 2) *Environment Friendly*: There is no need for the actual hardware installation in the use of cloud computing, hence the reduction in energy costs as well as CO₂ emissions.
- 3) *Easy Backup*: The backup is much easy to obtain and maintain as compared to the traditional 'Thick Client' PCs.
- 4) *Recovery from Disasters*: As the hardware is scattered at the backend rather than being centrally located at one place, hence the risk of total data loss is never encountered.
- 5) *Easy Scalability*: The system is easily scalable as there is a little need for the software or hardware customization at the client end.
- 6) *Information Mobility*: As the service is now used globally, hence information is available at all the extremes of the world.
- 7) *Low Cost*: Pertaining to utility computing, there is a low initial cost required to set up cloud computing services on a simple PC.

B. SHORTCOMINGS OF CLOUD COMPUTING

- 1) *Regulatory Compliance*: Even when the data is held by a third party provider, the users are responsible for the security and integrity of their own data.
- 2) *Dependency*: There is a dependency on the application provider, as it is only possible to use the services or applications that the provider is willing to offer.
- 3) *Difficult Recovery*: Backups are difficult to obtain due to segmented data over large geographical locations.
- 4) *Data Storage*: Cloud computing does not allow the users to get a physical store of their data, as the data storage is done by the service provider.
- 5) *Logging and Investigation Support*: It is not possible to know who altered the data on the server; hence there is a lack of investigative support.
- 6) *Data Location and Privacy Restrictions*: Various countries have varying privacy standards which are subject to varying laws, hence there is a discretion among different users.

VIII. CONCLUSION

In this paper, we discussed a fresh technology of cloud computing. We described the definition, styles characters, services and some existing issues. It is predicted that this technology brings for us an infinite capability of computing, fast micro-processor, huge memory, high-speed network, reliable system architecture etc.

There is no doubt that the cloud computing is a new emerging technology in the present world. Cloud computing brings us the approximately infinite computing capability, good scalability, service on-demand and so on. Though each cloud computing platform has its own strength, one thing should be noticed is that no matter what kind of platform there is lots unsolved issues. For example, continuously high availability, performance, data confidentiality, auditability, synchronization in different clusters, interoperability, standardization, and the security of cloud platform are some of the major research hotspots of cloud computing.

There is no doubt that cloud computing has a bright future [22]. Therefore, to welcome the coming cloud computing era, and solving the existing issues becomes utmost urgency.

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SATISFACTION OF SMALL CAR OWNERS IN SELECT AREAS OF AUNDH, BANER AND PASHAN IN PUNE CITY

DR. G. SYAMALA
ASST. PROFESSOR
DEPARTMENT OF COMMERCE & RESEARCH CENTRE
UNIVERSITY OF PUNE
PUNE

ABSTRACT

The automotive industry in India is one of the largest in the world; it is one of the fastest growing industries globally. Its passenger car¹ and commercial vehicle segment is the sixth largest in the world. Indian small car market is increasing by leaps and bounds. The indigenous market for small cars now occupies a substantial share² of around 70% of the annual car production in India which is about one million. Almost all automobile components in India are competing with each other in terms of design, innovation, pricing and technology. The following paper is an attempt to study the satisfaction level of customers who own small car. The research covers the areas of Aundh, Pashan, Baner in Pune, Maharashtra.

KEYWORDS

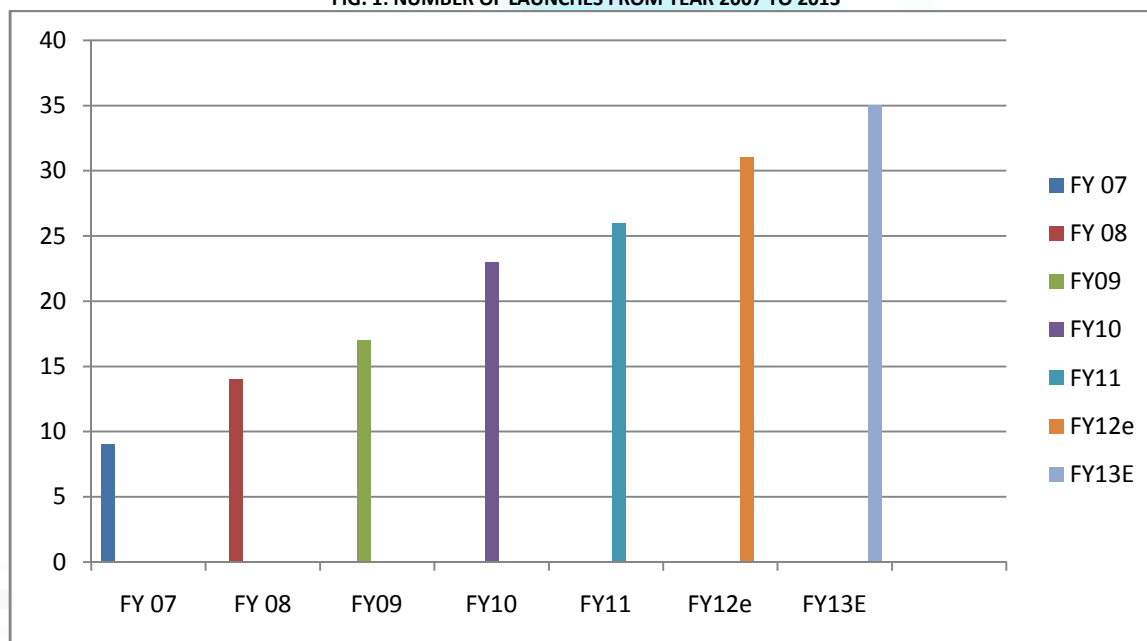
Mileage, cost efficiency, customer satisfaction, durability, variants available, small car hub.

INTRODUCTION

The changing lifestyle and other factors like owning a car at a very young age has become very common in India hence the demand for small cars have increased over the period of time. There is a strong domestic demand for small cars. India is well on its path of becoming a global production hub for small-cars. In 2009³, it surpassed Japan to become the largest small car market in the world.

In 1984, Government of India and Suzuki Motors Japan, formed a joint venture and launched Maruti 800 popularly known as the 'Peoples car' which has highest sales. It created new segment in the automobile sector. In 1998 the South Korean car makers Hyundai came up with Santro and Daewoo came up with Matiz which created vigour to the Indian small car market segment. However, year 2009 proved to be the year of small cars in India for apart from its historical launch of the worlds cheapest car Tata Nano. A number of new model were launched in the small car segment. It witnessed the highest number of launches, it launched 11 new cars in the last three years(out of which five were launched in 2010) with major ones being Ritz, A-Star, Zen Estilo (from Maruti Suzuki) i10, i20(from Hyundai) Indica Vista (from Tata Motors), Ford Figo, Chevrolet Beat, Polo(from Volks Wagen) and Etios (from Japan).

Figure showing number of launches over the past five years and the estimated launches in the year to come.

FIG. 1: NUMBER OF LAUNCHES FROM YEAR 2007 TO 2013

Source: ICRA research

OBJECTIVES

1. To study the market of small car segment in Aundh, Pashan, Baner & Sus road in Pune.
2. To study consumer preferences and their perception towards purchase of small car.
3. To study the consumers satisfaction of small car owners.

RESEARCH PROBLEM

Following questions were raised for the purpose of the research

- What are the parameters buyers consider while selecting a small car?
- What are the factors that influence the customer to purchase a small car?
- What decisions a buyer takes while buying a small car?

¹ <http://oica.net/wp-content/upload/all-vehicles-2010>

² Small car market in India-Ankit Agarwal

³ Indian Passenger Vehicle Industry-An ICRA perspective

- What aspects are considered while purchasing a small car?
- What factors are compared by the buyer while choosing a small car?

RELEVANCE & SCOPE AND OF THE STUDY

Buyers or customers form an integral part of business, there are number of factor customers considered before buying the product. With the increasing disposable incomes, owning cars is no more a status symbol; in fact it has become a necessity. Hence this research has relevance to modern day business where the automobile market is rapidly growing and the life of the automobile is quickly diminishing. Automobile industry has shown rapid growth at the macro and micro level and hence this study is relevant for the present day times.

The study covers the areas of Aundh, Baner, Pashan and Sus road areas in Pune.

HYPOTHESIS

For the purpose of the study the hypothesis is formulated as follows:

"80% of buyers of small cars are satisfied with their choice of small car".

RESEARCH METHODOLOGY

| | |
|--------------------|-----------------|
| Sample Size | 50 respondents |
| Sampling Technique | Random Sampling |
| Statistical Tools | Chi-square test |

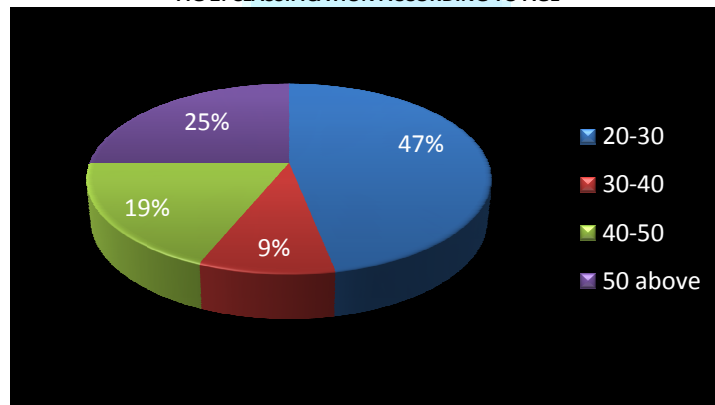
Primary Data: Information was collected through structure questionnaire, random sampling was used. The data was compiled and presented in diagrammatic form by using pie-charts for pictorial presentation of the information and bar diagrams for analytical presentation of the information, hypothesis was tested by applying chi-square as a statistical tool.

Secondary Data: Secondary data was collected from the published articles, papers, magazines.

FINDINGS

1. SMALL CAR OWNERS CLASSIFIED ACCORDING TO AGE

FIG 2: CLASSIFICATION ACCORDING TO AGE

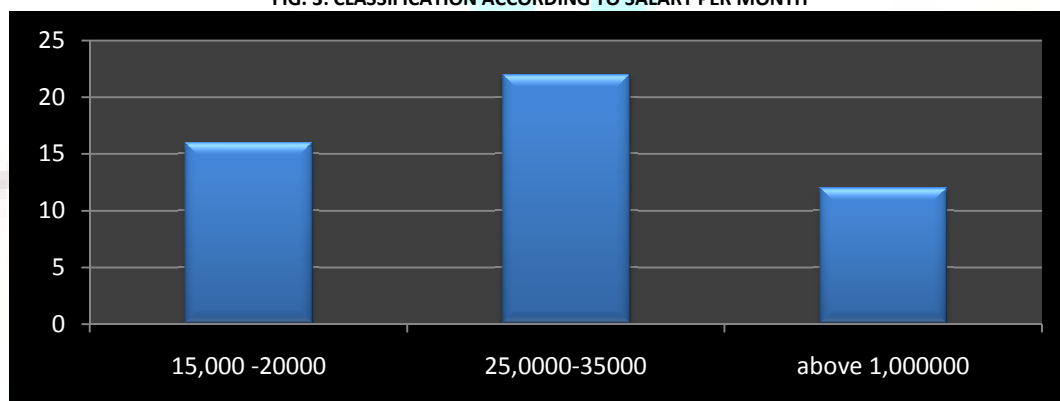


Interpretation

It can be interpreted that 25% respondents who own small car are above 50 years of age, 19% respondents are from the age group of 40-50, 9% are from the age group of 30-40 and 47% are from the age group of 20-30. This shows that young people prefer to have a small car as compared to older people.

2. SMALL CAR OWNERS CLASSIFIED ACCORDING TO SALARY

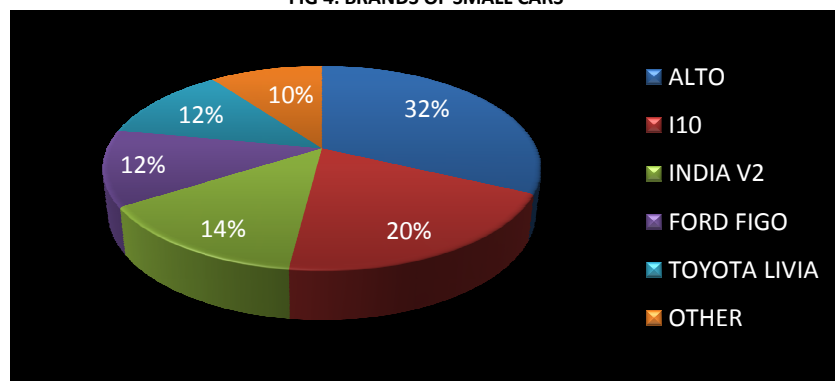
FIG. 3: CLASSIFICATION ACCORDING TO SALARY PER MONTH



Interpretation: It can be interpreted that 17 respondents earn salary between 15000-20000 per month, 22 respondents earn salary between 25000-30000 per month and 11 respondents earn salary above 100000 per month. This shows that middle income group people own small cars.

3. CLASSIFICATION OF DIFFERENT BRAND OF SMALL CARS

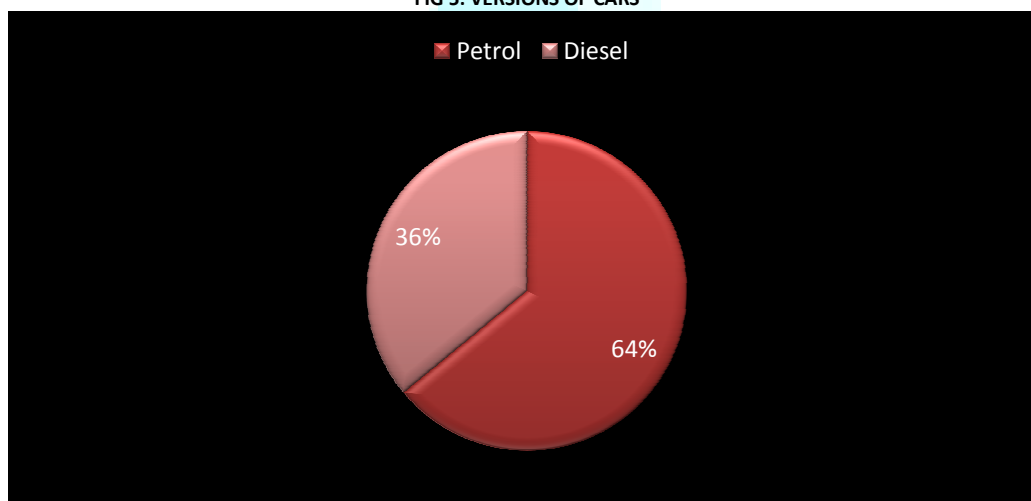
FIG 4: BRANDS OF SMALL CARS

**Interpretation**

It can be inferred that 32% prefer Alto as their small car, 20% prefer I10, 14% prefer Indica V2, 12% prefer Ford figo and Toyota Livia and 10% prefer other cars.

4. CLASSIFICATION OF SMALL CAR ACCORDING TO PETROL AND DIESEL VERSIONS

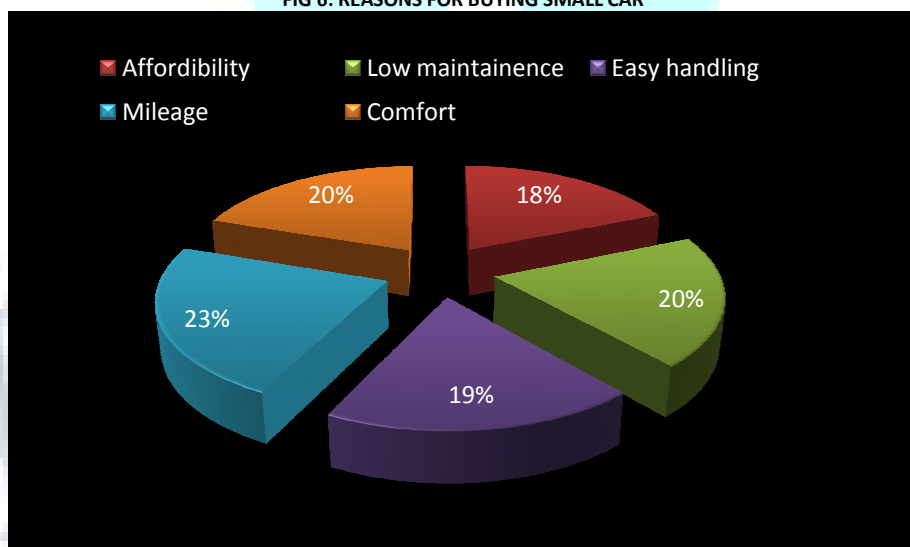
FIG 5: VERSIONS OF CARS

**Interpretation**

64% respondents prefer diesel version while 36% prefer petrol version, this can be interpreted by saying that diesel version is more popular than petrol.

5. REASON FOR PURCHASING A SMALL CAR

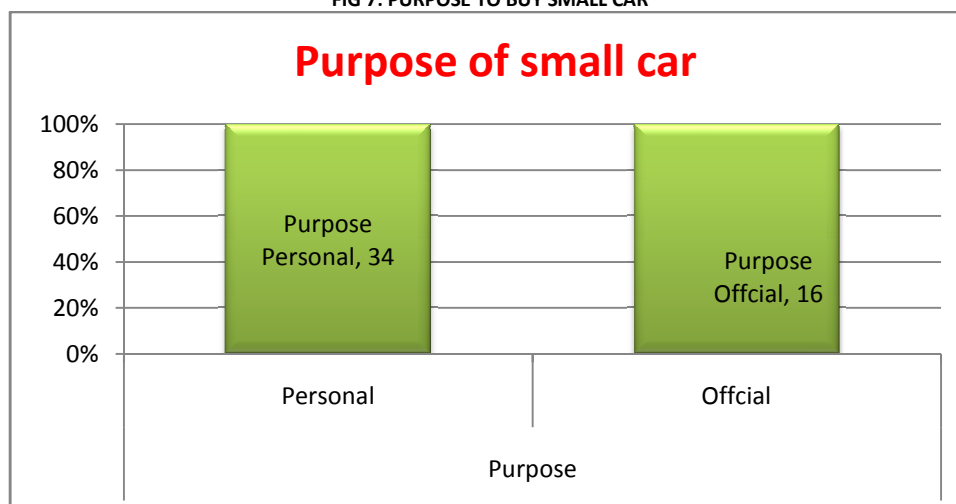
FIG 6: REASONS FOR BUYING SMALL CAR

**Interpretation**

Factors like Affordability, low maintenance, easy handling, mileage and comfort were considered. 23% prefer Mileage as the most important factors, 20% prefer both comfort and low maintenance, 19% prefer easy handling and 18% affordability. So it can be inferred that people do not mind spending more on buying the cars but factors like mileage, comfort and low maintenance are taken care of rather than affordability.

6. PURPOSE OF BUYING SMALL CAR

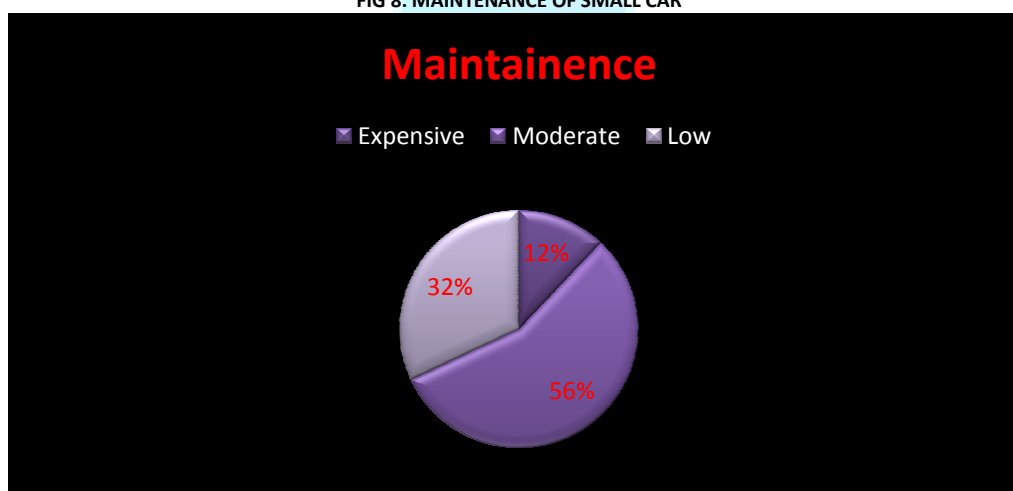
FIG 7: PURPOSE TO BUY SMALL CAR

**Interpretation**

The above bar-graph shows that 68% of the sample surveyed use their car for personal purpose while 32% use it for official purpose.

7. MAINTENANCE OF THE SMALL CAR

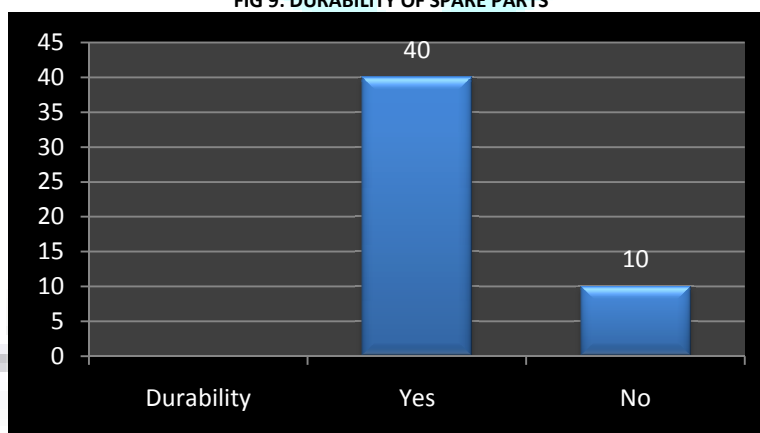
FIG 8: MAINTENANCE OF SMALL CAR

**Interpretation**

It can be interpreted that 56% are of the opinion that the maintenance of their car is moderate while 32% say that the maintenance of their car is low and 12% express their opinion as the maintenance of their car is expensive.

8. DURABILITY OF SPARE PARTS OF SMALL CARS

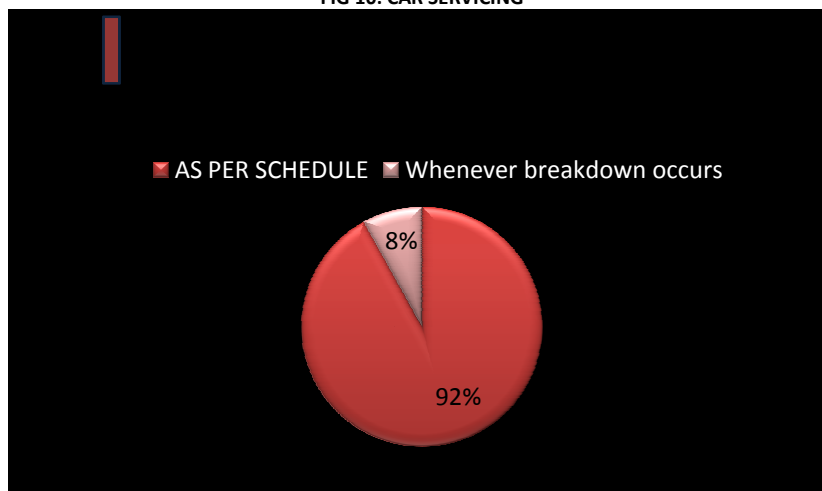
FIG 9: DURABILITY OF SPARE PARTS

**Interpretation**

80% of the consumers feel that the spare parts for their small car are durable while 20% feel that they are not durable and they have to get it changed quite often.

9. SERVICING OF THE SMALL CAR

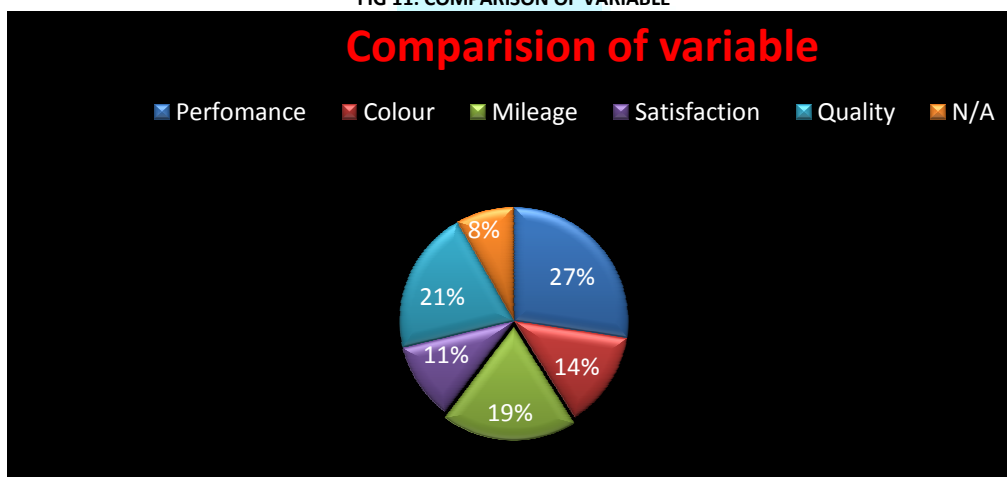
FIG 10: CAR SERVICING

**Interpretation**

92% respondents service their car as per schedule while 8% service their car whenever the car breaks down.

10. BASIS OF COMPARISONS

FIG 11: COMPARISON OF VARIABLE



Respondents took the decision of buying the small cars after considering the variable like performance, colour, mileage, satisfaction, quality and others. 27% respondent have taken the decision to buy the car based on its performance, 21% have decided based on quality and 19% have taken the decision to buy the car after knowing the mileage given by the car. Colour and other factor were not given that importance.

HYPOTHESIS TESTING

H0: 80% buyers of small cars are satisfied with small cars

H1: Less than 80% of buyers of small cars are not satisfied with their choice of small car

Specified proportion test was applied (Large sample test). Hypothesis is accepted at 5% and 1% levels

CONCLUSION

It can thus be concluded by saying that customers are happy to purchase and are satisfied with small cars. Small Cars has truly gained popularity due its affordability factor and low cost.

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CRM: SERVICE QUALITY & CUSTOMER LOYALTY - A STUDY OF MOBILE TELECOM INDUSTRY AT JAIPUR CITY

DR. ANJU PANWAR
ASST. PROFESSOR
M.V.N. UNIVERSITY
PALWAL

SHUCHI MATHUR
ASST. PROFESSOR
M.V.N. UNIVERSITY
PALWAL

NEHA CHAHAL
ASST. PROFESSOR
M.V.N. UNIVERSITY
PALWAL

ABSTRACT

CRM is a means to join trust from customer by meeting the needs of each customer in a more personalized way. According to this paper we have made an attempt to investigate the implementation of CRM in mobile telecom Industry. For this purpose, a field survey of 300 persons consisting of 100 each from service class, business class and student class was conducted using a structured questionnaire. The respondents were selected randomly from Jaipur (Rajasthan) using Vodafone and Airtel mobile Services. Customer opinions were obtained on main aspects of CRM practices such as service quality and customer loyalty. The respondents were asked to give response on each question statement on a 5 point scale ranging from 1-5. The primary data collected for the purpose have been analysed by statistical tool chi-square. The survey has brought out that majority of the people are of opinion that CRM is a valuable tool for mobile telecom industry.

KEYWORDS

CRM, telecom industry.

INTRODUCTION

In the present scenario of globalization and liberalization, marketing has undergone a metamorphic change to cope with increased competitiveness, changing needs of customers, continuous product up gradation due to change in technology, changing market trends and many more. Because of these continuous changes, the marketing efforts have also slowly shifted from mass marketing to interactive marketing and finally to relationship marketing. Companies have realized the value of long term relationships with individual customers and other business partners in the light of rapid changes in technology and consumer expectations, enhancing life time value of customer and developing a relationship with profitable customer has become the central focus of company's strategy. Building relationship and promoting them became an integral part of the service strategy. Therefore the study of Customer relationship marketing is of vital importance.

At present, more and more companies are adopting various CRM practices as it promises numerous benefits including shorter sales cycles, integrated customer feedback, improved communication, improved response, improved customer knowledge, improved efficiency, better customer tracking, enhanced customer satisfaction and increased loyalty.

Why CRM is needed? The need of CRM is to transform business from product centric to customer centric, using new techniques and technologies, and making the customer an integral part of the organization. The sales and marketing literature suggests that CRM is about getting to know your clients better through the use of technology. It is neither a new promotional tool nor a selling technique.

CRM facilitates the creation of an enduring personal business relationship between firm and customer rather than a project-based relationship (which is more likely to disappear once the project is completed). CRM must involve every customer touch point; it is not just for marketing information management.

The whole organization has to become customer-centric to implement CRM.

Most companies practicing CRM set up call centres, which are able to provide customized advice and services to individual customers. This enables companies to have a continuous ongoing relationship with customers by enhancing the organizational memory about customer's interaction with company.

The importance of CRM is of providing value to customer continuously and more effectively than the competition is to have highly satisfied customers; this strategy of customer retention makes in the best interest of customers to stay with the company rather than switch to another firm.

Indian cellular industry looked very promising. With increasing globalization and expanding business activities, cell phone became a necessity for business on the move. Therefore, the researcher has prompted to undertake the present study.

CRM is also important because it generates a report that shows information about an individual client, including internal contacts, firm liaisons, contact history, specific processes tailored to client preferences, all the projects proposed and completed for the client, fees and profits generated and then help business developers and project managers brainstorm how this can help them improve the relationship.

REVIEW OF LITERATURE

The forgoing review of literature shows a growing need of having better customer relationship. With the help of CRM a firm can understand how technology can assist them in managing client relationships and building long-term client value and firm also know how to leverage the core components of CRM systems (people, processes, and technology) to assist in managing their relationships with client. Olaf Boon, Brain Corbitt, Craig Parker (2002) from School of Information systems Deakin University, 'Conceptualising the requirements of CRM from an organizational perspective'. The research emphasis on three requirements i.e. CRM, information technology, information system.

Assion Laueson- Body University of North Dakota, Moez Limayem from City University of Hong Kong, 'The impact of customer relationship management on customer loyalty; The Moderating Role of web site characteristics' The result of this study will allow internet & information system experts to inform business about the impact of internet network use on customer loyalty.

Mohamed Khalifa (2005), Ning Shen-Department of information systems city university of Hong Kong, 'Effects of electronic customer Relationship management on customer satisfaction'. This study investigates the relationship between eCRM & an important surrogate of eCRM success: online customer satisfaction.

Hamed Shamna (2006), the George Washington University; school of business, Department of marketing, Washington, D.C., 'Client Attraction & Retention in the Design & Building Industry: Client Relation Management for professional services.' This research investigates that half of the firms utilizing a form of CRM. On the hand, half of these acknowledge that their CRM operation was not being as effectively or appropriately as desired.

Kallol Das, Jitesh Parmar, Vijay Kumar Sadanand, Customer Relationship Management (CRM) Best Practices and Customer Loyalty A Study of Indian Retail Banking Sector. The current study explores the association between deployment of customer relationship management (CRM) best practices and loyalty of profitable customers in Indian retail banking sector.

RESEARCH OBJECTIVES

The major objective of the present work is to analyse CRM related to service quality and customer loyalty in mobile telecom industry. The specific objectives are:

1. To identify significance difference between Vodafone and Airtel related to service quality.
2. To identify significance difference between Vodafone and Airtel related to customer loyalty.

RESEARCH METHODOLOGY

The study is based on the primary data collected by way of administering a structured questionnaire to the customer who were sampled from Jaipur city, In this survey questionnaire from 300 customers from Jaipur city divided into 100 each has service class, business class, student class were conducted with scheduled from April 2011 to June 2011. Customer opinions were obtained on main aspects of CRM practices such as service quality and customer loyalty. The respondents were asked to give response on each question statement on a 5 point scale ranging from 1-5. The primary data collected for the purpose have been analysed by statistical tool chi-square. The broad hypothesis testing by using chi-square test was stated as "there is no significance difference between Vodafone and Airtel in so far as opinion of customer about CRM- Service quality and Customer Loyalty.

RESULTS OF THE STUDY

TABLE -1: CHI-SQUARE ANALYSIS OF SERVICE QUALITY IN VODAFONE AND AIRTEL

| Classes/Telecom companies | Student | Service | Business | Total |
|---------------------------|------------|------------|------------|-------|
| Vodafone | 86 (84) | 60 (62) | 54 (54) | 200 |
| Airtel | 40 (42) | 33 (31) | 27 (27) | 100 |
| Total | 126 | 93 | 81 | 300 |

Source: Primary data

Chi-square value: 2.099

Significance at 5% level

TABLE-1 Highlights the less association between the service quality in Vodafone and Airtel. It is clear from this table that service quality is the most influencing factors among all respondents. A chi-square value indicates that there is less significant difference between Vodafone and Airtel in so far as the service quality is concerned. It is concluded that both the companies are not giving equal importance to the service quality. The service quality can be achieved by various ways such as willingness to help customers delivering the promised service, appearance of physical facilities, responsiveness.

TABLE-2: CHI-SQUARE ANALYSIS OF CUSTOMER LOYALTY IN VODAFONE AND AIRTEL

| Classes/Telecom companies | Student | Service | Business | Total |
|---------------------------|------------|------------|------------|-------|
| Vodafone | 70 (74) | 80 (62) | 35 (49) | 185 |
| Airtel | 50 (46) | 20 (38) | 45 (31) | 115 |
| Total | 120 | 100 | 80 | 300 |

Source: Primary data

Chi-square: 24.63

Significance at 5% level

TABLE-2 reveals the association between the customer loyalty in Vodafone and Airtel. More than 65% of respondents have either agreed or strongly agreed to the various factors of customer loyalty. Chi-square values indicate that there is significant difference between Vodafone and Airtel in so far as the customer loyalty is concerned. Amongst the various factor "feel safe in transaction" shows the maximum numbers of respondents (95%) who have strongly agreed towards both the companies. From the above analysis, it is concluded that customer loyalty can be ensured by various ways such as promises and commitment constant communication customer being innovative and customized service.

CONCLUSION

Based on the above results of survey of Vodafone and Airtel companies about CRM we arrive at the following conclusion:

- The findings reveal that neither Airtel nor Vodafone has using CRM practices such as Service Quality and Customer Loyalty to the fullest extent.
- The concept of students, service and business class as customer will become a competitive imperative with profound impact on how mobile service provider companies attract, retain and serve customers of all types.
- Our research showed and review the null hypothesis finds out that there is significance difference between both the companies related to service quality and customer loyalty.
- It means CRM in mobile industry is a key element of differentiation that allows a company to develop its customer base sales capacity. The goal of CRM is to manage all aspects of customer interactions in a manner that enables a company to maximize profitability from every customer.

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QUESTIONNAIRE

Kindly write your choice for each item.

| S.no. | Items | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|-------|--|----------------|-------|---------|----------|-------------------|
| 1. | Company should make customer friendly schemes. | | | | | |
| 2. | Information provided by customer care executives is accurate | | | | | |
| 3. | Information contents and text are easy to understand | | | | | |
| 5. | Customer care executives are easy to approach and contact | | | | | |
| 6. | The language of executives is easy to understand | | | | | |
| 7. | Knowledge and skills of the customer care executives being contacted is satisfactory. | | | | | |
| 8. | Customer care services can be used anywhere | | | | | |
| 9. | Customer care services is flexible as it provides 24x7 hr access | | | | | |
| 10. | Satisfied with the information they provided | | | | | |
| 11. | The frequency of customer care phones makes me irritating | | | | | |
| 12. | Customers should be served with patiently | | | | | |
| 13. | Fulfillment of promises and claims | | | | | |
| 15. | The waiting time for having my question addressed was satisfactory. | | | | | |
| 16. | Feel safe in transactions | | | | | |
| 17. | Retailer network is easily located | | | | | |
| 18. | Physical facilities are visually appealing | | | | | |
| 19. | Company inform me about the new schemes and changes time to time | | | | | |
| 20. | Want to switch other mobile services | | | | | |
| 21. | Satisfied with the tariff structure | | | | | |
| 22. | The company activates unnecessary services | | | | | |
| 23. | Customer care executives behaving respectfully and politely with the customers | | | | | |
| 24. | Be orderly and adorned with formal uniform | | | | | |
| 25. | Working hours to e desirable for the customers | | | | | |
| 26. | Equipments, items, forms and documents with beautiful design and appearance | | | | | |
| 27. | Being eager in their interactions with the customers | | | | | |
| 28. | Responsiveness: How do you rate the responsiveness in dealing with you | | | | | |
| 29. | Technical support: If you received any technical support, how do you rate the technical competence and their response time | | | | | |
| 30. | Service Quality: How do you rate the services regarding quality and performance | | | | | |
| 31. | Delivery: How do you rate the delivery on time performance and commitment to meet your delivery expectations | | | | | |
| 32. | Competitiveness: how do you rate the competitiveness of services | | | | | |
| 33. | Quality Management: How do you rate the approach of quality management to ensure complete customer satisfaction | | | | | |
| 34. | Rating: How do you rate Airtel/Vodafone | | | | | |
| 35. | Speed: How would you rate the speed at which your telephone call was handled? | | | | | |
| 36. | Network: How would you rate the network coverage? | | | | | |

TOUGH TIME FOR INDIAN TEA INDUSTRY

KAKALI HAZARIKA

RESEARCH SCHOLAR

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

NATIONAL INSTITUTE OF TECHNOLOGY

SILCHAR

ABSTRACT

In India, millions of people are dependent on tea industry; directly and indirectly. Tea is a labour intensive industry and provides jobs in remote rural areas. Assam is the highest tea producer in India, producing 52 per cent of total production. However, due to weak international and auction (national) prices over last few years, a worldwide tea sector crisis have been observed, which is felt at its worst in Assam also. Low prices affect the sustainability of tea sector along with the livelihoods of plantation workers and small growers in tea producing regions of India. Contrary to this, tea trading and distribution is dominated by few companies that are highly benefited from stable retail prices. In this paper, an attempt is made to highlight the problems faced by Indian tea industry in marketing field. The results of this study reveal that only effective marketing policy will help Indian tea industry to overcome the present crisis.

KEYWORD

tea industry.

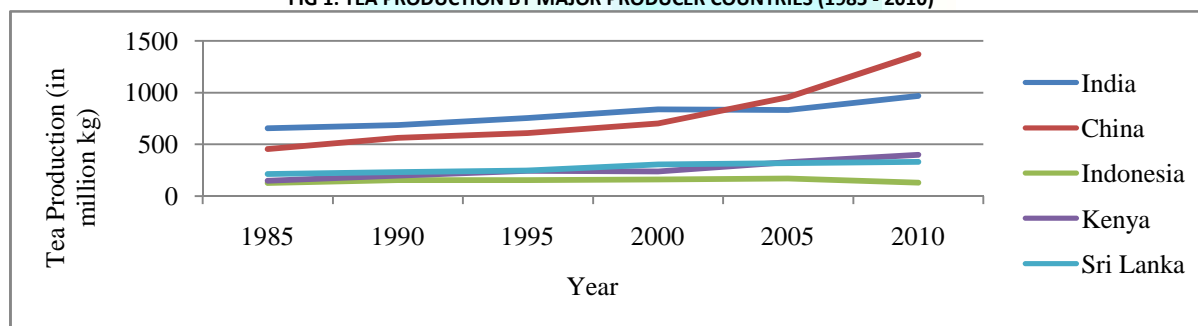
INTRODUCTION

The credit for creating India's vast tea empire goes to the British, who discovered tea in India. The Tea Industry is one of the oldest organized firm sectors with a large network of tea producers, retailers, distributors, auctioneers, exporters and employees. India is one of the world's largest producers and consumer of tea, which accounting for 27 percent of the world production and around 12 – 13 per cent of the world Tea export. It is directly responsible for economic and social development in far-flung areas where almost no other economic activity exists (Sahu, 2004). Tea industry gives a prestigious identity to India as well as Assam in the international platform. India's large Tea plantations are mostly concentrated in Assam and North-Bengal.

Tea industry is very much effective in developing basic infrastructures of the producing country like road and railway communications, development of waterways, postal and telecom service, etc. in the far flung areas where tea cultivation was taken up. The industry plays a very important role in employment generation in countries like India, Kenya, Vietnam and Indonesia. In India, tea industry provides direct gainful employment to 1, 25 800 families and another 10 million people are indirectly related with it (Kadavil, 2008). It is estimated that 10 per cent of Kenya's population entirely depends on tea industry. In Vietnam and Indonesia, more than 4, 00, 000 and 3, 50,000 people respectively are directly working in tea sector. Tea industry is also a very important foreign exchange earner to the producing countries like Kenya and Sri Lanka, having tea export value more than US\$ 655 and US\$ 830 million respectively during 2006 (Wal, 2008).

Indian tea industry remains the largest tea producer till 2005. China, India, Sri Lanka, Indonesia and Kenya are the major global tea producers. Presently India holds the second position after China in production (Fig 1).

FIG 1: TEA PRODUCTION BY MAJOR PRODUCER COUNTRIES (1985 - 2010)



Source: Tea Board of India.

It is observed from the table (Table: 1) that during last sixty years, Indian tea industry witnessed an increasing trend in area under tea and yield. In this period, area under tea and average yield per hectare increased 65.18 per cent and 83.88 per cent respectively. Until 1990, yield per hectare tea was increasing at a very faster rate; later on, yield had shown a decreasing trend.

TABLE 1: AREA AND YIELD OF INDIAN TEA INDUSTRY (1950 - 2010)

| Year | Area (in 000' hectares) | Absolute increase | Yield (kg/hectares) | Absolute increase |
|------|-------------------------|-------------------|---------------------|-------------------|
| 1950 | 316 | - | 881 | - |
| 1960 | 331 | (+) 15 | 971 | (+) 93 |
| 1970 | 354 | (+) 23 | 1182 | (+) 211 |
| 1980 | 381 | (+) 27 | 1494 | (+) 312 |
| 1990 | 416 | (+) 80 | 1731 | (+) 237 |
| 2000 | 504 | (+) 88 | 1679 | (-) 52 |
| 2010 | 522 | (+) 18 | 1620 | (-) 59 |

Source: Various issues of Tea statistics, Tea Board of India, (+) = increase, (-) = decrease

TABLE 2: SHARE OF INDIAN TEA IN WORLD PRODUCTION (1961 - 2010)

| Year | Quantity in million kilogram | | |
|------|------------------------------|-------|-----------------------------------|
| | World | India | India's percentage share to world |
| 1961 | 851 | 354 | 41.6 |
| 1971 | 1348 | 435 | 32.27 |
| 1981 | 1884 | 560 | 29.7 |
| 1991 | 2639 | 754 | 28.57 |
| 2001 | 3073 | 848 | 27.6 |
| 2002 | 3192 | 854 | 26.7 |
| 2003 | 3216 | 878 | 27.3 |
| 2004 | 3328 | 893 | 26.8 |
| 2005 | 3468 | 945 | 27.2 |
| 2006 | 3579 | 981 | 27.4 |
| 2007 | 3796 | 986 | 25.9 |
| 2008 | 3864 | 980 | 25.3 |
| 2009 | 3931 | 979 | 24.9 |
| 2010 | 4066 | 966 | 23.75 |

Source: Tea Statistics, Tea Board of India, 2011

World tea production has increased by 377 per cent during the period, whereas India's production enhanced by 172 per cent only. India, the second largest tea producer of world produced 966 million kg of tea in 2010, which is 23 per cent of global production.

There are sixteen tea-producing states in India, divided into two regions - North and South India. Assam has the highest area under tea and it has the pride of world's largest tea producing state. Assam not only produces around 50 per cent of the country's total production, but also employs about 12 lakh people (Choudhury, 2006).

During last few years, Indian tea industry is passing through serious crisis. This crisis is worst felt in marketing field. Limited big buyers or companies are the major players in Indian tea market. These players have their own network of sales all over the country and export tea after blending. Therefore they collect all the profit margins from production to auction and then to marketing and retailing (Baruah, 2008). Tata Tea, Eveready Industries (Williamson Magor) etc. are such powerful buyers having enormous influence on the market and price of tea. Hence actual growers (producers) can do nothing regarding the prices of their own tea. Problem with the tea growers is that they can not hold on to their stocks for a long time. Ultimately they have no alternative but have to satisfy with a lower price fixed by the big buyers. This is a major problem faced by the Indian tea producers and its impact fall upon not only on the production but also on common consumers.

There are some other problems related to tea marketing. In India we had the Tea Marketing Control Order, 1984 under which 75 per cent of the tea produced had to be compulsorily auctioned. Now after the abolition of compulsory auction in 2001 about half of the quantity of tea is privately sold. According to media this generates black money (Choudhury, 2006). Uncertain price and uncertain returns lead to less investment in tea production. Quality improvement and brand identity are the basic necessities of Indian tea. Because another burning problem arises in the tea market is maintenance of international standard on the quality (pesticide control) of tea. Indian teas also face such pesticide residue problem in recent years, which affects in its position in international market. But testing and conformity assessment for these standards are difficult and expensive. The cost required for the test is roughly US \$ 234 per analysis. When Brook Bond was the only packet tea manufacturer, it used to offer margins of around 4 per cent to grocers. But now when a large number of packet teas are available from various brands, grocers are being offered a margin of around 6 per cent (exclusive of other promotional schemes given to them). Therefore grocers are willing to keep branded tea only. This also leads to increase in cost for all other small and medium tea manufacturers to maintain a brand to compete with the already established brands in the tea market. New packaging trend is also a growing problem among small and medium tea producers. Today, consumers are attracted towards improved and profitable packets of tea. Especially in rural areas people can not afford a big packet having ½ kg or 1 kg tea. So they will prefer mini packets of 100gm or 200gm tea. Declining market price and increasing cost of production leads to decrease in profit margins. In recent years, some soft drinks and some melt based beverages such as Horlicks, Bournvita etc. are capturing some portion of tea market for their functional benefits and in the name of fashion. So it is difficult for a tea producing country to hold a particular section of buyers as regular consumers.

THE OBJECTIVES OF THE PRESENT STUDY ARE:

1. To observe the present status of Indian tea industry.
2. To highlight the difficulties faced by Indian tea industry in marketing field.
3. Suggest measures to overcome these problems of Indian tea industry.

RESEARCH METHODOLOGY

This work is primarily an empirical enquiry of the marketing problems faced by Indian tea industry. The study is mainly based on secondary data. Sources of data are related books, published literature of the plantation companies, associations, journals, reports published by different organizations (public and private) and websites. While studying the status of Indian tea industry, emphasis was given to understand the problems of marketing.

FINDINGS OF THE STUDY

In spite of its importance tea plantation industry of India is going through crises face since 1990's. The industry has witnessed many structural changes during recent years, which includes – emergence of small tea growers in place of large plantation, introduction of bought leaf factories (BLF); crisis has led to the closure of tea estates (20 in Kerala, 30 in West Bengal, about 70 in Assam has close down since the late 1990's). It is estimated that more than 60,000 plantation workers have lost their job since 2002 and livelihood of tens of thousands more are threatened. On the plantation that remains open, workers are suffering wage cut, tougher picking demand, job insecurity and the casualisation of work applying living and working condition etc. In early 2005 the tea industry witnessed major companies withdrawing from production and concentrating on the packaging/ retailing sector (e.g. Tata. Tea, HLL etc in India). They intend to focus on brand building business and on exploring the market substantially, rather than on the plantation business, which is a low margin segment.

The tea industry in this country has some inherent weaknesses – due to poor yield arising out of poor condition of the garden (old ages of bushes with more than 30 percent of the tea grown areas being above the economic threshold age limit), defective auction mechanism, old factory setup (which affecting tea quality and price realization), poor garden management, frequent changes of garden management/managers, in-experience people has taken charge of these gardens (who has no previous experience in tea cultivation and interest in plantation business, being mostly traders, who took control over the gardens with their money power) and the management's excessive reliance on bank-debts with negligible fresh equity infusion. In some of the gardens, the neglect has been due to ownership disputes and diversion of funds from tea gardens to other activities and in many cases strained relationship between management and garden workers (ICRA study 2007) has acted as a fuel to the fire.

At the market, the rising competition at domestic as well as international front has deepened the crisis of tea industry of India. The changing world order of last decade has left its own impact on the industry. The first, second and the third world are moving towards free globalized economy, where free trade (with WTO) and free flow of investment funds are the order of the day. Consumerism has taken the front seat, moreover developed world are moving towards healthier products and quality assurance which put pressure on the export of tea from India.

India, per capita consumption of tea among the lowest 64 grams, but in volume terms India is the largest consumer. Since 1970 country has become the largest absolute consumer of tea after UK. Larger domestic demand has given a new direction to the tea industry in the recent years.

CAUSES OF THE CRISES

Despite India's historical success with the tea industry, in recent years, the industry has faced serious competition in the international and national market which has led to the present crisis. Many factors have been cited as causing the crisis in the Indian tea sector – since the late 1990's. Analysts agree that the dramatic fall in prices is one of the most significant causes of the crisis. The worst affected have been plantation workers and small growers; the poor performance in price front, has seen the closure of tea estates that employ thousands of workers and of factories (BLF) to which small growers might sell their products. The fall in tea prices in India, are being driven down by many factors:

CHANGED GLOBAL POSITION FOR INDIAN TEA

The decade of 90's has been quite depressing for the Tea Industry in India (Asopa, 2007). The major cause of depression in the industry was due to decline in the international demand of Indian tea. The traditional markets of Indian Tea, USSR and UK have drastically reduced import of Tea from India. Changed global situations like disintegration of USSR, new WTO agreement, globalization of most developed and developing markets, etc. are steadily turning adverse to India. Indian tea lost its competitive advantage to other countries on account of high cost and poor quality. But one new development has given some ray of hope to tea industry as India has become the largest consumer of tea next to UK.

DEFECTIVE AUCTION SYSTEM

India's tea market is facing yet another paradox which could be explained in terms of glaring gap between the price charged by dealers and retailers (Choudhury, 2006). A 2005 report for the International labour organization (ILO) notes that the large tea companies are benefiting from fall in auction prices and rise in retail prices for tea "This widening gap between consumer and auction prices.....is cutting into the margins realized by the tea producers but is not being passed on to the consumer in the form of lowered tea prices" (Goddard, 2005). Price paid to plantation and small tea growers have fallen since 1998, retail prices for tea have increased. Average price for medium quality tea sold in Indian market increased from Rs.85-90 per kg in 1999 to Rs.120-140 per kg in 2005 and it is continuing to rise.

Many Industry insiders also believed that, the large buyers have co-operated on the auction floor to keep tea price low. The process the broker follows is "they first buy privately, using that they suppress prices in the auction. Then they go back to private sales.....and the sellers come back to them again, thinking that these are better prices" (Goddard, 2005).

The large buying companies use their market power (as they have their own network of sales and marketing all over the country and exported tea after blending) to push down price and took the advantage of depressed market to pay low prices; they are clearly benefiting from the current situation. Hindustan Lever, Tata Tea, Williamson Magor, etc. are such powerful buyers having enormous influence on the market and price of tea in India in general and Assam tea in particular. These big tea companies which are in monopolistic competition in consuming countries always try to stabilize prices (Asopa 2007).

OVER SUPPLY LEADS TO POOR PRICE REALIZATIONS

The price of tea has been in long – term decline while production costs have risen, putting pressure on tea growers and working condition of labourers. The decline in prices has been primarily due to growth in production in the face of sluggish demand. Low prices for tea are generally passed on to the plantation workers in the form of low wages and withdrawal of basic facilities like food, health, education, etc. given that it is easier to cut cost by reducing labour cost (as the labour are weak in bargaining power) than raise tea price (impossible in the competitive market economy) and in most of the cases producers have to remain competitive by lowering wages. Major causes of poor price realization are due to following reason:

- Competition between producing countries for a share of the world market was one of the major causes of poor price of Indian tea. World production of tea is fairly diversified and not concentrated in a particular area. Presently 36 countries of the world produce tea and many of them are big producers who prevent the establishment of a monopolistic leader, which ultimately allows fair and free competition.
- Demand for tea is rising very slowly (1.5 - 2 %) therefore the only way to increase market phase of export by a country is at the expense of competitor.
- Tea is a perishable product which deteriorates its quality and flavors very quickly. Therefore it is frequently necessary to cut prices to clear stocks. Tea producers have to stay in market despite cut in prices of their produces as they have invested a huge sum of money.

DEFECT IN MARKET STRUCTURE

The tea value chain comprises all the stages from green leaf production from the bushes to finished product and sale to the customers. Value is added to the tea leaves at each stages of the supply chain, each with associated cost (SOMO-2008). This includes the cost of plucking and sorting, factory packing, internal transportation, ware housing, sales changes (auction or direct sale), freight, insurance, interest, blending, packaging and retailers sales cost etc. In general most of the agricultural produces, value addition is done at the downstream in the higher processing and retail stages of supply chain – this is also true with tea. This part of the value chain is control by a handful multinational tea packers and brokers (SOMO 2008). Concentration is extremely high in the downstream of tea supply chain where 90 percent of western tea trade is controlled by 7 (seven) MNCs, 85 percent of world production is sold by these MNCs. (List 1) As a result, these MNCs can considerably influence world retail price.

RISING COST OF PRODUCTION

While market prices for tea have been falling, the cost of production has been on the rise in India, putting downward pressure on profitability and income. One factor which is closely related to the cost of production is, of course, productivity in terms of volume per hectare which is affected by change in climate, soil fertility, age of the tea bush, high over-head cost, poor agricultural practices etc. The stagnation in productivity in many big estates is compounded by high land labour ratio. Productivity declined in India from 1996 to 2005 in the large gardens.

Labour cost accounts for around half of the unit cost of production and approximately 55 to 75 percent of that labour cost is on plucking. High fuel (electricity a goal) cost, dilapidated infrastructure including transportation and unstable law and order situation in and around garden area etc. result in high cost of production.

Field and factory worker's productivity is also considered low in India. The impact of social cost (health, food, housing, water etc.) in the large estates in percentage terms works out to about 5-8 percent of the total costs. It implies an additional Rs.4.12 per kg for manufactured tea in NE Region of India and Rs. 3.44 per kg in South India (SOMO-2008). Therefore it is assumed that around 80 per cent of the cost of production goes towards fixed expenses like fuel, power and labour.

Inflationary pressures are now pushing up these fixed costs further. Labour unrest is another major problem faced by planter/estates. Looking into the profitability of the industry at the current price, does not provide the way to meet these costs. Rising costs and low productivity can have negative consequences on social and environmental aspects of production (sustainability problem), if these costs cannot be passed on to the ultimate buyer.

RECOMMENDATIONS

1. Indian tea industry is passing through multidimensional problems. The origin of these problems is poor price realization by the growers for their tea. In India, auction is the preferred channel for tea marketing, which has many inherent drawbacks. Heavy reliance on brokers is the main cause of doubtful

- price realization in auction. Therefore, to achieve best return from their produce, growers have to take up the issue of effective marketing. They should redesign their market strategy to suit the market requirements of 21st century.
2. The colonial traders had complete control over tea trading (from production to sell) in India until the country got independence. They had their own favorable procedure of selling tea i.e. auction. These traders were least concern about the issue of marketing due to higher demand for tea in those initial days. After independence, Indian tea industry was left to big corporate houses and traders. Market liberalization has shown its impacts. However, no change was seen on the marketing channel followed by tea growers. They did not opted for any new system of marketing but follow the traditional method for their tea. However, to fit in the prevailing liberalized world, tea producers must concentrate on effective channels of marketing, which will ensure better price realization and high profits.
 3. The findings of the study reveal that Indian tea industry is facing several problems in the international market. Emergence of new competitors and withdrawal of quota system in tea selling has negative impact on Indian tea. Therefore need arises for the Indian producers to prepare themselves as a strong competitor equipped with all the required efficiencies. In India, producers are selling their tea. Limited number of big traders does marketing part. To survive in this competitive world, producers must think beyond the traditional practices and they should try to be an active marketer themselves.
 4. Today, in this globalized economy; competition is increasing among tea growers. India is loosing its global position and low export share pushed down the country to fourth in the international market. Hence, improvement of supply management of tea and integration with global tea marketing network will be beneficial for promotion of Indian tea. Producers should reduce selling and marketing expenses by selecting and using proper marketing channels. Proper distribution of tea in suitable market will be fruitful for the industry.
 5. Most of the tea producers of Assam do not have their own brands. As Mark Kibblewhite has mentioned in the Global Tea Congress at Tocklai Tea Research Association, Assam tea has good demand in U K, but it does not have any particular brand to represent itself and not easily available in foreign retail markets, which reduces a portion of its consumers. Therefore, proper branding of Assam tea is urgently required to fulfill international as well as domestic demand.
 6. It is observed that despite the large number of tea estate in India, well known brands (national /international) by the names of the actual producers in the real scene is lacking. This is because the producers from the inception of the tea industry in India did not shown any interest in product marketing. Therefore till date, no proper and efficient distribution and marketing chain has been formed. The future development of the producers will need integration with the market.
 7. Addressing the issue of low marketing practiced by the Indian tea industry, the industry can be more responsive to the market needs and surge ahead; the study found that most of the people in the tea industry have limited experience outside the "traditional tea cup". They should come out of the old thought and face the market realities.
 8. Place the product 'Tea' in its 'life context'. The average retailer has over 1000 product lines and the average consumer uses over a 100 product lines in a day. Tea is just one of them and needs to fit into the 'life' of the retailer and the consumer.
 9. Earlier 80 per cent of the Indian tea was sent to export, but now situation has a complete opposite picture. India consumes more than 80 per cent of the total annual tea production locally. Therefore, producers must try to realize the needs of domestic market, rather than international market.
 10. India has a huge domestic market of tea, which is expanding every year. The rate of growth of tea consumption in India is higher than growth of tea production. Possibility is coming when demand for tea will overcome the production. Hence, producers have to give more emphasis on production growth. Vigorous efforts have to be taken by the industry to meet at least domestic demand of tea.
 11. European countries were the permanent buyers of Indian tea and they had purchased a sizeable amount of India's production. With the collapse of USSR, India lost a regular market for its tea. Now majority of tea produced in India is retained for home consumption. Therefore, Tea producers have to devote considerable time and resource for marketing their product to reach out expectations of the consumers.
 12. New producer countries are competing in the tea market with better quality tea. India is not equipped with strong quality or competitive price for participating in this competition. Since last 170 years of the industry, India has not witnessed any major infrastructural development in tea plantations and in tea producing regions. Hence, it is difficult to survive in the global competitive market with outdated technologies and Indian growers should concentrate on domestic market only.
 13. Indian tea growers always enjoy a readymade market established by British. However, in the recent past, due to over supply of tea against demand the market strategy has shifted from the seller market to the buyer market. Therefore, the grower must recognize the new challenges of the market and implementation of new marketing strategy must be ensured.

CONCLUSION

No doubt the tea industry is an important source of revenue for India. But it can be fruitful for the economy of India as well as Assam only through proper marketing channel. Only production and consumption can not give benefit to the economy. To a great extent, economic growth of a country depends on the performance of marketing activities which stimulates the demand for goods and services and leads to higher production. Production may be the door to economic growth of an underdeveloped and developing country, but marketing is the key to economic deadlock. Marketing also helps in the development of the standard of products and services and also increases the standard of all fields. But no definite guidelines are found from market. Though export market of tea is loosing its position, the next alternative will be domestic market which has a trend of increase in demand and dominated by some Branded products which are the market leaders. India has a large domestic market which is expanding day by day. It is difficult to monitor tea consumption in India for its large market size. Competition is strong in the domestic market also. The reason for enormous domestic consumption is not due to a high per capita consumption but because of a huge population. This domestic market should be the basic platform for the Indian tea growers (small and medium). Also to be competitive in the world market the only way will be the strong marketing bond and marketing is the only weapon for India to face the problems of tea industry.

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ANNEXURE

LIST 1: MNCS DOMINATE THE GLOBAL TEA MARKET

1. The companies dominate the Tea trade at the global level
 - Unilever (Brooke Bond, Lipton / Unilever Trading Company UTC, UK- The Netherlands)
 - Van Rees (Trader/ Blender, Supplying many packers, part of Deli Universal Corporation, Netherlands)
 - James Finlay (Trader, Producer, Packer, UK)
 - Tata Tetley / Stansand (Producer, Trader, Packer, UK)
2. Important Tea Packers in the World
 - Unilever (Lipton is a very strong brand with a world market share of 10 %)
 - Tetley (Tata Group)
 - R. Twinings (Associated British Foods)
 - Ajeepay Group (Typhoo tea)
 - Ostfriesche Tee Gesellschaft OTG: Major German company which also has activities outside Germany

IMPACT OF OPEC ON SUPPLY AND PRICE OF PETROLEUM PRODUCTS

GAURAV MANOJ JHA
STUDENT
BITS, PILANI'S K. K. BIRLA GOA CAMPUS
GOA

ABSTRACT

Petroleum products form the backbone of our modern civilisation and OPEC is arguably the world's most important organization when considering crude oil supply price stability. The members of OPEC are countries which have some of the largest oil reserves and ever since its formation in 1960s, OPEC has been a very important player in the crude oil market. This study aims to ascertain the impact of OPEC on the supply of oil and global imports and its effect of oil price stability. Historical data of world oil prices before and after the formation of OPEC have been compared and analysed considering the world and OPEC oil supply and reserves. Proportions of world imports from OPEC have also been discussed and the reasons for price shocks and fluctuations over the years have been analysed with greater emphasis on the role of OPEC in particular. This study confirms the fact that OPEC wields a heavy influence on the supply and price of petroleum products. Though there have been new oil well discoveries in Venezuela and Brazil and technological developments have enabled extraction of huge shale oil reserves in US and Canada, these reserves will take several years to develop in an economically viable manner and hence, for the foreseeable future, OPEC will continue to remain the most important organization in the crude oil market.

JEL CODES

F13, N70

KEYWORDS

OPEC, Crude Oil Price Volatility, Cartel, Supply of Crude Oil.

INTRODUCTION



PEC

The Organization of Petroleum Exporting Countries (OPEC) is an organization consisting of the world's major oil-exporting nations which was founded in 1960 to coordinate the petroleum policies of its members, and to provide member states with technical and economic aid. OPEC is a cartel that aims to manage the supply of oil in an effort to set the price of oil on the world market, in order to avoid fluctuations that might affect the economies of both producing and purchasing countries.

OPEC membership is open to any country that is a substantial exporter of oil and that shares the ideals of the organization. As of 2011, OPEC had 12 member countries, including founder members Iran, Iraq, Kuwait and Venezuela.

OPEC's Mission

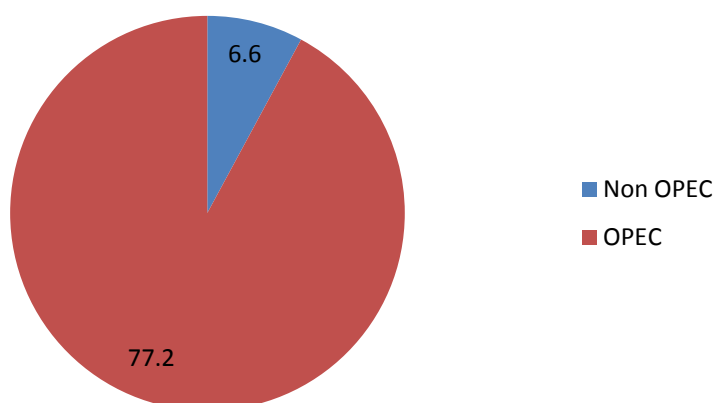
- To coordinate and unify the petroleum policies of its Member Countries
- Efficient, economic and regular supply of petroleum to consumers
- Fair return on capital for those investing in the petroleum industry
- Steady income to producers
- Stabilization of oil markets

BACKGROUND OF STUDY

IMPORTANCE OF OPEC

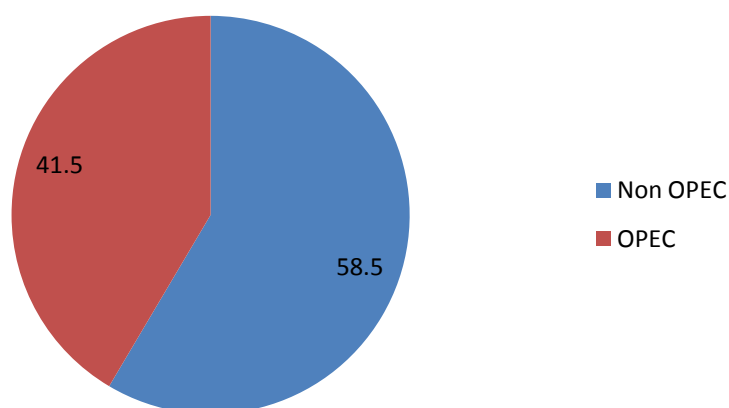
OPEC holds an immensely important position in the world oil market, because of its massive share of oil reserves and production as shown in Figure 1 and Figure 2 below.

FIGURE 1: PERCENTAGE OF OIL RESERVES



Source: BP Statistical Review of World Energy

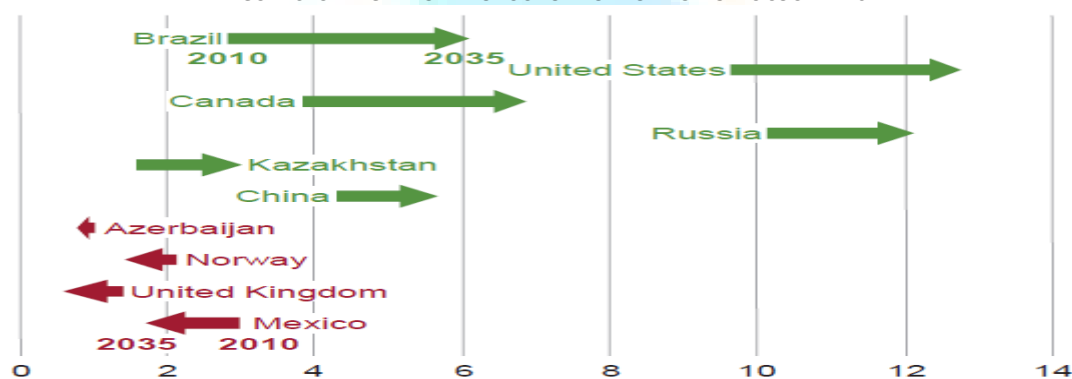
FIGURE 2: PERCENTAGE OF OIL PRODUCTION



Source: BP Statistical Review of World Energy

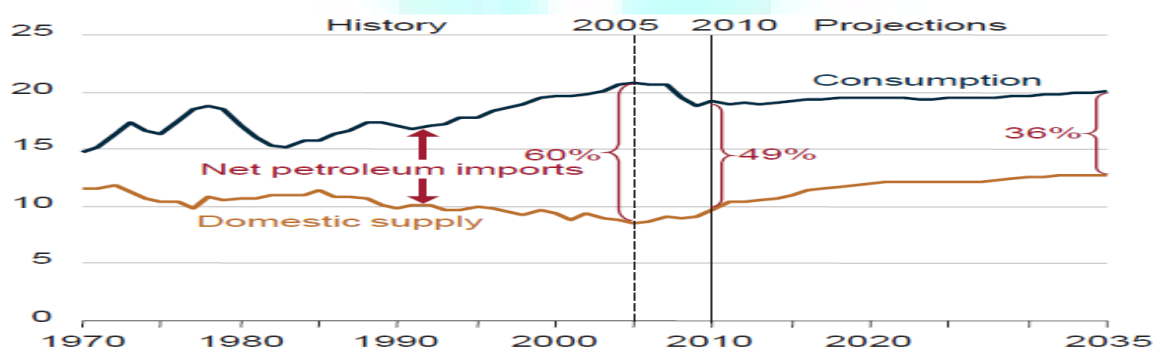
Over the past few years, as shown in Figure 3 and Figure 4 below, there has been an increase in the exploitable oil reserves of US (the largest consumer of oil), Canada and Brazil due to technological innovations. But the commercially viable extraction of these reserves will still take a few decades. And hence, even now, and for a considerable time in the foreseeable future, OPEC will remain dominant.

FIGURE 3: CHANGE IN OIL PRODUCTION FOR TOP NON-OPEC COUNTRIES.



Source: Energy Information Administration

FIGURE 4: US OIL CONSUMPTION AND SUPPLY



Source: Energy Information Administration

STATEMENT OF THE PROBLEM

This study aims at scrutinising the impact that OPEC has had on supply and price of petroleum products.

OBJECTIVES

- To study the impact on the supply of oil and global imports
- To ascertain the impact of OPEC on the world oil prices
- Analysis with respect to world imports
- Research the estimates of future oil production by Non-OPEC countries

RESEARCH METHODOLOGY

The period of study that has been taken into consideration is 1910 to 2011. This is because OPEC started its operations in 1960s. We have also taken a few years prior to the formation of OPEC to have a more holistic analysis. The data and information for analysis have been collected from –

- British Petroleum Global Energy Outlook Report

- Energy Information Administration
- OPEC website

Analysis has been done by –

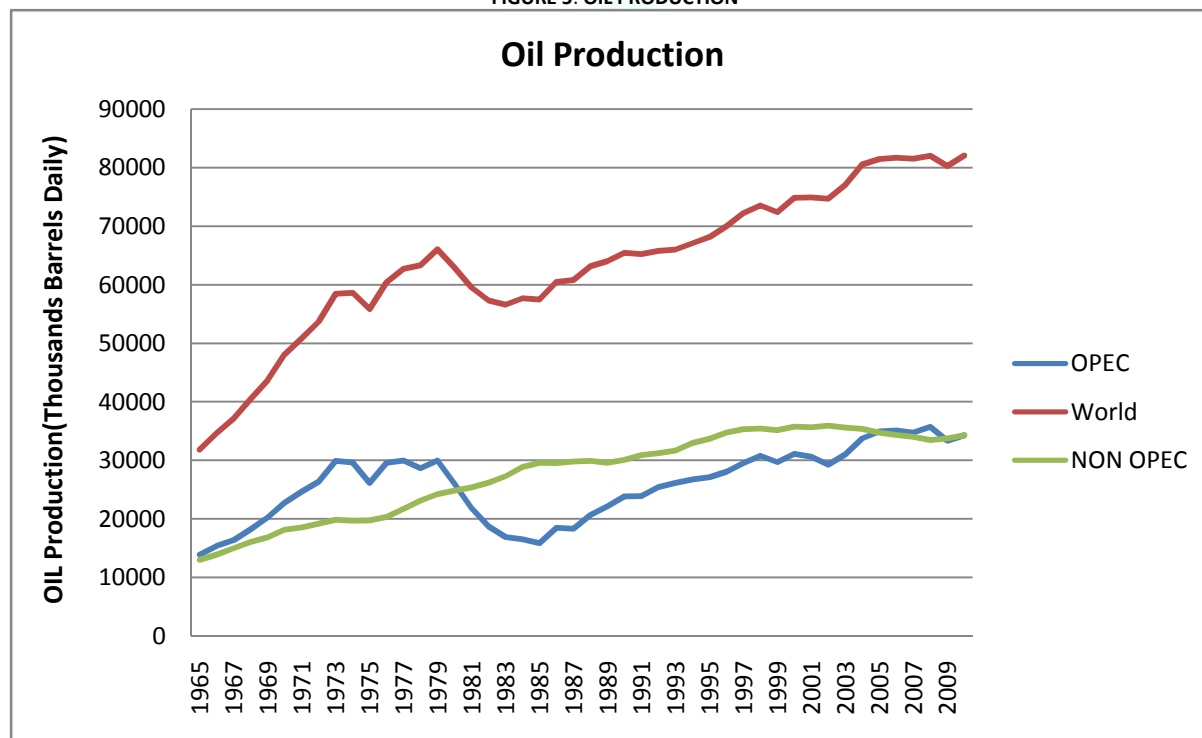
- Comparison of historical data of world oil prices across the years, before and after the formation of OPEC
- Comparison of world and OPEC oil supply and reserves
- Studying the proportions of world imports from OPEC

RESULTS, DISCUSSION AND FINDINGS

IMPACT OF OPEC CRUDE OIL PRODUCTION ON WORLD PRODUCTION

The following graph (Figure 5) shows the total world, OPEC and Non OPEC crude oil production from the period 1965-2010. It can be easily seen that the world oil production trend has simply followed the OPEC oil production trend. The OPEC produced an average of 40.97 % of world oil and thus had a significant impact on world oil production. Non-OPEC nations produced an average of 43.24% of world oil over the period.

FIGURE 5: OIL PRODUCTION

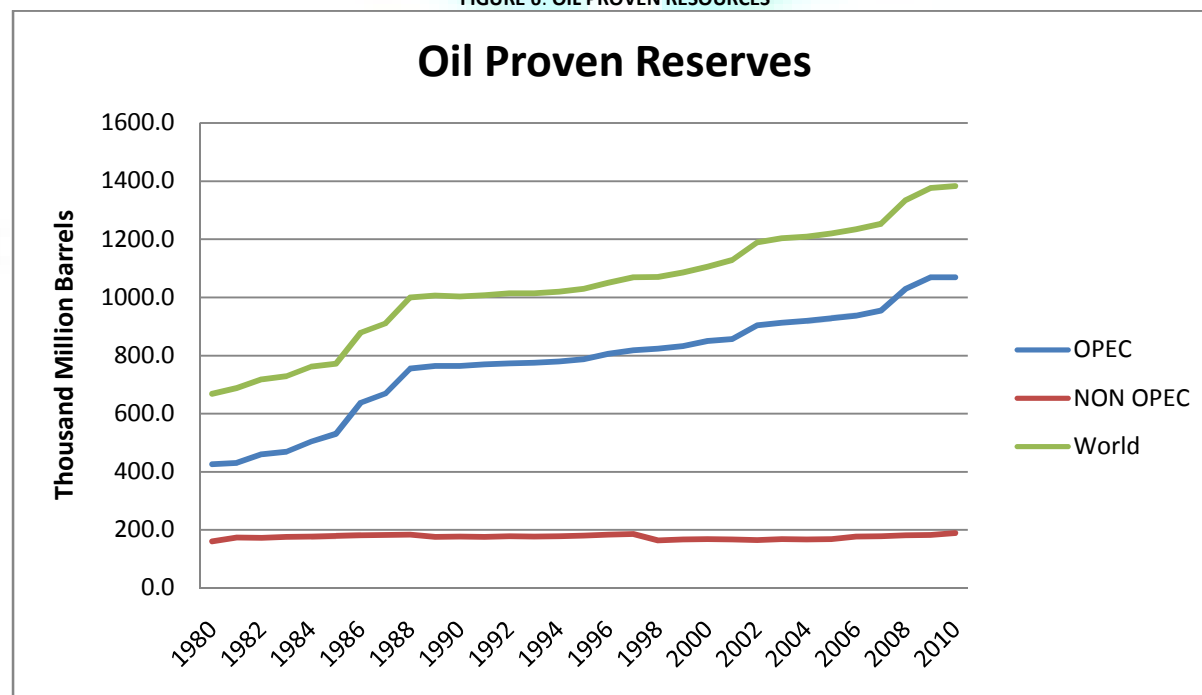


Source: BP Statistical Review of World Energy June 2011

PROVEN RESERVES IN WORLD, OPEC AND NON OPEC NATIONS

Analysis of the data clearly indicates that around 73.9% of the world oil reserves are with the OPEC nations and around 17.57% with the NON OPEC nations. The following graph (Figure 6) plots the total proven reserves of oil in OPEC, NON OPEC and World over the period 1980-2009.

FIGURE 6: OIL PROVEN RESOURCES



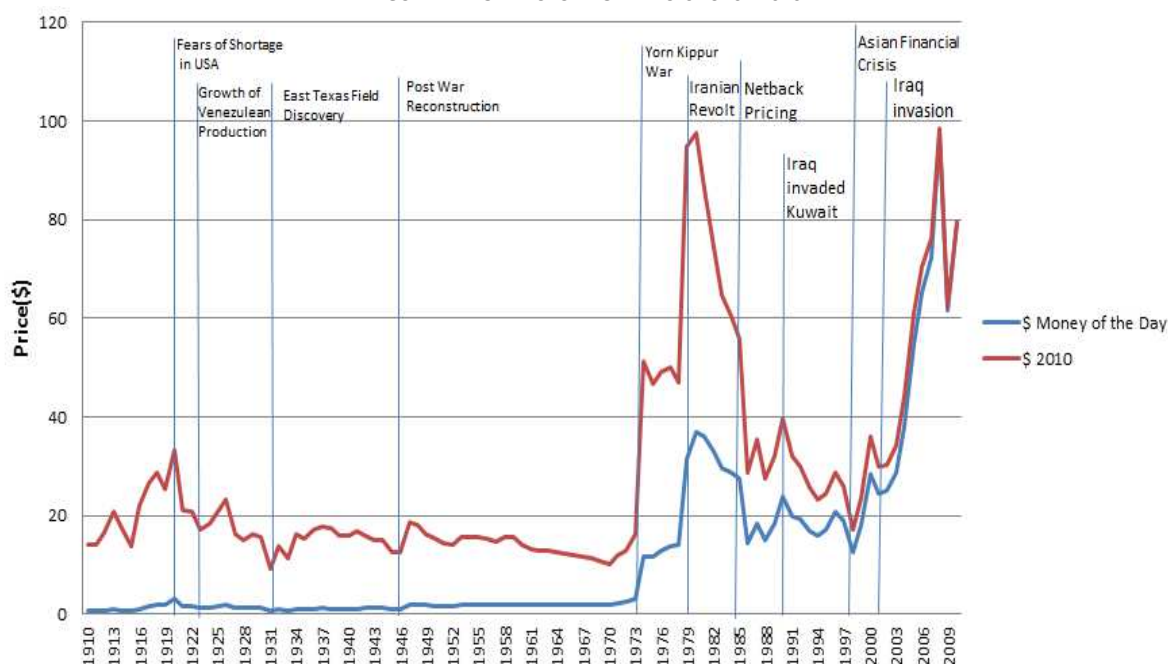
Source: BP Statistical Review of World Energy June 2011

As the OPEC had an average of 73.9% of total world oil reserves since 1980, world oil reserves almost follow a similar trend as OPEC oil reserves. Analysis of graphs in Figure 5 and Figure 6 clearly shows that OPEC has formed a cartel and influenced oil supply. OPEC nations had around 73.9% of oil reserves but produced only 40.97% of world production while NON OPEC nations had only around 17.57 % of world oil reserves but produced more than the OPEC nations around 43.24% of world production. This clearly indicated that OPEC nations have restricted production to influence world oil prices.

IMPACT OF OPEC ON WORLD CRUDE OIL PRICES

The graph in Figure 7 shows the historical trend in world crude oil prices over the period 1910-2010 both in terms of dollar prices in 2010 and prevailing dollar prices on the day analysed in the past. In the past century, world crude oil prices have been highly volatile especially after the 1970s.

FIGURE 7: WORLD CRUDE OIL PRICES 1910 - 2010



Source: BP Statistical Review of World Energy June 2011

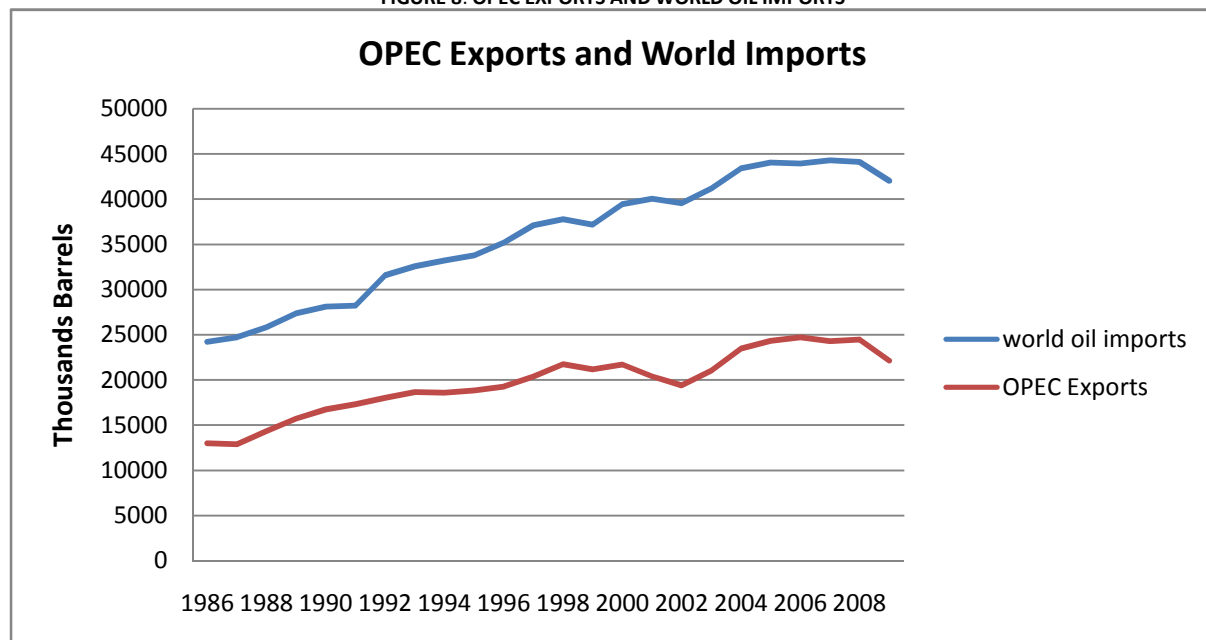
Prior to the formation of OPEC in 1960, world oil prices saw small fluctuations due to factors such as shortage fears, new field discoveries or world wars as depicted in Figure 7. However, after the formation of OPEC in 1960, world oil prices mainly depended on factors affecting production in OPEC nations.

POST-OPEC PERIOD ANALYSIS

- 1) Yom Kippur War: On October 5, 1973, Syria and Egypt attacked Israel to which US and many western countries extended support to Israel. In reaction to this several Arab exporting nations joined Iran and imposed an embargo on the countries supporting Israel. Production was curtailed by 5 million barrels leading to a quadruple rise in crude oil prices from \$3.50 in 1972 to \$12.00 in 1974.
- 2) Iranian Revolution: The Iranian Revolution in 1978-79 resulted in the loss of 2-2.5 million barrels per day of oil significantly affecting world crude oil prices. This was followed by Iraq's invasion on Iran in September 1980. Combined oil production of both the countries fell around by 6.5 million barrels as compared to last year. As a result of the above mentioned two events, nominal crude oil prices went from \$14 in 1978 to \$35 per barrel in 1981.
- 3) Reduced Demand: Surging prices in 1979-80 led to several changes in the global scenario such as improved energy efficiency in industrial processes and automobiles. Such factors along with global recession led to a fall in OPEC oil demand leading to a fall in prices. Higher prices also promoted production in Non OPEC by 6 million barrels per day. This led to a dramatic fall in world crude oil prices from \$36.83 in 1980 to \$14.43 per barrel in 1986.
- 4) Invasion of Kuwait & Gulf War: Following Iraqi invasion of Kuwait on August 2, 1990, the world crude oil prices saw a spike which lasted only for 9 months. But after the success of military operations against Iraq led by US, prices began to fall as uncertainty regarding long term supply reduced.
- 5) Asian Financial Crisis: Due to the economic crisis in Asia in 1997, growth in Asian economies slowed down and Asian oil consumption declined accompanied by increased production from OPEC leading to fall in crude oil prices and reduction in production quotas by OPEC.
- 6) Invasion of Iraq: In 2003, US invaded Iraq which led to a loss in producing capacity of Iraq. This led to an increase in crude oil prices. Also around 2004-05, world economies were growing and hence demand increased leading to further rise in crude oil prices.
- 7) Global Recession: The global recession in the late 2000's led to a reduction in demand of crude oil which led to a continuous fall in crude oil prices from \$97.26 in 2008 to \$61.67 in 2009.

IMPACT OF OPEC EXPORTS ON WORLD OIL IMPORTS

The following graph in Figure 8 analyses the impact of OPEC exports on world oil imports over the period 1986-2009. OPEC contributed around 55.17% of world imports over this period.

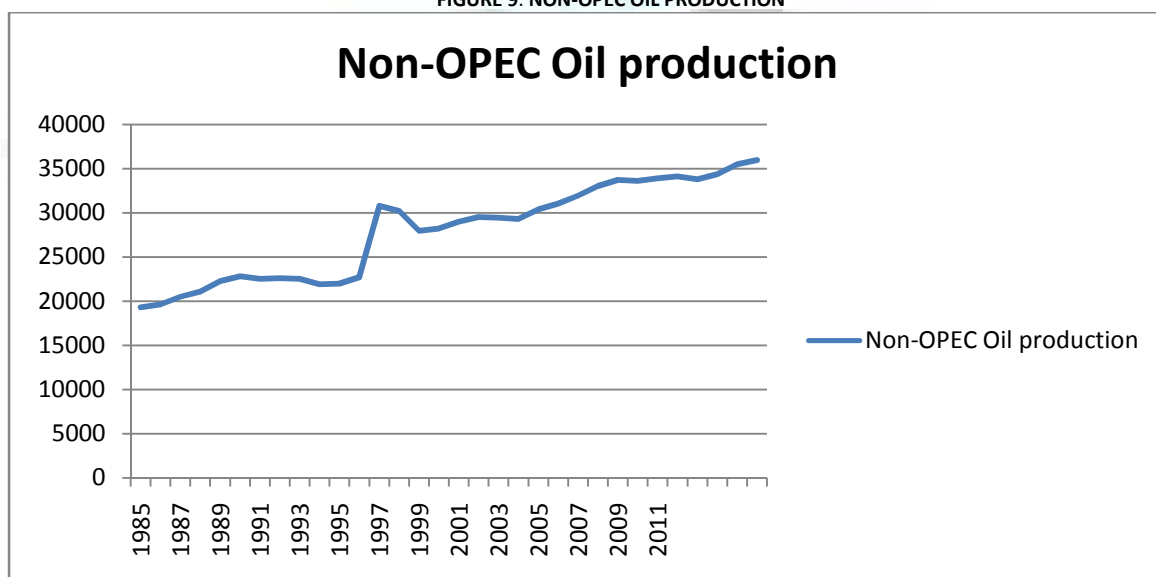
FIGURE 8: OPEC EXPORTS AND WORLD OIL IMPORTS

Source: BP Statistical Review of World Energy 2011

It can be easily concluded that world oil imports follow a similar trend as that of OPEC exports and thus, import of crude oil depends heavily on OPEC exports and supply.

CONCLUSIONS

- 1) As can be seen from the World Crude Oil prices analysis, after formation of OPEC there has been a lot of fluctuations in Crude Oil prices as compared to the initial period.
The Oil Embargo of 1973 clearly shows how members of OPEC curtailed flow of crude oil to the United States and other western countries that supported Israel in the war and cut down the production by five million barrels per day. The extreme sensitivity of prices to supply shortages became all too apparent when prices increased 400 percent in six short months.
Also the Iranian revolution and the subsequent invasion of Iran by Iraq led to the combined production of both countries just a million barrels per day. The loss of production from the combined effects of the Iranian revolution and the Iraq-Iran War caused crude oil prices to more than double. The price of crude oil spiked again in 1990 with the lower production, uncertainty associated with the Iraqi invasion of Kuwait and the ensuing Gulf War.
All these incidents clearly show the influence and control of OPEC to affect world crude oil prices and hence OPEC has a strong hold to control oil prices.
- 2) Another fact that significantly strengthens the OPEC's position is the fact that among the entire world's oil producing countries only OPEC nations have a significant spare oil production capacity. They can expand oil production when demand increases. OPEC member countries respond to market fundamentals and forecast developments by co-coordinating their petroleum policies. If demand grows or some producers are producing less oil, OPEC can increase its oil production in order to prevent a sudden rise in prices. It can also reduce production in response to market conditions.
- 3) OPEC's ability to control the price of oil has diminished somewhat since the Gulf War due to the subsequent discovery and development of large oil reserves in Alaska, the North Sea, Canada, the Gulf of Mexico, the opening up of Russia, and market modernization.

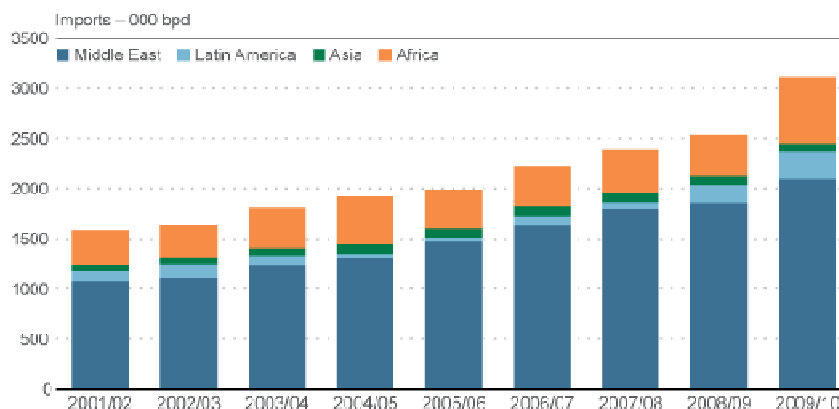
FIGURE 9: NON-OPEC OIL PRODUCTION

Source: Energy Information Administration

The Non-OPEC Oil production graph clearly depicts the increase in Non-OPEC Oil production around 1996 which somewhat reduced the hold of OPEC to influence Oil prices.

- 4) The Import Scenario of India clearly shows that India is heavily dependent on OPEC on its oil imports and hence any fluctuation in supply from OPEC is likely to affect India.

FIGURE 10: INDIA'S DEPENDENCE ON DIFFERENT REGIONS FOR CRUDE OIL



Source: Reuters

- 5) Prices are fore-casted to rise due to global economic recovery (leading to increased oil demand), and slower growth in non-OPEC oil supply and continuous production restraint by members of OPEC.
- 6) US oil production expected to increase tremendously because of extraction from shale – primarily from Bakken Fields (North Dakota) – 503 billion and underground reserves at Rocky Mountains (2 trillion) which will make it the country with highest reserves. This has been possible because of technological progress, which has enabled economical extraction of shale oil.

A part of the Williston Fields of North Dakota is in Canada and the production is expected to undergo a huge increase by 2015. Canada will become the largest source of US oil imports.

Brazil has found new reserves. This will bring it among the top 6 in terms of production over the next 4-5 years. Brazil will also benefit from the massive oil reserves recently discovered in Venezuela and Colombia.

So it is expected that OPEC will lose their hold to the United States on Oil prices when sufficient technology to extract shale oil is developed in the future.

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

The study does not take into account the recent oil well discoveries in Venezuela and Brazil and the impact of the development of new technology which enables economically viable extraction of shale oil. This has led to a tremendous increase in extractable oil reserves of US and Canada and is likely to have a very significant impact on the world scenario in the years to come depending on how quickly the technology can be implemented successfully.

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APPENDIX

APPENDIX 1: OIL PRODUCTION (THOUSAND BARRELS DAILY)

| A | B | C | D | E | F |
|---------|-------|----------|-------|----------------------------|--------------------------------|
| Year | OPEC | NON OPEC | World | OPEC % of World Production | NON OPEC % of World Production |
| 1965 | 13922 | 13027 | 31806 | 43.77004162 | 40.95705688 |
| 1966 | 15381 | 13888 | 34571 | 44.49201031 | 40.17149911 |
| 1967 | 16381 | 14978 | 37121 | 44.12900357 | 40.34860455 |
| 1968 | 18250 | 16021 | 40438 | 45.13091928 | 39.61836461 |
| 1969 | 20243 | 16826 | 43635 | 46.39104711 | 38.561454 |
| 1970 | 22762 | 18175 | 48064 | 47.35840897 | 37.81382485 |
| 1971 | 24702 | 18533 | 50846 | 48.5817873 | 36.45043397 |
| 1972 | 26393 | 19211 | 53668 | 49.17820156 | 35.79583663 |
| 1973 | 29932 | 19868 | 58465 | 51.19690133 | 33.98334219 |
| 1974 | 29667 | 19681 | 58618 | 50.61096335 | 33.57417514 |
| 1975 | 26181 | 19729 | 55826 | 46.89715558 | 35.34067418 |
| 1976 | 29590 | 20357 | 60412 | 48.97962035 | 33.69675631 |
| 1977 | 29983 | 21721 | 62714 | 47.80943132 | 34.63481818 |
| 1978 | 28677 | 23125 | 63332 | 45.28031536 | 36.51295769 |
| 1979 | 30011 | 24235 | 66050 | 45.43571775 | 36.69095037 |
| 1980 | 26028 | 24804 | 62948 | 41.34842999 | 39.40333555 |
| 1981 | 21895 | 25379 | 59535 | 36.77734568 | 42.62920865 |
| 1982 | 18756 | 26213 | 57298 | 32.73324494 | 45.74814183 |
| 1983 | 16943 | 27252 | 56599 | 29.93546864 | 48.14991203 |
| 1984 | 16535 | 28854 | 57686 | 28.66354862 | 50.01989349 |
| 1985 | 15871 | 29561 | 57472 | 27.61530543 | 51.43487384 |
| 1986 | 18517 | 29504 | 60463 | 30.62488917 | 48.79698724 |
| 1987 | 18351 | 29777 | 60784 | 30.19107477 | 48.9887972 |
| 1988 | 20678 | 29875 | 63154 | 32.74269264 | 47.30475197 |
| 1989 | 22180 | 29564 | 64042 | 34.63331945 | 46.1630807 |
| 1990 | 23857 | 30037 | 65460 | 36.44552627 | 45.88617573 |
| 1991 | 23904 | 30890 | 65268 | 36.62415429 | 47.32873639 |
| 1992 | 25428 | 31196 | 65774 | 38.65903698 | 47.42884771 |
| 1993 | 26181 | 31653 | 66028 | 39.65185733 | 47.93798093 |
| 1994 | 26780 | 32933 | 67104 | 39.9084451 | 49.07724762 |
| 1995 | 27161 | 33683 | 68141 | 39.85979918 | 49.43128962 |
| 1996 | 28083 | 34725 | 69978 | 40.13041619 | 49.62192703 |
| 1997 | 29560 | 35305 | 72238 | 40.91977918 | 48.87255446 |
| 1998 | 30801 | 35390 | 73593 | 41.85939416 | 48.09574583 |
| 1999 | 29718 | 35127 | 72397 | 41.04888726 | 48.51920767 |
| 2000 | 31145 | 35734 | 74893 | 41.58591962 | 47.71336245 |
| 2001 | 30640 | 35606 | 74906 | 40.90429245 | 47.53438427 |
| 2002 | 29261 | 35907 | 74700 | 39.17131368 | 48.0674687 |
| 2003 | 31020 | 35556 | 77075 | 40.24631403 | 46.13227768 |
| 2004 | 33776 | 35385 | 80568 | 41.92196469 | 43.91922608 |
| 2005 | 34951 | 34695 | 81485 | 42.89294079 | 42.57764754 |
| 2006 | 35098 | 34315 | 81729 | 42.94425634 | 41.98638368 |
| 2007 | 34757 | 33991 | 81544 | 42.62424699 | 41.68428748 |
| 2008 | 35722 | 33466 | 82015 | 43.55516427 | 40.80469966 |
| 2009 | 33365 | 33699 | 80278 | 41.56138771 | 41.97838552 |
| 2010 | 34324 | 34287 | 82095 | 41.81050262 | 41.76470675 |
| Average | | | | 40.97461833 | 43.24244074 |

Source: BP Statistical Review of World Energy June 2011

APPENDIX 2

| OIL Proved Reserves (Thousand million Barrels) | | | | | |
|--|--------|----------|--------|-----------------|---------------------|
| Year | OPEC | NON OPEC | World | OPEC % of World | NON OPEC % of World |
| 1980 | 425.4 | 160.2 | 667.5 | 63.72166487 | 23.99420464 |
| 1981 | 429.3 | 173.3 | 687.6 | 62.43696219 | 25.20089857 |
| 1982 | 459.2 | 172.1 | 717.4 | 64.01327091 | 23.99086226 |
| 1983 | 467.8 | 175.6 | 728.3 | 64.2366212 | 24.11294613 |
| 1984 | 503.7 | 176.9 | 761.6 | 66.1328908 | 23.23166843 |
| 1985 | 529.8 | 178.8 | 771.3 | 68.68803871 | 23.18466845 |
| 1986 | 636.7 | 180.6 | 878.0 | 72.51516116 | 20.57105156 |
| 1987 | 668.6 | 181.9 | 910.0 | 73.4739634 | 19.98764207 |
| 1988 | 755.0 | 183.1 | 999.0 | 75.5736457 | 18.32832296 |
| 1989 | 763.2 | 175.8 | 1006.4 | 75.83648932 | 17.4721516 |
| 1990 | 763.4 | 176.5 | 1003.2 | 76.09774736 | 17.59318947 |
| 1991 | 769.0 | 175.5 | 1007.6 | 76.32487025 | 17.41638458 |
| 1992 | 772.7 | 177.8 | 1013.3 | 76.25114066 | 17.54903003 |
| 1993 | 774.9 | 176.8 | 1014.3 | 76.40038401 | 17.42891615 |
| 1994 | 778.9 | 178.3 | 1019.5 | 76.39885641 | 17.48484581 |
| 1995 | 786.6 | 180.3 | 1029.0 | 76.44398997 | 17.51900225 |
| 1996 | 805.0 | 183.7 | 1050.6 | 76.62197255 | 17.48757773 |
| 1997 | 817.5 | 185.3 | 1069.3 | 76.45068132 | 17.32779348 |
| 1998 | 823.1 | 163.3 | 1069.6 | 76.95370542 | 15.26878404 |
| 1999 | 831.9 | 166.4 | 1085.0 | 76.67874591 | 15.33498511 |
| 2000 | 849.7 | 168.2 | 1104.9 | 76.89997057 | 15.21970414 |
| 2001 | 855.5 | 167.3 | 1129.0 | 75.78067533 | 14.81723664 |
| 2002 | 903.3 | 165.0 | 1189.6 | 75.93128576 | 13.87132136 |
| 2003 | 912.1 | 167.5 | 1203.2 | 75.80545676 | 13.92138089 |
| 2004 | 918.8 | 167.3 | 1209.3 | 75.9831997 | 13.83280333 |
| 2005 | 927.8 | 167.7 | 1219.7 | 76.06902676 | 13.75367385 |
| 2006 | 936.1 | 176.8 | 1234.1 | 75.85920165 | 14.32771438 |
| 2007 | 954.0 | 177.8 | 1253.5 | 76.10490399 | 14.18768403 |
| 2008 | 1028.8 | 181.1 | 1334.6 | 77.08742014 | 13.57150348 |
| 2009 | 1068.6 | 182.6 | 1376.6 | 77.63072576 | 13.26182395 |
| 2010 | 1068.4 | 188.7 | 1383.2 | 77.23975155 | 13.64248599 |
| Average | 773.7 | 175.2 | 1036.3 | 73.92394904 | 17.57716959 |

Source: BP Statistical Review of World Energy June 2011

APPENDIX 3

| Thousands Barrels per day | | | |
|---------------------------|-------------------|------------------|--------------------|
| Year | World Oil imports | OPEC Oil Exports | % of world imports |
| 1986 | 24240.88409 | 12987.83393 | 53.57821885 |
| 1987 | 24729.34309 | 12898.29095 | 52.15783898 |
| 1988 | 25850.89592 | 14351.17264 | 55.51518479 |
| 1989 | 27390.80751 | 15733.18336 | 57.43964779 |
| 1990 | 28148.34882 | 16761.47216 | 59.54691079 |
| 1991 | 28231.43541 | 17306.48708 | 61.30218612 |
| 1992 | 31613.7253 | 18047.23092 | 57.08669494 |
| 1993 | 32588.48611 | 18677.31237 | 57.31261129 |
| 1994 | 33243.02639 | 18596.08067 | 55.93979457 |
| 1995 | 33784.07012 | 18832.96132 | 55.74509304 |
| 1996 | 35214.05019 | 19263.22478 | 54.70323543 |
| 1997 | 37143.2551 | 20382.82068 | 54.87623695 |
| 1998 | 37788.58725 | 21742.04982 | 57.53602186 |
| 1999 | 37189.62452 | 21187.0246 | 56.97025682 |
| 2000 | 39449.66817 | 21709.9646 | 55.03205884 |
| 2001 | 40060.41257 | 20401.44708 | 50.92670238 |
| 2002 | 39561.42454 | 19419.10476 | 49.08595933 |
| 2003 | 41200.06192 | 21037.29119 | 51.06130964 |
| 2004 | 43444.09945 | 23468.68893 | 54.02042907 |
| 2005 | 44071.66674 | 24325.72116 | 55.19582752 |
| 2006 | 43975.50758 | 24720.65344 | 56.2145949 |
| 2007 | 44313.87451 | 24302.356 | 54.8414154 |
| 2008 | 44124.41602 | 24475.308 | 55.46885423 |
| 2009 | 42044.5472 | 22130.762 | 52.63646174 |
| Average | | | 55.17473105 |

Source: BP Statistical Review of World Energy June 2011

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