Higher Education in Public Universities in Bangladesh

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ABSTRACT: The key aims of higher education are to generate the new knowledge, explore research works on different social and development issues, anticipate the needs of the economy and prepare highly skilled workers. Throughout the World, universities change the society and remain the center of change and development. In Bangladesh a number of universities both public and private were set up so far theoretically emphasized on unlocking potential at all levels of society and creating a pool of highly trained individuals to contribute to the national development. But in practice these universities are very weak and do not change anything. Better understanding among teachers and students, introduction of modern teaching methods and dedication of teachers and students can improve the culture of higher education in Bangladesh. A proper academic calendar can bring discipline. To make the universities free from the clutches of politics can also improve the situation.

Keywords: Higher Education; Bangladesh.

1. INTRODUCTION

In Bangladesh there was a time when higher education used to be considered a luxury in a society of mass illiteracy. However, towards the turn of the last century the need for highly skilled manpower started to be acutely felt every sphere of the society for self-sustained development and poverty alleviation. Highly trained manpower not only contributes towards human resource development of a society through supplying teachers, instructors, researchers and scholars in the feeder institutions like schools, colleges, technical institutes and universities. They are also instrumental in bringing about technological revolution in the field of agriculture, industry, business and commerce, medicine, engineering, transport and communication etc. The development of a modern society depends to a large extent on the nature and standard of higher education. Thus the role of higher education is to prepare competent, knowledgeable and far-sighted people for assuming various higher responsibilities. The growing importance of knowledge in the modern world can hardly be overemphasized, especially in the era of globalization and in a global environment which is fiercely competitive.

1Pakistan Journal of Social Sciences (PJSS); Vol. 30, No. 2 (December 2010), pp. 293-305

2. ACCESSIBILITY OF HIGHER EDUCATION

Accessibility of higher education means the students opportunity to get chance in university education and sufficient support from the educational institutions. The growth of enrolment at the secondary level and large number of output from higher secondary examination put a
pressure for admission in the higher educational institutions. But due to limitation of capacity, annually a few number of students may be enrolled in university level. Thus, each year the vast number of students remains out of higher education. On the contrary, due to the poverty and increasing the educational expenses the students of lower middle class do not get equal access to higher education. Moreover, those who get chance in the university level they have the limited access to attain all kinds of diversified educational facilities relating to their study fields.

3. PUBLIC UNIVERSITIES IN BANGLADESH

After the liberation of Bangladesh in 1971, during the last 35 years, higher education scenario has greatly been transformed. The number of public universities has increased significantly. Public universities are the foremost choice of the majority students seeking higher education. This is for various reasons. First, these universities offer wide range of subjects in Science, Commerce, Liberal Arts, Humanities, Engineering and Technology, Law, Education and Medicine disciplines. Second, public universities attract the best brains and researchers as teachers although monetary compensation for them is anything far from attractive. Third, library, laboratory, internet and research facilities are much better there than anywhere else in the country. Fourth, seminars, symposiums, workshops, debates, exhibitions and visiting teachers lecture series are often held in these institutions with a wide scope for national and international exposures for promising young knowledge seekers. Fifth, residential and boarding facilities at low cost/subsidized rates are available in these public universities.

Table 1: Annual Total Intake and Total Number of Students

<table>
<thead>
<tr>
<th>Name of the university</th>
<th>Annual Total Intake</th>
<th>Total students</th>
<th>Male students</th>
<th>Female students</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Dhaka</td>
<td>5219</td>
<td>28772</td>
<td>19119</td>
<td>9653</td>
</tr>
<tr>
<td>University of Chittagong</td>
<td>3773</td>
<td>19301</td>
<td>14192</td>
<td>5109</td>
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<tr>
<td>University of Rajshahi</td>
<td>4305</td>
<td>26909</td>
<td>19133</td>
<td>7776</td>
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<td>642</td>
<td>4423</td>
<td>3440</td>
<td>983</td>
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<td>Comilla University</td>
<td>350</td>
<td>591</td>
<td>417</td>
<td>174</td>
</tr>
<tr>
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<td>10417</td>
<td>7082</td>
<td>3335</td>
</tr>
<tr>
<td>Islamic University</td>
<td>1210</td>
<td>10109</td>
<td>7913</td>
<td>2196</td>
</tr>
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<td>Bangladesh Agricultural University</td>
<td>757</td>
<td>4621</td>
<td>3211</td>
<td>1410</td>
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<td>25896</td>
<td>21774</td>
<td>4122</td>
</tr>
<tr>
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<td>7218</td>
<td>5865</td>
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<td>6156</td>
<td>1774</td>
</tr>
<tr>
<td>Bangabandhu Sheikh Mujib</td>
<td>Na</td>
<td>1116</td>
<td>695</td>
<td>421</td>
</tr>
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</table>
In comparison to this huge number of students, the number of teachers available in public universities is quite low. Moreover, not all of them are excellent enough to make the students skillful and knowledgeable. Also a large portion of them are involved in teacher
politics as they were employed in the universities on the basis of that. This makes the standard of the public universities low.

4. CHALLENGES OF HIGHER EDUCATION IN BANGLADESH

There are a lot of challenges faced by the public university in Bangladesh. Corruption is one of the barriers of higher education. Besides, nepotism, recruitment of less meritorious teacher by political identities are created obstacle in the higher education. Nevertheless, financial crisis, lack of residential halls, shortage of seats for the applicants as well as the involvement of teachers with other activities are also been identified by the respondents as the barriers of quality education in Bangladesh.

The traditional teaching method is the common feature in our universities. Here, the sharing of knowledge and students participation is very minimal. The brain storming discussions and presentations by the students enables them for a better grooming up. But this is almost absent in our university education system. Moreover, the monologue type of teaching and learning, the traditional system of distant relationship between teachers and students act as barriers in the congenial atmosphere of free learning in the universities of Bangladesh. Simultaneously, modern teaching methods and facilities like internet, multimedia, sound system are also been absent at the public university of Bangladesh. Poor quality of teaching staffs who fail to satisfy the students needs both in quantity and quality. Most of them have lack of specialized research and training on higher education. Moreover, due to the recruitment of political consideration a good number of teachers have no scientific and update knowledge that assist them to change their teaching methods.

Table 2: Number of Teaching & Non-Teaching Staff

<table>
<thead>
<tr>
<th>Name of the university</th>
<th>Teaching Staff</th>
<th>Non-Teaching Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>University of Dhaka</td>
<td>1159</td>
<td>394</td>
</tr>
<tr>
<td>University of Chittagong</td>
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</tr>
<tr>
<td>University of Rajshahi</td>
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<td>463</td>
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<td>304</td>
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</tr>
<tr>
<td>University</td>
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<td>Code 2</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>--------</td>
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</tr>
<tr>
<td>Comilla University</td>
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<td>Bangabandhu Sheikh Mujib Medical University</td>
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</tr>
<tr>
<td>Bangabandhu Sheikh Mujibur Rahman Agricultural University</td>
<td>76</td>
<td>06</td>
</tr>
<tr>
<td>Hajee Mohammad Danesh Science and Technology University</td>
<td>119</td>
<td>20</td>
</tr>
<tr>
<td>Mawlana Bhashani Science and Technology University</td>
<td>66</td>
<td>01</td>
</tr>
<tr>
<td>Patuakhali Science and Technology University</td>
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<td>06</td>
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<tr>
<td>Sher-e-Bangla Agricultural University</td>
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<tr>
<td>Sylhet Agricultural University</td>
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<td>Barisal University</td>
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<td>Jatiya Kabi Kazi Nazrul Islam University</td>
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</tr>
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<td>Jessore Science and Technology University</td>
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<td>06</td>
</tr>
</tbody>
</table>
Adequate library and laboratory facilities are very important particularly for the university education. But the quality and other facilities both in library and laboratory are very poor and outdated. There is shortage of modern equipment in the laboratory. On the other hand, recent text and reference books, professional journals are hardly available in library. So, inadequate library and laboratory facilities are hindering the quality of higher education in public universities in Bangladesh.

### Table 3: library facilities

<table>
<thead>
<tr>
<th>Name of the university</th>
<th>Total no. of books</th>
<th>Total no. of journals</th>
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</thead>
<tbody>
<tr>
<td>University of Dhaka</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Sher-e-Bangla Agricultural University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sylhet Agricultural University</td>
<td>3986</td>
<td>438</td>
</tr>
<tr>
<td>National University</td>
<td>35240</td>
<td>176</td>
</tr>
<tr>
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<td>33308</td>
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<td>Khulna University of Engineering &amp; Technology</td>
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<td>Dhaka University of Engineering and Technology</td>
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<td>Chittagong Veterinary and Animal Sciences University</td>
<td>3000</td>
<td>4000</td>
</tr>
<tr>
<td>Jessore Science and Technology University</td>
<td>Na</td>
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<tr>
<td>Bangladesh University of Professionals</td>
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<tr>
<td>Pabna University of Science and Technology</td>
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</tr>
</tbody>
</table>

The government allocation that is given for the university, mostly spent for the salary and allowances of the faculty and staff members. So, by the weak financial base the universities of Bangladesh do not play their assigned role. Even lack of finance some university do not spend anything for research. But higher education and research must go together.

Party politics both teachers and students have created a great problem in the higher education sectors. Both teaching and learning is greatly interrupted by the teacher and students politics. So, the respondents of the present study have clearly been identified as the major problems of this unexpected political practice in the higher education institutions.

Session jam is currently one of the most alarming situations prevailing in the universities in Bangladesh. It is hindering the higher education in Bangladesh. The problem began with the initial loss of one academic year due to the Liberation War. A university student now has to wait for almost six years to get four years honors degree.
5. RECOMMENDATIONS

5.1 Modify the Syllabus

The syllabus of university education should be modern, time-bound, need-based and international standard. The university authority has to monitor properly to add new and innovative courses and ideas in the learning process so that the students can face the challenges of new millennium. Besides, the credit transfer system should open from any Bangladeshi university to abroad.

5.2 Research Based Education

Higher education should be highly participatory, reciprocal and research based. Both teachers and students spontaneously participate in this learning process and research activities. Besides, the class hour must be at least 1 hour and 50 minutes in lieu of 45 minutes so that students can get more time to participate properly in the learning process. Simultaneously, facilitators can get time to explore them in the classroom.

5.3 Need-Based Education

Higher education should be need-based. That means necessary institutes or departments should be opened in every neglected field of education those have close connection to employment opportunities and income generating activities. Simultaneously unnecessary, self or specific group interest related initiatives should be discouraged. Moreover, new institutes should be opened aiming at reducing regional imbalances and resource mobilization.

5.4 Transparent Recruitment

The recruitment policy should be planned and transparent. Unplanned and political recruitment reduces the standard of education. In this context, priority should be given to the merit, academic result and research work. Besides, a commission relating to teachers recruitment should be formed so that non-political and bias free recruitment is ensured.

5.5 Introduces Teacher Evaluation

The university management has to introduce teacher evaluation system in the education process. The evaluation may be by the students and university authority. But this evaluation should bias free. If the system introduces teachers’ consciousness, motivation and responsibilities will increase.

5.6 Teacher-Student Politics

The university should free from political interfere. Student politics must be constructive and students’ welfare oriented. On the other hand, teachers should avoid the servile of political parties. In order to create safe and sound atmosphere and ensure the standard of education it is burning question to reform of teacher and students politics. Moreover, the internal conflict of teachers should be removed.
6. CONCLUSION

Due to the low quality of training, lack of combination of knowledge and practice, poor capacity and quality of graduates, the existing education system of public university of Bangladesh is in vulnerable position. It is losing its articulation and image that making its inappropriate in the present competitive market economy. As a result, the public university is going to fail to keep the tradition as well as quality of training, research and the social accountability. Comparing to the amount of students passing the HSC examination every year, the number of public universities in Bangladesh is still not sufficient enough. Moreover, many of the existing public universities do not fulfill the requirements which are needed to ensure a high quality standard in a university. The respective authorities should focus into the matter. Higher education sector can meet the needs of the economy. It promotes an overall development of society, viz., social, economic, technological, human resources development etc., which are highly correlated. The development of higher education plays an important role in facilitating these changes and producing adequately trained manpower. The effectiveness of higher education institutions contributes to development both internally and externally. So, higher education needs sustenance and quality with time and space. For sustaining and improving quality in the higher education it is need to reorient of curriculum and introduce vocational and job oriented courses.

7. REFERENCES

The 7 Ps` In the Websites of Qatari Banks

Bahnaz Ali Alquradaghi

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ABSTRACT: This research is an attempt to discover the extent of availability of the marketing mix elements in the webpages of some of the Qatari banks, in order to assess the degree of development in this area, and if they are able to take advantage of existing technologies in this field. I have discovered that the Qatari Banks, under consideration in this study, are very interested in the internet and have a desire to use this technology-and have actually been using it since 2010.

The elements of the marketing mix in services are 7, namely: product, price, place, people, promotion, physical evidence and process. Banks are service institutions. I chose to study 3 banks in Qatar: Qatar National Bank, Qatar Islamic Bank, Masraf AlRayan, and have made comparisons between them to find out how efficiently these elements of the marketing mix have been implemented. I found that the marketing mix is well established in Qatar National Bank, and to a lesser extent in Qatar Islamic Bank and Masraf AlRayan respectively. That is because Qatar National Bank has a wide diversity in product, a numerous branches and ATMs, a successful advertising strategy and attention to detail.

Keywords: Marketing Mix, Qatari Banks, Six Sigma in marketing .

1. INTRODUCTION:

The banking industry is an integral part of any society. E-banking in the banking sector in Qatar has become more significant since 2010. Banks had started to perform E-marketing besides the traditional marketing in banking in order to be able to offer new services efficiently due to the following:

- Intense competition in the financial service sector: The competition became intense due to the growing banking perceptiveness, and increase in liberalization of interest rates or profits rates in Islamic banks.
- Banks have to increase their profits to create new markets, to protect and develop their market shares and to survive on the basis of intense competition.
- Bank activities in Qatar can be divided into two categories; retail banking, dealing directly with individuals and small businesses and secondly business banking which provides services to corporate clients.

Banks offer different channels to access their banking and other services: Branches, ATM, Mail, Mobile banking, Credit Cards. New innovative methods of marketing services used by the banking
sector, such as E-banking enable people to carry out most of their banking transaction using a safe website operated by their respective bank. It had started in Qatar in 2010 in most banks. It is a very important delivery channel, from a bank’s perspective, with the costs per transaction being even lower than those of an ATM; Furthermore, it represents a significant opportunity for banks because it does not require physical infrastructure. It is also the most important facility from the customer’s perspective because it enables them to pay utility bills over the net, is open 24 hours, is fast and saves time.

While Internet banking has great potential and is a powerful delivery channel, it has succeeded to make a significant impact due to a combination of psychological, technological and socio-economic factors, and the government has made considerable progress in initiating a trustworthy environment.

The E-Banking sector is a service sector in which customer and service producers interact closely. The internal and external relations both have a significant role to play. It requires two techniques: Finding and keeping successful personnel as well as acquiring new customers while keeping the old ones. The role of the customer is very important according to researchers, as maintaining the relationship with extant customers increases the profit of the banks. In a service industry the product is not unique and hence easier to imitate so to have the best marketing mix is essential and a must have. Since the service has a dynamic approach, the marketing mix plan must also be dynamic. The competition in the banking industry environment makes the detailed and thorough knowledge about the marketing mixes a must.

2. **OBJECTIVE OF THE STUDY:**

1. The objective of the study is to examine the availability of marketing mix in Qatar banks website and analyze the quality by comparing 3 banks.

2. Disclosure about the importance of the role of E-marketing to banks and the importance of the availability of the elements of the marketing mix.

3. **RESEARCH PROBLEM:**

The number of working banks in Qatar is up to 25 so the competition between them is very high. This raises the question; have the Qatari banks been able to enter the 21st century or are they still in the 20th century, are they marketing their products? How effective is the marketing mix? How effective are the banks’ webpages and their use of internet banking?

4. **HYPOTHESIS:**

Based on the literature review, the following hypotheses emerge:

Hypothesis 1: Webpages of banks under study have appropriate marketing mix.

Hypothesis 2: The insignificance in the places policy - for banks under study- led to weak competitiveness against other banks.
Hypothesis 3: The insignificance in products policy – for banks under study – led to weak competitiveness against other banks.

Hypothesis 4: The insignificance in promotions policy – for banks under study – led to weak competitiveness against other banks.

5. THE IMPORTANCE OF RESEARCH:

There are no similar studies in the area of (marketing mix in Qatari banks). The Study will touch an important aspect to enhance and increase the performance of local banks in front of their competitors in Qatar.

This study is a scientific contribution as it will help to inspire similar studies and help banks to increase their performance by changing the marketing policies followed by banking.

The importance of this research also highlights the important role played by the elements of the marketing mix in achieving the goals of bank marketing strategies and achieving customer satisfaction as well as dealing with the requirements of the modern era.

6. METHODOLOGY

The present study is descriptive in nature, which is based on empirical evidences in the form of primary data. The data collection has been done through the websites of the selected three banks, and by calling the call center for each bank to get the extra information which is not available in the websites.

The study also used secondary data, which was collected from different published sources.

7. DEFINITION

The marketing mix is a “Controllable variables that an organization can co-ordinate to satisfy its target market” (McCarthy and perreault1987). The essence of the marketing mix concept is, therefore, the idea of a set of controllable variables or a “tool kit” (Shapiro, 1985). The marketing mix is often crucial when determining a product or brand's offering, and is often synonymous with the four Ps: price, product, promotion, and place; in service marketing, however, the four Ps have been expanded to the 7P’s or nine to address the different nature of services.

In recent times, the concept of four Cs or 5Vs has been introduced as a more new replacement of four Ps. And there are two four Cs theories today. One is Lauterborn’s (1990) four Cs (consumer, cost, communication, convenience), another is Shimizu’s four Cs (commodity, cost, communication, channel). But according to Bennett (1997) there are five criteria that can be used “To summarize the buyer disposition towards the adoption of a particular product or service: value, viability, volume, variety and virtue. These are the 5Vs concept from the buyer’s perspective of the marketing mix.
American marketing association definition:

Marketing mix is the four-factor classification called the "Four Ps"—price “The mix of controllable marketing variables that the firm uses to pursue the desired level of sales in the target market. The most common classification of these factors is product, promotion, and place (or distribution). Optimization of the marketing mix is achieved by assigning the amount of the marketing budget to be spent on each element of the marketing mix so as to maximize the total contribution to the firm. Contribution may be measured in terms of sales or profits or in terms of any other organizational goals”

“It is known as a “mix” because each ingredient affects the other and the mix must overall be suitable to the target customer.

What makes for an effective marketing mix?

“An effective marketing mix is one which:

- Meets customer needs
- Achieves marketing objectives
- Is balanced and consistent
- Creates a competitive advantage for the business

The marketing mix for each business and industry will vary over time. For most businesses, one or two elements of the mix will be seen as relatively more important than the others.” (Riley 2012)

The key elements of the marketing function began in 1948 with Cullition, then Jerome McCarthy was able to develop the elements of marketing mix and his recipe was the 4 element beginning with the letter “P” and is known as “4 Ps” which stand for the initial letters of the following words: Product, price, promotion and place.

After a period of time, many literary writings saw that it is no longer sufficient to the development era for the period, so they added more elements according to application areas. As Booms & Bittner theory added three other elements and became known as the “7 Ps” explained as follows:

Product –Price – Promotion –Place – People- Physical evidence – Process

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Place</th>
<th>Promotion</th>
<th>People</th>
<th>Physical Evidence</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trademark, Quality, Features, Attributes</td>
<td>Distribution, Discounts, Taxes, Payment Terms</td>
<td>Location, Availability, Accessibility, Transportation</td>
<td>Advertising,公关, Sales Promotion, Public Relations</td>
<td>Sales, Customer Services, Social Media</td>
<td>Environment, Transparency, Ethics, Fair Trade</td>
<td>Facilities, Product Development, Packaging, Delivery</td>
</tr>
</tbody>
</table>

Source: Kotha (2004)

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Place</th>
<th>Promotion</th>
<th>People</th>
<th>Physical Evidence</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research, Development, Design, Engineering</td>
<td>Distribution, Discounts, Taxes, Payment Terms</td>
<td>Location, Availability, Accessibility, Transportation</td>
<td>Advertising,公关, Sales Promotion, Public Relations</td>
<td>Sales, Customer Services, Social Media</td>
<td>Environment, Transparency, Ethics, Fair Trade</td>
<td>Facilities, Product Development, Packaging, Delivery</td>
</tr>
</tbody>
</table>

Source: De Vries and Struyf (2005)

Figure 1: Marketing Mix Element.
8. APPLICATION TO QATAR’S BANKS:

I am testing the availability of the element of the marketing mix in the webpages of the Qatar Banks and I chose 3 banks as follows:

1- Qatar National Banks (QNB): Because it is the oldest bank in Qatar and it is conventional, active since 1964.

2- Qatar Islamic Banks (QIB): Because it is the oldest Islamic banks in Qatar, active since 1984.

3- Masraf Al Ryan: Because it is the newest bank in Qatar and it is Islamic, active since 2006.

8.1. Product: The product is any good or service or idea or any combination of the three.

In a narrow sense the product could be any material or anything with material properties to be sold to a buyer’s market. In the broad sense and in the context of marketing – it is all physical tangible or intangible, received by the individual through exchanges. “Intangible products are service based like the tourism industry, the hotel industry and the financial industry. Tangible products are those that have an independent physical existence. Typical examples of mass-produced, tangible objects are the motor car and the disposable razor. A less obvious but ubiquitous mass produced service is a computer operating system.”(Needham1996)

The product as a component of the marketing mix includes the following: range, quality, product name, product line, product warranty, after-sales service, product level or depth of products, the mental image, diversity, customer service, the uses and availability of the product.

Banks, as a service institution, create an image about their name through their products. The product reflects a genuine and realistic image about the capabilities and possibilities of the banks and it also attracts individuals and companies from other competitor banks.

The product Mix includes several components so I put these components in figures to reflect their availability in these three Qatari banks.

Source: Author’s own based on information from website of the three banks.

Figure 2: Product Mix Elements in Qatar National Bank (QNB).
Figure 3: Product Mix Elements in Qatar Islamic Bank (QIB).

Source: Author’s own based on information from website of the three banks

Figure 4: Product Mix Elements in Masraf AlRayan.

Source: Author’s own based on information from website of the three banks.
Through these three figures we discover that the third hypothesis is not correct because-all the three banks have a variety of products that meet the need of their customers and are thus leading strong competition against other banks.

8.2. Price:

The price which is an important component of marketing mix is named differently according to the nature of the transaction exchange that takes place. Banks have to estimate the prices of their services offered. By performing this, they keep their relations with extant customers and take on new ones. The prices in banking have names like interest (profit in Islamic banks), commission and expenses. Price is the sole element of the marketing variables that creates earnings, while others cause expenditure. While marketing mix elements, other than price, affect sales volume, the price affects both profit and sales volume directly.

Banks should be very careful in determining their prices and price policies, because mistakes in pricing cause customers’ shift toward their rivals offering similar services.

It is the price as the value or monetary unit paid by the consumer to vendor product or service in exchange for them, or “The price is the amount a customer pays for the product. The price is very important as it determines the company’s profit and hence, survival. Adjusting the price has a profound impact on the marketing strategy, and depending on the price elasticity of the product, often it will affect the demand and sales as well” (Needham1996)

The price is a double-edged sword if you do not use right, it will make you lose a customer or lose profit and both are bitter so it should be considered in the short and long term strategies. The institutions should either develop pricing strategies that are commensurate with the marketing position, or determine how to define the pricing range of products. These pricing strategies should also define the pricing of any new product and how to develop pricing policies to face challenges posed by the competition. The price is determined after examining a number of variables such as: competition, the price of raw materials, product identity, pre-estimate of the price by the purchaser…etc.

The price as a component of the marketing mix includes: Discount, commission, perceived value, relationship quality price, market price, terms of payment, price position in the market, the components of value added, credit, price levels and payment methods.
8.3. Place

The place refers to the point of distribution of products as well as the methods and channels of distribution of these products, bearing in mind that distribution is considered to be one of the main elements of marketing which aims to ensure delivery of goods or services from the producer or service provider to the consumer. The place is also where the products are actually sold and includes the means of distribution and delivery of the goods and services to the buyers and the ways that these products and services reach the anticipated consumer at the appropriate time and place. The activities involved in distribution encompass the tangible distribution or the logistics such as transport, delivery, storage as well as choice of right distribution strategy either directly or through mediators.

Internet Banking needs no physical presence or existence, it can be provide anywhere but one of the keys to success is making available the service where the customer wants it, thus there is a great interest in the availability of branches and ATM machines. There are a number of factors affecting the determination of the location of the branch of bank, like population characteristics, commercial, proximity of other commercial outlets.

Figure 5: Price Mix Elements in the three banks.

Source: Author’s own based on information from website of the three banks.
Table 1. Place Mix Elements in the three banks.

<table>
<thead>
<tr>
<th></th>
<th>Qatar National Banks (QNB)</th>
<th>Qatar Islamic Banks (QIB)</th>
<th>Masraf AlRayan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical coverage</td>
<td>Inside and outside Qatar</td>
<td>Inside Qatar only.</td>
<td>Inside Qatar only.</td>
</tr>
<tr>
<td>Physical distribution and logistics</td>
<td>44 branches inside Qatar and an unknown number outside Qatar</td>
<td>26 branches inside Qatar</td>
<td>10 branches inside Qatar.</td>
</tr>
<tr>
<td>Electronic Distribution</td>
<td>107 ATMs machine</td>
<td>100 ATMs machine</td>
<td>31 ATMs machine</td>
</tr>
</tbody>
</table>

Source: Author’s own based on information from website of the three banks

Through the table we discover that place strategies are very strong in Qatar National Bank, then Qatar Islamic Bank and then AlRayan. The three banks are leading the competition strongly and thus negate the second hypothesis.

8.4. Promotion

I don’t have to leave my products to get to know them by accident... but I have to tell about them …tell about what they are ….what is the price ….where to find it … Promotion is simply the tool to make the customer more and more aware of the services and benefits provided by the bank; It is also the element of the marketing mix that most people mean when they talk about “marketing” and they mean by that communication. An integrated promotional mix, includes a measure of advertising, personal selling, sales promotion, public relations, publishing and selling promotional tools.

Hence promotion is the official spokesman for marketing activities performed through the vendor or through personal or impersonal items: newspapers, television, radio, etc. It includes the promotions side, customer service and addresses their complaints to ensure a permanent presence in the receiving market.

It includes all communication activities with clients from advertising, public relations, sales promotion, direct mail and hidden marketing. Promoting intervenes in all of the above elements such as the shape and size of the product. All promotional expenses must be covered in the process of determining the price. The promotion venue is also of great importance to its success.

Types of promotion: There are many types of promotion such as:
- Personal selling: “Due to the characteristics of banking services, personal selling is the way that most Banks prefer in expanding selling and use of them. Personal selling occurs in two ways. First occurs in a way that customer and banker perform interaction face to face at branch office. In this case, whole personnel, bank employees, chief and office manager, takes part in selling. Second occurs in a way that customer representatives go to customers’ place. Customer representatives are specialist in banks’ services to be offered and they shape the relationship between bank and customer.” (Dr. Once, clarity marketing 2005)

- Advertising: “Banks have too many goals which they want to achieve. Those goals are for accomplishing the objectives as follows in a way that banks develop advertising campaigns and use media:

1. Conceive customers to examine all kinds of services that banks offer.
2. Increase use of services.
3. Create well fit image about banks and services
5. Introduce services of banks.
7. Emphasize well service.” (Once)

Ads should be mostly educative, image making and provide the information as follows:

1. Activities of banks, results, programs, new services.
2. Situation of market, government decisions, future developments.
3. The opportunities offered for industry branches whose development meets national benefits.

Selling promotional tools:
Unification element of the promotion mixes of banks is improvement of selling. Mostly used selling improvement tools are layout at selling point, rewarding personnel, seminars, special gifts, premiums, contests.” (Dr. Once, Raina 2010, Nordman 2004)

Table 2 . Promotional Mix Elements in the three banks.

<table>
<thead>
<tr>
<th>Promotional mix</th>
<th>Qatar National Banks (QNB)</th>
<th>Qatar Islamic Banks (QIB)</th>
<th>Masraf AlRayan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising: reach,</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>frequency, theme and</td>
<td>Inside Qatar they advertising in print media: weekly in local newsletter, half full page and sometimes in daily basis.</td>
<td>In print media: From time to time and they make advertisement.</td>
<td>In print media: Few advertisements.</td>
</tr>
<tr>
<td>media.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Electronic promotion (E.X.: web or telephone) | Web and one source Call Center. | Web and one source Call Center. | Web and one source Call Center.

Sales promotion | Gifts | Gifts | Gifts

Publicity | By sponsoring important events like sports, conferences… | By sponsoring important events like sports, conferences… | By sponsoring important events like sports, conferences…

Source: Author’s own.

Through the table we discover that the promotional policy at Qatar National Bank is very strong, then comes Qatar Islamic Bank and at last comes AlRayan Bank. The three banks are leading the strong competition against the other banks and that proves the failure of the fourth hypothesis.

The six sigma manages the critical promotion process as following:

**Table 3 Six Sigma In The Promotion Process**

<table>
<thead>
<tr>
<th>In Puts</th>
<th>Process Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks Goals</td>
<td>Strategy Development.</td>
<td>Promotional activities.</td>
<td>Leads</td>
</tr>
<tr>
<td>Market/Customer knowledge.</td>
<td>Planning and Budgeting</td>
<td>Collaterals</td>
<td>Bank Image/brand</td>
</tr>
<tr>
<td>Distribution, Partnerships and Channel data.</td>
<td>Campaign Management/Execution.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: (Panda, 2005).

**8.5. process**

The process of delivery to the customer services is a key element of the marketing mix for banking service and includes all measures to ensure service delivery to customers effectively and this process is defined as: how they are to provide the service to customers.

The process starts from the moment the customer enters the bank until he leaves it; this process of handing over to the customer service is a way of strengthening good relationship with the customer. Therefore it is necessary when designing banking service delivery to focus on the customers and how to address them, as well as to manage the bank to reduce as much as possible the routine procedures in order to get the service accomplished in a short period of time. The how process is crucial for the bank, since the process of service includes very important things, such as the
procedures followed by the bank to ensure the provision of service to customers and also includes other measures such as mechanization and flow activities, freedom of action by those on service, how to direct customers and motivate them to be involved in the process of providing the service. The process of service delivery affects customer perceptions of the quality of service provided to them, so the integration of marketing plans and the delivery service to customers within the marketing mix will contribute towards making banks more efficient, more profitable and with high level customer satisfaction. The realization of the bank’s administration of the importance of Bank’s operations adds a competitive advantage because of the inherent speed of operations in the implementation and fulfillment of service, as well as saving the customer’s time.

The factors of speed and time are considered the most important in the provision of support services in this era of speed, and for the following considerations:

- The time-saving for the client, gives him time to do his other activities.
- The speed of completion of the transaction merchant banking customer from his opportunities to make profits by taking advantage of investment opportunities that depend on the speed of delivery.
- The speed of completion of the transaction allows the bank to serve a larger number of customers, and the same number of employees, which means saving in cost and high in yield.

Among the factors to help in the process of achieving speed and time-saving banking service:

1. Dependence on modern technology in providing banking service.
2. Abbreviation banking operations and procedures away from red tape and bureaucracy.
3. Devolution of powers.
4. Clarity in banking regulations.
5. No deadlock in the understanding of the text instructions and regulations, and work in the spirit of the text.
6. Standardization of bank procedures between the various branches of the bank.

There are many factors that affect the method of providing banking services including:

- Respect for the system: The respect for the system is one of the most important factors of customer satisfaction for the quality of service provided banking, and to achieve justice among customers, as well as the disappearance of the role of favoritism or nepotism or knowledge between customer and bank officer. To achieve this goal it is to manage the processes to adopt the introduction of SOA technologies to regulate the role automatically, and away from the barriers to regulate the clients within the ranks, where this scene is civilized feature in banking service. Can also be the formation of special unit to lead the major customers, in order to expedite the completion of their transactions?

- Ease of actions: The shorten and simplify procedures without compromising the essence of banking in terms of accuracy and honesty and control is one of the important factors for the removal of red tape and bureaucracy for banking service, as this is another factor measuring customer satisfaction with the quality of service provided. This has helped the development of information systems to ease banking data archiving and retrieval, processing and thus
access to banking accurate information: As we are seeing progress in reducing reliance on models and papers written and banking as well as the standardization of procedures in the various branches.

- Place to provide banking service: Associated with this factor banking distribution channels: link place quickly and easily provide the service was to manage the banking operations looking for ways to provide modern banking, which facilitate the customer the trouble to come to the bank as well as the possibility of providing service outside office hours. The tools and methods that have been recently resorted to: Bank spokesman, services SMS, ATM, bank mail and E-banking this can measure the success of operations management in achieving customer satisfaction by “measuring the speed of the transaction per customer, and the number of operations performed per day, as well as evaluating the technological level used by the bank in terms of business systems and software, computers and ATMs, automated and organizing role, these are all indications of how easy it is to provide service to the customer.”( McDonald, Frow and Payne,2011)

The Six Sigma can be used in order to achieve the greatest degree of effectiveness in the Process and “it also helps marketing departments in financial institutions to analyze their current performance and execute improvement actions to optimize their process.” (Oliya, Owlia, Shahrokh and Olfat)

The following table shows the availability of the elements of the Process Mix in the three banks:

**Table 4 . Process Mix Elements in the three banks.**

<table>
<thead>
<tr>
<th></th>
<th>Qatar National Banks (QNB)</th>
<th>Qatar Islamic Banks (QIB)</th>
<th>Masraf AlRayan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardization</td>
<td>The bank has standardized procedures to get typical transactions.</td>
<td>The bank has standardized procedures to get typical transactions.</td>
<td>The bank has standardized procedures to get typical transactions.</td>
</tr>
<tr>
<td>Customization</td>
<td>Special counters at each branch to deal with customers of a particular scheme.</td>
<td>Special counters at each branch to deal with customers of a particular scheme.</td>
<td>Special counters at each branch to deal with customers of a particular scheme.</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Separate counters exist with clear indication.</td>
<td>Separate counters exist with clear indication.</td>
<td>Separate counters exist with clear indication.</td>
</tr>
<tr>
<td>Customer involvement</td>
<td>Through money matter and signature.</td>
<td>Through money matter and signature</td>
<td>Through money matter and signature</td>
</tr>
</tbody>
</table>

Source: Author’s own.

There is no difference between operations management in Islamic banks and conventional banks because these are regulatory measures aimed at facilitating the provision of banking services to customers.

8.6. People
People who provide services and are in direct contact with the client are the key to the company's success as they provide an atmosphere of familiarity, comfort and acceptance. This tangible service forms the defining image of the Service Provider.

It includes individuals as a component of the marketing mix as follows: service providers, users of the service, the relationship between the service provider and the beneficiary of them, the existing relations between the beneficiaries of the service, individuals organizers of the marketing activities, individuals organizers of the customer contact, the mental image, culture, training and skills, rewards and incentives, the degree of participation of customers in the production of the service, “the relations between the customers themselves, and the company's relationships with customers” (Ennew, Watkins and Wriht 1995).

By integrating human capital into the Lean Six Sigma equation, banks have the opportunity for exponential, quantum levels of improvement and success. “Lean Six Sigma develops effective employees within your organization by:

- Involving employees in the improvement process. This promotes active participation and results in an engaged, accountable team.
- Building trust. Transparency throughout all levels of the organization promotes a shared understanding of how each person is important to the organization’s success.

Basically, Lean Six Sigma develops a sense of ownership and accountability for your employees. This increases their effectiveness at delivering results for any improvement project they are involved in. Quite often, this benefit is overlooked by organizations who implement Lean Six Sigma, but its underlying advantages dramatically increase the chances of continued success of Lean Six Sigma, and your business.” (Go lean six sigma, lss-academy)

Table 5 Lean Six Sigma Develops Effective People

Source: (Go lean six sigma)
The three banks in Qatar focused on service staff so that they may deal with the customer in an especially professional manner.

8.7. physical evidence

Competition between conventional and Islamic banks encourages them both to provide a comfortable environment and pay attention to every detail in the exterior and interior appearance.

"Physical evidence of the equipment used for the production of banking services is characterized as not tangible and material evidence is defined as: the physical environment surrounding the bank employees and customers during the production and delivery of service, plus concrete elements used to connect and support the role of the service.

The lead elements of the physical evidence plays an important role in the “comfort of the customers while they are receiving banking services” (Radomir, Wilson and Scridon). Therefore physical evidence is a large factor in customer perception of service in terms of quality banking and speed of service (Haron and Azmin, 2005).

Manifestations of physical evidence:

A. Appearance:

The design includes the external appearance of the bank, and the front placard with the Bank Name, the bank’s logo, and the surrounding environment for the delivery of service to the customer.

B. Interior facilities:

The Interior design includes the bank in terms of offices and distribution workers, the waiting area, equipment, and the equipment used to service customers directly, or that used by the bank's management.

C. Other aspects:

Other physical evidence which affect customer perceptions include certain vocabulary such as business cards and stationery, reports, and the appearance that affect customers’ positive perceptions about employees working in the bank, such as whether employees follow a dress code or not. So marketers employ the banking experience and use it to create a positive image of the bank and its services to the customers” (Haron and Azmin, 2005)

Table 6. Physical Evidence Mix Elements in the three banks.

<table>
<thead>
<tr>
<th></th>
<th>Qatar National Banks (QNB)</th>
<th>Qatar Islamic Banks (QIB)</th>
<th>Masraf AlRayan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial reports</td>
<td>Are issued to the customer on the web site to emphasis their credibility</td>
<td>Are issued to the customer on the web site to emphasis their credibility</td>
<td>Are issued to the customer on the web site to emphasis their credibility</td>
</tr>
</tbody>
</table>
Qatar National Banks (QNB) | Qatar Islamic Banks (QIB) | Masraf AlRayan
--- | --- | ---
**Tangibles** | Pens, writing pads to the customers and employees, Cheque book to the customers. | Pens, writing pads to the customers and employees, Cheque book to the customers. | Pens, writing pads to the customers and employees, Cheque book to the customers.
**Rule enforcement** | There is rule enforcement by the law and the management. | There is rule enforcement by the law and the management. | There is rule enforcement by the law and the management.
**Employee`s Dress Code** | Follows a dress code for their employees. | Does not follow a dress code for their employees. | Does not follow a dress code for their employees.

Source: Author`s own.

Both kinds of banks deal with physical evidence in a very professional manner.

9. **CONCLUSION**

In quick reading of E-marketing environment through the web pages in Qatar, I found that it is going in parallel with the traditional environment of marketing. Qatari Banks established web pages which provide information and some small services.

Qatari banking is focusing intently on mastering innovative business models by edifice management and customer services. Qatari banks should exert rigorous efforts to render enhanced services to their customer and should overcome the challenges.

Banks are the most significant players in the Qatari financial market. They are the biggest purveyors of credit, and they also attract most of the savings from the population. Dominated by public sector, the banking industry has so far acted as an efficient partner in the growth and the development of the country.

Qatari banking has finally worked up to the competitive dynamics of the ‘new’ Qatari market and is addressing the relevant issues to take on the multifaceted challenges of globalization. Banks that employ IT solutions are perceived to be ‘futuristic’ and proactive players capable of meeting the multifaceted requirements of the large customers base.

From this research I conclude that the marketing mix for Qatar`s banks rely on 7 components: Price, Product, Promotion, Place, People, Physical evidence and Process.
These elements are established the most strongly in Qatar National Bank, then in Qatar Islamic Bank, and then in Masraf AlRayan. That proves the first hypothesis to be true.

In terms of product: the banks offer a fantastic variety of investors but AlRayan goes wider and includes taking care of children by creating children’s account which is a great idea and is similar to European banks and has a lot of success.

In terms of prices, I observed that there are similar prices and there appears to be no competitive edge sought through advertising pricing. In all banks in the study, there is no information about the service price and there is no information about the profit rate in Qatar Islamic bank and Masraf AlRayan.

In terms of the place, Qatar National Bank ranked first because it has more branches inside and outside Qatar and more ATMs inside Qatar than the other banks. Qatar Islamic Bank comes second because of its wide number of branches inside Qatar and large number of ATMs. Masraf AlRayan comes in third place and needs to open more branches and ATMs for its customers. All banks offer credit cards which can be used inside and outside Qatar. Qatar Islamic Banks offers two additional cards: Travel card for use outside Qatar and Almanasek Card which is specifically for use in Saudi Arabia during Al-Haj period.

In terms of promotion, Qatar National Banks is very successful in making its name in the market. Its strategy is very successful. It has a very focused and consistent promotion plan. Qatar Islamic bank and Masraf AlRayan need to invest in more advertising to confirm their names in the market, especially Masraf AlRayan because it is new in the market.

The other component of the marketing mix is similar in kind in all the three banks.

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Transformation of The Fishery Subsector of Nigeria: The Need for Fishery Extension Program

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ABSTRACT: The inclusion of fishery subsector as one of the priority subsectors in the agricultural transformation plan of Nigeria stems from the increasing demand-supply gap for fish; which continues to constitute a colossal loss of foreign exchange in Nigeria. In view of the foregoing, this study was carried to examine the programs of the fishery subsector transformation plan in the achievement of self-sufficiency in fish production which is the principal goal of the fishery subsector transformation plan. Secondary data were employed in this study. Despite the laudable programs of the fishery transformation plan namely: (i) fish farm estate development program (ii) fish seeds and feed mill development program (iii) fish pen and cage culture development program (iv) fish post-harvest management and marketing program, the exclusion of fishery extension program in the programs of the fishery transformation plan was identified as a major weakness of the fishery transformation plan that could mar the achievement of the goal of achieving self-sufficiency in fish production. Therefore, it is recommended that fishery extension program should be included as a component of the fishery transformation plan of Nigeria so as to facilitate the delivery of fishery extension services to fish farmers, fish marketers, fish feed millers and other actors in the fish value chain.


1. INTRODUCTION

Fish farming is a feasible activity for small scale farmers to generate extra income and to add highly nutritious food to the daily diet[1]. It can be combined with crop, animal husbandry and irrigation practices which can lead to a better utilization of local resources. Nigeria is reported to have aquaculture potential which constitutes 75% of 923,768km$^2$ of the landmass and 14 million hectares of inland freshwater, but less than 1% is utilized for fish production [2]. Although the contribution of fisheries to the G.D.P is small (3-4%), it occupies a very significant position in the primary sector providing employment for over five hundred thousand people and contributing to over 40% of the animal protein intake of the people particularly the resources poor[3]. Nigerians are high fish consumers and offer the largest market for fish and fisheries products in Africa. Fish farming has thus become an important venture in the quest for food security and eradication of malnutrition especially among infants[4]. With an annual fish demand in the country of about 2.66 million tonnes, and a paltry domestic production of about 780,000 tonnes, the demand-supply gap stands at a staggering 1.8 million tonnes. Despite the popularity of farming in Nigeria, the fish farming industry can best be described as being at the infant stage when compared to the large market potential for its production and marketing[5].
The Nigerian fishing industry comprises of three major sub sectors namely the artisanal, industrial and aquaculture of which awareness on the potential of aquaculture to contribute to domestic fish production has continued to increase in the country[6]. This stems from the need to meet the much needed fish for domestic production and export. Although aquaculture in Nigeria has the potential for satisfying the increased demand for protein and has been experiencing unprecedented growth during the last decade, question remains regarding the sustainable development of the industry[7]. Despite the potential in fisheries, this sector is faced with constraint that hinder the full harnessing of the resources but if proper attention is given to this sector through extension and training, the better for the unemployed in our immediate environment[8].

Nigeria spends ₦100 billion on fish importation annually and the current fish demand consumption in Nigeria stands at over 2.66 million tonnes per annum, while the present importation rate is over 750,000 metric tonnes[9]. The continuous importation of fish portends a colossal loss of foreign exchange earnings to Nigeria. In order to bridge the demand-supply gap, an aquaculture transformation agenda plans to increase annual fish production from the current production of 0.78 million MT to 3.0 million tonnes in order to achieve self-sufficiency in fish production and supply by the year 2015[10]. The aquaculture transformation agenda is a laudable action plan put forward by the aquaculture value chain group of the federal ministry of agriculture and rural development, Abuja, Nigeria. This study was designed to review the action plan for the transformation of the fishery sub-sector in order to identify possible gaps that needed to be addressed towards ensuring that the self-sufficiency in fish production and supply by the year 2015 is achieved.

2. BLUEPRINT FOR THE TRANSFORMATION OF NIGERIAN FISHERY SUB-SECTOR

The fish value chain is essentially made up of three sub-categories: production, processing and ancillary[11]. Fish fingerling hatcheries, fish production, fish feed production, fish farm supplies are some of the activities which make up the production category, while fish processing includes filleting, drying, gutting, scaling and deboning, smoking, production of fish paste and production of fish oil. Ancillary activities include storage, packaging, warehousing, marketing, haulage, distribution, freighting and all export related activities. The value chain group believes that the major areas to increase fish production are:
1. Fish cage culture systems
2. Water recirculatory systems (WRS)
3. Flow-through systems
4. Integrated Fish farming

2.1 Objectives of the Aquaculture Transformation Agenda
1. To reduce importation of aquaculture products and inputs
2. To increase production of aquaculture products to arrive at over 1 million metric tonnes in 5 years
3. Employment generation for food security of Nigerians
4. Development of the various products along the aquaculture value chain
5. Establish the chain linking up the market to consumers
6. Establish, maintain and enforce quality standards along all the value chains backed up by appropriate regulation for the purpose of fish farms certification
7. To improve cultural, social and economic benefits from Nigeria's aquaculture resources
8. To generate foreign exchange through export of aquaculture products
9. To create enabling environment for small scale fish farmers to be part of the value chain
10. To encourage clusters of farmers to produce fish that will service fish processing and packaging plants

2.2 Expected Outputs of Aquaculture Transformation Agenda
1. 1.25 billion fish seeds per annum
2. Production of 400,000MT of fish feed per year
3. Production of 250,000MT of table size fish in a year
4. Creation of 100,000 jobs per annum for the next five years

The aquaculture transformation agenda plans to increase annual fish production from the current production of 0.78 million MT to 3.0 million MT in order to achieve self-sufficiency in fish production and supply by 2015[10]. This will be achieved through the following:

1. Fish Farm Estate Development Program: This program will basically involve establishment of large estates of fish farms across the nation. This will boost the production of aquaculture immensely towards the attainment of self-sufficiency.

2. Fish Seeds and Feed Mill Development Program
   Fish Seeds Component: This will involve the following:
   i. Production of 2 billion fingerlings per annum;
   ii. Providing premium quality brood stocks with fast growing disease resistant seed for the fish production value chain.
   iii. Establishment of 20 hatcheries per annum over 5 years giving an industry base of 100 hatcheries.
   iv. Creation of 10,000 hatchery jobs in 5 years
   v. Creation of a ₦50 billion industry.

   Feed Mill Component: This will involve the following:
   i. Production of over 1.8 million MT of aquaculture fish feed per annum in 5 years:
   ii. Establishment of 90 top grade fish feed mills (of 20,000 tonnes per annum) at 18 per Year for 5 years;
   iii. Creation of over 2,500 new jobs;
   iv. Creation of a ₦230 billion industry.

3. Fish Pen and Cage Culture Development Program: This will involve the following:
   i. Production of over 1 million tonnes of raw aquaculture fish within 5 years:
   ii. Installation of 22000 fish cage culture systems across, dams, reservoirs and rivers nationwide at 500 cages per annum
   iii. Installation of additional 50 water recirculatory aquaculture systems nationwide and encouraging more people go into flow-through systems and integrated fish farming; designated fish processing zones and aquaculture parks;
   iv. Creation of over 500,000 jobs in the production sector
   v. Creation of an industry size of over ₦500 billion.
   vi. Creation of a new market in Organic fish for the local and lucrative export markets.

4. Fish Post-Harvest Management and Marketing Program: This will involve the following:
   i. Production of an output of over 1 Million tonnes of processed fish in 5 years:
   ii. Establishment of one medium-sized processing plant of 60,000 MT per zone initially for the first year annum;
   iii. Creation of a ₦900 billion industry;
   iv. Boom in the various sub sectors of the value chain: this will entail filleting, smoking, canning, production of fish paste, production of fish oil, spice preparation, cooking and grilling.
However, success of the value chain development depends on sustainable and profitable production at the same time guaranteed good market. To ensure these, production and processing chain levels will be linked up with some definite markets such as the fast food chains, food industries, school feeding programme, hospitals and prisons feeding.

The key targets in line with the program designed for the attainment of self-sufficiency in fish production and supply by 2015 are as follows:

Production target

1. Fish production from aquaculture 1 million tonnes per annum
2. Fingerling production 2 billion fingerlings per annum
3. Processing 1 million tonnes per annum
4. Fish feed 1 million tonnes per annum

Fiscal targets

1. Fish value chain total industry value of over ₦1 trillion within 5 years
   a) Hatchery industry ₦50 billion
   b) Fish production industry ₦500 billion
   c) Fish processing industry ₦900 billion
   d) Feed mill industry ₦230 billion
2. Fish value chain industry job creation of over 500,000 jobs within 5 years
   a) 10,000 Hatcheries jobs
   b) 500,000 Fish production jobs
   c) 3,700 Fish processing jobs
   d) 2,500 feed mill jobs

Figure 1: Model of the Programs for Attainment of Self-Sufficiency in Fish Production

Despite the laudable efforts of the aquaculture value chain group of the federal ministry of agriculture and rural development in setting up these programs for attainment of self-sufficiency in fish production in the year 2015 as shown in figure 1, the exclusion of yet another vital program would constitute a major setback to the goal of the fishery transformation plan. The excluded
program is the fishery extension development program; which is the program that should facilitate the delivery of fishery extension services to fish farmers, fish processors, fish marketers, fish feed millers and other actors in the fish value chain. To buttress the need for fishery extension development program, [3] opined that in order to use fisheries/aquaculture management as an entry point to achieving the millennium development goals of combating hunger and reducing poverty in Nigeria, proper management of the extension component of fisheries is imperative. [12], also noted that agricultural extension is a vital element in the transformation plan and state government through the ADP should strengthen the extension delivery system. Generally agricultural extension has the potential to facilitate technology transfer and management at low cost to the farmer, and can also relay farmer needs back to innovators and policy makers to ensure that innovations meet local needs[13]. The role of fishery extension program is therefore necessary to facilitate the adoption of new fishery technologies by fish farmers, processors and fish feed millers for enhancement of fishery production and processing, provide marketing information to fish farmers, processors and marketers, provide information on accessing credit to fish farmers, processors, fish feed millers and marketers through their cooperatives and link fish farmers to processors, marketers and fish feed millers amongst others. This task is achievable through effective training and retraining of fishery/aquaculture extensionist for good performance. The model of programs for attainment of self-sufficiency of fish production is therefore modified as a result of the identified weakness (exclusion of fishery extension development program) in the programs set up for achieving the aquaculture transformation agenda. The modified model of programs for attainment of self-sufficiency of fish production in line with the aquaculture transformation plan is given in figure 2.

Figure 2: Modified Model of the Programs for Attainment of Self-Sufficiency in Fish Production
3. CONCLUSION AND RECOMMENDATION

This has been able to review the action plan for the transformation of the fishery sub-sector put together by the aquaculture value chain group of the federal ministry of agriculture and rural development, Abuja, Nigeria. Five laudable programs (fish farm estate, fish seeds and feed mill, fish pen and cage culture, fish post-harvest management and marketing development programs) were designed to foster the attainment of self-sufficiency in fish production and supply by 2015. The exclusion of fishery extension service was identified as a major weakness in the action plan for the transformation aquaculture in view of the integral role of extension services in fishery production, processing and marketing. It is therefore recommended that fishery extension development program should be incorporated in the fishery transformation agenda so as to facilitate the delivery of fishery extension services to fish farmers, fish marketers, fish feed millers and other actors in the fish value chain.

4. REFERENCES

Financial Statement Analysis of ONGC LTD. with reference to: Horizontal Analysis & Common Size Analysis

Assistant Professor Mayur Rao
Assistant Professor, J.H.Patel college of Management & Technology , Anand-388001, India

ABSTRACT: ONGC was ranked at 171th position in Forbes Global 2000 list of the worlds’ biggest companies for 2012. ONGC has grown multifold to become one of the largest Exploration & Production (E&P) companies in the world. The financial statement Analysis of ONGC for 2012 as compared to 2011 will reveal many things.

The present paper focuses on comparison of financial statements of ONGC for 2011 & 2012 with Horizontal & Common size analysis. Main objective is to identify various reasons of increase or decrease in variables of financial statements esp. Profit at varied stages, and to conclude financial position.

It was found from study that ONGC modifies its capital structure in 2012, by sourcing out more and more funds from own equity. ONGC’s investment is increased in fixed assets and decreased in liquid asset in 2012 as compared to 2011, concluding much money blockage in illiquid assets. Still ONGC gets nice increase of PAT, which satisfies shareholders & Investors.

Keywords: Financial Statements, Horizontal Analysis, Common Size Analysis;

1. INTRODUCTION

1.1. Oil Industry:

After the Indian Independence, the Oil Industry in India was a very small one in size and Oil was produced mainly from Assam and the total amount of Oil production was not more than 250,000 tonnes per year. But the Government of India declared the Oil industry in India as the core sector industry under the Industrial Policy Resolution bill in the year 1954, which helped the Oil Industry in India vastly. The Oil that is produced by the Oil Industry in India provides more than 35 percent of the energy that is primarily consumed by the people of India. The demand for oil is predicted to go higher and higher with every passing decade and is expected to reach an amount of nearly 250 million metric ton by the year 2024.

1.2. Oil and Natural Gas Corporation Ltd.-ONGC

ONGC is an Indian multinational oil and gas company headquartered in Dehradun, India. It is one of the largest Asia-based oil and gas exploration and production companies, and produces around 77% of India's crude oil (equivalent to around 30% of the country's total demand) and around 81% of its natural gas. ONGC, as an integrated oil and gas company, has over 55 years of legacy in India. Over the years, ONGC has grown multifold to become one of the largest Exploration & Production (E&P) companies in the world.
2. LITERATURE REVIEW

Ahindra Chakrabati published an article “Performance of public sector enterprises a Case study on fertilizers” in “The Indian journal of public enterprise” in the year 1988-89. He made analysis of consumption and production of fertilizer by public sector; he also made analysis of profit and loss statement.


Dutts S.K: He wrote an article on “Indian tea industry an appraisal” which was published in Management accountant in the year of March 1992. He analyzed the profitability, liquidity and financial efficiency by using various ratios

S.J.parmar(1998): He had done a study on “Financial Efficiency-Modern methods, tools & Techniques” for the period from 1998-89 to 1994-95. He had made an attempt to analyze financial strength, liquidity, profitability, cost and sales trend and social welfare trend by using various ratios analysis, common size analysis and value added analysis.

Dr Sanjay Bhayani published a book (2003): In his book “Practical financial statement analysis”, he covered 16 public limited cement companies in private sector. He made study of analysis of profitability, working capital, capital structure and activity of Indian cement industry. In his research he revealed various problems of cement industries and suggested remedies for the problems

Marilyn B. Misch and Carolyn A. Galantine (2009): In their Paper “A Financial statement analysis project for introductory financial accounting”, they described how a financial statement analysis project is useful in both preparer based and user-based introductory courses in financial accounting. The paper includes the complete project requirement sheet, a team evaluation form, examples of items that students might be expected to address in answering the questions posed, comments on the results of employing the project, and additional suggestions for implementation.

3. RATIONALE OF THE STUDY

Under, Oil drilling & Exploration Industry’s top players as per Net profit – ONGC is at top with 25,122.92 cr., followed by GAIL (3653.84 cr.) and Oil India(3446.92 cr.) for 2012. Even ONGC is topping the chart of Indian Companies with Highest Net profit for 2012. ONGC was ranked at 171th position in Forbes Global 2000 list of the worlds’ biggest companies for 2012.

The financial statement Analysis of ONGC for 2012 as compared to 2011 will reveal many things. The study focuses on how the NET PROFIT in 2012 has increased by 31.81 Cr. It will be beneficial to, know, where ONGC’s money was blocked in 2011 considering various items of Profit
& Loss statement. Besides Money Blockage of ONGC, this study will also reveal ONGC’s new sources capital, its fund usage etc. So, analysis of financial statements of ONGC is worth performing it.

4. OBJECTIVES OF THE STUDY

- To compare financial statements of ONGC for 2011 & 2012 with help of tools like Horizontal & Common size analysis.
- To make interpretation of various variables of financial statements from the results derived from tools used.
- To evaluate profit under varied stages i.e. before and after depreciation, interest & tax.
- To identify various reasons of increase or decrease in variables and add it in the interpretation.

5. METHODOLOGY

5.1. Data Collection
Data used in the paper is secondary.

5.2. Data Analysis Tools

5.2.1 Horizontal Analysis:
It includes working out of the increase/ decrease in each item of both Balance Sheet and Profit & Loss account of the current year over the last year. And the increase/decrease in amount is also expressed in the form of percentage.

5.2.2. Common Sized Analysis:
For comparing 2 year’s Income statement, the Net sale is assumed to be 100% and respective % for other items can be found in comparison to Net sales. For comparing Balance sheet of 2 years, total amount of sources and applications are assumed to be 100%, and other items are compared against them.

5.3. Time- Period of Paper
Two year’s Balance sheet and Income statement of ONGC is analyzed i.e. for year ending 2011 and year ending 2012
### 6. ANALYSIS & INTERPRETATION

#### Table 1. Horizontal Profit & Loss A/C For ONGC (Rs. In Cr)

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>Year ended</th>
<th>Increase/ Decrease over 2011</th>
<th>In terms of Amount</th>
<th>In terms of %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31st March 2012</td>
<td>31st March 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Turnover</td>
<td>76,887.06</td>
<td>66,487.19</td>
<td>10399.87</td>
<td>15.64</td>
</tr>
<tr>
<td>Excise Duty</td>
<td>371.97</td>
<td>322.85</td>
<td>49.12</td>
<td>15.21</td>
</tr>
<tr>
<td><strong>Net Sales</strong></td>
<td>76,515.09</td>
<td>66,164.34</td>
<td>10350.75</td>
<td>15.64</td>
</tr>
<tr>
<td>Other Income</td>
<td>7,593.53</td>
<td>5,028.07</td>
<td>2565.46</td>
<td>51.02</td>
</tr>
<tr>
<td>Stock Adjustments</td>
<td>91.34</td>
<td>12.91</td>
<td>78.43</td>
<td>607.51</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>84,199.96</td>
<td>71,205.32</td>
<td>12994.64</td>
<td>18.25</td>
</tr>
<tr>
<td><strong>Expenditure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw Materials</td>
<td>2,450.98</td>
<td>2,790.68</td>
<td>-339.7</td>
<td>-12.17</td>
</tr>
<tr>
<td>Power &amp; Fuel Cost</td>
<td>316.18</td>
<td>285.6</td>
<td>30.58</td>
<td>10.71</td>
</tr>
<tr>
<td>Employee Cost</td>
<td>6,796.05</td>
<td>6,445.18</td>
<td>350.87</td>
<td>5.44</td>
</tr>
<tr>
<td>Other Manufacturing Expenses</td>
<td>265.76</td>
<td>32,098.77</td>
<td>-31833.01</td>
<td>-99.17</td>
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<tr>
<td>Selling and Admin Expenses</td>
<td>0</td>
<td>-16,565.10</td>
<td>16565.1</td>
<td>-100.00</td>
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<td>Miscellaneous Expenses</td>
<td>30,207.24</td>
<td>492.78</td>
<td>29714.46</td>
<td>6029.96</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>40,036.21</td>
<td>25,547.91</td>
<td>14488.3</td>
<td>56.71</td>
</tr>
<tr>
<td><strong>PBDIT</strong></td>
<td>44,163.75</td>
<td>45,657.41</td>
<td>-1493.66</td>
<td>-3.27</td>
</tr>
<tr>
<td>Interest</td>
<td>34.83</td>
<td>11,133.34</td>
<td>-11098.51</td>
<td>-99.69</td>
</tr>
<tr>
<td><strong>PBDT</strong></td>
<td>44,128.92</td>
<td>34,524.07</td>
<td>9604.85</td>
<td>27.82</td>
</tr>
<tr>
<td>Depreciation</td>
<td>7,495.92</td>
<td>6,835.01</td>
<td>660.91</td>
<td>9.67</td>
</tr>
<tr>
<td><strong>Profit Before Tax</strong></td>
<td>36,633.00</td>
<td>27,689.06</td>
<td>8943.94</td>
<td>32.30</td>
</tr>
</tbody>
</table>
### Extra-ordinary items

<table>
<thead>
<tr>
<th></th>
<th>626.97</th>
<th>547.7</th>
<th>79.27</th>
<th>14.47</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PBT (Post Extra-ord Items)</strong></td>
<td>37,259.97</td>
<td>28,236.76</td>
<td>9023.21</td>
<td>31.96</td>
</tr>
<tr>
<td><strong>Tax</strong></td>
<td>12,137.07</td>
<td>9,177.53</td>
<td>2959.54</td>
<td>32.25</td>
</tr>
<tr>
<td><strong>Reported Net Profit</strong></td>
<td>25,122.92</td>
<td>19,059.23</td>
<td>6063.69</td>
<td>31.81</td>
</tr>
</tbody>
</table>

### 6.1 Interpretation

**Net Sales:** ONGC’s Net sale is increasing by 15.64% in 2012 over 2011. This increase could have been more but comparatively with the increase in sales turnover by 15.64%, excise duty is also increased by 15.21% in 2012. So effect of increase in sales turnover is nullified by equal increase in excise duty.

**Total Income:** There is increase of total Income by 18.25% over 2011, it is been contributed by ONGC’s increasing net sales, other income and stock adjustments.

**Total Expenses:** ONGC’s total expenses are rising by 56.71% in 2012 against Revenue generated from sales. Major contribution in this increased expense is given by misc. expenses which is increasing by 6029.96%, followed by power and fuel i.e. increasing by 10.71% over 2011. One can interpret that with the increase in power & fuel, the orders for company have also risen.

**PBDIT:** PBDIT is decreasing by 3.27% in 2012, which is due to higher expenditure of ONGC in 2012, and which has completely nullified the effect of increase in income as hike in expenditure is very high.

**PBDT:** ONGC gets nice hike of 27.82% in 2012 for PBDT, It is because of ONGC’s decision to reduce debt burden, which decreases interest obligation by 99.69% in 2012. So it can be interpreted ONGC depends more on equity for capital.

**PBT(Before EOT):** It has grown by 32.30%, it is also observed money blocked in depreciation is also increased by 9.67% in 2012 over 2011. But as the hike in PBDT was 3 times higher than hike in depreciation, it helps to give nice growth in PBT over 2011.

**PAT:** Final reported NET PROFIT is increased by 31.81% over 2011, which is a good sign for company & its shareholders. ONGC could have generated a better hike in PAT for 2012 but its money blockage in tax payments is also increasing by 32.25% over 2011.

### 2. Horizontal Balance Sheet For ONGC (Rs. In Cr)
<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>Year ended</th>
<th>Increase/ Decrease over 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31st March 2012</td>
<td>31st March 2011</td>
</tr>
<tr>
<td><strong>Sources of Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Share Capital</td>
<td>4,277.76</td>
<td>4,277.76</td>
</tr>
<tr>
<td>Equity Share Capital</td>
<td>4,277.76</td>
<td>4,277.76</td>
</tr>
<tr>
<td>Reserves</td>
<td>108,678.97</td>
<td>93,226.67</td>
</tr>
<tr>
<td>Networth</td>
<td>112,956.73</td>
<td>97,504.43</td>
</tr>
<tr>
<td>Secured Loans</td>
<td>4,500.00</td>
<td>0</td>
</tr>
<tr>
<td>Unsecured Loans</td>
<td>0</td>
<td>17,564.26</td>
</tr>
<tr>
<td>Total Debt</td>
<td>4,500.00</td>
<td>17,564.26</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>117,456.73</td>
<td>115,068.70</td>
</tr>
<tr>
<td><strong>Application of Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Block</td>
<td>191,914.75</td>
<td>80,938.60</td>
</tr>
<tr>
<td>Less: Accum. Depreciation</td>
<td>123,857.78</td>
<td>62,299.05</td>
</tr>
<tr>
<td>Net Block</td>
<td>68,056.97</td>
<td>18,639.55</td>
</tr>
<tr>
<td>Capital Work in Progress</td>
<td>26,879.29</td>
<td>65,354.44</td>
</tr>
<tr>
<td>Investments</td>
<td>14,398.82</td>
<td>5,332.84</td>
</tr>
<tr>
<td>Inventories</td>
<td>5,165.44</td>
<td>4,118.98</td>
</tr>
<tr>
<td>Sundry Debtors</td>
<td>6,194.82</td>
<td>3,845.90</td>
</tr>
<tr>
<td>Cash and Bank Balance</td>
<td>20,124.57</td>
<td>356.55</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>31,484.83</td>
<td>8,321.43</td>
</tr>
<tr>
<td>Loans and Advances</td>
<td>30,907.72</td>
<td>64,693.91</td>
</tr>
<tr>
<td>Fixed Deposits</td>
<td>0</td>
<td>22,090.00</td>
</tr>
<tr>
<td><strong>Total CA, Loans &amp; Advances</strong></td>
<td>62,392.55</td>
<td>95,105.34</td>
</tr>
</tbody>
</table>
6.2 Interpretation

6.2.1. Sources of Fund

➢ Net Worth

There is an increase of Net worth by 15.85% in 2012, which is only due to increase in Reserves by 16.57% over 2011. ONGC’s equity capital remains constant for 2012.

➢ Total Debt

Overall debt is decreased by 74.38% in 2012. The reason is the company has taken secured loan in 2012 and has repaid unsecured loan. This way has reduced its debt proportion to greater extent which helped company to reap good PBT by reducing interest obligations.

6.2.2. Applications of Fund

➢ Net Block

Net Block is increased by 265.12% over 2011. This could have been more but Depreciation has increased by 98.81% in 2012, as the company has purchased fixed Assets in 2012, and which has increased Gross block by 137.11%. This indicates more fund of company gets blocked in illiquid asset.

➢ Capital WIP

It is decreasing in 2012 by 58.87%, this may be the good sign as some funds will be released and can be invested elsewhere.

➢ Investments

ONGC’s has increased its investment by huge 170%, which can be a good indicator and can be interpreted that company has gathered enough funds or recovered blocked funds which are invested for returns, providing margin of safety for creditors.

➢ Net Current Assets (NCA)

It is decreasing by 67.44% in 2012 which interprets company may find difficulty to manage the working capital requirement. The decrease in CA (by 34.40%) & CL (by 22.65%) can be observed in 2012 which effects NCA,. However the CL is decreasing but it is not worth as there is higher decrease in CA comparatively, in 2012.

<table>
<thead>
<tr>
<th>Current Liabilities</th>
<th>30,715.22</th>
<th>35,384.31</th>
<th>-4669.09</th>
<th>-13.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisions</td>
<td>23,555.65</td>
<td>34,775.19</td>
<td>-11219.54</td>
<td>-32.26</td>
</tr>
<tr>
<td>Total CL &amp; Provisions</td>
<td>54,270.87</td>
<td>70,159.50</td>
<td>-15888.63</td>
<td>-22.65</td>
</tr>
<tr>
<td>Net Current Assets</td>
<td>8,121.68</td>
<td>24,945.84</td>
<td>-16824.16</td>
<td>-67.44</td>
</tr>
<tr>
<td>Miscellaneous Expenses</td>
<td>0</td>
<td>796.03</td>
<td>-796.03</td>
<td>-100.00</td>
</tr>
<tr>
<td>Total Assets</td>
<td>117,456.76</td>
<td>115,068.70</td>
<td>2388.06</td>
<td>2.08</td>
</tr>
</tbody>
</table>
Table 3. Common Sized Profit & Loss A/C For ONGC (Rs. In Cr)

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>YEAR ENDED</th>
<th>% CHANGE</th>
<th>YEAR ENDED</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31st March 2012</td>
<td></td>
<td>31st March 2011</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Turnover</td>
<td>76,887.06</td>
<td>100.49</td>
<td>66,487.19</td>
<td>100.49</td>
</tr>
<tr>
<td>Excise Duty</td>
<td>371.97</td>
<td>0.49</td>
<td>322.85</td>
<td>0.49</td>
</tr>
<tr>
<td>Net Sales</td>
<td>76,515.09</td>
<td>100.00</td>
<td>66,164.34</td>
<td>100.00</td>
</tr>
<tr>
<td>Other Income</td>
<td>7,593.53</td>
<td>9.92</td>
<td>5,028.07</td>
<td>7.60</td>
</tr>
<tr>
<td>Stock Adjustments</td>
<td>91.34</td>
<td>0.12</td>
<td>12.91</td>
<td>0.02</td>
</tr>
<tr>
<td>Total Income</td>
<td>84,199.96</td>
<td>110.04</td>
<td>71,205.32</td>
<td>107.62</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td>0.00</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Raw Materials</td>
<td>2,450.98</td>
<td>3.20</td>
<td>2,790.68</td>
<td>4.22</td>
</tr>
<tr>
<td>Power &amp; Fuel Cost</td>
<td>316.18</td>
<td>0.41</td>
<td>285.6</td>
<td>0.43</td>
</tr>
<tr>
<td>Employee Cost</td>
<td>6,796.05</td>
<td>8.88</td>
<td>6,445.18</td>
<td>9.74</td>
</tr>
<tr>
<td>Other Manufacturing Expenses</td>
<td>265.76</td>
<td>0.35</td>
<td>32,098.77</td>
<td>48.51</td>
</tr>
<tr>
<td>Selling and Admin Expenses</td>
<td>0</td>
<td>0.00</td>
<td>-16,565.10</td>
<td>-25.04</td>
</tr>
<tr>
<td>Miscellaneous Expenses</td>
<td>30,207.24</td>
<td>39.48</td>
<td>492.78</td>
<td>0.74</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>40,036.21</td>
<td>52.32</td>
<td>25,547.91</td>
<td>38.61</td>
</tr>
<tr>
<td>PBDIT</td>
<td>44,163.75</td>
<td>57.72</td>
<td>45,657.41</td>
<td>69.01</td>
</tr>
<tr>
<td>Interest</td>
<td>34.83</td>
<td>0.05</td>
<td>11,133.34</td>
<td>16.83</td>
</tr>
<tr>
<td>PBDT</td>
<td>44,128.92</td>
<td>57.67</td>
<td>34,524.07</td>
<td>52.18</td>
</tr>
<tr>
<td>Depreciation</td>
<td>7,495.92</td>
<td>9.80</td>
<td>6,835.01</td>
<td>10.33</td>
</tr>
<tr>
<td>Profit Before Tax</td>
<td>36,633.00</td>
<td>47.88</td>
<td>27,689.06</td>
<td>41.85</td>
</tr>
<tr>
<td>Extra-ordinary items</td>
<td>626.97</td>
<td>0.82</td>
<td>547.7</td>
<td>0.83</td>
</tr>
<tr>
<td>PBT (Post Extra-ord Items)</td>
<td>37,259.97</td>
<td>48.70</td>
<td>28,236.76</td>
<td>42.68</td>
</tr>
<tr>
<td>Tax</td>
<td>12,137.07</td>
<td>15.86</td>
<td>9,177.53</td>
<td>13.87</td>
</tr>
<tr>
<td>Reported Net Profit</td>
<td>25,122.92</td>
<td>32.83</td>
<td>19,059.23</td>
<td>28.81</td>
</tr>
</tbody>
</table>

6.3. Interpretation.

- **Total Income**
  
  Percentage change in total income is increasing in 2012 against net sales., it can be interpreted that against 100 Rs. Net sales, ONGC gets 110 Rs. Total Income, which is a good sign for company.
Total Expenses
ONGC has big list of expenses which have increased in 2012 against sales, they are 52.32% in 2012, indicating, against 100 Rs. Net sales, ONGC’s 52.32 Rs is blocked in big list of expenses. It must be noted, ONGC’s expenditure was 38.61% in 2011, which was lesser.

PBDIT
It is 57.72% against Net sales in 2012, it has decreased in comparison to 2011, reason is very high hike in expenditure in 2012.

PBDT
PBDT of ONGC has increased in 2012 i.e. 57.67%. It can be interpreted that with 100 Rs. Net sales, PBDT is 57.67 Rs., The Increase of this PBDT is contributed by decrease in interest from 16.836% (2011) to only 0.05% (2012) against Net sales.

PBT (Before EOT)
It is 47.68% against Net sales of 2012, It is lesser than PBDT, because of depreciation which is 9.8% in 2012, but it can be seen depreciation is slight decreased against net sales in 2012.

PAT
It is 32.83% against Net sales in 2012, it is increasing in comparison to 2011. However, tax obligations of ONGC is also increasing against net sales in 2012, which is 15.86%, which sticked the PAT to 32.83 Rs. against 100 Rs sales.

### Table 4. Common Sized Balance Sheet For ONGC (Rs. In Cr)

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>YEAR ENDED</th>
<th></th>
<th>YEAR ENDED</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31st March</td>
<td>%</td>
<td>31st March</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>CHANGE</td>
<td>2011</td>
<td>CHANGE</td>
</tr>
<tr>
<td>Sources of Funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Share Capital</td>
<td>4,277.76</td>
<td>3.64</td>
<td>4,277.76</td>
<td>3.72</td>
</tr>
<tr>
<td>Equity Share Capital</td>
<td>4,277.76</td>
<td>3.64</td>
<td>4,277.76</td>
<td>3.72</td>
</tr>
<tr>
<td>Reserves</td>
<td>108,678.97</td>
<td>92.53</td>
<td>93,226.67</td>
<td>81.02</td>
</tr>
<tr>
<td>Networth</td>
<td>112,956.73</td>
<td>96.17</td>
<td>97,504.43</td>
<td>84.74</td>
</tr>
<tr>
<td>Secured Loans</td>
<td>4,500.00</td>
<td>3.83</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Unsecured Loans</td>
<td>0</td>
<td>0.00</td>
<td>17,564.26</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Debt</td>
<td>4,500.00</td>
<td>3.83</td>
<td>17,564.26</td>
<td>15.26</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>117,456.73</td>
<td>100.00</td>
<td>115,068.70</td>
<td>100.00</td>
</tr>
<tr>
<td>Application of Funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Block</td>
<td>191,914.75</td>
<td>163.39</td>
<td>80,938.60</td>
<td>70.34</td>
</tr>
<tr>
<td>Less: Accum. Depreciation</td>
<td>123,857.78</td>
<td>105.45</td>
<td>62,299.05</td>
<td>54.14</td>
</tr>
<tr>
<td>Net Block</td>
<td>68,056.97</td>
<td>57.94</td>
<td>18,639.55</td>
<td>16.20</td>
</tr>
<tr>
<td>Capital Work in Progress</td>
<td>26,879.29</td>
<td>22.88</td>
<td>65,354.44</td>
<td>56.80</td>
</tr>
<tr>
<td>Investments</td>
<td>14,398.82</td>
<td>12.26</td>
<td>5,332.84</td>
<td>4.63</td>
</tr>
</tbody>
</table>
6.4. Interpretation

6.4.1. Sources Of Fund

- **Net Worth**
  
  Out of 100% sources of und, ONGC has Net worth of 96.17% (2012) higher than 84.74% (2011) of which company has increased Reserves to 92.53% (2012) almost 12% higher than 2012, Where Equity capital remains constant. This interprets efforts of company to depend on own money more.

- **Total Debt**
  
  ONGC takes only 3.83% debt in 2012 and possess only secured loan. It has decreased debt from 15.26% in 2011. This interprets ONGC collects long term funds from own equity and reserves rather than going towards higher debt. This may increase ROE & Profits, with decreasing debt equity ratio and financial leverage in 2012.

6.4.2. Applications of Fund

- **Net Block**
  
  It has increased to 57.94% of total fund, interpreting ONGC’s increasing investment in fixed assets in 2012, because in 2011 ONGC invested only 16.20% of fund in net block.

- **Capital WIP**
  
  ONGC blocks only 22.88% in 2012, which is lesser than 2011’s 56.80%. It is observed some funds have been switched over to long term assets.

- **Investments**
  
  It has increased to 12.26% in 2012. It interprets out of 100 Rs. ONGS invest 12.26 Rs. In Investment, which was only 4.63. in 2011.

- **Net Current Assets (NCA)**
  
  It is decreasing by 3 times (approx.) in 2012, it is observed investment in CA & CL is also decreased in 2012. It interprets Current ratio falls in 2012, still ONGC can manage its short term requirement internally in 2012 but condition was better in 2011.
7. Conclusions

- Net sales is increasing in 2012 but, effect of increasing sales turnover gets nullified with nearby equal increase in excise duty, this concludes Net sales could not have increased much.
- From the analysis, it is found, against 100 Rs. Net sales, ONGC‘s Income is 110.04 Rs and Expenses are 52.32 Rs in 2012.
- ONGC‘s Total Expenses are increased in 2012, which has impact on PBDIT and it is reduced against 2011.
- ONGC decreases debt in 2012, which decreases financial leverage, as interest obligations falls, these funds are invested elsewhere.
- ONGC‘s PAT for 2012 has increased , which is contributed by increasing PBDT& PBT, but the effect of these increases gets somewhat nullified due to increase of tax obligations in 2012. Still it can be concluded ONGC holds nice increase of PAT, which satisfies shareholders.
- ONGC modifies its capital structure in 2012, by sourcing out more and more funds from own equity. It is found, ONGC collects 96.17% from net worth and only 3.83% from outsiders in 2012. The current debt is from secured loans, while ONGC repaid all unsecured loans.
- ONGC‘s investment in CA and CL is reduced in 2012, which reduces NCA, which concludes difficulty in managing working capital requirement. ONGC‘s investment is increased in fixed assets and decreased in liquid asset in 2012 as compared to 2011, concluding much money blockage in illiquid assets.

8. REFERENCES

8.1. Publication:

8.2. Links:

8.3. Websites
[1] www.ongcindia.com
ABSTRACT: Across the globe a degree in business management is highly coveted as it is perceived
to open doors to opportunities and high-paid jobs and India is no exception. However, with the
increased inclination towards gaining management degrees and a rapid increase in number of B-
Schools in the country a big question mark raises not only on the quality of management education
and its relevance but also on the acumen of MBA aspirants and students pursuing MBA degrees.
The top b-schools in India admit candidates through stringent selection criteria and then impart
relevant and contemporary management education. On the other hand admissions in many other
institutions are neither stringent nor rigorous and therefore the competency of pass-outs remains a
question mark. Management education is facing multiple challenges in maintaining its relevance
and keeping pace with changing demands of the industry. Although issues such as the quality of
faculty and infrastructure concerns the entire academia but discussions must also take into
consideration the quality of MBA aspirants, mushrooming B-schools and loop holes in regulation of
professional education. The current paper aims at finding some of the important challenges and
issues concerning management education in India in the changing times while discussing examples,
lessons and insights from the state of Madhya Pradesh. The scope of the paper covers years from
2008 to 2012. The paper also discusses ‘Sallis’ quality imperative model in educational
establishments in Indian context.

Keywords: Management Education; B-Schools; Higher Technical Education; Regulation in
Education; B-School Governance; Quality in Education

INTRODUCTION
In recent times there has been a spurt of surveys and reports indicating that the employability of
management graduates in the functional roles of management remains as low as 10 to 20% of the
totals pass outs churned every year in the country. The very first question is raised on the quality of
management education and then a simultaneous question rises on the ability of the admitted
students in gaining and inculcating knowledge that is being imparted and skills which are being
taught to them. The fact however remains that there is a gap between what is desired by the industry
and what is being supplied by the educational institutions. A clear inference therefore, that a mere
MBA degree is no guarantee of high and a well-paid job. And thus, the scope of present discussion
in finding the answers to this gap.

Various government agencies and certain foreign institutions studying and scrutinizing Indian
economy point that for 2012-13 Indian economic growth rate could be as low as 5 per cent, lowest
in last 10 years. If Indian GDP is slowing down then trade, commerce and businesses start to bottom
out and so is the economy’s ability to produce more jobs. And with so many management graduates
coming out in job market without a job the unemployment shoots up and thus an eventual question
mark again rises on the desirability of management degree itself.
1. REVIEW OF LITERATURE

Indian B-schools are not untouched by the contextual compulsions of the Management education in the international arena and need to revitalize in order to meet the expectations of stakeholders as opined by Jha and Kumar (2012). Saba et al. (2011) assessed the effects of MBA degree on enhancement of skills and career advancement and concluded that the degree provide better opportunities and diversified skills, helping working professionals act as worthy managers.

A three-year study on the future of management education and development, reported by Porter and McKibbin (1988) and commissioned by the American Assembly of Collegiate Schools of Business (AACSB), surveyed management education as traditionally provided by colleges and universities and also as delivered by other systems such as corporations and third-party providers. The authors conclusion were largely centered around factors such as the need for strategic planning in business education including the supply/demand patterns and societal expectations; business school missions and niches; curriculum faculty preparation and development and accreditations/regulations. The factors hindering the effectiveness of management education in India reported by Reddy (1991) emphasized the lack of clarity regarding the expected outcome of the management education program, discipline-orientation and ivory-tower approach of the academicians, lack of involvement by practitioners in the industry and bias towards conceptual learning.

Mintzberg (2004) writes that because MBA programs cater for young people with little or no managerial experience, students are unable to use art or craft, and so they become spoon-fed with analysis and technique to emphasize the scientific aspects of management. This results in MBA graduates who engage in too much analysis, reducing managing to decision making through analysis and technique. When university service quality is in question Prasad and Verma (2013) conclude that employability and industry-institute interaction is the most important factor for management students. However amidst concerns about the relevance of management education and employability of management graduates, it is opined by Jarzbkowski et al. (2010) that there is relatively little evidence about whether graduates use the management tools and concepts they are taught and found out that four educational characteristics—level of formal education, frequency of management training, specificity of strategic management education, and time elapsed since formal education—drive adoption of strategy tools at work. While examining adjusting management teaching to address the complex needs of business professionals in context of Poland and Polish faculty and to explore potential solutions, Kowalski (2008) concludes that adjusting teaching is a slow and complex process that cannot occur without substantial changes in values as well as proactive leadership and collaboration at the individual, institutional, and national levels.

2. OBJECTIVE OF STUDY

The study aims to assess the trends in management education in India with special reference to the state of Madhya Pradesh. The purpose of the study is to analyze the concept of quality in management education while underlining the problems, possible answers and future course for the stakeholders associated with management education.
3. METHODOLOGY
The study examines the data related to proliferation of management education in India and related to management entrance exams, management institutions and MBA courses intake in the state of Madhya Pradesh and analytically reviews the data. Further the concept of quality in management education is revisited in the changing contexts.

4. Inclusive MBA education: B-Schools Reaping the MBA Fashion
In January 2013, The Associated Chambers of Commerce and Industry of India (Assocham) released a paper on "B-schools and Engineering colleges shut down- Big Business Struggles". The paper reports that except IIM graduates, management institutions (roughly around a total of 4,500) are fast losing on campus recruitments while many B-schools face struggle for survival and that 180 schools shut shop in 2012 and another 160 may follow suit in 2013. The Assocham paper further adds that compared to 2008, in 2012 mere 10% of the management graduates not belonging to top 20 B-schools were employable directly after their education, while it was 58% in 2008.

The much sought after MBA degree in India undoubtedly became a vogue thing since the last years of 1990s, resulting in mushrooming of B-schools and exceptional increase in management seats. Academicians and industry experts call it the phenomena of bringing the coveted MBA degree to the masses. Questionably this proliferation surmises upon derived industry demand. And therefore industry ready pass-outs are the basic criteria for justification for such proliferation, which eventually must converge based on comprehensive quality delivery, covering key aspects of preparedness for the industry and academic concepts. If industry acceptance of pass-outs is as low as 10% as claimed by certain reports, it indicates that such a convergence is exceedingly inert to the extent that even the academic portion of this mechanism, its delivery and results are frittered. And therefore this proliferation is not justified.

Table No. 01 compares number of seats in the country in management, engineering and MCA courses for five consecutive years, 2005-06 to 2010-11. The data suggests that average annual growth rate (AAGR) for last five years in management courses seats have been 41.8%, which is higher than engineering courses seats (33% AAGR) and MCA course seats (23.6%). Clearly the data indicates that management seats comparatively have increased at a much larger pace in the county and that management education is much sought after, it also indicates to the problem of mushrooming of B-schools in the country.
Table 01. Comparison of Technical Courses Intake Over a Period of Six Years

<table>
<thead>
<tr>
<th>Year</th>
<th>Management Seats</th>
<th>% increase in seats</th>
<th>Engineering Seats</th>
<th>% increase in seats</th>
<th>MCA Seats</th>
<th>% increase in seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>122,663</td>
<td></td>
<td>499,697</td>
<td></td>
<td>61,991</td>
<td></td>
</tr>
<tr>
<td>2006-07</td>
<td>144,372</td>
<td>17.7%</td>
<td>550,986</td>
<td>10.3%</td>
<td>63,394</td>
<td>2.3%</td>
</tr>
<tr>
<td>2007-08</td>
<td>185,780</td>
<td>28.7%</td>
<td>653,290</td>
<td>18.6%</td>
<td>78,692</td>
<td>24.1%</td>
</tr>
<tr>
<td>2008-09</td>
<td>227,989</td>
<td>22.7%</td>
<td>841,018</td>
<td>28.7%</td>
<td>82,578</td>
<td>4.9%</td>
</tr>
<tr>
<td>2009-10</td>
<td>273,732</td>
<td>20.1%</td>
<td>1,071,896</td>
<td>27.5%</td>
<td>121,123</td>
<td>46.7%</td>
</tr>
<tr>
<td>2010-11</td>
<td>378,907</td>
<td>38.4%</td>
<td>1,324,246</td>
<td>23.5%</td>
<td>135,173</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

Source: AICTE

Table 02 represents the number of institutions running MBA courses and the intake/seats to MBA courses under the regulations of the Directorate of Technical Education, Madhya Pradesh. These institutions admit students based on the results of state management entrance exam called the MP MET (Madhya Pradesh Management Entrance Test) conducted by the Madhya Pradesh Professional Examination Board (VYAPAM) in Madhya Pradesh. For the academic session 2013-13 onwards AICTE’s CMAT (Common Management Admission Test) shall be the basis of admissions in MBA courses in Madhya Pradesh. Chart 01 depicts the rapid increase both in the number of institutions running MBA courses and the intake in such courses.
Management Institutions and Total Intake in MBA Courses

Chart 01

Table 02

<table>
<thead>
<tr>
<th>Year/Session</th>
<th>Institutions</th>
<th>Intake/Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>42</td>
<td>2790</td>
</tr>
<tr>
<td>2006-07</td>
<td>63</td>
<td>4600</td>
</tr>
<tr>
<td>2007-08</td>
<td>91</td>
<td>6530</td>
</tr>
<tr>
<td>2008-09</td>
<td>139</td>
<td>9410</td>
</tr>
<tr>
<td>2009-10</td>
<td>208</td>
<td>13800</td>
</tr>
<tr>
<td>2010-2011</td>
<td>210</td>
<td>13890</td>
</tr>
<tr>
<td>2011-2012</td>
<td>218</td>
<td>16920</td>
</tr>
<tr>
<td>2012-13</td>
<td>213</td>
<td>18510</td>
</tr>
</tbody>
</table>

Source: DTE MP, VYAPAM

Table 03 represents the total candidates appeared for MP MET in the years from 2008 to 2012 and classification of candidates based on their category. Chart 02 plots candidates appeared for MP MET and the total intake in MBA courses all over Madhya Pradesh. A startling observation is the fact that in five years MBA seats have doubled while candidates appearing in MP MET remained only a third of the candidates appearing in 2008.
Candidates Appeared In MP MET And Total Intake

Chart 02

Table 03

<table>
<thead>
<tr>
<th>Year</th>
<th>Un Reserved</th>
<th>SC</th>
<th>ST</th>
<th>OBC</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>11627</td>
<td>1137</td>
<td>178</td>
<td>5211</td>
<td>18153</td>
</tr>
<tr>
<td>2009</td>
<td>10222</td>
<td>928</td>
<td>143</td>
<td>4527</td>
<td>15820</td>
</tr>
<tr>
<td>2010</td>
<td>6168</td>
<td>530</td>
<td>87</td>
<td>2787</td>
<td>9572</td>
</tr>
<tr>
<td>2011</td>
<td>4999</td>
<td>353</td>
<td>84</td>
<td>2166</td>
<td>7602</td>
</tr>
<tr>
<td>2012</td>
<td>3960</td>
<td>385</td>
<td>78</td>
<td>1801</td>
<td>6224</td>
</tr>
</tbody>
</table>

Source: DTE MP, VYAPAM

The question which highlights the discussion of the paper is, that why there has been a continuous rise in the number of MBA seats in the state while the candidates appearing in the state management entrance test has reduced drastically? The answer is closely linked with the quality of student intake in management institutions not only in M.P. but all over the country. Most of the colleges whose seats remain vacant after the counseling phases related with the MP MET are filled by college level counseling where seats are allotted based on candidates marks obtained in graduation. And thus a significant intake into the MBA courses constitutes of students who did not face the competitive entrance exam, the MP MET.

5. Benchmarking Management Education

Management institutions in India can be broadly classified into four categories (categorization irrespective of merit), in the first category falls all institutes in India of high repute who have student centric delivery mechanism in place and produce high quality graduates, who are well taken by the industry. University departments, private colleges affiliated with universities and management institutions deemed to be university belong to second category. Private, autonomous
institutions approved by ACITE fall into the third category. And private institutions affiliated to foreign universities fall in the fourth category. However there are certain other institutions also which are neither affiliated to any university nor accredited by AICTE.

In the early days of management education in India the pioneering institutions benchmarked themselves through prominent international institutes imparting management knowledge. The practice is unobservable in the current times and has given way for a regulatory approval from the apt body for example the All India Council for Technical Education (AICTE) one of the regulators of management education in India which evaluates and authorizes institutes to run management courses. Although the regulators have well placed norms like student teacher ratio, qualification norms for teachers, infrastructure and pedagogy; there are numerous instances reported of bypassing such norms on the part of the institutions. The regulators maintain their caveat emptor in regard to students choosing an institute, advising them to make an informed choice. AICTE has the power to take punitive action on institutions not approved by this apex regulatory organization. MBA institutes affiliated with Universities may choose accreditation by National Assessment and Accreditation Council (NAAC) which functions as an autonomous body under University Grants Commission and accredits institutions of higher education. National Board of Accreditation (NBA), started under the aegis AICTE is an autonomous body with effect from 7th January 2010, with the objective of Assurance of Quality and Relevance of Education, especially in technical disciplines, including Management through program/course accreditation. NBA accredits programs approved by AICTE and which have already graduated out two batches of students.

6. Quality In Management Education: A Model Built On Four Quality Imperatives
Edward Sallis (2002, Total Quality Management in Education) proposes four quality imperatives in an educational establishment, namely the moral imperative, the professional imperative, the competitive imperative and the accountability imperative. Chart No. 03 depicts the details of the imperatives.

![Chart 03](chart.png)

We have attempted to provide with a framework to illustrate a quality model for management education in Indian context based on the four imperatives give by Sallis.

**The moral imperative:** The essentials of moral imperative are (1) strict compliance with regulatory framework and mechanism and (2) transparent and value driven ethical governance.

**The professional imperative:** The requisites of an educational institution’s professional footing and appeal to students stand on quality of faculty and infrastructure, innovative and creative delivery of curriculum to the students and creating a student centric approach to the entire delivery mechanism.
The competitive imperative: An institution’s competitive footing is build upon the commitment to which the students are able to enhance their competitive footprints. Commitment to improve students’ competitive standing is an essential condition for this imperative and is based upon organizational collaborations, skill development and enhancement, motivation and job facilitations.

The accountability imperative: Quality improvement and benchmarks accompany measurable objectives which in turn support a quality feedback process and eventually results in quality betterment. The accountability imperative is not only the basis of quality mechanism for institutions both bidding and bearing autonomy but for all institutions where quality may be judged based on the four imperatives. The accountability imperative bestows a purposeful duty in the hands of an institution to deliver results based on the four imperatives.

7. SUGGESTIONS
The quality imperatives provide the framework for comprehensive improvement in all related spheres of management education and it involves all the stakeholders, not just the management institution alone. The following are the suggestions based on observation of challenges in management education and its classification under the quality imperative. This classification provides stakeholders to critically judge the institution and take apt and appropriate actions. The model may be developed further to construct a scale to rank and monitor management educational institutions.

1. Issues related to accreditation, organizational management, and corruption in practices, issues of transparency, ethical mindset and commitment towards best possible comprehensive managerial education delivery to students; should be dealt under the moral imperative.

2. Quality of faculty, faculty development, infrastructure, lateral support, pedagogy, curriculum and focus on research should form the basis of professional commitment to students.

3. Quality of students, corporate collaborations, placements, skills development, and managerial acumen, working with efficiency and effectiveness, knowledge, application of management concepts, theories and tools should fall under the competitive imperative.

4. Accountability is a broad notion, an umbrella covering the other three imperatives and fixing the responsibility and commitment towards education, students, employees, industry, regulators and potential students and talent.

8. CONCLUSION
This paper reveals that the main issues in management education is that students are eager to pursue a management degree but poor placements, infrastructure, corporate collaborations do not commensurate with fees being charged. Outdated course curriculum, lack of qualified faculties and rapid mushrooming of management institutions has further deteriorated the scenario.

Regular upgradation & training of faculty members and proper focus on research will help to uplift the level of education in central India region. Focus should be shifted from conceptual learning to skill development. Institutes should also put efforts to acquire faculty members having a greater practical orientation and an interdisciplinary approach.

Management education needs to be holistic, targeted and customized with aim to remove the gap that exist between industry requirements and academic curriculum focusing on attitude, corporate
awareness, grooming and developing managerial skills. Industry interaction has to be strengthened by inviting senior person from industry to deliver lecture and ensuring student get associated with live industry projects. Learning needs to student centric resulting in development in all areas such as analytical reasoning, lateral thinking, and solving case studies and as such. Mentoring and carrier counseling has to be introduced Most B-schools claim to have it but only as a lip service. If Management education in India has to really extend its image on international scenario; Institutes, Industry and government will have to work in alignment to improve quality of management education.

9. REFERENCES

9.1 Books

9.2 Scholarly Literature


9.3 Online Resources


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Abstract: Capital Asset Pricing Model (CAPM) is one of the important talk factors in finance and it has been widely discussed and tested in different capital markets throughout the world. This study examines the validity of capital asset pricing model in Indian Capital Market by using the data of 70 companies listed in BSE 100 index. The study used Black, Jensen and Scholes (1972) methodology and Fama Macbeth methodology (1973) to test the empirical validity of the model. The results showed linear relationship between beta and return, and also it showed weakness in explaining the various assumptions of CAPM.

Key Words: CAPM, Intercept, Beta, Portfolio Returns, SML, Black Jensen and Scholes Methodology, Fama and Macbeth methodology.

1. Introduction:

The need for investment may be different to different people, and it may be to appreciate his idle savings or to make a provision against uncertainty in the future. Every investment is likely to have risk and return. Further risk and return are considered as two sides of a coin and the measurement of risk without considering return is extraneous. The concept of risk is an important factor in security analysis and its valuation. Today risk management is a core area in all investment decisions, which protects the investor from financial loss and ensures that he is properly compensated for the risks he assumes. Through measurement of risk, one evaluates the possibility and tries to quantify the extent of risk and measures the likely fluctuation in return associated with his investment. Through the analysis one can identify how much will return vary from desired return or the likely changes in the actual return from the anticipated return.

The risk can be mainly classified in to Systematic risk and Unsystematic risk. The unsystematic risk is unique and specific to a firm or industry and these risk factors do not play an important role in investment decisions because it is diversifiable. The measurement of systematic risk is vital and the investor should give due care in assessing systematic risk, which is denoted by Beta (\(\beta\)). For the calculation of Beta we use the historical data of the individual security and the return of the representing market index. Beta present the volatility of a stock to general market movement and it measures the systematic risk added to a diversified portfolio. Security’s Beta depends on how the security’s return is closely correlated with the overall market’s return, and the relative volatility of the security to the market.
The investment theories provide tools to enable an investor and portfolio managers to handle their investment safely under wide range of complex situations. The investors are “price takers” and always expect a reasonable or higher return on his investment. The Markowitz portfolio model provides a useful framework for optimizing and combining risky funds to form a suitable portfolio. The portfolio theory of Markowitz derived the efficient frontier of risky assets; and point out the importance of security return correlation in the formation of portfolios. However the theory is not simple to explain the risk – return relationship of an investment. The modern portfolio theory explains that there is a clear trade of between risk and return. The Markowitz portfolio selection model helps one to plot the efficient frontier of risky assets and provides a useful framework for selecting an optimal combination of risky funds. The Capital asset pricing Model which was contributed William Sharpe (1964), John Lintner (1965), and Jan Mosssin (1966), (often referred as Sharpe – Lintner - Mosssin Capital Asset Pricing Model) explains the equilibrium relationship between the expected return on risky assets. This model is really an extension of the portfolio theory of Markowitz and explains the behavior of security prices. The model provide a mechanism to assess the role of a particular asset in the overall portfolio risk and return and it uses the result of capital market theory to derive the relationship between expected return for the risky assets. The model is used widely in security valuation, risk analysis, estimation of cost of capital and evaluation of the performance of portfolios. The capital asset pricing model (CAPM) is a theoretical model of equilibrium ex ante or expected returns on risky assets. The model specifies the relationship between risk and required rate of return for assets held in well-diversified portfolios. The essence of this model is that the expected return on any asset is a positive linear function of its beta, the only measure of risk that explain the cross-section of expected returns. All the securities are expected to yield a certain amount of return proportionate to the riskiness as measured by the beta and the relationship is also valid for all portfolios irrespective that whether it is efficient or inefficient. But the literature says that there is controversial opinion about the validity of the model and a number studies which questioned the applicability of the Model especially in developed markets. Therefore the model should be tested and validated for each and every market and this study will test the empirical validity of the CAPM by using 9 years daily data.

This study is organized as follows. Section 2 presents a brief review of the literature on the empirical testing of CAPM model. Section 3 gives a brief theoretical background, details of test procedure with details of data used in the study and Section 4 presents the details of the empirical work. Finally section 5 deals with findings, summary and conclusion.

2. Previous Research
The capital asset pricing model is one of the most discussed models in the history of finance. The evidence from the literature indeed insinuates on the inefficiency of the Capital Asset Pricing model and questioned the applicability in different market throughout the world but not fully reject the model. Various empirical tests revealed that there is a mixed feeling on the applicability of CAPM in predicting the risk return relationship. The studies conducted by Fischer Black, Michael C. Jensen, and Myron Scholes (1972), Fama and Mac Beth (1973), Sauer and Murphy (1992), Andor Gyorgy et.al (1999) for the Hungarian capital market are...
generally supportive and the results were in favor of the using the model. Jagannathan, R, and Z. Wang (1996) strongly support conditional CAPM when betas and expected returns are allowed to vary over time by assuming that the CAPM holds in each and every period. Ming-Hsiang Chen (2003) established that empirical performance of the CAPM is encouraging and the CAPM outperforms the CCAPM in terms of goodness of fit. Further Suh (2009) opined that in a highly volatile market, Parameter estimates of the CAPM are generally superior to those of the Fama French three factor models.

But many studies aroused serious questions against the validity of the model and challenged the validity of the model in late Seventies, Eighties and Nineties. It was found that beta itself cannot explain the risk return relationship and some studies firmly acknowledge that a systematic relationship between market beta and average return across the assets does not exist. Javid, Attiya. (2009) studied about Pakistan market, Pablo Rogers and et al.(2007) analysed the Brazilian market, Gursoy and et al .(2007) done on Turkey market, Xi yang etal.(2006) conducted study on Chinese market, Fan Stephen C. (2004), Bartholdy Jan (2004) for NYSE stocks, Malin mirela and etal. (2004) studied about UK, France and German markets, Cagnetti (2001) studied about Italian market, Yue Cheong Chan(1997) analysed the Hong kong market and Madhusoodanan (1997) studied the Indian context and most of them reject the CAPM model. Further the studies conducted by Roll (1977), Harris and et al.(2003) argued against CAPM,. Nopbhanon Homsud and et. al. (2009) found that Fama French model explain return better than the traditional one factor Asset Pricing model.

In Indian context, only few studies were conducted for analyzing risk return relationship and studies by Varma (1988), Srinivasan (1988) have generally supported CAPM. The studies by Rao and Bhole (1990), Vaidyananthan (1995), Sehgal (1997) Connor and et.al (2001), Sehgal (2003) Mohanty (2002),Manjunatha and Mallikarjunappa (2006) questioned the validity of CAPM in Indian context. Further it is clear that most of the studies in India used monthly or yearly data and only few studies used daily and weekly data. The studies in Indian context to examine the validity of Capital Asset Pricing Model are scanty and thereby it is planned to examine the CAPM model by using daily data of 70 companies listed in BSE100-index.

3.1. Objectives of the Study
The primary objective of the study is to test the empirical validity of the CAPM frame work in Indian context by using Black et.al (1972) and Fama and Mac Beth (1973) methodology and the study specifically intended:

- To ascertain the relationship between return of securities and market return
- To check whether higher or lower risk generate higher or lower rate of return.
- To check whether expected rate of return is linearly related with systematic risk.

3.2. Source and Period of Data
It is to investigate the empirical validity of CAPM models in Indian context by considering the data of BSE 100 stock Index, a broad-based index, launched in 1989 with the base year 1983-84. The period for the study covers nine years daily data for a period from 01-01-2001 to 31-12-2009 and the data used in this study were sourced from RBI (Reserve Bank of India), SEBI(Security Exchange Board of India), BSE (Bombay Stock Exchange)websites and Prowess- a
data base of CMIE (Center for Monitoring Indian Economy). Further the study considers 91 day Treasury bill rate as the proxy for the risk free assets as it reflects the short term changes in the financial market.

3.3. Methodology Adopted:

This study will test the CAPM model by using the same method followed by the Black, Jenson and Scholes in (1972) over the period from 2001 to 2009 and the non linearity is tested with Fama Macbeth (1972) methodology. The following are the steps adopted in the analysis:

First individual securities beta are measured by using the following model:

\[ R_{i,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + e_{i,t} \]  

Where: \( R_{i,t} \) is the rate of return on asset i (or portfolio) at time t, \( R_{f,t} \) is the risk-free rate at time t, \( R_{m,t} \) is the rate of return on the market portfolio at time t. \( \beta_i \) is the beta of stock i, \( e_{i,t} \) is the error term in the regression equation at time t.

Secondly the portfolios are constructed by using the betas calculated above. For the formation of portfolios the individual beta of each security is arranged in ascending order and the stocks were grouped in to portfolios having five stocks each according to their beta value. The first portfolio comprises of first five securities with the lowest beta, the next portfolio with the next five securities. The same method is followed for the formation of other portfolios and there by the last portfolio is formed with the securities having the highest beta.

Thirdly portfolio betas are determined by using the following regression model.

\[ r_{p,t} = \beta_p + \beta_{m,t} + e_{p,t} \]  

Where \( r_{p,t} \) is the average excess portfolio return on time t, \( \beta_p \) is the estimated portfolio beta, and \( e_{p,t} \) is the error term in the regression equation at time t.

Fourthly ex post security market line is determined by regressing the portfolio return to portfolio betas with the following model:

\[ r_p = \lambda_0 + \lambda_1 \beta_p + e_p \]  

Where \( r_p \) is the average excess return of the portfolio P, \( \beta_p \) is the beta of the portfolio P, and \( e_p \) is the error term in the regression equation

Fifthly the non- linearity between the total portfolio return and betas is measured by using the following equation.

\[ r_p = \lambda_0 + \lambda_1 \beta_p + \lambda_2 \beta_{p}^2 + e_p \]  

Here the theory says that if the CAPM is true, the portfolio returns and its betas are linearly related with each other and \( \lambda_2 \) will be equal to zero.
4.1. CAPM Frame Work in Indian Capital Market

In this study an attempt is made to test the empirical validity of the model by using portfolios having five securities. The theory says that through diversification one can strategically reduce the risk by allocating the available funds in many securities by forming balanced portfolios. Further, it will also help to compare the results with earlier studies with same set of data and also to check whether the number of securities in a portfolio has any influence on measuring the efficiency and validity of CAPM.

4.1.1. Testing CAPM through Portfolio Beta

The Capital Asset Pricing model postulates that, the components of the expected return exceeding the risk free rate will be linearly related to the idiosyncratic risk. Further the model predicts that, there is a linear relationship between stock beta and return and also higher risk beta is associated with higher rate of return.

Table 4.1

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Portfolio Return(rp)</th>
<th>Constant</th>
<th>Beta</th>
<th>Standard Error</th>
<th>$R^2$</th>
<th>F value</th>
<th>P Value 99%</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>0.08861</td>
<td>0.06414</td>
<td>0.36583</td>
<td>0.92121</td>
<td>0.33020</td>
<td>1106.26</td>
<td>0.0000</td>
</tr>
<tr>
<td>P2</td>
<td>0.13393</td>
<td>0.09521</td>
<td>0.57899</td>
<td>1.09383</td>
<td>0.46691</td>
<td>1965.43</td>
<td>0.0000</td>
</tr>
<tr>
<td>P3</td>
<td>0.12553</td>
<td>0.07899</td>
<td>0.69593</td>
<td>1.38381</td>
<td>0.44153</td>
<td>1774.18</td>
<td>0.0000</td>
</tr>
<tr>
<td>P4</td>
<td>0.10556</td>
<td>0.05461</td>
<td>0.76191</td>
<td>1.05857</td>
<td>0.61823</td>
<td>3633.93</td>
<td>0.0000</td>
</tr>
<tr>
<td>P5</td>
<td>0.13207</td>
<td>0.07543</td>
<td>0.84704</td>
<td>1.06828</td>
<td>0.66276</td>
<td>4410.18</td>
<td>0.0000</td>
</tr>
<tr>
<td>P6</td>
<td>0.12198</td>
<td>0.06193</td>
<td>0.89781</td>
<td>1.09352</td>
<td>0.67816</td>
<td>4728.54</td>
<td>0.0000</td>
</tr>
<tr>
<td>P7</td>
<td>0.13557</td>
<td>0.07309</td>
<td>0.93429</td>
<td>1.14146</td>
<td>0.67682</td>
<td>4699.57</td>
<td>0.0000</td>
</tr>
<tr>
<td>P8</td>
<td>0.12536</td>
<td>0.05982</td>
<td>0.98011</td>
<td>1.22015</td>
<td>0.66855</td>
<td>4526.25</td>
<td>0.0000</td>
</tr>
<tr>
<td>P9</td>
<td>0.18670</td>
<td>0.11754</td>
<td>1.03411</td>
<td>1.11044</td>
<td>0.73053</td>
<td>6083.59</td>
<td>0.0000</td>
</tr>
<tr>
<td>P10</td>
<td>0.21272</td>
<td>0.14094</td>
<td>1.07345</td>
<td>1.30458</td>
<td>0.67912</td>
<td>4749.29</td>
<td>0.0000</td>
</tr>
<tr>
<td>P11</td>
<td>0.18653</td>
<td>0.10890</td>
<td>1.16086</td>
<td>1.68331</td>
<td>0.59786</td>
<td>3336.14</td>
<td>0.0000</td>
</tr>
<tr>
<td>P12</td>
<td>0.13889</td>
<td>0.05912</td>
<td>1.19280</td>
<td>1.29372</td>
<td>0.72657</td>
<td>5962.97</td>
<td>0.0000</td>
</tr>
<tr>
<td>P13</td>
<td>0.18345</td>
<td>0.10019</td>
<td>1.24502</td>
<td>1.51927</td>
<td>0.67734</td>
<td>4710.72</td>
<td>0.0000</td>
</tr>
<tr>
<td>P14</td>
<td>0.18131</td>
<td>0.08756</td>
<td>1.40188</td>
<td>1.44521</td>
<td>0.74628</td>
<td>6600.44</td>
<td>0.0000</td>
</tr>
<tr>
<td>Avg Rf</td>
<td>0.01626</td>
<td></td>
<td></td>
<td>0.06687</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the Table 4.1, it is clear that the portfolio 1 (P1) with lowest beta earned the minimum return (0.08861) and the portfolio 10 with the beta (1.30458) earned the maximum return (0.21272). Out of the 14 portfolios, with the increase in beta we cannot see any increasing trend in the average portfolio excess return; rather it goes up and down. The study also supplements that, during the study period all the portfolios including the portfolio with lowest beta earned more than the average excess market return and also the risk free return. Further the positive
constants suggest that, the portfolios earned higher returns than the CAPM has predicted. In the case of first three portfolios (P1, P2, P3), the value of $R^2$ is less than 0.50 and which points a less than adequate correlation with the market index. But in the case of other portfolios, $R^2$ values are in between (0.59) and (0.73), which means that 59% to 73% of the variation in the scrip has been explained by the relationship with the index. Further from the Table, it can be noted that the all constants are not significant and it has positive values. Thus the result indicates that, the alpha coefficients are significantly different from zero and hence we reject the null hypothesis.

Further all the p values of estimated betas are found to be statistically significant at 99% level; thereby we reject the null hypothesis that the portfolio beta is not a significant determinant of portfolio return. Thus from the analysis we can say that the $\beta$ is a predictor of return during the whole study period (2001-2009).


From the Table 4.2, it is clear that the t-test rejects the null hypothesis that $\lambda_0$ is significantly different from zero. Here the calculated value of the intercept is (0.10800) and it is significantly different from zero. Statistically, the result shows that the t-value is greater than (2.18) at 95% confidence level and the $\lambda_0$ is statistically significant. Thus the result is statistically inconsistent with CAPM.

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Std error</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_0$</td>
<td>0.04244</td>
<td>2.545 **</td>
<td>0.0257</td>
</tr>
<tr>
<td>$\lambda_1$</td>
<td>0.04344</td>
<td>2.432 **</td>
<td>0.0316</td>
</tr>
</tbody>
</table>

Table showing the estimation of SML for the whole Study Period (2001-2009)

Note: ** shows significance at 95% level

Further, from the table, it is clear that the t-test reject the null hypothesis that the slope ($\lambda_1$) is not significantly different from zero because the t value is greater than (2.18) at 95% confidence level. As per the CAPM $\lambda_1$ should be equal to the average risk premium, and should be greater than zero, Hence the result is consistent with the CAPM and hence the CAPM can be accepted along with the rejection of Ho for $\lambda_0=0$.

4.1.3. Test of Non-Linearity (2001-2009)

The theory of CAPM holds true, when $\lambda_0$ and $\lambda_2$ equal to zero and the $\lambda_1$ equal to the average risk premium. The results of the estimated values are summarised bellow in the Table 4.3.

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Std error</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_0$</td>
<td>0.11404</td>
<td>0.7274</td>
<td>0.4822</td>
</tr>
<tr>
<td>$\lambda_1$</td>
<td>0.25691</td>
<td>0.6458</td>
<td>0.5316</td>
</tr>
<tr>
<td>$\lambda_2$</td>
<td>−0.13937</td>
<td>−0.2383</td>
<td>0.8160</td>
</tr>
</tbody>
</table>

Critical value for t-test with 11-Degrees of freedom at 95% level (2.2010)
The test of the non-linearity checks the relation between stocks returns and the estimated betas. Here the t-value (0.7274) of the intercept $\lambda_0$ is less than (2.2010), and is not significantly different from zero, thereby it is consistent with the CAPM hypothesis. The parameter $\lambda_1$ is not significantly different from zero and the t-value (0.6458) is smaller than (2.2010), which is inconsistent with the CAPM hypothesis. The absolute t-value (0.2383) of $\lambda_2$ is smaller than (2.2010), i.e. it is not significantly different from zero, which is consistent with the CAPM hypothesis. Thus, beta is linearly related with expected return and the CAPM cannot clearly be rejected during the test period. Further the test shows the weakness of the data to explain the postulates of the CAPM.

Table 4.4

Consolidated result for the Different Test periods

<table>
<thead>
<tr>
<th>Period</th>
<th>CAPM</th>
<th>SML</th>
<th>Non-Linearity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>$\lambda_0$</td>
<td>$\lambda_1$</td>
</tr>
<tr>
<td>2001-2009</td>
<td>Support Inconsistent Consistent Inconsistent Consistent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Conclusion

The consolidated results of tests are shown below in Tables 4.4 and following inference can be derived. The test of portfolios based on percentage return with equally weighted portfolios having 5 securities mostly favored and is in support of CAPM. In almost all the cases the constant have positive values, which suggest that the portfolio bagged more return than the CAPM has predicted. In analyzing the risk - return relationship, for most of the cases the $R^2$ explain the relative amount of variance in return of the portfolio. Further it is found that, generally higher beta provides higher return to the investor; but it does not mean it is fully true in all the cases. The Test for SML and Non linearity also support CAPM but it still shows the weakness of the data to fully explain the model during the study period. In short most of the test result supports the CAPM and is in favor of the model but it fails to fully explain the postulates of CAPM and we cannot see conclusive evidence in support of CAPM to wrap up the question of the validity of CAPM in Indian context.

Reference:-

Incorporating the Credit Constraint in a Linear Programming Model: A Case Study of a Rural Farmer in Zimbabwe

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ABSTRACT: The available working capital required to finance purchase of inputs on a farm like seeds for instance, can be an important constraint on a farm. Some working capital may be available from the farm family’s savings. The farmer may have an option for increasing his working capital by borrowing. In this study, a linear programming model was developed in order to determine the optimal crop combination for a rural farmer. The linear programming model incorporated the credit constraint. The objective was to maximize income. Crops considered were maize, soya beans, cotton and tobacco. Tobacco gained acreage by 291.33%. Soya beans and cotton lost acreage completely. Maize lost acreage by 73.5%. The optimal income increased from $9,877.00 to $22,774.60. The optimal income showed an improvement of 130.58% compared to the farmer’s existing plan. The results show that LP model solutions are worthy implementing because they increase income.

Keywords: Credit Constraint; Linear Programming; Optimal Crop Combination; Income; Rural Farmer.

1. INTRODUCTION
The available working capital required to finance purchase of inputs on a farm like seeds for instance, can be an important constraint on a farm (Hazell and Norton, 1986). Hazell and Norton (1986) say that, “Some working capital may be available from the farm family’s savings, but this can be supplemented by borrowing”. The farmer may have an option for increasing his working capital by borrowing. Adebayo and Adeola (2008) argue that, “Agricultural credit enhances productivity and promotes standard of living by breaking vicious cycle of poverty of small scale farmers”. Adegeye and Ditto (1985) in Adebayo and Adeola (2008) describe agricultural credit “as the process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at the future”. The efficient use of credit is an important factor in order to increase productivity (Adebayo and Adeola, 2008).

The credit constraint can be incorporated in a linear programming (LP) model in order to determine the optimal crop combination for small scale farmers. Ohajianya and Oguoma (2009) used an LP technique for optimizing resources. Their results showed a divergence between the existing and optimum farm plans under limited and borrowed capital situations. After optimization, farm income could be increased. Tanko et al (2011) used an LP model for optimizing gross margins. Their
results showed that resources were not optimally allocated and after optimization the gross margins could be increased. The gross margins were higher in the borrowed capital as compared to the limited capital situation. Bamiro et al (2012), in their study examined the enterprise combination in cassava based food farming system in Ogun state. The optimal cassava based combination was actualized by an LP model. The results show that land and capital were the limiting resources. Mohammed and Ndanitsa (2012) determined the optimal farm plan for Fadama tree-crop farmers in Niger State, Nigeria. A linear programming model was used to analyze the data collected. Their results showed that capital was the only limiting resource in the study area and had a shadow price of N8.453k. The study recommended farm families to direct their resources towards the production of only citrus lemon, which both governments and non-governmental organizations should assist in providing infrastructure and soft loans to the farm families. Mahendran et al (2006) developed a linear programming model to determine optimal crop plans. The constraints considered were water, land and capital. The net income of the farms sampled increased marginally or considerably in the optimal crop plans. Agbonlahor et al (2009) carried out a study to model an optimal arable crop plan that minimizes child farm labor use in Ogun State, Nigeria. An LP model developed was used to come out with an optimal arable crop farm that maximizes economic returns to the farmers. The optimal farm model showed that the optimal crop plan could increase the annual farm income by about 15.3 percent. Singh et al (2003) developed an LP model to formulate optimal cropping pattern for producing minimum food requirement. The optimal cropping pattern showed that it was possible to achieve food security with minimum investment. Ibrahim and Omotesho (2011) determined an optimal enterprise combination for vegetable production under Fadama in north central Nigeria. Their LP model considered both economic and environmental goals simultaneously in a composite function. The optimal plan achieved 88 percent of the goals considered. Kaur et al (2010) formulated an LP model to suggest the optimal cropping pattern for maximizing net returns and ensuring significant savings of groundwater in the Punjab agriculture. The solution ensures groundwater savings of almost 25 percent. Mohamad and Said (2011) proposed an LP crop mix model for a finite-time planning horizon. The objective was the maximization of the total returns at the end of the planning horizon. The LP model solved the problem normally faced by farmers which include what to plant, how much to plant and when to plant (Mohamad and Said, 2011). Abdelaziz et al (2010) used the LP technique to analyze data. The results showed that the models gave a different cropping pattern from the farmers’ production plan. The model solutions gave a profitable income while in reality the farmers gained a loss (Mohamad and Said, 2011). Dey and Mukhodhay (2010) formulated two optimal crop plans by LP technique. The net returns obtained from the optimal plans exceeded the existing plans by 43 percent and 13 percent respectively. Farmers face the problem of allocating their limited resources to alternatives (Dey and Mukhodhay, 2010). Dey and Mukhodhay (2010) say, “Scarcity of resources necessitates judicious allocation for maximizing of return”.

The objective of this study was to develop an LP model that resulted in an optimal cropping for a rural farmer in Bindura, Zimbabwe. The LP model developed incorporated the credit constraint. The farmer currently determines cropping pattern using traditional methods like trial and error, and experience.
2. LINEAR PROGRAMMING FORMULATION

The farmer in our study contemplated on supplementing his working capital available from his farm family’s own savings by borrowing from a financial institution. The interest rate was 22 percent per annum. The area available for production of maize, soya beans, cotton and tobacco was 6 hectares for the 2011/12 agricultural season. The farmer’s plan was to allocate 2 ha for maize, 1.5 ha for soya beans, 1 ha for cotton and 1.5 ha for tobacco production. The farmer planned to borrow $3000.00 from a financial institution to supplement working capital. This would allow the farmer to utilize all the 6 ha of land available for crop production. The question is whether this crop combination maximizes net income?

The decision variables are:

\[ \begin{align*}
  x_1 &= \text{hectares allocated for maize production.} \\
  x_2 &= \text{tons of maize produced for sale.} \\
  x_3 &= \text{tons of maize stored for family consumption.} \\
  x_4 &= \text{hectares allocated for soya bean production.} \\
  x_5 &= \text{hectares allocated for cotton production.} \\
  x_6 &= \text{hectares allocated for tobacco production.} \\
  x_7 &= \text{credit.}
\end{align*} \]

The goals of the objective function were to maximize net income and to store maize for family consumption subject to land, labor, cash and credit constraints. The working capital was introduced in the farm model by adding the working capital constraint.

Table 1: Linear Programming Matrix

<table>
<thead>
<tr>
<th></th>
<th>Maize (ha)</th>
<th>Sell maize (ton)</th>
<th>Transfer maize (ton)</th>
<th>Soya beans (ha)</th>
<th>Cotton (ha)</th>
<th>Tobacco (ha)</th>
<th>Borrow credit (dollars)</th>
<th>Objective function (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crop land (ha)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>≤ 6</td>
<td></td>
</tr>
<tr>
<td>Labor (days)</td>
<td>30</td>
<td>30</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td></td>
<td>≤ 295</td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td>-8</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>≤ 0</td>
<td></td>
</tr>
</tbody>
</table>

The goals of the objective function were to maximize net income and store maize for family consumption subject to land, labor, cash and credit constraints. The working capital was introduced in the farm model by adding the working capital constraint.
Table 1 represented the LP matrix. The right hand side represented the production constraints. The LP model is given by:

$$\text{Max } z = -918x_1 + 285x_2 + 595x_4 + 160x_5 + 4067x_6 - 0.22x_7, \quad (\text{objective function})$$

subject to

$$x_1 + x_4 + x_5 + x_6 \leq 6, \quad (\text{crop land constraint})$$

$$30x_1 + 30x_4 + 40x_5 + 40x_6 \leq 295, \quad (\text{labor constraint})$$

$$-8x_1 + x_2 + x_3 \leq 0, \quad (\text{maize accounting})$$

$$-x_3 \leq -1, \quad (\text{maize consumption})$$

$$918x_1 + 730x_4 + 365x_5 + 1183x_6 - x_7 \leq 2500, \quad (\text{working capital})$$

$$x_1, ..., x_7 \geq 0, \quad (\text{non-negativity constraint})$$

3. RESULTS AND DISCUSSION

MS Excel (2007) a software package was used to solve the LP problem and the results are shown in Table 2. Tobacco gained acreage by 291.33%. Soya beans and cotton lost acreage completely. Maize lost acreage by 73.5%. The optimal cropped acreage did not change as compared to the existing plan.
The production levels are shown in Table 3.

Table 3: Production

<table>
<thead>
<tr>
<th>Activities</th>
<th>Farmer’s plan ($)</th>
<th>LP solution ($)</th>
<th>% of Farmer’s plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>2,724.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Soya beans</td>
<td>892.50</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Cotton</td>
<td>160.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Tobacco</td>
<td>6,100.50</td>
<td>23,893.63</td>
<td>391.67</td>
</tr>
</tbody>
</table>

The income levels are shown in Table 4. The optimal income increased from $9,877.00 to $22,774.60 showing an improvement of 130.58%. The results show that LP model solutions are worthy implementing because they increase income.

Table 4: Income Levels

<table>
<thead>
<tr>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer’s plan ($)</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>9,877.00</td>
</tr>
</tbody>
</table>

4. CONCLUSION

In this study an LP model that determines the optimal crop combination for a rural farmer in Zimbabwe was developed. The income obtained by using the LP model was compared to the
income obtained by using the farmer’s existing plan. The income difference was 130.58% compared to the farmer’s existing plan. The results show that the LP model solutions are worthy implementing because they increase income.

5. REFERENCES


How Multinational Oil Companies and Corrupt Niger Delta Elites Underdeveloped the Niger Delta Region

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ABSTRACT: This study is on the role played by Multinational Oil Companies (MNOCs) and Niger Delta elites in the underdevelopment of the Niger Delta region of Nigeria. The study adopts a descriptive approach drawing data mainly from secondary data such as books, articles in newspapers, journals, internet etc. The study found that the Niger Delta region is endowed with natural resources. Among this is crude oil which is the mainstay of the Nigerian economy. Despite this oil wealth however, the region is largely underdeveloped. Poverty, massive unemployment, absence of safe drinking water, filth and squalor, lack of access to health care, education and housing among others are some of the features of the region. The problem of underdevelopment in the Niger Delta was traced to MNOCs and Niger Delta elites. The paper therefore argues that oil exploration activities of MNOCs such as gas flares and oil spills which have resulted in environmental degradation have deprived the people of the region their means of livelihood while corrupt practices of Niger Delta elites who embezzle funds meant for development have been responsible for the underdevelopment of the region. The study recommends among others the need for MNOCs to compensate the people for years of environmental degradation while Niger Delta elites found guilty of embezzlement while in office should be sent to jail.

KEY WORDS: underdevelopment; environmental degradation; Niger Delta; conflict, Nigeria

1. INTRODUCTION

The Niger Delta is located in the South-South region of Nigeria and as officially defined by the Nigerian Government, it extends over about 70,000 square kilometres and makes up 7.5% of Nigeria’s land mass. The region is made up of nine states namely: Abia, Akwa-Ibom, Bayelsa, Cross Rivers, Delta, Edo, Imo, Ondo and Rivers. In the past the region was referred to as the Oil Rivers because it was once a major producer of palm oil.

The Niger Delta is one of the World’s ten most important wetland and coastal marine ecosystems and home to some 31 million people. The third wetland in the world, it is also the location of massive oil deposits, which have been extracted for decades by the government of Nigeria and by MNOCs.
Since the discovery and exploitation of crude oil in commercial quantity in 1956 in Oloibiri in present day Bayelsa State by Shell Petroleum Development Corporation (SPDC), the oil industry in the Niger Delta has brought impoverishment to the people of the region. Pollution and environmental degradation caused by these MNOCs have deprived the people the right to an adequate standard of living, right to gain a living and to health and a healthy environment among others while Niger Delta elites on the other hand have helped in impoverishing their people by embezzling funds meant for development. The result is high rate of unemployment, social deprivation, abject poverty, filth and squalor and endemic conflict which have not only underdeveloped the region but made it one of ‘The Wretched of The Earth.’

2. THEORETICAL FRAMEWORK

The bourgeoisie political economy approach best explains this work. Political economy approach provides for a holistic study of the domineering role, control and impoverishment of the Niger Delta region by MNOCs.

The bourgeoisie political economy approach is one of the theories of underdevelopment. According to Wikipedia, Underdevelopment is a term used to refer to economic underdevelopment symptoms of which include lack of access to job opportunities, health care, drinkable water, food, education and housing. Underdevelopment takes place when resources are not utilized to their full socio-economic potentials as in the case of the Niger Delta. The result is that regional and or local development is slower than it should be. It also results from interplay of internal and external factors which allow less developed countries only a lop-sided development progression.

Bourgeoisie political economy scholars are of the view that the underdevelopment of and consequent dependency of most Third World Countries (TWCs) is a result of their internal contradictions which can be explained from their lack of close integration, diffusion of capital, technology and institutions among others. According to them, the way out therefore for the TWCs is for them to seek foreign assistance, aid, loan, investment, etc and allowed the MNCs to operate without restrictions or hindrance. Though they argued that development can come through the MNCs mechanism for transferring technology, capital, skills in management, design and marketing, this is however not true as the case of the Niger Delta region has shown that the penetration and activities of MNOCs are the major causes of underdevelopment of the region (Mohammed and Hundeyin 1999).

3. GEOGRAPHICAL LOCATION OF THE NIGER DELTA REGION

Niger Delta region is located in the Southern part of Nigeria. It is bordered to the South by the Atlantic Ocean and to the North by Anambra, Ebonyi, Ekiti and Kogi States. It is also bounded in the East by Cameroun and in the West by Ondo and Ogun States. (Ekpo 2004:1; Niger Delta Regional Development Master Plan 2000:49)
The Niger Delta region is the third largest wetland in the world after Mississippi and Pantanal and it covers an area of about 70,000 square kilometers, representing about 12% of Nigeria’s total surface area. According to the official estimation by the Nigerian Government, the region extends over about 70,000 square kilometers and makes up about 7.5% of Nigeria’s landmass (NDDC 2003:17; NDRDMP 2000:49).

In the past, the region was limited to the geographical area occupied mainly by minorities of Southern Nigeria but today it is synonymous with the Nine Oil producing states of Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers (Niger Delta Standard Feb 14, 2008:39).

The Niger Delta is a densely populated area. It was once known as the Oil Rivers because it was a major producer of palm oil. The population of the region was estimated at above 30 million people in 2005 accounting for more than 23% of Nigeria’s total population. The population density is also said to be the highest in the world with 265 people per kilometre-squared. The population is said to be expanding at a rapid 3% per year.

The Niger Delta is rich with diverse mosaic ecological zones five of which are; Mangrove Forest and Coastal Vegetation Zone, Fresh Water Swamp Forest Zone, Lowland, Rain Forest Zone, Derived Savannah Zone and the Montane Zone. The climate of the region varies from the hot equatorial forest type in the Southern lowlands to the humid tropical in the Northern highlands.

The Niger Delta people have a rich culture and heritage with 5000 communities, 50 ethnic groups speaking 250 languages and dialects. Some of the ethnic groups include; the Ijaws, Ogonis, Ikwerres, Etches, Ekpeyes, Ogbas, Engennes, Obolos, Isoko, Nembes, Okrikans, Kalabaris, uhobos, Itsekiris, Igbos, Ika-Igbos, Ndoni, Oron, Yoruba, Ibibios, Anang, Efiks, Bekwarras, Benins etc (Niger Delta standard Feb. 14 2008: 21; NDRDMP 2000: 53).

The Niger Delta region is rich in oil and gas production. It produces the bulk of Nigeria’s oil. About 2 million barrels a day are extracted in the region. Since 1975, the region has accounted for more than 90% of the country’s export earnings from oil and gas and about 60% of federally distributed revenue. It also accounts for oil reserve of about 30 billion barrels and gas reserves of about 160 million cubit feet. The region also accounts for 40% gross domestic product {GDP} and 80% gross revenue for the country (www.nigerdeltafoundation.org).

The region is also endowed with several solid minerals such as: granites, barites, marble, clay, gypsum, phosphate rock, feldspar, limestone, sand, gravel and natural resources, including oil palm, rubber, cocoa, coconut and a diversity of aquatic resources and fertile land for agriculture (NDRDMP 2000: 29)
The highest proportion of the people are engaged in the Agriculture, Forestry and Fishing industries which account for 44.2% while others are engaged in trade or selling activities 17.4%, education and health 7.1%, services 9.8%, administration, 5.4%, transport 2.2%, construction 2.8% and other activities 11.1%. Traditional industries exist in the region such as canoe – carving, cloth- weaving, mat-making, thatch-making, palm-oil processing, food processing (garri, fufu, starch from cassava), and local gin distillation (Ibid:68).

The Niger Delta region has a wide variety of tourists attractions in Ogoni land in Rivers state, and Kaiama and Odi in Bayelsa State among others.

4. ORIGIN OF OIL EXPLORATION ACTIVITIES IN THE NIGER DELTA

Nigerian Bitumen cooperation, a Nigeria subsidiary of a German Company carried out the first Niger oil exploratory work in Nigeria between 1908 and 1914. The company was however forced to withdraw in 1914 following the outbreak of the First World War and was disallowed from further operations after the war. In 1938, a joint venture between the two major British Oil Companies Shell and BP was granted a license to explore oil covering the entire territory of Nigeria. Shell – Bp therefore began its drilling activities in 1951 and in 1953 about 450 barrels of oil were discovered at the Akata – I well. In 1955, Mobil Oil Corporation started operations in Nigeria but oil was found in commercial quantities for the first time in 1956 at Oloibiri, about ninety kilometers West of Port-Harcourt in the present Bayelsa State by Shell D’Arcy which later changed its name to Shell-Bp Petroleum Development. Shortly after the discovery at Oloibiri, other important discoveries were made at Etche and at the Bomu Oil field in the Ogoni area in 1958 and other MNOCs like Texaco Overseas, Elf, Nigeria Agip Company, Phillips Oil Company among others started operation in Nigeria. Of these, Shell is the main operator on land.

Nigeria joined the rank of oil producers in 1958 when its first oil field came on stream producing 5,000 bpd. After 1960, exploration rights were extended to other foreign countries and with the oil boom in 1970; it began to reap instant riches from its production. Petroleum production and export play a dominant role in the country’s economy and accounts for about 90% of its gross earnings. However, the Niger Delta region which is home to vast oil reserves which make the country one of the world’s biggest oil exporters remains poor, underdeveloped and ridden with conflicts. The activities of MNOCs which include gas flaring has had a negative impact on the Niger Delta people. It is on record that the oil industry in the Niger Delta is one of the worst cases in the world of gas flaring (Worgu 2000). Gas flaring in the region emits about 70 million tones of Co2 a year, higher than the emissions in Norway and according to a report by the Environmental Rights Activists (ERA), and the climate Justice Programme (CJP): More gas is flared in Nigeria than anywhere else in the World (Nore P.C and Turner T.1980:233) while Van Dessel, Shell’s former head of environmental studies in Nigeria agreed that: …the most serious environmental damage of oil exploration and production activities is caused by: oil Spills, gas flares, oily and other waste, land take and production/drainage of water…(Jedrzey 1999)
6. Many people in the Niger Delta use the heat from pipeline gas flares for cooking in the absence of fuel. These flares are dangerous and harmful to the health of the people and are known to cause respiratory problems, leukemia, other blood-related diseases, premature deaths and pollute farmlands (Wikipedia, the Free encyclopedia; Worgu op cit).

7. Another report by the International Friends of the Earth (ERA) (n.d) states that: The gas flaring in the Niger Delta causes more greenhouse gases than all of sub-saharan Africa combined. (thenationonline, eng.net/../page/.html)

8. Gas flare causes noise and heat, air pollution, vibration which destroys economic trees and houses and also sleeplessness. According to a report in the Niger Delta Standard (Feb 5, 2008:20): Anyone under the age of 29 who lives in the small Fishing village of Akaraolu, deep in the tropical jungle of Nigeria’s oil-rich Niger Delta region, has never known a dark and peaceful night’s sleep. They’ve lived their entire lives knowing that once the sun sets behind the Mangrove Swamps of the Niger Delta that its light would be almost entirely supplanted by that of a roaring gas flare on the edge of a town that’s been turning the night into day unhindered for nearly 30 years.

The flare, owned by Italian oil company Agip Petroli, reveals the impact of gas flare by the oil industry on the region.

The educational sector is not spared as according to Ebere, a teacher in the village: …When the sun is high, we feel the heat of the flare because it is close. Sometimes the noise disturbs, so we have to shout for the students to understand (Niger Delta Standard Feb 5, 2008:20).

Oil Spills on the other hand, cause damage to the soil and pollute the people’s drinking water. According to Na’Allah: ‘oil spills are like spilling blood’. (Na’Allah 2008) and in the words of Ransome-Kuti (1999): “For oil, Nigeria is prepared to drown the country in blood.’

A recent UNDP (2006) report reveals that more than 6,800 spills were recorded in the Niger Delta between 1976 and 2001. Another report issued by the NNPC (1983), long before popular unrest surfaced had this to say: We witnessed the slow poisoning of the waters of this country and the destruction of vegetation and agricultural land by oil spills which occur during petroleum operations. But since the inception of the oil industry in Nigeria, more than twenty-five years ago, there has been no concerned and effective effort on the part of the government, let alone the oil operators, to control environmental problems associated with the industry.

Between 1997 and 1998, a number of oil spills occurred in the region resulting in the death of aquatic life, livestock, damaged farmland and polluted drinking water among others. During this period also, Cash crop and food crops estimated at 500 million were destroyed in Okpeku in
Etsako-East LGA of Edo State as a result of fire emanating from oil spills (Environmental Rights Action (ERA); Vanguard March 12, 2008)

The most annoying part of the issue is that the spills are neither cleaned nor are compensations paid. The host communities complain that oil companies shortchange them by not paying compensations for the degradation of their environment. They insist that these companies must plough something back to areas where they are making immense wealth from, if not by obligation but in the spirit of good neighborliness but the oil companies maintain that what they pay as compensation is adequate. The inability to identify actual representatives of the people often leads to payment of double compensation or frequent delays in payment on the part of the oil companies which the people view as deliberate efforts to frustrate them by refusing to pay. In addition, they blame the government for the ‘unholy alliance’ between it and the oil companies giving the latter the impression that the Niger Delta people do not matter but collaboration with the oil companies (Vanguard: September 6, 2004; NDS Feb 4, 2008: 2).

For the Niger Delta people, oil in the land has indeed become more of a curse than a blessing as aptly captured by the people of Oguagba in Edo State: Our joys have become sorrows because the oil production activities have completely destroyed the ecological system of our clans. Aquatic life is almost completely destroyed, the soil completely eroded and flora and fauna badly affected almost to the level of extinctions. In addition, oil exploration and production activities have subjected us to devastating erosion and permanent pollution, forcing us against our will to live permanently in a toxic atmosphere. Another villager summed this up when he said; ‘We suffer here, we plenty suffer. The effect of the light is too much … we need help from our Federal Government, we are crying out and writing letters’ (Ekpo 2004).

4.1 How Corrupt Niger Delta Elites Contribute to the Region’s Underdevelopment

The Niger Delta which should be a gigantic economic reservoir of national and international importance because of its rich endowments of oil and gas resources is in reality faced with the paradox of poverty in the midst of plenty because the region suffers from administrative neglect and poor governance among others. While the region deserves greater attention and revenues to deal with the poverty and infrastructural needs, it also pertinent to acknowledge that even though the percentage allocated to the region from the Federation Account seems small, in real terms it amounts to substantial sums of money enough to improve the lot of the people. Despite huge allocations to the NDDC which include contributions from the Federal Government, MNOCs operating in the region, the Ecological Fund, and member states in the region, the lack of development in the region is still glaring. It is on record that between June 1999 and March 2002 a total of N299.648 billion was allocated to the region from the Federation Allocation. Between 2001 and 2004, a total of N44 billion or US $341.1 million was disbursed to the NDDC of which the Federal Government accounted for 78.03 per cent. Annual federation allocations to the
Commission from 2000 to 2004 are respectively, N0.944 billion (US $ 7.3 million), N10.0 billion (US $77.5 million), N13.9 billion (US $107.8 million), N9.0 billion (US $69.8 million) and N14.0 billion (US $108.5 million). Data provided by the Federal Ministry of Finance shows that between May 1999 and October 2005, about 1050000 billion was allocated as revenue to the region (see table 1.8). While there was a huge increase in the revenue accruing to the region between 1999 and 2003 and an increase in the total expenditures during the same period, the quality of such spending was invariably low considering the low level of human development. This pattern was due to bad governance and corruption (dawodu.com; UNDP 2006:13, 62).

Isabella Abidde who hails from the region has the following questions for the Niger Delta elites: **Considering the state of the nine oil producing states, one must ask; where have all the monthly allocations gone? Where are the roads, school and clinics and hospitals? Where are the libraries, the science laboratories and the parks? Where are the water works, the bridges and industries? where are the social services these governments are supposed to provide to citizens? Stolen? Mismanaged? Where? Where has all the money the various states in the Niger Delta states received since 1999 gone?**

Former Speaker of the House of Representatives, Dimeji Bankole also believes the Niger Delta region leaders has failed their people for not using the allocations given them judiciously for the purpose they were meant. According to him, Bayelsa receives 9.2 times more money than Lagos State from the Federation Account while Rivers state collects more money than the entire North. Akwa Ibom collects more money than the entire North and Western part and Bayelsa than the entire North Central. Speaking to the leaders of the region he said: **Nobody is going to come to from Abeokuta to ask you what you did with your money in the creeks… you should ask yourselves about how your money was spent**

There is a strong belief that most of the governors within the region are not true representatives of the people but divert most of the fiscal allocation from the Federation Account and Derivation Fund to their states for their private use. This is glaring from the disparity between allocations and the low of infrastructural development. The local government which should be the most democratic and responsible to the people is even more problematic. In many of the core delta states, many of the local government officials do not reside in the locality and hardly visit their offices at all for months on end yet they collect and disburse the monthly allocations from the Federation Account (UNDP 2006:41). Many past governors and officials of the states of the delta are currently being charged to court for money laundering within and outside the country. Below are some examples.

- Former Governor of Bayelsa state Diepreye Alamieyesigha was arrested in London for money laundering and after his conviction was jailed for 2 years. He was also made to forfeit assets worth billions of naira in addition to local and foreign currencies more than #600 million.
- Lucky Igbinedion former governor of Edo state was also arraigned before a federal High court sitting in January 2008 on more than 150 count charges including money laundering and
abuse of office. He has also been accused of stealing more $25 million Edo state government money which he used for personal property acquisition at home and abroad.

- Peter Odili of former Rivers state was also accused of corruption and money laundering. He was said to have acquired more than two aircrafts and one helicopter for his personal and official use while in office.

- James Ibori ex-governor of Delta state was also arraigned before a federal high court in 2007 on 103 count charges of money laundering and abuse of office. Part of the allegation included fraudulent acquisition of several mansions in the Uk, south Africa and Nigeria. He is also said to have more than $35 million in foreign currencies.

- Even at the local government level, the issue of corruption is rife. Many of the local government chairmen are known to have embezzled funds earmarked for development. For instance, Mr. Christopher Ogolo chairman of Opobo/Nkaro LGA was said to have consistent withdrawn council funds which he deposited in private company account, awarded several contracts to himself between 2005 and 2006 to the tune of #12 million, in addition to that he awarded to his brother and other nefarious deeds.

- Sam Edem, former chairman of the NDDC was accused in 2008 of embezzling billions of naira belonging to the commission #800 million of which he gave to a native doctor to aid his continued stay in the commission.

Source: Nwachukwu 2008:75

The foregoing shows that the Niger Delta elites have contributed to impoverishing their people. The truth is that the entire fund embezzled would have been used for meaningful development in the region and prevented the crisis from escalating.

4.2 Indices of Underdevelopment in the Niger Delta

The Niger Delta is a paradox of poverty in the midst of plenty. Despite the vast wealth produced in the region, the people remain poorer than the national average with GNP per capita is below the national average of US $ 280.

About 70% of the Niger Delta people live below the poverty line which is above African Standard making the Niger Delta one the poorest parts of the world.

A UNDP report on the Niger Delta (2006:36), describes the poverty of the region in the following term: The poor person is one who cannot pay school fees for his children; cannot meet any needs, including food; has no farm land and cannot farm well; cannot take part in age-grade activities; cannot afford to send his children to school; wears tattered clothes; is very lean; and has no house to live in. In short, a poor person is one who has nothing. Consequently, ‘he has no voice’ in the community.

Poverty in the region means; hunger, being sick and not being able to see a doctor, not having access to school and not knowing how to read, not having a job, fear for the future, living one day at a time, losing a child to illness brought about by unclean water etc.

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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>28.1</td>
<td>46.3</td>
<td>42.7</td>
<td>65.6</td>
<td>54.4</td>
</tr>
<tr>
<td>Edo/Delta</td>
<td>19.8</td>
<td>52.4</td>
<td>33.9</td>
<td>56.1</td>
<td>Delta 45.35</td>
</tr>
<tr>
<td>Cross River</td>
<td>10.2</td>
<td>41.9</td>
<td>45.5</td>
<td>66.9</td>
<td>41.61</td>
</tr>
<tr>
<td>Imo/Abia</td>
<td>14.4</td>
<td>33.1</td>
<td>49.9</td>
<td>56.2</td>
<td>Imo 27.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Abia 22.27</td>
</tr>
<tr>
<td>Ondo</td>
<td>24.9</td>
<td>47.3</td>
<td>46.6</td>
<td>71.6</td>
<td>42.15</td>
</tr>
<tr>
<td>Rivers/Bayelsa</td>
<td>7.2</td>
<td>44.4</td>
<td>43.4</td>
<td>44.3</td>
<td>Rivers 29.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bayelsa 19.98</td>
</tr>
</tbody>
</table>

Source: NBS 2004

The problem of the Niger Delta is not just that of increasing incidence of poverty but also the feeling among the people that they ought to fare better considering the enormous resources within the region and the display of ostentation by states in the country which owe their wealth to crude oil.

Due to the many forms of oil-generated environmental pollution evident throughout the region, farming and fishing have become impossible or extremely difficult in oil-affected areas and this has heightened unemployment. Over two million youths (in the region) are unemployed while MNOCs employ ghost workers which they pay for nothing. Militants in the Niger Delta region often use these unemployed youths to carry out their activities as a way of telling the world, that if the oil companies fail to provide jobs for them they can engage themselves. Some of the youths absorbed are mostly on part-time basis or as casual workers.
Table 1.5: Unemployment and Underemployment Rate in the Niger Delta, 2000

<table>
<thead>
<tr>
<th>COUNTRY/STATE</th>
<th>UNEMPLOYMENT (%)</th>
<th>UNDEREMPLOYMENT (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Composite</td>
<td>Urban</td>
</tr>
<tr>
<td>Abia</td>
<td>2.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Akwa Ibom</td>
<td>18.2</td>
<td>12.6</td>
</tr>
<tr>
<td>Bayelsa</td>
<td>6.5</td>
<td>13.0</td>
</tr>
<tr>
<td>Cross River</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Delta</td>
<td>10.3</td>
<td>16.2</td>
</tr>
<tr>
<td>Edo</td>
<td>1.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Imo</td>
<td>6.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Ondo</td>
<td>4.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Rivers</td>
<td>19.1</td>
<td>18.2</td>
</tr>
<tr>
<td>Nigeria</td>
<td>4.7</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Note: An unemployed person did not do any work during the period of survey; an underemployed person worked less than normal hours for voluntary reasons.


Another indication of underdevelopment is the absence of safe drinking water because of the pollution of water by oil spills. Water supply in the majority of the states in the region comes from unsafe supply facilities including rivers, lakes or ponds, unprotected wells and boreholes. The lack of potable water makes people to drink water polluted with oil spills which is hazardous to their health. The few hospitals in the region are very far from people in the rural centres and even where they are available, absence of good roads pose as an obstacle to getting to the hospitals on time for treatment in the event of an emergency. The Niger Delta has the worst post-neonatal mortality rate in Nigeria. In the estimates derived from the Nigeria Democratic Health Survey (NDHS) for 1999, carried out by the National Population Commission, the infant and child mortality rates for the Niger Delta region were estimated at about 48 and 35 per 1,000.
respectively compared with national rates of 71 and 67 per cent per 1,000 respectively (see table 1.4 for the situation as at 2003).

### Table 1.3 Child and Infant Mortality Rates by the Regions of Nigeria

<table>
<thead>
<tr>
<th>Region</th>
<th>Neonatal Mortality</th>
<th>Post-neonatal Mortality</th>
<th>Infant Mortality</th>
<th>Child Mortality</th>
<th>Under-five Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>53</td>
<td>56</td>
<td>109</td>
<td>121</td>
<td>217</td>
</tr>
<tr>
<td>North-Central</td>
<td>53</td>
<td>49</td>
<td>103</td>
<td>70</td>
<td>165</td>
</tr>
<tr>
<td>North-East</td>
<td>61</td>
<td>65</td>
<td>125</td>
<td>154</td>
<td>260</td>
</tr>
<tr>
<td>North-West</td>
<td>55</td>
<td>59</td>
<td>114</td>
<td>176</td>
<td>269</td>
</tr>
<tr>
<td>South-East</td>
<td>34</td>
<td>32</td>
<td>66</td>
<td>40</td>
<td>103</td>
</tr>
<tr>
<td>South-South</td>
<td>53</td>
<td>68</td>
<td>120</td>
<td>63</td>
<td>103</td>
</tr>
<tr>
<td>South-West</td>
<td>39</td>
<td>30</td>
<td>69</td>
<td>47</td>
<td>113</td>
</tr>
</tbody>
</table>

*Source: Nigeria Demographic and Health Survey 2003*

Roads in the region are mostly bad and impassable during the rainy season. Although urban road transportation development has in recent times been given priority attention, less regard has been shown for rural transportation, especially water transport which the most of the rural populace depend on. Because of the bad situation of the roads which has made them death traps, motorists avoid them and as a result people trek long and excruciating distances due to the high cost of motorcycle transport which has become a popular means of transport.

Housing in the region is mostly of poor quality especially in the swamps and creeks where dwellings are made of mostly mud walls, and stilt and strip foundations.

Quality education poses a big challenge in the region. 40 per cent of the people are illiterates. Across the region, nearly all school facilities are in a state of extreme disrepair and require major rehabilitation. There are schools in the region where pupils still sit on bare floors and leaking roofs to learn. Statistical estimates put the proportion of children attending primary school at 80 per cent which compares favourably with the estimated national average of 54 per cent. However, across the region, nearly all school facilities are in a state of extreme disrepair and require major rehabilitation. It is surprising to note that there are schools in the region where
pupils still sit on bare floors and leaking roofs to learn. The secondary school system suffers from a shortage of quality teachers. An NDES report (2000) revealed that in the Niger Delta states covering some 30,000 square kilometers and with over 3,800 settlements and an estimated eight million living there, there were only 2,169 primary schools and 545 secondary schools. For primary schools, this implies one school per 3,700 people serving in an area of 14 square kilometers, and one school for every two settlements. For secondary, the ratio is one school per 14,679 people serving an area of 55 square kilometers and one school for every seven settlements. No wonder 40 per cent of the people are said to be illiterates. The Niger Delta Regional Development Master Plan (NDRDMP) report (2008) states that the major constraint to good quality administration and schooling at the primary, secondary, adult and tertiary levels is poor funding with attendant poor infrastructure maintenance. One wonders why this should be the case with huge allocations to the region and money that accrue to the MNOCs, as well as compensations except that some elites within the region embezzle such funds.

Table 1.4: Net Enrolment Ratios in Primary and Secondary Schools in the Niger Delta

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Abia</td>
<td>98.1</td>
<td>98.08</td>
</tr>
<tr>
<td>Akwa Ibom</td>
<td>99.56</td>
<td>93.06</td>
</tr>
<tr>
<td>Bayelsa</td>
<td>95.68</td>
<td>96.46</td>
</tr>
<tr>
<td>Cross River</td>
<td>93.92</td>
<td>92.35</td>
</tr>
<tr>
<td>Delta</td>
<td>93.88</td>
<td>96.88</td>
</tr>
<tr>
<td>Edo</td>
<td>97.35</td>
<td>96.43</td>
</tr>
<tr>
<td>Imo</td>
<td>98.33</td>
<td>98.25</td>
</tr>
<tr>
<td>Ondo</td>
<td>98.48</td>
<td>100.00</td>
</tr>
<tr>
<td>Rivers</td>
<td>97.47</td>
<td>97.92</td>
</tr>
<tr>
<td>Niger Delta</td>
<td>97.0</td>
<td>96.6</td>
</tr>
<tr>
<td>Nigeria</td>
<td>82.21</td>
<td>60.17</td>
</tr>
</tbody>
</table>

The foregoing shows that the Niger Delta is underdeveloped in relation to the wealth generated from its oil and unless something is done, the trend will continue.

5.0 CONCLUSION AND RECOMMENDATION

In this paper, we have been able to establish that the problem of underdevelopment in the Niger Delta is caused by the MNOCs oil exploration activities with their attendant hazards which have resulted in poverty, massive unemployment, absence of safe drinking water, filth and squalor, lack of access to health care, education and housing which are symptoms of underdevelopment. In addition, embezzlement of funds meant for development by corrupt Niger Delta elites also contributes to underdevelopment of the regions. In view of this, the following recommendations are made.

In the first place, efforts should also be made by the MNOCs to meet the genuine needs of the people of the region. In this regard, rapid and massive socio-economic development must be put in place; qualified Niger Delta people should be given management-related positions in oil-related parastatals to give them a sense of belonging while unemployed youths in the region must be employed as full time workers and well-articulated skills acquisition programme put in place. Furthermore, amenities such as portable water, constant electricity, state of the art schools and hospitals with qualified medical personnel among others must be put in place for the people to make life comfortable for them. Also, there must be construction of roads and bridges to key towns and communities, coastal roads to link the entire region and creation of development centres in the most inaccessible areas of the region.

MNOCs should also ensure that oil production does not continue at the cost of violations of the rights of those who live in the area. They should take responsibility for their actions by a definite plan to clean the environment and adequately compensate the people for many years of environmental degradation just as obtains in advanced countries of the world. In addition, gas flaring which has a lot of havoc to the Niger Delta people should be eliminated as has been done in Europe and America. It is also important that these companies engage the services of environmentalists who would find out the extent of damage and relocate the people for effective rehabilitation where necessary.

Western nations with oil interests in Nigeria should supervise the activities of MNCOs in the country ensuring that they operate according to international best practices. Strict environmental standards should be enforced. They should also ensure that a certain percentage of the funds generated be re-invested in the region to encouraged development.
REFERENCES


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PROFITABILITY PERFORMANCE OF PRIVATE SECTOR BANKS

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Principal, APGCMS, Rajampet.

ABSTRACT: Banking plays a crucial role in enriching the economic and social life of nations all over the world. Their ability to make a positive contribution in igniting the process of growth depends on the effective banking system. Private banking in India was practiced since the beginning of banking system in India. Technique. It represents the efficiency with which the operations of the banks are carried on. The analysis of the profitability performance is extremely useful to various interested parties. Profitability performance analysis is one of them. In the present study, an attempt has been made to appraise the financial position of the bank through the application of profitability performance analysis technique.

Key words: Profitability, Performance, Spread and burden ratios

1.0 INTRODUCTION:

Profitability performance analysis technique is an important criterion to evaluate the overall efficiency of an organization. It is concerned with the total earnings or the income generated and the total expenditure or the investments incurred by a bank. Thus, profitability performance analysis may be defined as the ability of a given investment, to earn a return on it. It helps in understanding the profitability and the financial health of a bank through the application of two set of ratios i.e. spread ratios and burden ratios.

Banking sector plays a vital role in the economic development of a country. It has a crucial role in enriching the economic and social life of nations all over the world. It is also an integral part of the financial system of a modern industrial economy, and plays an important role in the economy by financing the requirements of trade industry and agriculture in the country. In the modern economy, bankers are considered not merely as dealers in money, but more realistically the ‘leaders in investments’. Similarly, banks are not just the storehouse of the country’s wealth, but are reservoirs of resources necessary for economic development. Banking, when properly organized aids and facilitates the growth of trade and industry and hence contributes in the development of the national economy. Profitability performance analysis is one of them. In the present study, an attempt has been made to appraise the financial position of the bank through the application of profitability performance analysis technique.
Profitability Performance Analysis to make an assessment of the financial position of a bank, profitability performance analysis is a reliable technique. It represents the efficiency with which the operations of the banks are carried on. The analysis of the profitability performance is extremely useful to various interested parties like the management, shareholders and the long-term creditors. Profitability performance analysis of the bank has been performed using two sets of ratios. They are as under

1. Spread as percentage of Working Funds
2. Burden as percentage of Working Funds

2.0 REVIEW LITERATURE:


3.0 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

Based on the objectives of the study, descriptive research has been adopted. It is designed to gather descriptive information and provides information for formulating more sophisticated studies. It involves formulation of more specific hypotheses and testing them through statistical inference.

3.2 NEED FOR THE STUDY

Along with this the global players have also brought in many foreign banks into India to full fill the requirements of WTO accord. They offer new range of products and services like ATMS, EFTS, Credit cards, portfolio management etc. Hence a study was conducted to know whether
these new private sector banks adopt in retaining market shares and profit margins, reliability and overall performance

3.3 OBJECTIVE OF STUDY:

➢ To assess the profitability performance of selected private banks through Spread ratios, Spread Related ratios, Burden Ratios, Burden related ratios and Profitability ratios

3.4 SOURCES OF DATA

The study is based on SECONDARY DATA. The data was collected from the selected banks websites.

3.5 TOOLS OF ANALYSIS:

SPREAD RATIOS

Spread is difference between interests earned to interest paid

[1] Ratio of interest income to working fund \( (X_1) \):
\[
\frac{\text{Interest income}}{\text{Working fund}}
\]

[2] Ratio of interest expenses to working fund \( (X_2) \):
\[
= \frac{\text{Interest expenses}}{\text{Working fund}}
\]

[3] Spread to working fund \( (X_3) \):
\[
= \frac{\text{Spread}}{\text{Working fund}}
\]

SPREAD RELATED RATIOS

[4] Ratio of interest income to total income \( (X_4) \):
\[
= \frac{\text{Interest income}}{\text{total income}}
\]

[5] Ratio of interest expenses to Total expenses \( (X_5) \):
\[
= \frac{\text{Interest expenses}}{\text{Total expenses}}
\]

BURDEN RATIOS

Burden is difference between non – interest expenditure to non – interest income.
[6] Ratio of Non-interest expenditure to working funds ($X_6$)
\[ = \frac{Non - Interest \text{ expenditure}}{Working \text{ fund}} \]

[7] Ratio of non-interest income to working fund ($X_7$)
\[ = \frac{Non - Interest \text{ income}}{Working \text{ fund}} \]

[8] Ratio of burden to working fund ($X_8$)
\[ = \frac{Burden}{Working \text{ fund}} \]

**BURDEN RELATED RATIOS**

[9] Ratio of non-interest income to total income ($X_9$)
\[ = \frac{Non - Interest \text{ income}}{Total \text{ income}} \]

[10] Ratio of establishment expenses to total expenses ($X_{10}$)
\[ = \frac{Establishment \text{ expenses}}{Total \text{ expenses}} \]

[11] Ratio of operating expenses to total expenses ($X_{11}$)
\[ = \frac{Operating \text{ expenses}}{Total \text{ expenses}} \]

[12] Ratio of Burden to total income ($X_{12}$)
\[ = \frac{Burden}{Total \text{ income}} \]

**PROFITABILITY RATIOS**

[13] Ratio of Gross profit to working fund ($X_{13}$)
\[ = \frac{Gross \text{ profit}}{Working \text{ fund}} \]

[14] Ratio of Gross profit to Total deposit ($X_{14}$)
\[ = \frac{Gross \text{ profit}}{Total \text{ deposit}} \]

[15] Ratio of Net profit / loss to Total Income ($X_{15}$)
\[ = \frac{Net \text{ profit}}{Total \text{ income}} \]
[16] Ratio of Net profit/loss to Total deposit ($X_{16}$)
\[ \frac{\text{Net profit}}{\text{Total deposit}} \]

[17] Ratio of net profit to Working fund ($X_{17}$)
\[ \frac{\text{Net profit}}{\text{Working fund}} \]

4.0 ANALYSIS AND INTERPRETATION

4.1 SPREAD RATIOS

<table>
<thead>
<tr>
<th>SPREAD RATIOS</th>
<th>Interest income to working fund ($X_1$)</th>
<th>Interest Expenses to Working fund ($X_2$)</th>
<th>Spread to working fund ($X_3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D</td>
<td>C.V</td>
</tr>
<tr>
<td>ICICI BANK</td>
<td>0.066</td>
<td>0.019</td>
<td>28.93</td>
</tr>
<tr>
<td>AXIS BANK</td>
<td>0.068</td>
<td>0.010</td>
<td>15.02</td>
</tr>
<tr>
<td>HDFC BANK</td>
<td>0.072</td>
<td>0.010</td>
<td>13.44</td>
</tr>
<tr>
<td>DHANLAXMI</td>
<td>0.081</td>
<td>0.012</td>
<td>15.20</td>
</tr>
<tr>
<td>INDUSIND</td>
<td>0.076</td>
<td>0.007</td>
<td>9.01</td>
</tr>
<tr>
<td>OVERALL</td>
<td>0.073</td>
<td>0.012</td>
<td>16.32</td>
</tr>
</tbody>
</table>

Interpretation: The above table reveals that the mean ratio $X_1$ of the sample banks is ranging from 0.066 to 0.081 with the overall ratio of 0.073 and SD of 0.012. The ratio of Dhanlaxmi Bank and Indusind bank is higher than the overall ratio and all the remaining banks are less than the overall ratios. It is also revealed that the mean ratio of $X_2$ ranging from 0.037 to 0.057 with the overall ratio of 0.049 and SD of 0.012 and CV of 25.058. The ratio of Dhanlaxmi Bank and Indusind bank is higher than the overall ratio and the remaining banks are less than the overall ratio.

It is also revealed that the mean ratio of $X_3$ ranging from 0.017 to 0.035 with the overall ratio of 0.023, SD of 0.005 and CV of 21.981. The HDFC and Dhanlaxmi banks are higher than the overall ratio and the remaining banks are less than the overall ratio.

4.2 SPREAD RELATED RATIOS

Spread Related Ratios are used to analyze the changes in the contents of interest earned and interest paid. So the following ratios are used to analyze the spread.
### SPREAD RELATED RATIOS

<table>
<thead>
<tr>
<th>Banks</th>
<th>Interest income to Total income (X₄)</th>
<th>Interest Expenses to Total Expenses(X₅)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D</td>
</tr>
<tr>
<td>ICICI BANK</td>
<td>0.771</td>
<td>0.035</td>
</tr>
<tr>
<td>AXIS BANK</td>
<td>0.790</td>
<td>0.036</td>
</tr>
<tr>
<td>HDFC BANK</td>
<td>0.825</td>
<td>0.022</td>
</tr>
<tr>
<td>DHANLAXMI BANK</td>
<td>0.839</td>
<td>0.066</td>
</tr>
<tr>
<td>INDUSIND BANK</td>
<td>0.829</td>
<td>0.051</td>
</tr>
<tr>
<td>OVERALL</td>
<td>0.811</td>
<td>0.042</td>
</tr>
</tbody>
</table>

**Interpretation:**

From the above table it is revealed that the mean ratio X₄ of sample banks is ranging from 0.771 to 0.839 with the overall ratio of 0.811 and SD of 0.042 and CV of 5.180. The HDFC, Dhanlaxmi and Indusind Banks are higher than overall ratio and the remaining banks are less than overall ratio.

It is also observed that the mean ratio of X₅ of sample banks is ranging from 0.506 to 0.666 with the overall ratio of 0.606 and SD of 0.062 and CV of 10.505. The ICICI, Axis and Indusind Banks are higher than overall ratio and the remaining banks are less than overall ratio.

### 4.3 BURDEN RATIOS

<table>
<thead>
<tr>
<th>Banks</th>
<th>Non-Interest expenditure to working fund (X₆)</th>
<th>Non-Interest Income to Working fund (X₇)</th>
<th>Burden to working fund (X₈)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D</td>
<td>C.V</td>
</tr>
<tr>
<td>ICICI BANK</td>
<td>0.027</td>
<td>0.007</td>
<td>26.66</td>
</tr>
<tr>
<td>AXIS BANK</td>
<td>0.028</td>
<td>0.006</td>
<td>21.60</td>
</tr>
<tr>
<td>HDFC BANK</td>
<td>0.036</td>
<td>0.007</td>
<td>20.52</td>
</tr>
<tr>
<td>DHANLAXMI BANK</td>
<td>0.037</td>
<td>0.009</td>
<td>25.07</td>
</tr>
<tr>
<td>INDUSIND</td>
<td>0.028</td>
<td>0.007</td>
<td>22.92</td>
</tr>
<tr>
<td>OVERALL</td>
<td>0.031</td>
<td>0.007</td>
<td>23.353</td>
</tr>
</tbody>
</table>
Interpretation: From the above table it is revealed that the mean ratio X6 of sample banks is ranging from 0.027 to 0.037 with the overall ratio of 0.031 and SD of 0.007 and CV of 23.353. The HDFC and Dhanlaxmi banks are higher than the overall ratio and the remaining banks are less than the overall ratios. It is also revealed that the mean ratio X7 of sample banks is ranging from 0.15 to 0.020 with the overall ratio of 0.017 and SD of 0.006 and CV of 34.507. The ICICI, AXIS and Dhanlaxmi banks are higher than the overall ratio and the remaining banks are less than overall ratio. The HDFC and Dhanlaxmi banks are higher than the overall ratio and the remaining banks are less than overall ratio.

4.5 PROFITABILITY RATIOS: It is revealed that the mean ratio X13 of sample banks is ranging from 0.085 to 0.098 with the overall ratio of 0.090 and SD of 0.016 and CV of 17.538. The Dhanlaxmi and Indusind banks are higher than the overall ratio and the remaining banks are less than the overall ratio.

It is also revealed that the mean ratio X14 of sample banks is ranging from 0.104 to 0.149 with the overall ratio of 0.118 and SD of 0.023 and CV of 18.381. Except ICICI Bank the remaining banks are less than the overall ratio.

It is also revealed that the mean ratio X15 of sample banks is ranging from 0.044 to 0.164 with the overall ratio of 0.103 and SD of 0.040 and CV of 55.550. The ICICI, Axis and HDFC banks are higher than the overall ratio and the remaining banks are less than the overall ratio. It is also revealed that the mean ratio X16 of sample banks is ranging from 0.005 to 0.019 with the overall ratio of 0.012 and SD of 0.005 and CV of 52.519. The ICICI, AXIS and HDFC banks are higher than the overall ratio and the remaining banks are less than the overall ratio. It is also revealed that the mean ratio X17 of sample banks is ranging from 0.005 to 0.014 with the overall ratio of 0.009 and SD of 0.003 and CV of 50.473. The ICICI, AXIS and HDFC banks are higher than the overall ratio and the remaining banks are less than the overall ratio.
KARLPEARSON CORRELATION

Regression fitted \( X_{16} = -0.063 + 0.409 \times X_{10} + 0.368 \times X_{1} - 0.010 \times X_{11} + 0.017 \times X_{13} \)

Variables Entered/Removed\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>x10</td>
<td></td>
<td>Stepwise (Criteria: Probability-of-F-to-enter &lt;= .050, Probability-of-F-to-remove &gt;= .100).</td>
</tr>
<tr>
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\(^a\) Dependent Variable: x16

The below table describes the results of multiple regression analysis in terms of regression coefficient, the standard error, coefficient of determination of \( R^2 \) and t value, when variable is introduced.

The coefficient of determination of \( R^2 \) value shows that the variable \( X_{10} \) (Establishment expenses to total expenses) alone explains the variation in dependent variable to the extent of 97.4%. The coefficient of determination of \( R^2 \) value shows that the variable \( X_{10} \) and \( X_1 \) (Interest income to working fund) together explains the variation in dependent variable to the extent of 99.6%.

The coefficient of determination of \( R^2 \) value shows that the variable \( X_{10}, X_1, X_{11}, \) and \( X_{13} \) (Gross profit to working fund) together explains the variation in dependent variable to the extent of 100%.
### Model Summary

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The P value of Anova is 0.000<0.05 it indicates the overall significance of the model fitted. The beta coefficient of X<sub>1</sub> is 0.409 and it is significant (0.000<0.05), the beta coefficient of X<sub>2</sub> is 0.368 and its significant (0.000<0.05). the beta coefficient of X<sub>11</sub> is (-0.010) and negatively effecting the dependent variable and the beta coefficient of X<sub>13</sub> is (0.017) to its significant is (0.000<0.05).
## Excluded Variables

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FINDINGS: From the spread ratios it is revealed that HDFC and Dhanlaxmi banks are balancing their interest income and interest expenses and the remaining are below the average (0.023) of their profitability. By which we know that HDFC and Dhanlaxmi banks are maintaining good profitability among selected banks. From the spread related ratios it is revealed that the Dhanlaxmi, HDFC, and Indusind banks are balancing their interest income to total income (overall 0.811). And it is revealed that the Dhanlaxmi and HDFC are spending less in interest expenses to total expenses. (overall 0.06). From the burden related ratios it is revealed that HDFC and Dhanlaxmi banks are spending more expenses on operating and establishment expenses.

Non - interest expenses is consistent and burden to total income is not consistent other than HDFC and Dhanlaxmi banks. The step wise multiple regression indicates that out of 17 ratios $X_{10}$, $X_{1}$, $X_{11}$ and $X_{13}$ ratios are only significantly contributing to $X_{16}$ (dependent variable).

SUGGESTIONS: The average interest income of ICICI bank is low when compared to other banks so it has to concentrate on improving interest income like Interest on loans and borrowings. The operating expenses of the ICICI bank are more than the average expenses of remaining banks. So ICICI bank has to take steps to reduce these expenses. Interest expenditure of ICICI bank is high when compared with other banks so it has to decrease its interest expenditure.

The non interest expenditure and non interest income of ICICI bank is less than the average so this bank has to concentrate to increase the non interest income also. Non interest expenditure includes Salaries, rental of equipment, leases of buildings and equipment, and taxes and other related expenses, including the Loan Loss Provision for anticipated bad debt.

CONCLUSION: The study reveals that the profitability performances of the selected banks were maintaining consistent level. Among five selected banks HDFC Bank ranks first followed by ICICI bank, AXIS, Dhanlaxmi, and Indusind bank.

By this comparative study, ICICI Bank profitability performance is good, by increasing its deposits and decreasing its interest expenditure it may be in first position in banking sector.

Reference:


Mechanism of the Heart Using Graph Theory

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\textsuperscript{a}Department of Mathematics, Stella Maris College, Chennai – 600 086, India.
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ABSTRACT: The chambered muscular organ in vertebrates that pumps blood received from the veins into the arteries maintains the flow of blood through the entire circular system. In this paper we discuss the mechanism of the heart using the graph. We study about how the deoxygenated blood comes from and exits and how the oxygenated blood goes to the body using a digraph.

Keywords: Arteries; circular system; deoxygenated blood; digraph; oxygenated blood; veins; vertebrates

INTRODUCTION

Ever since the research started in bio-mathematical sciences, there is an enormous progress in its growth. The emergence of models and the existence of large data sets that require quantitative analysis, coupled with strong public support for accelerated progress in the biosciences, present a great opportunity for the mathematical sciences [2]. The quantitative analysis of fundamental problems in bioscience will require new ideas and new techniques. There already exist several mathematical bioscience research groups in departments of mathematics, statistics, computer science and biology as well as biostatistics centres in medical research facilities around the country. There is a need to encourage an influx of mathematicians and statisticians into mathematical biosciences and to nurture a new generation of researchers more meticulously than before [5]. These challenges motivated us to emerge into a new trend of using graph theory to model mechanism of human organs and to make its study at ease to everyone.

Blood consist of a fluid medium called plasma which transports food, carbon dioxide and nitrogenous wastes in dissolved form. Oxygen is carried by R.B.C. (red blood corpuscles). Many other substances like salts are also carried by blood to various parts of the body. Thus a network of tubes exits in the pumping organ to pump the blood around the body to reach all the tissues and a system in place to ensure that this network can be repaired if damaged [6].

In this paper we have shown the working of the pumping organ and a representation of the function using a digraph.
10. MODELING OF HEART USING DIGRAPH

10.1 Digraph

A directed graph $D$ is an ordered triple $(V(D), A(D), \Psi_D)$ consisting of a non empty set $V(D)$ of vertices, a set $A(D)$, disjoint from $V(D)$, of arcs, and incidence function $\Psi_D$ that associates with each arc of $D$ an ordered pair of (not necessarily distinct) vertices of $D$. If $a$ is an arc and $u$ and $v$ are vertices such that $\Psi_D(a) = (u, v)$, then $a$ is said to join $u$ to $v$; $u$ is a tail of $a$, and $v$ is its head. For convenience, we shall abbreviate 'directed graph' to digraph [7].

10.2 Mechanism of the Heart

Oxygen rich blood from the lungs comes to the thin walled upper chamber of the heart on the left, the left atrium. The left atrium relaxes when it is collecting this blood. It then contracts, while the next chamber, the left ventricles, expands, so that the blood is transferred to it. When the muscular left ventricle contracts in its turn, the blood is pumped out to the body.

De-oxygenated blood comes from the body to the upper chamber on the right, the right atrium, as it expands. As the right atrium contracts, the corresponding lower chamber, the right ventricle, in turn pumps it to the lungs for oxygenation.
Figure 2: Oxygen enters the blood in the lungs
The separation of the right side and the left side of the heart is useful to keep oxygenated blood from mixing. Such separation allows a highly efficient supply of oxygen to the body [1]. This is useful in animals that have high energy needs, such as birds and mammals, which constantly use energy to maintain their body temperature.

11. A MATHEMATICAL MODEL OF THE HEART

12.1 Mechanism of the Heart using Digraph
The following graph represents the mechanism of the heart.
The Dark lines in figure 3 represent the deoxygenated blood, the normal lines represent oxygenated blood and the dotted lines represent atmosphere air. In this graph the out degree of each vertex should be equal to the in degree since wherever the oxygenated blood flows the deoxygenated blood should come from there to the heart for purification.

The vertex $v_2$ (lungs) receives oxygen from the vertex $v_1$ (atmosphere). It contains an network of blood vessels these blood vessels combines the oxygen from the lungs with the blood and the oxygen rich blood goes to the vertex $v_3$ (left atrium) through the edge $e_2$ (pulmonary veins) from there the oxygen rich blood goes to the vertex $v_4$ (left ventricle) through the edge $e_3$ (mitral valve) then the oxygen rich blood goes to all over the parts of the body.
From the other parts of the body the deoxygenated blood goes to the vertex $v_6$ (right atrium) through the edge $e_5$ (vena cava) then from there it reach the vertex $v_7$ (right ventricle) through the edge $e_6$ (tricuspid valve) from there the deoxygenated blood pumps to $v_2$ through the edge $e_7$ (pulmonary arteries) the blood vessels present $v_2$ collect the carbon dioxide from the deoxygenated blood and exits it.

3. **REMARK**
In this digraph we find that edge cut or vertex cut should not exist since removal of one such indicates the failure of the entire mechanism of heart.

It is important that vertices $v_3$ and $v_4$ are not adjacent to $v_6$ and $v_7$ so that there is no collapse of oxygen rich blood with the deoxygenated blood.

4. **CONCLUSION**
In this paper we discussed about the mechanism of heart using digraph which helps us to understand the function of heart in a simple fashion and how it circulates the pure blood to all parts of the body and how it exits the deoxygenated blood from all parts of the body.

5. **FURTHER STUDY**
The problem related to various heart diseases using graph theoretic approach is under study. Further we intend to extend our study to central nervous system.

6. **ACKNOWLEDGMENTS**
Our thanks to the doctors who have contributed with their expertise towards development of this paper.

7. **REFERENCES**


Present Scenario of Power Sector in India
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Abstract: Infrastructure is a key requirement for the sustained growth of an economy. Within infrastructure, growth in the power sector is one of the most important requirements for such growth. Though, the installed generation capacity of Indian power sector increased over the years. Yet, the power sector lacked in quality, security and reliability. It was characterized by gross under-investments, serious under recoveries and had the highest contribution to the India’s fiscal deficit. In the wake of all these difficulties, it was necessary to bring reforms in this sector. The present paper is an attempt to describe the efforts taken by Indian government for the overhauling of this sector since 1991, gaps in its implication and the need for future reforms.

Keywords: Reforms; Sustained Growth; Fiscal deficit

1. INTRODUCTION
Sustained growth in an economy comes with growth from all the sectors, among which growth in the infrastructure sector is a key requirement for growth in other sectors. Within infrastructure, growth in the power sector is one of the most important requirements for the sustained growth of a developing country like India.

The volume of power consumption in every sector of the economy and by all sections of the population of the society shows the sign of the development of the economy. Before the period of liberalization, the Indian power sector was characterized by gross under-investments in the generation sector. Though, the Installed generation capacity grew from 1362 MW at the time of Independence to over 66,086 MW in 1990-91, yet the Power situation lacked in quality, security and reliability (Kundu, 2007). The per capita average annual domestic electricity consumption in India in 2009 was 96 kWh in rural areas and 288 kWh in urban areas for those with access to electricity, in contrast to per capita annual average of 2600 kWh and 6200 kWh in the European Union.

Despite a very low level of per capita consumption, the installed generation capacity was unable to meet the demand of the every sector of the economy. Moreover, transmission capacity bottlenecks were hindrances in the bulk transfer of power from surplus to deficient locations. The distribution sector was plagued by serious under-recoveries with transmission and distribution losses at the world highest level (Kundu, 2007). Revenue crunch made it difficult to make further investment in this sector and thus further increased the demand supply gap. All this made the Reforms in this sector imperative. This paper describes the need for economic reforms in the power sector, the efforts taken by the Indian Government to improve the performance of this sector.
since 1991, gaps in its implication and the need for future reforms. The present study is descriptive in nature and is based on the secondary data collected from various websites, the web portal of central electricity authority of India.

2. CURRENT STATUS OF INDIAN POWER SECTOR: Indian Power sector, the world’s fifth largest sector, had an installed capacity of 205.34 Gigawatt (GW) as of June 2012. An additional 31.5 GW is generated by the Captive power plants. In December 2011, electricity was inaccessible to over 300 million Indian citizens. Over 33% percent of India's rural population lacked electricity, with 6% of the urban population. Of those who had access to electricity, the supply was intermittent and unreliable. In 2010, blackouts and power shedding interrupted manufacturing and irrigation across the country.

2.1 Structure: The majority of generation, transmission and distribution capabilities are either with public sector companies like NTPC having 31% share, State Electricity Boards (SEBs) having 48% share (figure 1). Rest is being dominated by the private companies with 21% of the total capacity.

![Figure 1: Structure of Power sector](image)

**Source:** Central Electricity Authority

India has adopted a blend of thermal, hydro and nuclear sources with a view to increasing the availability of electricity. Out of the total installed capacity, thermal power plants constitute 66%, hydroelectric about 19% and rest being a combination of wind, small hydro, biomass, waste-to-electricity, and nuclear. India generated 855 BU (855 000 MU i.e. 855 TWh) electricity during 2011-12 fiscal (figure 2).
Thermal mode of electricity is in highest usage (112.82GW) as shown in table 1 and its usage has increased over 2010 by 12% approximately. Nuclear energy is used only at the central level in all years. New & renewable energy is used only at the state level as well as steadily increasing. At the state level thermal power generated is more than the Central level (Table 1).

By having a look on the table 1, we can analyze that the compound annual growth rate of the installed capacity of new & renewable energy has increased by 65.74% at the all India level. After the renewable energy, installed capacity of thermal energy has increased. Its installed capacity has been increased by 22.76%. CAGR in Hydro and nuclear energy’s capacity has increased 4.62% and 16% Respectively. Reason for less percentage increase in nuclear energy, in comparison to thermal and renewable energy, may be the high cost of uranium. But the usage of hydro utilities should be increased keeping in mind its environment friendly nature.

**Source:** Central Electricity Authority
The consumption of all resources for generation of capacity has depicted an increasing trend in all the years. Now a day’s Thermal is at the top for the generation of electricity followed by Hydro. Nuclear is least consumable utility for the generation of electricity (figure 3). The projected generating capacity of all the utilities by the year 2020 will be 42 GW in hydro (figure 4), approximately 170 GW in thermal (figure 5), 7 GW in nuclear (figure 6), 40 GW in New & Renewable (figure 7). As per expectation, thermal source will be used more for the generation of electricity in comparison to the current scenario.

Figure 4: Projected generation capacity of Hydro Power

![Figure 4: Projected generation capacity of Hydro Power](image)

Figure 5: Projected generation capacity of Thermal Power

![Figure 5: Projected generation capacity of Thermal Power](image)
In terms of fuel, coal-fired plants account for 56% of India's installed electricity capacity. After coal, renewal hydropower accounts for 19%, renewable energy for 12% and natural gas for about 9% (Figure 8).
Figure 8: Energy Source Contribution

![Energy Sources Contribution (%)]

**Sources:** Central Electricity Authority

3. INDIAN POWER SECTOR REGULATION:

Prior to the Enactment of Electricity Act 2003, the electricity supply in the country was governed by three enactments namely: the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948, the Electricity Regulatory Commissions Act, 1998.

The Indian Electricity Act, 1910 provided basic framework for electric supply industry in India through private licensees. It laid down legal framework for lying down of wires and other works and provisions for relationship between licensee and consumer.

**The Electricity (Supply) Act, 1948** mandated creation of State Electricity Boards (SEBs) and the need for the state interference for electrification all across the country.

**The Electricity Regulatory Commissions Act, 1998** provided the provision for setting up of Central / State Electricity Regulatory Commission with powers to determine tariffs and distancing of Govt. from tariff determination.

4. REVIEW OF LITERATURE:

Being one of the fastest growing economies and the second largest populated country, India represents an attractive destination for the power industry. Among all others sectors, power sector plays a crucial role in the development of an economy. But now a days, it has been suffering from various problems. Among all utilities, the power sector has been the highest contributor to the fiscal deficits of the country and the efforts to revert the situation have not been very successful so far (Singh and Srinivasan 2002). In the state of Assam, there is only less than 25% of the population which has access to electricity. The prevailing situation is one of less opposition to more drastic reforms due to the poor quality of power supply (Santhakumar, 2003c). Lack of funds for the electricity boards, and the use of government finance for the provision of subsidy to the connected consumers are major factors that work against the extension of electricity supply to these households (Santhakumar, 2003a; Energy Infrastructure Services Project, 2000). The public sector organizations, due to financial non viability, were unable to enhance capacity to the required levels, as done by the private companies (World Bank, 1996). This made the government to go for the privatization of the power sector.

In India, early policy reforms aimed at inviting private participation for investment in electricity industry failed to attract adequate investment (Dossani, 2004). Power sector reforms in India were initiated in the face of endemic capacity and energy shortages and increasing subsidy burden on the states (Santhakumar, 2003). A summary table having all relevant literature has been given in annexure 1.

5. NEED FOR THE REFORMS

All over the world, new regulatory schemes and organizational reforms were implemented to improve the incentives for efficient operation of electricity utilities. These reforms were introduced for bringing competition into the electricity supply industry. Reforms were initiated in Indian power sector due to commercial losses, due to poor fiscal health of State Utilities and increasing subsidy burden on the states. Kannan and Pillai (2001a) have argued that the reforms are driven by the demands of the intermediate classes within India and the external agencies on the other hand. Sagar (2004) states that the reforms in Delhi were not driven to do budgetary advantages to the state government, but to bring turnaround in power sector to improve the quality of service to the level expected by the electorate.

The Government of India, in 1991, introduced an ambitious program of reforms in this sector for achieving the following objectives:

- To improve the efficiency of Indian power sector so as to achieve the intended targets with the minimal wastage of time and efforts.
- Public sector utilities were suffering from the problem of financial non-viability. They had been the highest contribution to the fiscal deficits of the country. To make these public enterprises financially viable and improve the fiscal viability of the utilities, it was essential to make these utilities financially viable.
- To make the utilities capable of investing for and providing the quantity and quality of electricity desired by the society.
• To provide autonomy and adequate incentives to the employees of power enterprise, and to make them accountable.
• To enable utilities to buy adequate power from generating companies.
• To increase the capability of public utilities to invest in power generation.
• To promote competitiveness and progressively involve the participation of the private sector, while ensuring a fair deal for consumers.
• To introduce competition in the power sector for removing monopoly.
• To promote efficiency, economy, and safety in the various stages of power generation and use of electricity in the State.

6. POWER SECTOR REFORMS:

Power Sector Reform Project was designed to undertake the following:

6.1 Reforms In Distribution:

India was facing its worst ever balance-of-payments crisis and was on the verge of defaulting which would have reduced India’s bond rating in international credit markets. The Electricity Laws (Amendment) Act of 1991 was enacted to encourage the entry of privately owned generators. Further amendments were carried out in 1998 when the transmission sector was also opened for private investments subject to the approval of the Central Transmission Utility (CTU). The private investors were offered a guaranteed 16 percent return in equity with a full five year tax holiday. The required debt-equity ratio was also kept at 4:1. These projects were also given sovereign guarantees and escrow benefits in case there were defaults on part of the SEBs. Eight projects were brought on the “fast-track” route where Government approvals were quickly expedited. At national level 98% feeders and 88% of the consumer have been metered so far.

The overall distribution loss levels, while remaining high in absolute terms, have shown improvement on account of improvement in the areas of energy audit, system strengthening, rural load management, and prevention of theft.

After 1998 reforms, Electricity Act 2003 was constituted. It comprised regulations / policies such as provision / planning of electricity and network, shift from the single buyer model to the multi buyer model; delicensing of thermal generation; harnessing captive generation / renewable energy resources, grant of open access in transmission and distribution; identification of trading as a distinct activity; reorganization of the SEBs; supply of subsidized electricity only on timely payment by the State Government concerned; performance based cost of service regulation, competitive procurement of power, merit order dispatch / availability based Tariff, multi year tariff framework, transmission pricing framework, tariff rationalization through the phased reduction and elimination of cross – subsidies, trading margin, etc. Electricity Act 2003 was later amended in the year 2007, which primarily omitted the clause; ‘elimination of cross subsidies’ while retaining the provision for reduction of cross subsidies. However, nothing really happened with this enactment. Even after the reforms, distribution segment has continued to be dominated by State distribution companies (DisComs).
6.2 Reforms In Regulatory Development: Recent regulatory developments are highlighted below:

6.2.1 Changes in Mega Power Policy:

It includes, extension of customs duty / tax benefits to expansion projects, relaxation in terms of power supply to more than one State, relaxation on procurement of power equipment through international competitive bidding, extension of benefits to supercritical technology, etc.

6.2.2 New Tariff Regulations For Generation & Transmission Projects For Next Five Years (2009-14):

The Central Electricity Regulatory Commission (CERC) issued new tariff regulation including raising of base rate of return on equity for central sector projects, revision / rationalization of various financial and operational norms / factors / parameters pertaining to tariff computation, incentives peak load generation & protection of hydrological risk in case of hydro power projects, etc. The new regulations will also be the guiding principle for the State Electricity Regulatory commissions in arriving at tariffs for their respective state generation / transmission companies / projects.

6.2.3 Competitive Procurement Of Power For All New Power Projects:

The existing public & state power generating companies & Hydropower projects have been exempted to supply power to the distribution utilities through competitive route till January 2011. Thereafter, all the generating companies need to compete through competitive tariff bidding route to supply power to the distribution licensees.

6.2.4. Amendments In Competitive Bidding Tariff Guidelines:

Ministry of power has recently amended the guidelines for tariff determination for procurement of power by distribution licensees through competitive bidding. The amended guidelines aim to attract serious players, to bring about greater efficiency and transparency in the tariff determination process and also promote development of power market.

6.2.5 Tariff Regulations For Renewable Energy (Wind, Small Hydro, Biomass, Co Generation, Solar Pv And Solar Thermal):

These regulations include specifying capital cost norms and fixing tariff upfront for the whole tariff period for the above renewable sources.

6.2.6 Introduction Of Renewable Energy Certificate (Rec):

As per the REC mechanism, there will be a central level agency to be designated by the Central Commission for registration of Re Generators participating in the scheme. The RE generators will have two options – either a) to sell the renewable energy at preferential tariff fixed by the concerned Electricity Regulatory Commission or b) to sell the electricity generation at average cost of power supply and environmental attributes associated with RE generation separately. On choosing the second option, the environmental attributes can be exchanged in the form of REC.
6.2.7 Gbil’s For Wind Projects:
Government of India has extended the Generation based incentive scheme for grid connected wind energy projects to maximum capacity limit of 4000 MW, wherein an incentive of Rs. 0.5 per unit above the fee in tariff is provided.

6.2.8 Grant Of Connectivity Long Term And Medium Term Open Access In Inter State Transmission, 2009 (Amendment Sept. 2010):
Any generating plant having installed capacity of at least 250 MW (50MW is case of Hydro) and any bulk consumer can seek connectivity to interstate transmission system. Medium term open access would be available for any period between three months to three years and it shall be provided on the basis of availability of transmission capacity in the existing transmission system. No augmentation of transmission system is envisaged for granting medium term open access. Long term access can be availed for any period between 12 years to 25 years and might require construction of new transmission capacities.

6.2.9 New Transmission Tariff Mechanism:
In accordance with the Electricity Act 2003, National Electricity Policy 2005 and National Tariff Policy 2006, CERC recently notified regulation pertaining to sharing of interstate charges and losses that is sensitive to distance, direction and quantum of flow. These regulations would implement point of connection method of sharing the cost of inter state transmission services as well losses among the users in India, replacing the present system of regional postage stamps.

6.2.10 Amendment To Inter State Open Access Regulations:
CERC has amended the inter state open access regulations in a bid to streamline and rationalize the processes involved in obtaining open access which is likely to benefit power deficit states, consumers as well as trading companies.

6.2.11 Restructuring Of Unscheduled Interchange (Ui) Mechanism:
CERC has come out with new regulations restructuring the UI mechanism to avoid UI as a trading route and promulgate discipline among distribution utilities to go for planned procurement of electricity and thereby creating environment for investors to set up new power plants. Presently, many utilities postpone setting up of power projects and rely on overdraw from the grid for meeting the consumers demand.

6.2.12 Grid Code Regulations 2010:
CERC has revised grid code which inter alia include the following revisions / additions;
a) The financial burden of all the fluctuations from schedule in case of new solar energy plants and the fluctuations within 30% of schedule in case of new wind energy plants will be borne by all the users of inter state grid.
b) The new grid code will also put in place a scheduling mechanism for renewable energy like solar and wind. It will enable the power plants to operate on “must run” principles, instead of “merit scheduling.
6.2.13 Ring Fencing Of SLDCs:
CERC has advised the Centre to take up with the states, the separation of management and controlling interests between entities operating SLDCs and the entities engaged in distribution / trading activities to have a non discriminatory open access.

6.2.14 New Interstate Trading Regulations 2009:
The new Trading regulations aim to tighten the term & conditions for grant of trading licence keeping in view current price of the trading power, liquidity requirements of the power trading business and to encourage the only serious players intending to undertake trading business. Power, having been imported from other countries for resale in the domestic market is also covered under these regulations. As on FY 2009, CERC had issued trading licences to 42 companies such as Tata Power, Reliance Energy, RPG Power, GMR Energy and DLF Power, etc.

6.2.15 CERC Allows Term Ahead Contracts:
CERC has allowed the power exchange to launch term ahead contracts, which are likely to permit sale of energy over a longer period and thus facilitate better planning procurement and load management of power by distribution utilities / consumers.

6.2.16 Power Market Regulations:
The regulations inter alia comprise introducing concept of derivatives contracts, financial settled exchange traded derivatives and other innovative contracts like capacity and ancillary services contracts. However, derivatives would be introduced from a date to be notified when the supply deficit scenario improves and sufficient liquidity gathers in day ahead market.

6.2.17 Generating Company Permitted To Distribute Electricity In Rural Areas
Section 14 of the Electricity Act, 2003 allows any generator of electricity to distribute electricity in rural areas without the requirement of any license, subject to compliance with the measures as mainly specified by the Central Electricity Authority under section 53.

6.2.18 Third Power Exchange In The Country
Central Electricity Regulatory Commission has given its approval to set up third power exchange in the country which will be owned by National Thermal Power Corporation, National Hydro Power Corporation, Power Finance Corporation, and Tata Consultancy Services.

6.2.19 Automatic Approval For FDI
Automatic approval (RBI route) for 100% foreign equity is permitted in generation, transmission, and distribution and trading in power sector without any upper ceiling on the quantum of investment.

6.2.20 Captive Power Plants
The electricity Act, 2003 does away with the requirement of approval/clearance of any authority for setting up a captive generating plant. The new law also ensures non-discriminatory open access for
transmission of electricity generated from a captive generating plant to the destination of its use, subject to availability of transmission capacity.

6.2.2 Setting Up Of Ultra Mega Power Projects

The government of India had launched an initiative for the development of coal-based Ultra Mega Power Projects (UMPPs), each with a capacity of 4,000 MW. The objective of the initiative is to obtain tariffs utilizing economies of scale and to mitigate the risk relating to ties up of land, fuel, water and other statutory clearances.

6.3 Future Developments In Transmission

Government of India is planning to develop National Inter State transmission Grid with interregional transfer capacity of 37,700MW at an investment of Rs. 55,000 crore by FY 2012. The power grid of the future is expected to be more intelligent, effective and environmentally sensitive comprising of several elements such as Ultra High Voltage / HVDC (765KV ac, 800KV HVDC and 1200 KV AC) lines, flexible alternating current transmission system (FACTS), dynamic control systems, wide area monitoring system and distribution network management.

Power Grid Corporation of India Ltd (PGCIL) is planning an additional investment of Rs. 80,000 crore over the next eight years to build transmission corridors and strengthen the grid in the country. PGCIL is planning to complete nine transmission corridors over next five years to evacuate 50,000 MW of upcoming projects by IPPs in various States. PGCIL is also exploring to set up transmission project to evacuate power from neighbouring countries such as Myanmar, Bangladesh, Nepal, Bhutan and Sri Lanka. Seven transmission projects with investment of Rs. 5000 crore have been planned during Eleventh Plan period, while 14 other (Ultra Mega Transmission Projects) at an investment of Rs. 20,000 crore have been identified by the empowered committee on transmission that are to be awarded through tariff based competitive bidding to the private sector.

More reforms in the field of administrative, legal, structural, and regulatory front are also required for fast completion of projects, higher ceiling on investment without approval, breaking down SEBs into manageable entities, and setting up of regulatory mechanism to rationalize power tariff and promote efficient policies.

7. WHAT REFORMS DON’T ADDRESS DIRECTLY

Though the reforms were targeted to bring an overall improvement in the power sector, yet there are still many areas where these reforms lagged behind. These are:

- Price fixation process by the utilities is not transparent.
- No accounting for variable costs by the utilities makes it difficult to fix the price for the electricity.
- There are still different regulations at the centre and the state level. Due to the lack of uniformity in legal rules, sometimes, clashes generate. This problem needs to be resolved.
- Without a load duration curve, all generators want to operate as much as they can. Moreover, plant load factor is a dangerous measure of performance.
- There is no single price fixation method for in-state (SEB) plants.
8. FUTURE REFORMS
There is a big gap between the suggested reform measures (privatization, tariff reform, anti-theft measures) and their implementation (Lal, 2005). Regulators have not been much successful in handling the problems of power supply to agriculture (Sinha, 2005). Therefore, there is a need to bring some future reforms in the power sector. These are:

- Open access philosophy need to be brought into the power sector.
- Government should make the private entities to operate on their own because helping private players and some consumers might hurt the SEBs/current utilities.
- Need for more transparency in power policies related to production/generation and distribution/transmission.

9. CONCLUSION AND RECOMMENDATIONS
On the basis of above analysis, we can conclude that many reforms have been introduced in the power sector like setting up of Ultra Mega Power Projects, new transmission tariff mechanism, automatic approval for FDI, restructuring of Unscheduled Interchange(UI) mechanism, but still there is need to amend the procedure of the power sector process in the context of tariff determination and procurement of power.

- Nuclear source is least preferred for the generation of the power. It should be used for the power generation.
- There is no transparency in the prices.
- New and renewable resources like wind are more economical, but their use is minimal. So these resources must be used for the economic generation and proper utilisation of available resources.
- There is need for more options for power development in India in context of technology and economic growth.
- There is also need for more invention in the area of environmental and ecological aspects
- The global trend of fuel availability and its pricing must be taken into consideration.
- There is still the need to increase the role of private sector in power generation and to encourage new Independent Power Producers (IPPs) in power generation sector.
- There is a requirement to expand domestic production in critical energy sub sectors, notably petroleum and gas & coal.
- Imports in energy sector needs to be encouraged to meet the mismatch between domestic demand and supply.

REFERENCES:


A Preliminary Exploration of the Changing Paradigms of Leadership in Turbulent Times

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ABSTRACT: Globalisation and disruptive changes have made the organizations realize the need and importance of leadership in turbulent times. The frenetic pace of change, significant growth in technology, scarcity of resources and changing business models pose immense challenges to the organisations to keep competitive. One critical factor for the success of organisations in such times is the capability of the leader at the helm of affairs. This paper is based on findings from Consultancy Service industry and Information Technology Enabled Services (ITES) industry, which were evaluated through appropriate statistical techniques (surveys and factor analysis) to find out the critical individual capabilities one should build and inculcate to be an effective leader in turbulent times. The findings suggest that to effectively lead through turbulence a leader will need to be authentic and set directions for others in the team. The leader who can adapt, use analytical and innovative thinking during turbulent times and avoid negative approach through excellent communication will lead a more productive group of followers. This study will be of significance to practicing leaders, researchers, and development experts who are involved in exploring different dimensions of leadership in times of complexity and turbulence.

Keywords: leaders, leadership skills, turbulent times, India.

1. INTRODUCTION
1.1 Turbulence and Change

Turbulence in corporate world means uncertainty which often results from intense changes and countless challenges in this global economy (McLester, 2004; Austin, 2002). A recent study has predicted that the exponential sample of current change is so sudden that we would be observing the counterpart of all the key milestones of the twentieth century by the year 2025 (i.e. electricity, internet, automobile, nuclear energy, space journey, human genome sequencing, WWⅡ) in less than a week (Modis, 2003). In the midst of these progresses, will come varying issues concerning the role of business within our global society on a number of fronts comprising of globalization, demographic changes, insufficiency of natural resources, and fading social structures (Connor and Mackenzie-Smith, 2003).

This kind of turbulence places new expectations on organisational leaders all the time as it demands additional transparency, societal involvement and a justifiable corporate social...
responsibility (Martin, 2007). What is common among organizations nowadays is that each faces identified and unidentified threats to its existence (Mitroff & Kilmann, 1984; Perrow 1984; Shrivastava, Mitroff, Miller, & Miglani, 1988). The more evident and predictable the threat, the possibility of its people and systems using innovative understandings, processes and perspectives to deal with it turns out to be significantly more. Critical challenges faced by many organizations include adoption of sustainable production processes, integration of cultural diversity by organizations and the different role global businesses play in the society. To remain competitive organizations attempt to integrate this societal change into business continuously.

1.2 Leadership at a Glance

Regardless of business, the location or size, the world is experiencing a fundamental change that will influence the very nature of work and leadership (Hamel, 2007; Wheatley, 2001). Within the framework of modern organizations, understanding how to best deal with and survive large scale changes has become a significant factor in their execution (Szamosi and Duxbury, 2001). Leadership in this scenario has been the source of extensive investigation than any other aspect of human behaviour but interestingly when Rost (1991) analyzed around 587 articles on leadership it was found that 366 of the papers did not offer any common definition of leadership. Stogdill in 1974, elaborated different skills a leader should possess like, “adaptable to situations, observant, ambitious, assertiveness, and cooperative, decisiveness, dependable, influential, energetic, self-Confident, persistent, and tolerant of stress”.

A conspicuous change can be noticed in the nature of leadership. Leadership in today’s business scenario is coming up as a continuum of service. The service-oriented leader of the 21st Century puts up a culture of community (Goldsmith, 2006), shared purpose, and service (Rao, 2006), and treats staff and other stakeholders as social group and partners (Stallard and Pankau, 2008), and with utmost dignity (Fairholm, 1996). Eventually, a leader is not judged so much by how fine one leads, but how well one serves. Every single value and contribution is attained through service. Leaders serve the society, an organization, the workforce, customers and relationships.

The purpose of this paper is to explore how the nature and traits of leadership are transforming in light of ever increasing complexity and instability and what exclusive skills will be required in a leader to handle the trauma of difficult times. This paper is based on primary findings (applying the generally accepted research methods in human resource development that incorporates survey and factor analysis) from Consultancy Service Industry and Information Technology Enabled Services (ITES) Industry. These sectors were chosen as the area of research as their contribution to the resilience of the economy is significant, which has enabled them to survive major crisis (The Economic Times, June 2012).

The paper attempts to explore various paradigms of leadership in turbulent times and is accordingly divided into seven sections. After the introductory Section, Section 2 reviews some classical and significant works in the field of leadership, Section 3 details the question for the
research study; Section 4 describes the data and methodology; the result of the study has been depicted in Section 5, Section 6 discusses the implications and finally Section 7 concludes with the scope for future research and findings of the study.

2. LITERATURE REVIEW: BACKGROUND FOR THE RESEARCH

In this section, we have briefly looked at some of the major theories, observed various styles of leadership and reviewed some of the traits and characteristics that leaders should have to achieve better organizational results.

2.1 Great Man Theory: At first, leaders were considered to be born and not made. It was believed that leaders were exceptional people, gifted with exclusive qualities, destined to influence and lead (Carlyle, 1907). The term "Great Man" was used because leadership in the latter twentieth century was considered largely as a male, military and western concept. Galton (1869/1870) was the first person who conducted an authentic study of this approach. Influenced by Galton's study of the hereditary background a number of early theorists of great men tried to explain leadership on the basis of inheritance. The Great man theory ultimately developed into what is known as “trait theory” of leadership.

2.2 Trait Theory: Based on the characteristics of many leaders and a finite set of personal traits, this theory helps in distinguishing effective from ineffective leaders. One of the first trait theories came about at the time of the famous Greek physician named Galen. He proposed that the personality of human beings was a reflection of four hormones (fluids). There are some other traits which have also been linked to successful leaders. Stogdill and Bass (1982) characterised leaders by task accomplishment, self-confidence, tolerance of interpersonal stress, and the ability to influence the behaviour of others. Researchers very often have disagreed over which traits are most significant for an effective leader. Leadership exist in abundance and there is no universal list of traits for successful leaders (Adair, 1990).

2.3 Behavioural Theories: Researchers believed that behaviour, unlike traits can be learned. This theory takes a different approach as they determine what effective leaders do rather than figuring out who effective leaders are. The study of leadership in this period mainly focused on leadership styles and leadership functions (Mullins, 2000). Blake and Mouton (1964) took the most path breaking step in understanding the behavioural aspects of leadership and proposed a more comprehensive theory called 'Managerial Grid'. This theory categorizes a range of management behaviours based on a variety of ways the task-oriented and employee-oriented styles can correlate with each other. The Grid provides an advanced learning package with probable applications for those who wish to study organisation development (Yukl, 2006). With this the researchers developed several other useful leadership models like transformational leadership, transactional leadership, and contingency or situational leadership.

2.4 Transformational Theory: J.V. Downton was the first author to coin the term “Transformational leadership”, in his book, “Rebel Leadership: Commitment and Charisma in a Revolutionary Process”, (Pielstick, 1998). Transformational leadership displays the concept of change, and the leaders according to this theory are said to be value oriented, self-aware,
flexible, competent, and sensitive to the individual needs of a team (Burns, 1978). The ultimate purpose, as the name reflects, is transforming and moulding of followers’ goals, vision, and sense of principle into an organized team. This style of leadership focuses on concern for people and their individual needs. Bass and Avolio (1993) further classified skills of transformational leaders into "Four I's" namely, idealized influence, inspirational motivation, intellectual stimulation and individualized consideration.

2.5 Transactional Theory: Assuming that people are mostly motivated by conventional reward and punishment, this theory highlights the importance of the bond between leader and followers, where the leader delivers rewards or recognition for the obligation or loyalty of the followers (Bass & Avolio, 1990). Burns (1978) stated that the difference between transformational and transactional leadership lies in what leaders and followers put forward to one another. With the passage of time a number of researchers have added to Burns original theory. Avolio, Waldman, and Yammarino (1991) suggested that transactional leadership deals with different ways to handle the status quo and sustain the day-to-day operations of a business. It does not consider the future of the entire organisation, situation or employee into account while offering rewards (Crosby, 1996).

2.6 Situational or Contingency Theories: Situational theories are also known as Contingency theories, which meant 'something depended on another uncertain event' (Owens, 1995) for leadership. Among the various contingency theories that the researchers have proposed, the most famous was developed originally in 1982 by P. Hersey and K. H. Blanchard which was termed as “situational leadership” theory. Unlike Blake and Mouton’s leadership grid, this leadership theory holds that the most appropriate behaviour or action of a leader depends on the situation and on the followers. In this theory, 'Leadership effectiveness' depends on internal and external factors called as 'situational variables'. This approach was originally called “zeitgeists” (Luthans, 1998).

2.7 Indian Approach to leadership: Indian and Western business leaders both deal with demanding worlds and convey a vision of where they want to take their enterprise. At the same time, Indian and Western executives have evolved distinct leadership styles that, in India’s case, have helped motivate unexpected business growth despite challenging business conditions (Useem, 2010). Indian approaches to leadership gives importance to practical aspects of life. Ancient Indian approach to leadership is a great approach and is a highly useful tool for any aspirant who wants to become a leader and for any leader who desires to be efficient in his operations and create effectiveness in the organization (Gopalakrishnan, 2000). Indian business leaders think broadly and act rationally. They first set plans and then continually test the same through trial and error, to check what works and what does not. Indian leaders deeply emphasize on creativity and adaptability (Basu, 2012).

3. RESEARCH QUESTION

Previous studies have revealed that the leaders need to be attuned to the real-time situation and the best way of bringing problems under control, lie with leaders who apply good business
management qualities to resolve critical issues. This paper is thus an attempt to answer the following question:

**Research Question:** What are the most important skills and traits required in a leader to handle the trauma of turbulent times?

4. **RESEARCH METHODOLOGY**

4.1. **Research Instrument**

The present study incorporates a questionnaire survey approach and the primary data for the study was collected with the help of the same. Available instruments, articles and existing body of literature on leadership theories, skills and its role in combating crisis were analyzed.

The first instrument used in the study is Emotional Intelligence Scale instrument. The instrument consists of 33 items and its purpose is to help individuals understand and develop emotional competencies and skills to reach their potential as well as to improve their performance in a critical situation. The second instrument used in the study is Benchmarks 360° feedback instrument (Centre for Creative Leadership, 2003). This tool consists of 13 items that describe the behaviours required for leadership excellence. Available questions from Emotional Intelligence Scale and Benchmarks 360° feedback instrument (Centre for Creative Leadership, 2003) were adapted and refined. Combining 46 items of both the tools, a self-structured 15-item questionnaire was developed to measure leadership capability in managing turmoil in an organizational context. These items have been constructed based solely on the review of literature and considering the objective of the research study and were measured on the five-item Likert scale.

To ensure the reliability and internal consistency between the items, Exploratory Factor Analysis (EFA) was conducted. Initially the questionnaire was pre-tested on a small sample size of 30 respondents, whereby the cronbach’s alpha came out to be 0.78, which is an acceptable reliability coefficient.

4.2. **Sample, Procedure and Measurement**

The population of the study includes personnel of the Human Resource (HR) Departments like HR Vice President, HR Manager and HR Executive from Consultancy Service Industry and ITES Industry. The companies are located in Delhi and National Capital Region, hub of industrial India. The companies were shortlisted based on the addresses obtained from the local yellow pages. There were 120 companies which had clear address and contact numbers, and were therefore included in the final sample for the study. In total 120 questionnaires were emailed to the personnel of the HR department of each company. Out of 120 questionnaires distributed, 92 questionnaires were found to be usable. This gave a return rate of approximately 77%. The data was collected between June and September, 2012. All the questionnaires were sorted and the variables were thereafter coded. The questionnaires were...
analyzed using the SPSS statistical software (version 17.0). A factor analysis was carried out, where the factors were extracted from principal component analysis using varimax rotation (Table 1).

**Table 1. Rotated Component Matrix**

<table>
<thead>
<tr>
<th>Skills required</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Alertness/agility</td>
<td>.869</td>
</tr>
<tr>
<td>Downrightness</td>
<td>-.826</td>
</tr>
<tr>
<td>Global sensitivity</td>
<td>-.553</td>
</tr>
<tr>
<td>Decisiveness</td>
<td>.081</td>
</tr>
<tr>
<td>Analytical</td>
<td>-.132</td>
</tr>
<tr>
<td>Disciplined/Comm ited</td>
<td>.410</td>
</tr>
<tr>
<td>Straightforwardness</td>
<td>.006</td>
</tr>
<tr>
<td>Motivating employees</td>
<td>.007</td>
</tr>
<tr>
<td>Employees' Participation</td>
<td>.207</td>
</tr>
<tr>
<td>Excellent Comm.</td>
<td>.176</td>
</tr>
<tr>
<td>Influencing People</td>
<td>-.292</td>
</tr>
<tr>
<td>Directing</td>
<td>-.122</td>
</tr>
<tr>
<td>Employees'</td>
<td>.233</td>
</tr>
<tr>
<td>Competitive Environ</td>
<td>-.066</td>
</tr>
<tr>
<td>Cultural Diversity</td>
<td>.192</td>
</tr>
</tbody>
</table>
5. RESULT AND ANALYSIS

Research Question: What are the most important skills and traits required in a leader to handle the trauma of turbulent times?

A factor analysis was performed where the varimax rotation method was incorporated for the detection of factors each of which is related to few variables. This finally reduced and narrowed down 15 items to more specific and relevant 7 factors. These we named as: Adaptability, Analytical Approach, Setting Direction, Excellent Communication, Authenticity, Global Outlook and Creative thinking (Table 2). These are those leadership skills that are exclusively needed to thrive in turbulent times. To get more insight on these specific leadership skills in combating tough times we again did a review of some of the available major literature on them which along with the importance of each of the 7 leadership skills is briefly described below:

<table>
<thead>
<tr>
<th>Factors</th>
<th>Leadership Skills</th>
<th>Specific Leadership Skills after Factor Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alertness/agility Downrightness Global sensitivity</td>
<td>Adaptability</td>
</tr>
<tr>
<td>2</td>
<td>Decisiveness Analytical Disciplined/Committed</td>
<td>Analytical Approach</td>
</tr>
<tr>
<td>3</td>
<td>Straightforwardness Motivating employees Employees' Participation</td>
<td>Setting Direction</td>
</tr>
<tr>
<td>4</td>
<td>Communication</td>
<td>Excellent Communication</td>
</tr>
<tr>
<td>5</td>
<td>Influencing People Directing Employees</td>
<td>Authenticity</td>
</tr>
<tr>
<td>6</td>
<td>Competitive Environment Cultural Diversity</td>
<td>Global outlook</td>
</tr>
<tr>
<td>7</td>
<td>Innovativeness</td>
<td>Creative thinking</td>
</tr>
</tbody>
</table>
5.1 Adaptability
We found that one of the critical skills needed for leaders during turbulent times is adaptability. Adaptability is the ability to be flexible, agile, and adjustable and show initiative during times of change and uncertainty (Joiner and Josephs, 2006). People with this skill are both flexible and versatile. Flexibility is categorized into five attributes namely, confidence, tolerance, empathy and respect for others. On the other side, versatility traits are characterized by resilience, vision, attentiveness, competence and self-correction (Heifetz, 2009). Adaptability helps in making adjustments with a small measure of resistance. This trait is a hallmark of a transformational leader and calls for self-development and self-awareness in order to bring in and develop a culture of adaptability in an organisation. Adaptive leadership can be used in a crisis situation to bring in constructive transformation in the company as needed according to the changed environment.

5.2 Analytical Approach
Different times call for different approaches but some of the basic tools remain the same and one such tool is an analytical approach. One of the critical attribute which emerged in the study as significant in leaders for managing turbulent times is an analytical approach. Badillo in 2007, in his study mentioned that analytical approach involves releasing oneself from locked up thinking and getting out of the box. This skill stands out as an effective way in diagnosing problems where an individual does some scenario thinking, explores new concepts and starts connecting the dots. As new problems appear in the way of progress, this skill becomes a core part to overcome any hurdle. This also reflects that the power of thinking critically is important in times of increased complexity and change, because the demand of the hour is coming out with new ideas, and not looking for the solutions with the same old approach (Kirkpatrick & Locke, 1991). It can thus be implicated that critical thinking in times of uncertainty helps in refined analysis of information, more flexibility in thinking and use of more logical inference.

5.3 Setting Direction
When the change is sudden and unprecedented one major function which a leader has to perform is set direction as stated by John Kotter (1990) in his classic article ‘What Leaders really do’. Kotter asserts that managers cope with complexity but leaders cope with change which has become inevitable in today’s environment of competition and volatility. This setting of direction is less about planning but more about vision. This is also a trait of transformational leaders as stated by Bass and Avolvio in their description of Idealized influence. In 2001, Szamosi and Duxbury, contributed in the field of research, mentioning that there are some vital changes, such as a lay-off, merger or acquisition, which may disturb an organization’s goals and strategies. Effective leaders must reorganize the company’s direction to sustain the change and ensure future success. Setting an appropriate direction ultimately provides motivational accountability, reduces confusion and conflicts, enhances performances and leads to better time and resource management.

5.4 Excellent Communication
In the hyper mediated world of today, communication is assumed unheard of significance as messages travel across the globe at the flick of a button. Goldsworthy in 2009, in his study, has very clearly portrayed communication as the lynchpin of leadership. As has already been researched and concluded that during turbulent time’s communication channels have to be
most active and no space should be left empty lest grapevine fills it. Thus excellent communication emerging as a critical attribute in the study was expected. An excellent communication creates an atmosphere in which timely and high quality information flows efficiently within an organization that eventually encourages open expression of ideas and opinions. In a turmoil state of affairs, the business leaders tend to avoid disclosure, which is a wrong approach to cope up with turbulent times. Tough times involve more frequent communication (Rost, 1991). Communicating openly during challenging times can eventually help in building teamwork and cooperation among employees. The skills to listen, invite questions and create effective two-way communication generate trust and can prevent problems during times of change.

5.5 Authenticity
In turbulent times when trust is most needed if a leader is not authentic or trustworthy nothing else will matter. It is the value system or ethos of the leader which followers will listen to, actually in times of change messenger is the message, if the people trust the messenger then only will they trust his message. Authenticity is being loyal to the truth of who you are (George, 2003). Authentic leaders perceive themselves and others truthfully and take responsibility for their feelings and behaviours for all time (Avolio and Gardner, 2005). They demonstrate high levels of modesty to their intentions and commitments. Brown clearly defined in his paper what actually authenticity calls for. Authenticity means signifying consistency between words and actions, and being consistent in the various roles that leaders play. Living an authentic life is more rewarding than hiding your true self. When one lives authentically, he doesn't have to worry about what he said, how he acted, or whether he did the right thing. The most revered example of authentic leadership according to the authors is Mahatma Gandhi, who lived a life of such transparency that his life became his message. Authentic leaders know themselves—their own values, strengths and weaknesses. This helps in preparing them to manage themselves, and others, under unfavourable circumstances.

5.6 Global Outlook
The world today has turned into a global village, with cross border movement of products and people increasing by the day, we have literally become citizens of the world. It is impossible for an organisation to stay local, constrained to one’s own country or region and still survive forget about succeeding, growth in the present environment is fuelled by a global approach only. Leaders who appreciate the cultural norms, attitudes, beliefs and values of the foreign markets that they visit and factor in political and historical perspectives will find entry and existence easier than those who think of the world as one big market. As we are aware that the mantra today of business success is ‘glocalisation’ which is ‘go global but act local’ that means appreciating local values and beliefs. Major factors that make global thinking crucial for future are the remarkable increase in global trade, and integrated global technology, like e-commerce. Technology can help break down barriers to global business (Greco & Roger, 2003). If survival is the aim in the new millennium, then change becomes imperative. Change is obligatory not only in the work, but in the thoughts of how we think about ourselves, organisation and our lives (Stogdill, 1974). A successful organizational leadership should be strong on global concerns and emotional intelligence to create competitive advantage in this transforming landscape. The smart organizations will be
the ones who seize these transformations as an opportunity and the key to the same lies in dealing with three interconnected dimensions of organizational change i.e. leadership, technology, and culture simultaneously (Applebaum et al., 2010).

5.7 Creative Thinking
If it was expected of business executives to be sensible in their spending till yesterday, today they are being asked to be miserly, cost cutting is the mantra of coping with the present difficult times. To remain competitive in such times innovations and creativity are most needed in the corporations of the world to find ways by which more can be done by less and how more can be delivered to the customer. In such environment innovative leadership is the skill to view situations from various perspectives and produce unique approaches to problems (Choi, 2004; Adelman, Parks & Albrecht, 1987) and it also helps in perceiving the world in new and remarkable ways. Innovative leaders persuade and inspire innovation, thoughts and out of the box thinking. Adil Malia, Essar group feels “Innovation is very likely to be an inherent part of an organisation in India, especially since many businesses here are entrepreneurial in nature”. The top leadership of the organization must do value creativity themselves and be enthusiastic about encouraging new development. Diversity is a key ingredient for innovation to take place. Leaders should therefore encourage creativity and innovation through creating a friendlier environment for diversity to thrive. Thinking-Outside-the-Box requires individuals and businesses to dare and develop their way of thinking. It provides a path to create and implement innovative ideas and solutions to address difficult situations. Leadership today focuses on continuous adaptation and improvement and it is imperative that leaders understand strategic and operational aspects of change.

6. DISCUSSION
Implications for Consultancy Service Industry and ITES Industry
The literature review shows that over the past decade, mega-trends like changing regulatory structures, availability of product in abundance and e-commerce and information technology, would probably have a deep impact on businesses and markets (Useem, 2010). In order to fuel the growth of both Consultancy Service Industry and ITES Industry, effective leadership skills are needed to lead at the managerial level. The seven leadership skills that were extracted in the present study with the help of factor analysis are; Adaptability, Analytical Approach, Setting Direction, Excellent Communication, Authenticity, Global Outlook and Creative thinking. Though any manager in any industry would need these skills but the need of them in the two mentioned industries is absolutely critical. One of the most important leadership skill, a consultant needs is the ability to communicate well with others, seek information and influence diverse set of people. Working with people with multitudes of perspectives constantly calls for being analytical and having an ability to come up with creative ideas and all this with authenticity and credibility. Parks, in 2005, mentioned that when it comes to consulting, to be triumphant in one’s area, one has to think of many solutions to the same problem as there is no sitting back and letting someone else seize the opportunity. Badillo, in 2007, mentioned, over the next decade, an intensifying number of powerful drivers of change in business that leads to
turbulence will call for a higher concern on authenticity, innovation and adaptation, by both organisations and the consultants that look forward to serve them.

Given the unique nature of the ITES Industry global outlook to the external environment becomes very critical in order to match customer’s ever changing demands and remain competitive. Being the main provider of these resources, the IT department plays a key role in analysing and ascertaining that the organization is able to connect the skills and capabilities of the entire workforce (Henderson & David, 2008). As technology keeps on advancing and plays a vital role in enabling business strategy in ITES sector, IT companies would need to take account of the value-chain right from inventing to innovating in business models, to executing till enhancing the technology offerings. Satisfying and retaining clients is of utmost importance to the CIOs, therefore being authentic towards the people, policies and system on his part, plays a vital role in flourishing and sustaining the growth of the business. In order to meet client's needs and to build up strong customer base, adequate communication skills and active listening skills are required to understand and to empathize with customers.

7. CONCLUSION
In an environment, where existing management viewpoints and approaches are repeatedly being challenged, this paper has tried to explore those leadership skills that are emerging in India because of the rapid shift in the corporate scenario. The present study would help organisation nurture leadership spirit in their employees through imparting these skills and attitudes through training support. While further research is needed to understand the flexible nature of challenges, the present study would aid as an advantage to researchers as well as organizational practitioners. This paper adds significance to the existing body of work due to its distinctive future perspective and its practical implications. As the capacity to find the right skill in the right place becomes more complex, the hunt for high-potential leadership talent will therefore require going beyond traditional pools (Sahni, 2000).

8. REFERENCES


A Study on Consumer Awareness, Preference and Attitude towards Mall Culture with Reference to Coimbatore District

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ABSTRACT: The growth of integrated shopping malls, retail chains and multi-brand outlets is evidence of consumer behavior being favorable to the growing organized segment of the business. Space, ambience and convenience are beginning to play an important role in drawing customers. Malls, which are now anchored by large outlets such as Westside and Lifestyle and are resided by a lot of Indian and international brands, are also being seen as image benchmarks for communities. Various factors on which the Indian consumers base their choice of going to the shopping mall or the unorganized markets have been analyzed in this research. This study focuses on the shopping mall preferences of consumers, their attitude and the awareness about the existence of malls in the district. Survey method and convenient sampling had been adopted for collection of data. The major referrals are friends, and most consumers consider time as factor, major respondents are satisfied with the brands available.

KEYWORDS: Shopping malls, mall culture, awareness and attitude.

INTRODUCTION

A shopping mall is typically, a shopping complex connected by walkways. It provides shopping as well as entertainment options to the target consumers. It generally contains one anchor store, which consumes twenty five percent of its retail space. In addition a mall contains specialty stores for clothes, accessories, home needs, books, as well as food court, multiplexes and entertainment zones. The factors that affect store choice and draw customers to the shopping centre include space, ambience, and convenience and moreover an array of choice under one roof.

Brookefields is the first of its kind retail project in the city of Coimbatore. With several anchor retail outlets, leading local, national and international brands, hyper markets, food court, fine dining, family entertainment centre, multiplex, business centre, health club, hotel and parking all under one roof, it is the ultimate shopping and entertainment experience. The mall promises something for everyone with its bewildering range of products spread over an area of about 4,50,000 sq. ft. Its great location and connectivity make it a convenient destination for locals and tourists alike.
Entertainment and dining options abound, with a gaming park and a food court. A 70 room boutique hotel has been planned within the mall for the convenience of tourists. The hotel also has other facilities like swimming pool, roof garden, health club and banquet halls. Wi-Fi Connectivity, ATM, money exchanger, mall gift vouchers and customer loyalty programs ensure an enhanced shopping experience. Brookefields with its great value proposition for shoppers and retailers is all set to change the retail scene of Coimbatore forever.

**OBJECTIVES OF THE STUDY**

- To study the customer attitude towards shopping malls.
- To measure the level of awareness about malls.
- To study the preference of consumers towards malls.
- To assess the consumer opinion about marketing strategies employed by malls.

**REVIEW OF LITERATURE**

*Kenhove et al. (1999),* reported that the choice of store by the consumer was differentiated by the nature of the task that had to be executed by him. The different tasks that were described by the respondents included urgent purchases, large quantity purchases, difficult job, regular purchases and getting ideas.

*Sinha and Banerjee (2004)*, commented that store choice behaviour of a consumer is considered a cognitive procedure. It is believed to be a process of information processing as the brand choice or any purchase decision is considered. It is very similar to the decision of making a brand choice except the fact that store choice is influenced by the location factor, which does not need to be considered when making a selection of brands.

*Satendra Bhardwaj, Rajeev Sharma and Jyoti Agarwal* reported that customer perception about shopping malls and suggesting way to improve its market share in sales through customer perception about private labels.

*Sproles & Kendall (1986)* stated that identified the characteristics among consumers “helps to profile an individual consumer style, educate consumers about their specific decision making characteristics, and counsel families on financial management”.

*Christiansen, et al. (1999)* examined the effects of mall ‘entertainment value’ from the consumers’ perspective on mall profitability.

*Wirtz and Mattila (2001)* argued in their study that even if the service environment is perceived as attractive, a mismatch between the desired and actual arousal levels is expected to lead to low levels of pleasure.

According to *Assael’s Model of Store Choice(1995, p.630)* consumers’attitudes towards and perceptions of the store’s image and attributes, as well as the influence of in-store stimuli, influence patronage behaviour. Variables such as personal characteristics,
information sources and store attributes could determine store patronage (Shim & Kotsiopulos, 1992b).

Reid and Brown (1996), proposes that the customers orientation towards shopping may shed light into the way he/she indulge in shopping and it may also tell the reason why he/she chooses a particular retail store (including shopping malls).

Research on shopping mall behaviour indicates, amongst others, that age groups differ regarding preferences for mall attributes (Anderson, Burns & Reid, 2003); entertainment available could influence mall choice (Wilhelm & Mottner, 2005) and décor of a mall is important for apparel consumers (Baker & Haytko, 2000).

Lee, Ibrahim & Hsueh-Shan, (2005), reported that certain retailer factors influence male shoppers enjoyment, namely shopping-centre features, ancillary facilities, value-added features and special events.

RESEARCH METHODOLOGY

RESEARCH DESIGN
The survey method was been employed to study the customer awareness about existence of malls and the attitude towards purchasing at shopping malls. Datas were collected from the potential customers visiting Brookefields, Coimbatore, Tamilnadu.

DATA COLLECTION
The study includes both primary & secondary data. A structured questionnaire was issued to collect the primary data from the customers of Brookefields Coimbatore. Secondary data was collected from the reports, brouchers, magazines and website.

POPULATION & SAMPLING FRAME
A convenience sampling method was used to obtain the data from the customers.

SAMPLE DESIGN
A Sample of 275 respondents was chosen for data collection. It was observed at the end of the month (data collected) nearly 25 questionnaires were incomplete. They were deleted which gave a samples of 250 respondents in total.

DATA ANALYSIS
The collected data were analyzed using statistical tools like percentage analysis, Garrett ranking.

LIMITIATIONS
The data has been collected from the respondents of Coimbatore city. The results are location specific and therefore the conclusions drawn may not be applicable to a different district having different socio-economic conditions. The study relating to awareness of mall culture is entirely based on the responses given by the respondents. The views of the respondents relating to perception, satisfaction and expectation may be based.
ANALYSIS AND INTERPRETATION

Table 1: Demographic variables (N=250)

<table>
<thead>
<tr>
<th>S.no</th>
<th>Demographic variables</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age (in years)</td>
<td>15-25</td>
<td>90</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25-35</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35-45</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45-55</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55 and above</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>Gender</td>
<td>Male</td>
<td>130</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>120</td>
<td>48</td>
</tr>
<tr>
<td>3.</td>
<td>Education</td>
<td>Intermediate</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Undergraduate</td>
<td>60</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post graduate</td>
<td>70</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.Phil</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ph.D</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Others</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>4.</td>
<td>Current Occupation</td>
<td>Student</td>
<td>70</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employed</td>
<td>75</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entrepreneur</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retired</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Others</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>5.</td>
<td>Income (in Rs.)</td>
<td>Below 10,000</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10001-20000</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20001-30000</td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30001-40000</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40001-50000</td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50001 &amp; Above</td>
<td>55</td>
<td>22</td>
</tr>
</tbody>
</table>

Findings:
The above table shows that shopping Malls are mostly visited by age group of 15-25 followed by 25-35 age groups. The reason is most visitors are college students and families. Malls visited by majority of employed persons (30 %), followed by students (28%). Income group of Rs.50, 000 and above plays dominant role (22%).
Table 2: Consumer attitude, Preferences and Awareness about malls (N=250).

Table 2.1:

<table>
<thead>
<tr>
<th>Frequency of visit</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly</td>
<td></td>
<td>70</td>
<td>28</td>
</tr>
<tr>
<td>Monthly</td>
<td></td>
<td>125</td>
<td>50</td>
</tr>
<tr>
<td>occasionally</td>
<td></td>
<td>55</td>
<td>22</td>
</tr>
</tbody>
</table>

Findings:
- The above table shows that 50% of respondents visit the mall monthly, 28% visit weekly.

Table 2.2:

<table>
<thead>
<tr>
<th>Accompanying person</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends</td>
<td></td>
<td>75</td>
<td>30</td>
</tr>
<tr>
<td>Colleagues</td>
<td></td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td>Neighbors</td>
<td></td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td>Alone</td>
<td></td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>others</td>
<td></td>
<td>35</td>
<td>14</td>
</tr>
</tbody>
</table>

Findings:
- The above table shows that 30% of respondents prefer to visit the mall with their friends, followed by purchase with neighbours and colleagues.

Table 2.3: Influencers for visiting mall.

<table>
<thead>
<tr>
<th>Influencer</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenced</td>
<td></td>
<td>90</td>
<td>36</td>
</tr>
<tr>
<td>Not influenced</td>
<td></td>
<td>70</td>
<td>28</td>
</tr>
<tr>
<td>Cognitive</td>
<td></td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>self</td>
<td></td>
<td>40</td>
<td>16</td>
</tr>
</tbody>
</table>

Findings:
- The above table shows that only 36% of respondents visit the malls by advertising influence and others have neutral or nil influence.
Table 2.4: Major influencer to visit the mall.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Factors</th>
<th>Mean Scores</th>
<th>Rank</th>
<th>% Position</th>
<th>Score Scale (100)</th>
<th>PRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Friends</td>
<td>9.98</td>
<td>1</td>
<td>4.17</td>
<td>85</td>
<td>95.83</td>
</tr>
<tr>
<td>2</td>
<td>colleagues</td>
<td>8.84</td>
<td>2</td>
<td>12.50</td>
<td>73</td>
<td>87.50</td>
</tr>
<tr>
<td>3</td>
<td>kids</td>
<td>7.30</td>
<td>3</td>
<td>37.50</td>
<td>56</td>
<td>62.50</td>
</tr>
<tr>
<td>4</td>
<td>Family members</td>
<td>6.3</td>
<td>4</td>
<td>54.17</td>
<td>48</td>
<td>45.83</td>
</tr>
<tr>
<td>5</td>
<td>Myself</td>
<td>6.03</td>
<td>5</td>
<td>62.50</td>
<td>44</td>
<td>37.50</td>
</tr>
<tr>
<td>6</td>
<td>Neighbors</td>
<td>4.84</td>
<td>6</td>
<td>79.17</td>
<td>34</td>
<td>20.83</td>
</tr>
<tr>
<td>7</td>
<td>Others</td>
<td>3.18</td>
<td>7</td>
<td>95.83</td>
<td>17</td>
<td>4.17</td>
</tr>
</tbody>
</table>

PRS –percentage ranking

Findings:

The above table shows that the major influencers for visiting malls are friends and colleagues.

Table 2.5: Showing the purchasing budget of respondents.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing budget</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1000</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>1001-2000</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td>2001-3000</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>3001-4000</td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td>4001 &amp; Above</td>
<td>65</td>
<td>26</td>
</tr>
</tbody>
</table>

Findings: 6

- The above table shows that 26% of respondents have purchase budget of Rs. 4001 & above followed by 1001-2000.

Table 2.7: Respondents plan for purchase.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major item purchased</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparels</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Food products</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>Jewelry</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Cosmetics</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Home appliance</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Health care</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>grocery</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Gift &amp; Toys</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>-------------</td>
<td>----</td>
<td>---</td>
</tr>
<tr>
<td>others</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>All the above</td>
<td>25</td>
<td>10</td>
</tr>
</tbody>
</table>

Findings:

- The above table shows that 14% of respondents opt home appliance and groceries in their planned purchase.

**Table 2.8: Showing the visiting time of respondents.**

<table>
<thead>
<tr>
<th>Time of visit</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>35</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>afternoon</td>
<td>65</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Evening</td>
<td>150</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>No. of times visited</td>
<td>0-10</td>
<td>95</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>70</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>30 &amp; Above</td>
<td>30</td>
<td>12</td>
</tr>
</tbody>
</table>

Findings:

- The above table shows that majority 60% of respondents prefer evening time to visit the malls. Majority are new customers i.e., 38% of respondents.

**Table 2.9: Showing the respondents main centre of attraction in mall.**

<table>
<thead>
<tr>
<th>Main centre of magnetism in mall</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment</td>
<td>45</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Food &amp; beverages</td>
<td>60</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Variety of shops</td>
<td>65</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>45</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>All the above</td>
<td>35</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Findings: The above table shows that major customers feel food & beverages, variety of shops is the main centre of magnetism in mall.
Table 2.10: Showing the customer feeling towards mall.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer perception of one stop shop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>120</td>
<td>48</td>
</tr>
<tr>
<td>Disagree</td>
<td>80</td>
<td>32</td>
</tr>
<tr>
<td>Neutral</td>
<td>50</td>
<td>20</td>
</tr>
</tbody>
</table>

Findings: The above table shows that major customer feel mall as one stop shop.

Table 2.11: Factors contributing to customer satisfaction.

<table>
<thead>
<tr>
<th>Satisfaction level</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brands</td>
<td>65</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>35</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>35</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>convenience</td>
<td>50</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Time factor</td>
<td>45</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Parking facility</td>
<td>20</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Findings:
- The above table shows that Major respondents are satisfied with the brands available.

Table 2.12: Showing the effective media for advertisement.

<table>
<thead>
<tr>
<th>Effective media for advertisement</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>65</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td>25</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td>45</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td>40</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>pamphlets</td>
<td>30</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>45</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Findings:
- The above table shows that 26 % of respondents feel that Television will be effective media for advertisement.
Table 2.13: Effective promotional strategy for malls.

<table>
<thead>
<tr>
<th>Effective promotional strategy</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price discounts</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Offers</td>
<td>80</td>
<td>32</td>
</tr>
<tr>
<td>gifts</td>
<td>65</td>
<td>26</td>
</tr>
<tr>
<td>Kids entertainment</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>others</td>
<td>50</td>
<td>20</td>
</tr>
</tbody>
</table>

Findings:
The above table shows that 32% of respondents suggest offers as the effective promotional strategy, followed by gifts (26%).

Table 2.14: Respondents behavior to suggest mall purchase to others.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mall reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>165</td>
<td>66</td>
</tr>
<tr>
<td>no</td>
<td>85</td>
<td>34</td>
</tr>
</tbody>
</table>

Findings:
- The above table shows that majority of respondents 66% suggest the mall purchase to others and 34% of respondents do not suggest.

FINDINGS
The majority of the consumers of Brookefields is the younger population with high potent purchasing behavior. Different occupational habits were influenced by different medium/media of advertisement that has in due course influenced their impulsive buying behaviour. Majority of the customer surveyed prefer shopping once in month and majority of the customers’ surveyed prefer to spending 1-2 hours in the Brookefields at Coimbatore in invariably of their occupational status, except the business class customers, who prefers to spend less than an hour. · It has been observed that majority of the impulsive buyers prefer to spend between Rs.4001–Rs.5000 on their shopping and 14 per cent of items under planned purchase were Home appliances and groceries. It has been inferred that quality, brand and price are primary factors have influence the modern day customers to shop at malls like Brookefields. The major success secret of retail business in India is its discount offers provided to the customers on season and off the seasons periods.

SUGGESTIONS
Generally the customer’s expect more and more satisfaction in all aspects, each and every time they step into a store. In today retail market the organized retailing could grow tremendously provided they adopt the right marketing strategies and customer attraction techniques. Retail managers must also assure product variety and availability of new products to enhance customer loyalty.
Development of incentives for customers to tell associates and friends about the value of your products or services. An endorsement from them is more effective than any amount of advertising—and it is much cheaper. Visual management should be improved because it is often seen that the people come to the store to browse rather than buy. In store Promotions for the people visiting the store should be encouraged to visit the store again and again. So it is necessary to delight the shoppers with the shopping experience. It has been observed in international shopping malls that there are in-store promotions like lucky draws for entrants surprise winners and so on at random.

CONCLUSION

Considering the location factor, majority of the respondents did not care about the proximity of the shopping malls from their homes. The reason for this probably would be that there are only a few shopping malls currently and all the consumers want to experience this new way of shopping, therefore, they do not mind even if they have to travel a long distance to visit the shopping mall occasionally. However, few of the interviewees associated their decision of their shopping destination with respect to its proximity from their home.

The Retail Industry in India has come forth as one of the most dynamic and fast paced industries with several players entering the market. But all of them have not yet tasted success because of the heavy initial investments that are required to break even with other companies and compete with them. The India Retail Industry is gradually inching its way towards becoming the next booming industry. At this juncture the Indian retail market is continuously increasing, on the backdrop that middle class households purchasing power are rising as there is increase in the total income as well as the change in their tastes and preferences towards modern retail outlets. The retail players to be able to understand the extent in with different factors affect in converting the impulse buyers to compulsive buyers. Shopping malls provide many facilities under one roof but lack in providing goods at a cheap price. This makes Local markets more famous among the Common Man as they provide largely the same goods at a competitive price. A very mixed response was obtained when the consumers were questioned about the frequency of their mall visits for the purpose of shopping. Few of the respondents visited only the mall whenever they would move out with the intention of shopping. Others visited a mixture of both, which must be dependent on various factors. From the responses it can be analyzed that the customers who initially visited only the unorganized markets with the shopping motive in mind has also started to consider the malls for specific product categories or brands. This again indicates a gradual change in the consumer preference for malls.

REFERENCES


Employee Involvement and Job satisfaction in Automobile Industry with Special reference to Ashok Leyland

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Abstract: Prime challenge for HR today is how to engage and ultimately retain employees particularly among an economic downturn. It is highly critical for the management to reduce the employee turnover .Hence it involves the role of HR management to devise the HR Strategies to stimulate the employee Involvement and Job satisfaction. More recently employee Involvement and Job satisfaction has become an area of focus within organizations for the purpose of retention as a means of avoiding expensive employee replacement costs resulting from staff who voluntarily quit their jobs.

Key words: Motivation, Employee enrichment, career development, career path, Employee Empowerment, Employee turnover, corporate Bond, Employee Involvement, Job satisfaction

Introduction:

Ashok Leyland, the Hinduja Group flagship company in India, is a leading manufacturer of commercial vehicles with a product range of 7.5T GVV to 49T GTW in goods vehicles and 19 seaters to 80 seaters in passenger models. The Company’s annual turnover exceeds US $ 2 billion. It has a production capacity of nearly 100,000 vehicles per annum. The Company exports to over 30 countries in Asia, the Middle East, Africa and South America.

Based on their very high background with respect to their portfolio, it is necessary for the management to sustain their employee standard and involvement. Since the company deals with highly diversified heterogeneous group of employee mix, it is highly imperative for the management to maintain the employee involvement and bond with the system. For this they have to devise the effective HR policies as per the necessitates of their employees\textsuperscript{1}. This study finds the gaps that to be filled by the company to sustain employee engagement and to reduce employee turnover rate.

\textsuperscript{1} http://www.journalofaccountancy.com/Issues/2010/May/20092404.htm
**Importance of the study:** It is crucial to maintain a highly motivated workforce throughout the organization’s operations. With the wide variety and scope of work in its plate and the growing number of assignments and workforce, the HR department sought to recognize ways of keeping its employees going throughout the organization’s operations\(^2\). It is vital to understand the various aspects that pave way for employee Involvement and to focus on each aspect.

**Statement of Problem:**

In this day and age, retaining employees for the longer period seems to be very hectic. Since so many competitive job offerings are there with attractive packages, employees are doting in the process of job hopping. Hence forth the employee replacement cost is the burgeoning issue for the management and it is alarming for Ashok Leyland to solve this issue.

**1.3 Research Objectives:**

**1.4 Primary Objective:**

To analyze the effectiveness of employee involvement and job satisfaction at Ashok Leyland.

**1.5 Secondary Objectives:**

1. To assess the effectiveness of organizational support on employees and to identify whether the employees needs are met.

2. To analyze the factors influencing employees to attain job involvement and satisfaction.

**Research methodology:**

**Research Design-**

In this study **Descriptive Research** is used where the available resources on Employee Involvement and Job satisfaction as primary data is used to describe the characteristics of Employee Involvement and Job satisfaction.

**Data Collection-**

*Primary Data*- Research is pertained with primary data.

*Secondary Data*- In this study the Secondary data are from online websites, company websites and books on the related topics.

\(^2\) [http://www.washington.edu/admin/hr/pod/leaders/orgdev/alliance/articles/EmployeeInvolvement-ScontrinoPowell.pdf](http://www.washington.edu/admin/hr/pod/leaders/orgdev/alliance/articles/EmployeeInvolvement-ScontrinoPowell.pdf)
Research Instrument-

The research instrument used in this study is Questionnaire. In this study structured and concealed Questionnaire is used where the respondents are given with specified options for each question.

Limitations of the study

1. Accuracy of the study is purely based on the information as given by the sample.
2. Views and perceptions of the employees may vary over a period of time.
3. All the employees may not provide genuine information about the organization.
4. Due to communication problem with few basic employees proper details were not furnished.
5. Since plant visit is not permitted direct observation on the work environment was not made possible

Sample Design-

Simple Random sampling was adopted for this study.

Sampling Frame- In this study the sample frame is the total employees of Ashok Leyland, Chennai

Sample Size-In this study 110 Sample units are selected from Ashok Leyland, Chennai for the study.

Reliability & validity

Reliability

Reliability is the consistency of a measurement. Questionnaire had been tested with 30 respondents to check the reliability. With SPSS package, reliability was tested. Cronbach alpha value was 0.782 with no exclusions implying the acceptability of the questionnaire for the research work.

Validity

Internal and external validity were checked with the respective sources and every hypothesis is represented by a question in the questionnaire so that they can be tested and measured.

Data analysis & interpretation

Chi square test

To test the dependency of psychographic factors on the demographic factors

Formulation of Null hypotheses

NH 1 - There is no significant relationship between marital status and Employee Involvement and Job satisfaction
**NH 2** - There is no significant relationship between age and employee involvement.

**NH 3** - There is no significant relationship between educational qualification and Employee Involvement and Job satisfaction

**NH 4** - There is no significant relationship between experience in the same company and Employee Involvement and Job satisfaction

### Table 1: Chi square analysis

<table>
<thead>
<tr>
<th>NH</th>
<th>CHI VALUE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH 1</td>
<td>6.943**</td>
<td>ACCEPTED</td>
</tr>
<tr>
<td>NH 2</td>
<td>15.876**</td>
<td>ACCEPTED</td>
</tr>
<tr>
<td>NH 3</td>
<td>20.752**</td>
<td>REJECTED</td>
</tr>
<tr>
<td>NH 4</td>
<td>65.905**</td>
<td>REJECTED</td>
</tr>
</tbody>
</table>

**Significance at 99% Confidence level**

**Interpretations**

**NH 1 Interpretations:**

From the above table it is identified that there exists a significant relationship between marital status and other psychographic factors, based on the marital status the HR policies and allowances can be framed so as to boost up the involvement of the employees.

**NH 2 Interpretations:**

From the above table it is identified that there exists a significant relationship between age and other psychographic factors, where the Training methods can be framed based on the age limit as the younger and older generation differ in knowledge such as decision making, experience, stress handling, creative problem solving.

**NH 3 Interpretations:**

From the above table it is identified that there is no significant relationship between educational qualification and other psychographic factors, but it is necessary to assign roles based on the educational qualification and employees can be promoted to higher levels based on the successful updation of the educational qualification.

If the employee has a dual qualification in two different streams then he/she can be made cross departmental as per the company needs so as to increase the knowledge of the employees and to make use of the employees skill in an effective manner.
NH 4 Interpretations:

From the above table it is identified that there is no significant relationship between experience in the same company and other psychographic factors but it is necessary, but the hr policies can be framed in such a way that the experienced employees undergo a different set of training so as to improve their performance.

The experienced employees serve as a indirect guidance to new employees so they can also be treated as a positive motivator towards guiding the new employees about complete employee involvement.

Findings from the study:

1. From the study it is clear that there is significant relationship between the demographic factors and the other considered psychographic factors, which must be taken care while formulating the Human resource policies. The findings are as follows:

2. Level of involvement in work is high as per the self analysis made by the employee which helps the organization to sustain in the competition and in the market, and also leads to the continuous growth.

3. Superior is approachable at any time to answer the queries of the employees. This helps to bridge the gap between the senior managers and their subordinates which enhances the two way communication in the organization.

4. Main momentum behind the employee involvement is the supervisors / managers which shows the interest of the top level management in the growth of the employees as well as the organization. This forms the healthy work environment.

5. Appraisal provided by the organization is found to be significant, which shows that the employees are satisfied with the current appraisal system. HR department can make updating in the current system to meet the needs of the employees and the organization which changes from time to time. Employees are satisfied with the current compensation benefits which can be revised as and when needed.

6. Career growth opportunities are found to be significant which shows that the organization is focused on the growth of the employees who are an asset to the organization. This shows that the organization has substantial and stable growth.

7. Employees are satisfied with the current reward system of the organization which shows that organization is interested in appreciating the employees and which leads to improve

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4 http://www.weyerhaeuser.com/Sustainability/People/Communities/EmployeeInvolvement

5 http://www.workplacerelations.ie/en/information/employeeinvolvementinformationandconsultation/
their performance. Employees enjoy the work, which denotes the employees are interested in the organization growth and development.

8. Continuous feedback is given to the superiors to their subordinates to identify the problem areas and to improve the performance of the employee. Employees feel the strong sense of personal satisfaction in work which is the reason for the organization to grow and expand continuously.

**Suggestions:**

From the study it is identified that certain factors are not significant to a greater extent. To ensure effective employee involvement, job satisfaction and for better result in those factors the following suggestions can be followed. Employees must be empowered to a certain extent to make decisions based on their job role assigned and the HR department must ensure that they are trained in decision making and creative problem solving skills. Work life balance is important for any employee to be successful in his/her personal as well as professional life. HR department must frame policies that help the employees to maintain a healthy balance between the work and personal commitments. Employee’s interest and the organizational needs differ from time to time. To balance this, policies must be framed in such a way that employees are trained to accept change and work with it as per the organization requirements.

Recognition/appreciation are a source of motivation to the employees. The reporting manager must ensure that his/her subordinates are under observation and must encourage them time to time to avoid the employees from losing interest in the job. Employee when not satisfied with the current position he/she can be given a chance to move to other department if interested as per the organizational requirements so as to make use of the employee’s skills to the fullest. Employees being the greatest asset of the organization, the HR department must also focus on the health and safety of the employees during work. Inspiration is required for an employee to be involved in work completely. This inspiration can be provided to the employees through weekend meetings where the successful employees share their experience and views. Discrimination of employees based on race, gender etc de-motivates the employees, which may sometime lead to the state of employee resignation which can be avoided by team building training sessions. Top level management must consider the feedback given by the employees and take action efficiently to improve the organization from every point.

Working hours and timing when extended has a great impact on employees. HR department must ensure that the working hours and timing is comfortable for the employees and can provide space for aged employees to work from home in case of health ailments and women staff in case of maternity. The employees can be provided with motivational sessions which

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6 http://ec.europa.eu/social/main.jsp?catId=707

7 http://asq.org/learn-about-quality/employee-involvement/overview/overview.html

8 http://www.pwc.ca/en/about/employee-involvement
would boost employee involvement and performance. Weekend meetings within the department can be organized to bring out individual and team queries and problems which can be solved.

Conclusion

The present study at Ashok Leyland focused on employee involvement and job satisfaction. Employee involvement is the complete involvement by an employee in work both physically and mentally by using the fullest potential to achieve the organizational objectives. Through employee participation and the organization interest in employee’s life the organization can continuously improve its performance and the employee can attain job satisfaction. The management provides various welfare measures such as medical allowance, medical leave, counseling; house rent allowance and other benefits which help to increase their employee involvement. Thus the findings would enable both the employer and employee to realize their success factors problem areas and the suggestions would help the management to improvise.

Direction for future research:

This study is focused in the middle-low level employees and it covers limited aspects only because of the limited project time period. Thus in future this research can be taken even to the shop floor workers, who are also important for the betterment of the products and working environment of the organization. Also the study can be carried with various other factors which are not considered in this study which can help in the betterment of employee involvement and job satisfaction.

References:


[18] National Business Research Institute, Inc. The Importance of Employee Engagement Infographic (2011)
AN ANALYSIS ON THE FARM PRODUCTIVITY AND RETURNS FROM BT COTTON. A CASE STUDY OF COIMBATORE DISTRICT

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Research Scholar Department of Economics, Karpagam University, Coimbatore.

Abstract: India has made impressive strides on the agricultural front during the past three decades. India is the leading producer in many of the agricultural crops including the commercial crops. Objectives of the study, To analyse the socio economics conditions of the Cotton farmers in the study area and study the cost of cultivation of Bt cotton farmers in the study area. Methodology of this study, in order to estimate the impact of BT cotton on existing cropping pattern in the district of Coimbatore, a survey was conducted in the rural areas of the district. A sample of 500 respondents was taken from the cotton growing villages of the district namely, Anaimalai, Annur, Karamadai, Kinathukadavu, Madukarai, Pollachi, Sarkarsamakulam and Sulur are the major blocks were BT cotton are grown. Important findings of the study, on the use of inputs in the cotton farm activity indicated that, for a majority of the inputs, the use of these inputs increases with the increase in the size of holdings and the reason put forth was that a majority of the sample growers particularly, the small, medium and large growers adopt mechanization in cotton farming which is the cause of higher usage of agricultural inputs. Suggested in this study, The low productivity added with the poor quality of the product results in poor for the product which ultimately results in poor returns. The higher share of expenditure incurred on pests and disease control and for the application of higher dose of chemical pesticides and labour intensive nature of cultivation are the probable reasons for high cost of production.

Key words: Cost, Return, Productivity, Farm etc.,

INTRODUCTION

India has made impressive strides on the agricultural front during the past three decades. India is the leading producer in many of the agricultural crops including the commercial crops. To sustain the agricultural productivity, the country has embarked upon the introduction of hybrid seeds and a recent introduction of one such hybrid variety is the BT cotton. The BT cotton, in spite its controversies, has been gaining popularity due to its economic profits. In the present paper it is attempted to examine the cost and revenue aspect of BT cotton in the context of the district of Coimbatore which is a major producer of cotton in the state of Tamil nadu.

STATEMENT OF PROBLEM

The agriculture sector is the backbone of the country’s economy and all time shelter for bulk of the population which provides employment throughout the year and partially restricts the flow of population from rural to urban areas. In 2011-12, agriculture accounted
for 19.5 percent of India’s Gross National Product (GNP) while 70.0 percent of India’s workforce was engaged in farming. With increasing demand for agricultural produce due to increasing population on the one hand and the fast declining area under cultivation, there is a need for increased productivity of almost all agricultural crops and among them cotton an important commercial crop in India. In this research paper based on the socio economic conditions of cotton farmers and cost, expenses and returns of cotton cultivation in this area. Title of this study, An Analysis On The Farm Productivity And Returns From Bt Cotton. A Case Study of Coimbatore District

Objectives of the study
1. To analyse the socio economics conditions of the Cotton farmers in the study area and
2. To study the cost of cultivation of Bt cotton farmers in the study area

METHODOLOGY
In order to estimate the impact of BT cotton on existing cropping pattern in the district of Coimbatore, a survey was conducted in the rural areas of the district. A sample of 500 respondents was taken from the cotton growing villages of the district namely, Anaimalai, Annur, Karamadai, Kinathukadavu, Madukarai, Pollachi, Sarkarsamakulam and Sulur are the major blocks were BT cotton are grown. From these eight blocks, four blocks were selected at random and from these four blocks five villages were identified using the random sample method. This gave a total sample village of 20. From each of these identified 25 villages, 20 farmers growing BT cotton were identified from the list obtained from the Agricultural Cooperative Societies operating in the nearby village. These farmers were met and required data were collected with the help of a structured pre tested questionnaire. The collected data were analyzed using the simple percentage method and a multiple regression model.

ANALYSIS AND INTERPRETATION OF DATA: RESPONDENTS BY SOCIO ECONOMIC STATUS

| TABLE: 1 |
| DISTRIBUTION OF SAMPLE Respondents BY SOCIO ECONOMIC STATUS |

<table>
<thead>
<tr>
<th>Age (in Years)</th>
<th>No. Of Samples</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 35</td>
<td>34</td>
<td>6.80</td>
</tr>
<tr>
<td>35-45</td>
<td>43</td>
<td>8.60</td>
</tr>
<tr>
<td>45-55</td>
<td>194</td>
<td>38.80</td>
</tr>
<tr>
<td>55-65</td>
<td>151</td>
<td>30.20</td>
</tr>
<tr>
<td>65 and above</td>
<td>78</td>
<td>15.60</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level</th>
<th>No. Of Samples</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>48</td>
<td>9.60</td>
</tr>
<tr>
<td>Primary</td>
<td>42</td>
<td>8.40</td>
</tr>
<tr>
<td>Education Level</td>
<td>No. Of Samples</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
<td>------------</td>
</tr>
<tr>
<td>Middle</td>
<td>141</td>
<td>28.20</td>
</tr>
<tr>
<td>Secondary</td>
<td>237</td>
<td>47.40</td>
</tr>
<tr>
<td>HSC</td>
<td>31</td>
<td>6.20</td>
</tr>
<tr>
<td>Degree</td>
<td>1</td>
<td>0.20</td>
</tr>
<tr>
<td>Total</td>
<td><strong>500</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family Type</th>
<th>No. Of Samples</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>304</td>
<td>60.80</td>
</tr>
<tr>
<td>Joint</td>
<td>196</td>
<td>39.20</td>
</tr>
<tr>
<td>Total</td>
<td><strong>500</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of Family</th>
<th>No. Of Samples</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16</td>
<td>3.20</td>
</tr>
<tr>
<td>3</td>
<td>39</td>
<td>7.80</td>
</tr>
<tr>
<td>4</td>
<td>137</td>
<td>27.40</td>
</tr>
<tr>
<td>Above 4</td>
<td>308</td>
<td>61.60</td>
</tr>
<tr>
<td>Total</td>
<td><strong>500</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependency Level</th>
<th>No. Of Samples</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>1.60</td>
</tr>
<tr>
<td>2</td>
<td>241</td>
<td>48.20</td>
</tr>
<tr>
<td>3</td>
<td>101</td>
<td>20.20</td>
</tr>
<tr>
<td>Above 3</td>
<td>150</td>
<td>30.00</td>
</tr>
<tr>
<td>Total</td>
<td><strong>500</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

**Source:** Computed from Primary Data.

Age is an important socio economic variable determining the expertiseness in cotton cultivation and production. Hence, more the age more is the experience in cotton cultivation and hence is more is supposed to be the production of cotton. As it is seen in table 1, the highest share of 38.80 per cent of the cotton growers are in the age group of 45-55 years while the least share of 6.80 per cent are in the age group less than 35 years.

Education helps to create awareness on the latest technique of agriculture which results in the higher level of cotton production. As seen in the table, among the sample respondents, 47.40 per cent are just primary level of education completed which constituted the highest while the least share (0.20 per cent) is degree holders.

The type of family is an important demographic factor that determines the time spent in farming. The farmer from a nuclear family may be able to spare much time in farming, while in the case of joint family it is expected to be less. As it is seen in the table, among the sample respondents 60.80 per cent belong to nuclear family system, while the remaining 39.20 per cent belong to the joint family system.

As given in the table, 61.60 per cent of the families have more than four members and this constituted the highest. While the least share of 3.20 per cent of the families there are two members.

The data on the number of dependents in the sample farmers’ families provided in the table indicates that in 48.20 per cent of the respondents’ families, the number of dependents is two which constitutes the highest, while in 1.60 per cent of the families the number of dependents is one which forms the least.
FARM PROFILE AND FARM PRACTICES:
SAMPLE RESPONDENTS BY NATURE OF OWNERSHIP OF LAND

TABLE 2

DISTRIBUTION OF SAMPLE RESPONDENTS BY PROFILE OF FARM

<table>
<thead>
<tr>
<th>Ownership</th>
<th>No. of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>488</td>
<td>97.60</td>
</tr>
<tr>
<td>Jointly</td>
<td>12</td>
<td>2.40</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of Land Holdings</th>
<th>No. of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.5</td>
<td>12</td>
<td>2.40</td>
</tr>
<tr>
<td>0.50-1.00</td>
<td>22</td>
<td>4.40</td>
</tr>
<tr>
<td>1.1-1.50</td>
<td>37</td>
<td>7.40</td>
</tr>
<tr>
<td>1.50-2.00</td>
<td>59</td>
<td>11.80</td>
</tr>
<tr>
<td>2.01-4.00</td>
<td>82</td>
<td>16.40</td>
</tr>
<tr>
<td>4.01-10</td>
<td>233</td>
<td>46.60</td>
</tr>
<tr>
<td>Above 10</td>
<td>55</td>
<td>11.00</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience in Farming (in years)</th>
<th>No. Of Samples</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5</td>
<td>12</td>
<td>2.40</td>
</tr>
<tr>
<td>5-10</td>
<td>51</td>
<td>10.20</td>
</tr>
<tr>
<td>10-15</td>
<td>78</td>
<td>15.60</td>
</tr>
<tr>
<td>15-20</td>
<td>193</td>
<td>38.60</td>
</tr>
<tr>
<td>20-25</td>
<td>148</td>
<td>29.60</td>
</tr>
<tr>
<td>Above 25</td>
<td>18</td>
<td>3.60</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Note: Marginal 0.01 to 1.00 ha.; Small 1.01 to 2.00 ha; Semi-Medium 2.00 to 4.00 ha; Medium 4.01 to 10.00 ha; Large above 10 ha.

Source: Computed from Primary Data.

The nature of ownership of land is an important factor determining the level of production, productivity and eventually the farm practices.

As it could be seen in table 2, among the sample respondents of 500, 97.60 per cent are single or individual owners of their cultivating land, the remaining 2.40 per cent cultivate their lands jointly.

In the case of land holdings of the sample cotton farmers, there are 41 per cent respondents who hold less 0.50 hectares of land. Another 33.60 per cent of the farmers hold 0.50 to one hectare of land. The total of the two indicates that almost 75 per cent of the sample farmers are marginal farmers. In the case of small holdings, there are 18.60 per cent farmer respondents. While 4.20 per cent of the respondents are semi-medium farm holders, 1.60 per cent are medium farm holders. Just one per cent of the sample respondents are larger farmers.

As it could be seen in table 4.26, among the sample respondents, 38.60 per cent have a farm experience of 15-20 years which farms the highest, while 3.60 per cent of the sample cotton growers who have above 25 years forms the least share.
OPERATION-WISE COST, REVENUE AND GROSS PROFIT AMONG SAMPLE COTTON FARMERS:

### TABLE 3

<table>
<thead>
<tr>
<th>Size of Land Expenses (in Rs./ha)</th>
<th>OP1</th>
<th>OP2</th>
<th>OP3</th>
<th>OP4</th>
<th>OP5</th>
<th>OP6</th>
<th>OP7</th>
<th>OP8</th>
<th>OP9</th>
<th>OP10</th>
<th>OP11</th>
<th>OP12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3952</td>
<td>2673</td>
<td>5251</td>
<td>1926</td>
<td>3822</td>
<td>5752</td>
<td>3160</td>
<td>3522</td>
<td>2967</td>
<td>7238</td>
<td>2785</td>
<td>1565</td>
<td>44613</td>
</tr>
</tbody>
</table>

OP1 = Ploughing & Preparation of Land, OP2 = Harrowing, OP3 = Seed, OP4 = Sowing, OP5 = Fertilizer, OP6 = FYM, OP7 = Pesticides, OP8 = Weeding & Interculture, OP9 = Irrigation, OP10 = Harvesting (Picking), OP11 = Transport & Marketing and OP12 = Others.

Source: Computed from Primary Data.

A close perusal of the data provided in table 3 would indicate that the total of expenses for all farm operation stood at Rs. 44613 per ha. The operation wise analysis would indicate that Rs. 3952 in the case of Ploughing & Preparation of Land, Rs. 2673 in the case of Harrowing, Rs. 5251 in the case of Seeds, Rs. 1926 in the case of the expenditure on Sowing, Rs. 3822 in the case of the purchase of Fertilizer, Rs. 5752 in the case of the purchase of Farm Yard Manure, Rs. 3160 in the case of the purchase of Pesticides purchase, Rs. 3522 in the case of the cost of the cost incurred in Weeding & Interculture of the cotton farm, Rs. 2967 in the case of irrigating the land, Rs. 7238 in Harvesting (Picking), Rs. 2785 in the Transport & Marketing of the cotton produce and Rs. 1565 as miscellaneous expenses. The above discussion on the use of inputs in the cotton farm activity indicated that, for a majority of the inputs, the use of these inputs increases with the increase in the size of holdings and the reason put forth was that a majority of the sample growers particularly, the small, medium and large growers adopt mechanization in cotton farming which is the cause of higher usage of agricultural inputs.

FACTORS CONTRIBUTION TO PRODUCTIVITY OF COTTON: A PRODUCTION FUNCTION ANALYSIS

### TABLE 4

<table>
<thead>
<tr>
<th>Factors Contribution to Productivity of Cotton: Regression Results</th>
<th>Dependent variable: Cotton yield (q/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>Estimated coefficient</td>
</tr>
<tr>
<td>Constant</td>
<td>0.6875</td>
</tr>
<tr>
<td>Human labour</td>
<td>0.3872*</td>
</tr>
<tr>
<td>Machine labour</td>
<td>0.0997*</td>
</tr>
<tr>
<td>Fertilizer—Potash</td>
<td>0.0385*</td>
</tr>
<tr>
<td>Plant protection chemicals</td>
<td>-0.0471*</td>
</tr>
<tr>
<td>Irrigation</td>
<td>0.0512</td>
</tr>
<tr>
<td>R2</td>
<td>0.9312</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.9282</td>
</tr>
<tr>
<td>F-value</td>
<td>1277.25</td>
</tr>
<tr>
<td>DF</td>
<td>6</td>
</tr>
<tr>
<td>D</td>
<td>494</td>
</tr>
</tbody>
</table>

Notes: * indicates significant at 5 per cent level.

Source: Computed from Primary Data.

The earlier paragraph provided a detailed discussion on the farm practices of the sample cotton growers in the district of Coimbatore. Given these discussions, in the present paragraph it is attempted to examine the impact of farm related factors on the productivity of
cotton. To capture the yield response of cotton and the yield effect due to Bt seed more precisely, a production function analysis was carried out. Following the convention and the straightforward way in which the elasticities of production could be obtained, the Cobb-Douglas production has been used in the present study and the results are presented in Table 4. The adjust $R^2$ value of 0.9312 Indicates that as high as 93 per cent of the variation in the dependent variable, that is productivity, is being explained by the five independent labour and capital related variables considered for the analysis. Among the coefficients estimated, the coefficient arrived at in the case of the variable on human labour is 0.38752. This indicates that every one unit(human days per hectare) of increase in human labour increases the productivity of cotton by 0.38 quintal per hectare. The coefficient arrived at in the case of machine labour with 0.0997 implies that every one unit (hour per hectare) of increase in the machine labour increases the productivity by 0.0097. It can be inferred that the productivity contribution by (human) labour is found to be higher than the machine labour and the probable explanation for this higher contribution of human labour than the machine labour is that with the application of capital namely, the tractors and other machineries, the users of these machineries namely the human labour productivity increases.

The coefficient of fertilizer, namely potash is 0.0385. This implies that every one unit (kgm.) of increase in the application of fertilizer increases the cotton productivity by 0.0385 quintals per hectare. The estimated coefficient for the variable on plant protection chemicals is -0.0471. This indicates that that every one unit (litres per hectare) of increase in the application of pesticides reduces the cotton productivity by 0.0471 quintals. The probable explanation for a negative coefficient is that farmers use excessive quantities of pesticides than the recommended level which contributes negatively to productivity. In the case of the coefficient of irrigation, the coefficient arrived at as 0.0512 indicates that every unit (number of irrigations) of increase in irrigation increases the productivity of cotton by 0.0512 quintals. However, the variable is not significant. The probable explanation for this variable to turn out to be insignificant is that all the farmers irrigated to the recommended level and there was not much variation in number of irrigation across farms.

Thus from the above analysis, it can be concluded that except irrigation, all the variables included in the analysis were found to be statistically significant in explaining the yield variability of cotton.

**SUGGESTIONS OF THIS STUDY**

The study attempted to examine the socio economic and demographic profile of the BT cotton farmers. The revealed that the due to high cost of production only a medium and large farmers show interest in raising BT cotton in the study area. Also, the productivity of BT cotton in the study area is also found to be far lower when compared to the state average. The low productivity added with the poor quality of the product results in poor for the product which ultimately results in poor returns. The higher share of expenditure incurred on pests and disease control and for the application of higher dose of chemical pesticides and labour intensive nature of cultivation are the probable reasons for high cost of production. Having established the fact that BT cotton has high yield and higher profits inspite of the higher cost of production, the low productivity and poor price for the product is really surprising in the context of the study area. Hence, awareness on the intensive use of new technologies of production has to be popularized. Also, it is found that the farmers are not properly trained in adopting bio-safety measures such as growing refugee crops so as to avoid building-up of the resistance by bollworms against the Bt toxin. Therefore, the non-economic benefits and bio-safety measures should also be given adequate attention in the creation of awareness. As indicated above, the high cost of seeds and incidence of pests and diseases


other than bollworm are found to be the bottlenecks in Bt cotton cultivation which affects the production and profits. Therefore, continuous efforts are necessary to evolve pest- and disease-resistant varieties and to reduce the cost of cultivation. The negative coefficients arrived at in the case of the variable on pest indicates that the more than optimum level of use of pest by the farmers in the cotton filed which may also be a cause of poor productivity. Hence, the farmers are to be educated on the optimum level of use of pest. It can also be seen in the table on the production function analysis that the application of fertilizer has positive impact on cotton yield and hence application of optimum quantity of potash should be recommended to the farmers.

REFERENCES
CORPORATE GOVERNANCE IN ASIA: A COMPARATIVE STUDY

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¹Assistant Professor, Department of Management, Kongunadu Arts and Science College, Coimbatore.
² & ³ 2nd Year Students, Department of Management, Kongunadu Arts and Science College, Coimbatore.

Abstract: This study examines the overview of Corporate Governance practices in Asian countries. However the corporate governance is a mandatory requirement in today’s corporate world by every stake holders groups. Moreover, corporate governance has brought weakness to the attention of general public, especially in Asian countries.

   This paper begins with a corporate governance needs and overview of corporate governance practices as approved by the OECD and World Bank. Then proceeds to examine how these practices are being useful for Asian countries.

Introduction:

Corporate governance is a set of rules that defines the relationship between stakeholders, management and board of directors of a company and influence how that company is operating at its most basic level. Corporate governance deals with issue that results from the separation of ownership and control. But corporate governance goes beyond simply establishing a clear relationship between shareholders and managers.

The concept of corporate governance has been attracting public attention for quite some time. Corporate governance is a system of structuring, operating and controlling a company with a view to achieve long term strategic goal to satisfy shareholders, creditors, employees, customers and suppliers and complying with the legal and regulatory requirements apart from meeting environmental and local community needs.

Corporate governance otherwise called as “Good Corporate Governance” or “Good Business” which ensures:

- To achieve corporate objectives by making effective decision and adequate disclosures.
- Value and safeguarding shareholders interests.
- Transparency in business transactions
- Statutory and legal compliances.
The Fig – 1 shows the major players in Corporate Governance:

![Diagram of Corporate Governance]

**Methodology:**

The paper is completely a conceptual one whose basic foundation comes from various secondary sources like research articles, publishes and unpublished scholarly papers, books, various international and local journals, speeches, newspapers and websites. The overview of corporate governance practices as approved by the OECD and World Bank, and then proceeds to examine how these practices are being useful for Asian countries.

**Need for Corporate Governance:**

Corporate governance represents the value framework, the ethical framework and the moral framework under which business decisions are taken. In other words, when investments take place across national borders, the investors want to be sure that not only is their capital handled effectively and adds to the creation of wealth, but the business decisions are also taken in a manner which is not illegal or involving moral hazard.

The word ‘corporate governance’ has become a buzzword these days because of the following factors. After the collapse of the Soviet Union and the end of the cold war in 1990, it has become the conventional wisdom all over the world that market dynamics must prevail in economic matters. The thrust given to globalization because of the setting up of the WTO and every member of the WTO trying to bring down the tariff barriers.
When investments take place in emerging markets, the investors want to be sure that not only the capital markets or enterprises, with which they are investing, run competently but they also have good corporate governance.

The presence of strong governance standards provides better access to capital and aids economic growth corporate governance also has broader social and Institutional dimensions properly designed rules of governance should focus on implementing the values of fairness, transparency, accountability and responsibility to both share holders and stakeholders.

In order to be effectively and ethically governed, business need not only go into internal governance, but also must operate in a sound institutional environment. Therefore, elements such as secure private property rights, functioning judiciary, and free press are necessary to translate corporate governance laws and regulations into ground practice.

Good corporate governance ensures that the business environment is fair and transparent and that companies can be held accountable of their actions. Conversely, week corporate governance leads to waste, mismanagement and corruption. It is also important to remember that although corporate governance has emerged as a way to manage modern joint stock corporations it is equally significant in state-owned enterprises, co-operatives and family businesses, regarding of the type of venture, only good governance can deliver sustainable good business performance.

**Best Practices on Corporate governance in Asian countries:**

India has become one of the fastest emerging nations to have aligned itself with the international trends in Corporate Governance. As a result, Indian companies have increasingly been able to access to newer and larger markets around the world; as well as able to acquire more businesses. The response of the Government and regulators have also been admirably quick to meet the challenges of corporate delinquency. But, as the global environment changing continuously, there is a greater need of adopting and sustaining good corporate governance practices for value creation and building corporations of the future.

However corporate governance has no unique structure or design and is largely considered ambiguous. There is still lack of awareness about its various issues, like, quality and frequency of financial and managerial disclosure, compliance with the code of best practice, roles and responsibilities of Board of Directories, shareholders rights, etc. There have been many instances of failure and scams in the corporate sector, like collusion between companies and their accounting firms, presence of weak or ineffective internal audits, lack of required skills by managers, lack of proper disclosures, non-compliance with standards, etc.

**Corporate governance in India:**

Corporate governance and financial regulation in India was generally considered quite poor until the economic reforms of the early 1990s. The Securities and Exchange Board of India (SEBI) was established in 1992 by an act of Parliament, and SEBI was given the job of regulating stock exchanges, brokers, fraudulent trade practices, and other areas of corporate activity. As its power grew over the decade, SEBI started to play a much more active role in
setting minimum standards for corporate behavior. In addition, a voluntary code of corporate governance was developed by the Confederation of Indian Industry (CII), a group of well-regarded Indian firms. Near the turn of the century, SEBI commissioned a series of projects to improve Indian corporate governance by building on CII’s code (and by converting the voluntary code into a mandatory one). This work would eventually lead to the Clause 49 reforms. The modern Indian corporate is governed by the company’s act of 1956 that follows more or less the UK model. The pattern of private companies is mostly that of closely held or dominate by a founder, his family and associates. In respect of public enterprises, central/state government forms the board. The hold of the government constitutes is to be dominant. The board of directors is appointed by the controlling administrative ministry.

**Fig – 2**
Corporate governance in India

<table>
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<tr>
<th>Regulatory Framework</th>
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<th>Disclosure requirements</th>
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<tbody>
<tr>
<td>Self vs Legal</td>
<td>Company law</td>
<td>Take over codes</td>
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</table>

**Accountability**
- Auditors role expectation gap
- Audit committees
- Executive remuneration
- Committees/disclosures
- Parliamentary committees

**Supervision of Directors**
- Stakeholders
- Shareholders
- Financing institutions
- Markets for corporate control
- Non-Executive directors

1. Directors (executive)
2. Management

(Source: SSMS, Journal of Indian Management, July-Sep-2004)

**Issues involving corporate governance principles:**
- Composition of board
- Number of Independent Directors
- Audit Committee
- Certification of financial statement by management.
- Internal control report.
- Statement of Corporate Governance.
The above issues have been compared among countries chosen and shown in the Table – 1(Vide Annexure-A)

**Steps for improving corporate governance:**

There is a greater need to increase awareness among entrepreneurs about the various aspects of corporate governance. There are some areas that need special attentions, namely:-

- The ratio of external directors on boards may be increased.
- Appointment of independent directors may be emphasized.
- Committees for auditing, remuneration, by nomination etc under the board of directors may be established and managed by independent directors.
- The work of these committees may be enhanced by  
  - Improving the quality of audit.  
  - Defining the role of board of directors as well as accountability of CEOs and CFOs;  
  - Explaining the effectiveness of the legal, administrative and regulatory framework; etc.

Some of the specific steps that should be taken to improve corporate governance are the following:

- The abolition of SICA and organisations like BIFR
- The entire banking system and the Banking Secrecy Act call for a review
- Laws like the Benami Transactions Prohibition Act and the Prevention of Money Laundering Act should be implemented effectively and vigorously

**Conclusions:**

With the integration of Indian economy with global markets, industrialists and corporates in the country are being increasingly asked to adopt better and transparent corporate practices. If companies are to reap the full benefits of the global capital market, capture efficient gains, benefit by economies of scale and attract long term capital, adoption of corporate governance standards must be credible, consistent, coherent and inspiring.

Hence, in the year to come, corporate governance will become more relevant and a more acceptable practice worldwide. This is easily evident from the various activities undertaken by many companies in framing the different systems. Thus, the government should take necessary steps for framing the fixed corporate governance system.

**Reference:**