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   STATEMENT OF THE PROBLEM

   OBJECTIVES

   HYPOTHESES

   RESEARCH METHODOLOGY

   RESULTS & DISCUSSION

   FINDINGS

   RECOMMENDATIONS/SUGGESTIONS

   CONCLUSIONS

   SCOPE FOR FURTHER RESEARCH

   ACKNOWLEDGMENTS

   REFERENCES

   APPENDIX/ANNEXURE

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EDUCATIONAL LEADERSHIP, MANAGEMENT AND PAKISTAN IN 2050

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ABSTRACT
There are very few moments in the history of the nations, when they are bestowed with the opportunities to flourish examples for the world. When Demographic Dividend occurs, it may change the nations into prosper nations or may take them to destruction. Now-a-days, Pakistan is also going through this opportunity, Demographic Dividend, which may take Pakistan at the top of the developed nation and may create more troubles as well. The thing is to avail and utilize these precious moments with wisdom and planning. This paper explores the opportunity that Pakistan has been traveling through since 1990 and it will last till 2045. Population Dividend is a natural gift which is bless by the nature so rarely. This paper also throws light on those Demographic Dividends which had been availed by some other nations and how they took benefit from that. This paper will be helpful for the policy makers, educational institutes and other stake holders of the Pakistan to plan a better future and This paper also presents an over view about this opportunity, mentioned earlier, ways to take benefit of it and also how can we trained the young generation of Pakistan.

KEYWORDS
Educational leadership, Pakistan, population dividend, age structure, demographic transition.

INTRODUCTION
Does population growth leave any effect on economic growth of the country? If it has any effect, then what it would be? These questions and other questions have very old history. First Malthus, almost at the end of 18th century, threw light over it. There were three major groups' opinions. First, The Pessimists: who thought that population growth had a bad effect on economy. According to Malthus (1798) and Ehrlich (1968), the world had limited and fixed resources. It could not afford the burden of ever increasing population. So, it will disturb the economy of the country. Second, The optimists: who thought that increase in population can strengthen the economy [Kuzent (1967), Simon (1981, 1986) and Boserup (1981)]. They claimed that the economy could be effected by wrong policies and inappropriate institutions not by the population growth. Third, The neutralists: they proposed that population growth has no link with the economy. According to Kelly and Schmidt (1995), Kelley and Bloom and Freeman (1986), by controlling educational policies, trade opportunities and properly working of civil authorities, there is a very low chance for that economic growth can be hit by the population growth.

This population growth can be more useful if it can convert in *"Population Dividend"* which is called demographic dividend, too. Demographic Dividend occurs when a *falling birth* rate changes the age distribution, so the fewer investments are needed to meet the needs of the youngest age groups and resources are released for economic development and family welfare. [Ross, John (2004)]. But there is also the opponents, as Coale and Hoover (1958) mentioned, decreasing *mortality* and sustainability in *fertility*, can increase weight of burden on governments and household in shape of increasing rate of dependency of the young age group, can lead to decrease in taxes and savings. According to Durr-e-Nayab, demographic dividend is the potential economic benefit offered by changes in the age structure of the population, during the demographic transition, when there is an increase in working age population and an associated decline in the dependent age population.

In this regard, two terms are relatively more important in these above mentioned definitions of *demographic dividend,* First is, falling birth rate, fertility and second is mortality, decrease in death rate. According to John Ross, *"Falling Births rate makes for a smaller population at young, dependent ages and for relatively more people in the adult age group—who compromise the productive labor force. It improves the ratio of productive workers to child dependent in the population. That makes for faster economic growth and fewer burden on families."*

This Demographic Dividend effect lasts for several years after it passes. To understand this, we have to look into the Population Momentum Theory. It says that an initial population growth occurs between beginning of the mortality decline and the end of the fertility decline. However, when the baby boom generation itself reaches the prime reproductive years, it creates its own echo—a succeeding baby boom. Subsequent echo effect produces further spurts. In other words, even if the total fertility rates have been reduced to replacement level, the population will continue to grow until the members of subsequent generation and successive echo generation tend to have pass through their prime reproductive years. This process is known as *Population Momentum* and its affects will be felt for 50 to 100 years before the population age structure settle down. Because of this momentum alone, the population of developing countries as a whole is expected to increase by 40 percent between 1995 and 2100 [Bongaarts, 2000; Bloom, 2003; Pandey, 2009].

There are a lot of researchers and experts who built a relation between population growth and economic growth[Bloom and Canning (1999); Sachs (2002); Mason (2005); Birdsall (2001); Bloom and Williamson (1998); Bloom and Freeman (1986); Bloom and Sachs (1998); Lee (2003)]. In the demographic transition, mortality and fertile going on declining, dependency level also decreased. Because there are a few number of people who will be in that age structure gap [Bloom (1998); Durr-e-Nayab (2006)]. If we keenly observe the *Life Cycle Consumption Model*, we find out that different age groups has different purposes of spending and earnings.

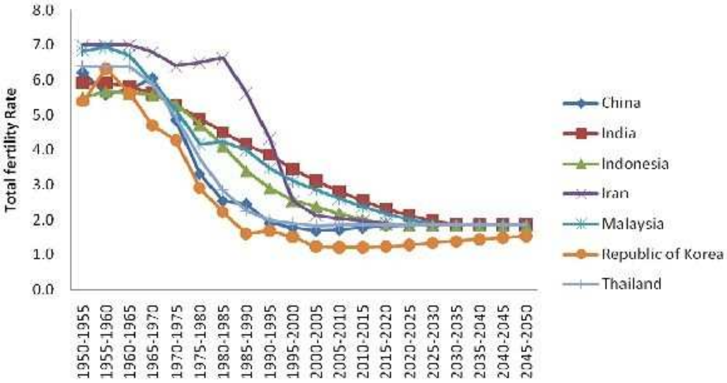
In very young age most of the population needs money in education and health as well, where adults want to increase supply of labor, income and saving and old age need retirement income and also, investments for health, too [Durr-e-Nayab (2006)]. In *"Economic Miracle"*, study by Bloom and William, they discovered that one-fourth and two-fifths of East Asia is in Demographic Dividend [Bloom and Sachs (1998), Bloom and WIliamson (1998); and Bloom, Canning and Malaney (2000); Durr-e-Nayab (2006); Pandey (2009)]. And these results were also accepted and confirmed by Mason (2001), Nayab (2006) and Panday (2009).

Bloom (2003) said that there are a lot of mechanisms available to take advantage from demographic dividend and most important are labor supply, savings and human capital [Panday (2009)]. When there is an increase in working age group, then the labor supply increases as the country who is passing through demographic dividend has enough working force to be employed and consequently dependency ratio decreases. Thus, accumulation of physical capital and growth will also increase. In this time period, the young ones do not enter in the labor market so they keep on spending and the old age group also carrying on spending that money which they have saved in their working age. Working age, is encouraged for savings and investments as they are more intrigue to these functions than other age groups [Bloom (2003), Panday (2009)].

Before discussing Pakistan and Demographic Dividend, let us have a look on those countries in Asia who has gone through or will pass from this population transition period. There are many countries of Asia who availed, are availing or will avail this *"window of opportunity"* in the coming future. But, the status and the speed will vary among the countries. Jones (2004) divided Asia into three parts on prominent regional groups: East Asia (China and Republic of Korea), Southeast (Indonesia, Malaysia and Thailand) and South central Asia (India and Iran) [Panday (2009)].

To examine the speed of the fertility declining rate, Panday (2009) adopted Coal's criteria for the onset of martial fertility decline; she calculated the percentage change over time. Panday (2009) took Total Fertility Rate (TFR) as the base and presented her view in this form.

FIGURE 1: TRENDS IN TOTAL FERTILITY RATES, SELECTIVE COUNTRIES



Source: Panday (2009)

Here we can observe that two countries China and Korea TFR is declining so rapidly and fastly during the period of 1965-1975. Malaysia and Thailand TFRs are also on equal rates.

TABLE 1: INDEXING THE FERTILITY DECLINE FROM ITS ONSET

Country	China	India	Indonesia	Iran	Malaysia	Republic of Korea	Thailand
1950-1955							
1955-1960						1.00	
1960-1965					1.00	0.89	
1965-1970	1.00				0.88	0.74	1.00
1970-1975	0.80		1.00		0.77	0.68	0.84
1975-1980	0.55		0.89		0.62	0.46	0.64
1980-1985	0.42		0.78	1.00	0.63	0.35	0.48
1985-1990	0.41		0.64	0.85	0.60	0.25	0.38
1990-1995	0.32	1.00	0.55	0.65	0.52	0.27	0.34
1995-2000	0.29	0.90	0.48	0.38	0.46	0.24	0.32
2000-2005	0.28	0.81	0.45	0.32	0.43	0.20	0.31
2005-2010	0.29	0.73	0.41	0.31	0.39	0.19	0.31
2010-2015	0.29	0.66	0.38	0.30	0.35	0.19	0.31
2015-2020	0.30	0.60	0.35	0.29	0.32	0.20	0.31
2020-2025	0.31	0.55	0.35	0.28	0.30	0.20	0.31
2025-2030	0.31	0.51	0.35	0.28	0.28	0.21	0.31
2030-2035	0.31	0.48	0.35	0.28	0.28	0.22	0.31
2035-2040	0.31	0.48	0.35	0.28	0.28	0.23	0.31
2040-2045	0.31	0.48	0.35	0.28	0.28	0.24	0.31

Source: Panday (2009)

In this table we can see that China started declining from 1970-1975. Where Korea also started declining near to this time period. During 1960-1985, Malaysia, Thailand and Korea were standing almost the same level but then Korea exceeded in declining ratio. There were a lot of reasons behind for Malaysia to remain behind like family planning, governmental policies which they adopted take work force at 70 million [Panday, 2009].

TABLE2: AGE STRUCTURAL CHANGES OF SELECTIVE COUNTRIES OF ASIA, 1950 2050

	1950				1975				2000			
	Dependency Ratio				Dependency Ratio				Dependency Ratio			
Country	Total	Young	Aged	*Ig**	Total	Young	Aged	*Ig**	Total	Young	Aged	*Ig**
China	61.3	54.0	7.3	13.4	78.3	70.4	7.8	11.1	46.5	36.5	10.0	27.3
India	68.4	63.1	5.2	8.3	77.0	71.0	6.0	8.5	65.6	57.9	7.6	13.1
Indonesia	75.9	68.9	7.0	10.2	82.0	76.0	6.0	7.9	54.3	46.8	7.6	16.2
Iran	79.9	70.3	9.5	13.6	92.3	85.6	6.7	7.9	65.6	58.1	7.5	12.8
Malaysia	85.2	75.7	9.4	12.5	84.5	77.7	6.8	8.8	59.6	53.4	6.2	11.6
Republic of Korea	80.8	75.4	5.4	7.2	70.5	64.3	6.1	9.5	39.3	29.0	10.3	35.6
Thailand	83.0	77.1	5.9	7.6	84.8	78.2	6.7	8.5	43.5	33.9	9.6	28.4

	2025				2050			
	Dependency Ratio				Dependency Ratio			
Country	Total	Young	Aged	*Ig**	Total	Young	Aged	*Ig**
China	46.3	26.3	20.0	76.1	63.9	25.1	38.9	154.9
India	48.1	36.7	11.4	31.0	48.6	27.0	21.5	79.7
Indonesia	43.3	30.4	12.9	42.5	56.4	27.3	29.1	106.3
Iran	43.3	33.1	10.2	30.7	55.1	27.5	27.6	100.6
Malaysia	47.7	34.9	12.9	36.9	52.9	28.0	24.9	89.1
Republic of Korea	46.8	18.0	28.7	159.3	83.5	19.1	64.4	337.5
Thailand	48.8	26.6	22.2	83.2	64.2	25.9	38.3	147.5

Note: **Ig* denotes Index of Ageing. Source: United Nations Secretariat, World Population Prospects; 2006.

Source: Pandey (2009).

Dependency ratio is one of the indicators which help the experts to locate this transition period. Total means the people who are in 0-14 years and also 65 and above, where aged means the working age group which compromises over 15-64 years of age. In this table, it is determined how the transition period is accumulated. According to Panday (2009), the evaluation of dependency is presented in this table. It can be observed, how during the transition phase, the profile of total indicator was totally determined by young dependency ration (sum of children and adolescents aged 0-14 years divided by working ages group 15-64 years population), reflecting the presence of demographic growth.

Through this table we can also identify the time of *"opportunity window"* or the demographic dividend and also the time phase can be calculated of this phase in different countries.

TABLE 3: TIME OF DEMOGRAPHIC DIVIDEND IN DIFFERENT SELECTED COUNTRIES OF ASIA

Country	China	India	Indonesia	Iran	Malaysia	Republic of Korea	Thailand
Onset	1985	2005	1995	1990	2000	1980	1985
End	2010	2035	2020	2005	2025	2010	2000

Source: Panday, 2009.

This table is showing that China availed this opportunity from 1985 to 2010. India is going through this *"opportunity window"*. This chart is also identifying that this opportunity opens for 25 years almost. Korea spent a bit more years than others but usually it remains for 25 years. Now the question is that countries who had availed this opportunity, did they get any remarkable progress? To answer this question we would have to see the GDP annual growth rates of these selected countries. Table below is representing the facts of GDP growth rates of those countries who had harvested this demographic dividend.

RESEARCH QUESTIONS AND OBJECTIVE OF THE STUDY

1. What is the demographic transition period for Pakistan?
2. How can this transition prove beneficial? In which areas Pakistan has to make efforts?
3. What educational policies should adopt to utilize this demographic dividend?

METHODOLOGY

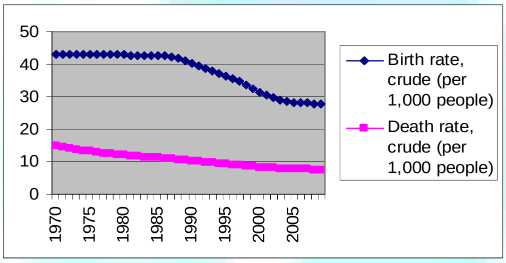
In this paper both qualitative and quantitative research methods have been used. In which, Demographic Transition Model is followed to estimate *opportunity window.* For research purpose, different countries have been selected to see how long there demographic dividend last and then for Pakistan quantitative data has been collected to analysis our research questions.

DEMOGRAPHIC TRANSITIONAL PERIOD AND PAKISTAN

These are the basically three research questions which will be answered in this paper. Pakistan is one the countries where nature is on its full charm. In Pakistan, we have, the Punjab, where greenery is everywhere. We use to export different vegetables, fruits and various food items to whole world. Then, Sindh is there, with plenty of water reserves. In Balochistan, natural forces had hidden the treasures in shape of mine. Pakistan is in the top countries which have salt mines, gas and coal reserves, aluminum, gold, iron and a lot of other minerals. But, unfortunately, it has been up to 65 years. We are still standing in the list of developing nations. If, we want to make progress then we will have to plan and implement our planning for the progress.

According to Durr-e-Nayab (2006), demographic transition is characterized by the decline in mortality followed by the decline in fertility and it is the difference between the two that defines the natural increase in a population

FIGURE 2: CRUDE BIRTH AND DEATH RATES OF PAKISTAN, 1970-2009



Source: WDI, World Bank Indicators, 2012.

TABLE 4: BIRTH AND DEATH RATES OF PAKISTAN, 1970-2009

Year	CBR	CDR
1970	43.003	14.85
1975	42.865	13.15
1980	42.799	12.02
1985	42.629	11.2
1990	40.416	10.28
1995	36.392	9.274
2000	31.44	8.372
2005	28.242	7.811
2009	27.562	7.544

Source: WDI, World Bank Indicators, 2012.

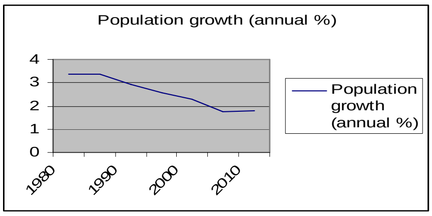
In this table, we can see that Crude Death Rate (CDR) was at 14 (per 1000 people) in 1970 and then it started declining to almost 7.5 (per 1000 people) in 2009. People use to invest more money on their children and on the next generation because their life expectancy ration becomes higher as the mortality ratio goes down. We can also see that Crude Birth Rate (CBR) was at its peak with 43 (per 1000 people) and it declined to 27 (per 1000 people) in 2009. It was during 1990s that Pakistan had a major shift in fertility decline, with the rate falling from over six children per woman to around 4.5 children per woman by the year 2000 [Nayab, 2006, p# 20). These two forces, CRD and CBR, can not stop the increase in the population but can slow it down. The population growth rate in 1980 was 3.5, which now-a-days is below 2 %, and it is projected that the population will grow at very slow speed of 0.78% per annum till 2050.

TABLE 5: POPULATION GROWTH (ANNUAL %) OF PAKISTAN, 1980-2010

Years	Population growth (annual %)
1980	3.360148
1985	3.37689
1990	2.924228
1995	2.564991
2000	2.282334
2005	1.771333
2010	1.801343

Source: World Bank Indicators (WDI), 2012.

FIGURE 3: POPULATION GROWTH (ANNUAL %) OF PAKISTAN, 1980-2010



Source: World Bank Indicators (WDI), 2012.

It was in 1990s when Pakistan had a major shift in fertility decline, with the rate falling from over six children per woman to around 4.5 children per women by the year 2000. The Total Fertility Rate (TFR) is expected to continue to fall, reaching a near replacement level by 2050, according to the median variant [UN (2005), Nayab (2006)].

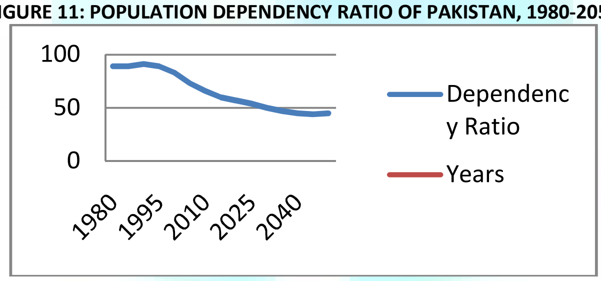
One more thing that helps out to estimate the demographic ratio is dependency ratio. Most of the researchers have argued about the dependency ratio. Dependency ratio means, as stated in World Bank variables glossary, “age dependency ratio is the ratio of dependent people, people younger than 15 or older than 65, to the working age people.” (World Bank, 2012). Dependency ratio helps the experts to locate the time period of the transition.

TABLE 8: POPULATION DEPENDENCY RATIO OF PAKISTAN, 1980-2050

Year	Dependency Ratio %
1980	89
1985	89
1990	91
1995	89
2000	83
2005	73
2010	66
2015	60
2020	57
2025	54
2030	50
2035	47
2040	45
2045	44
2050	45

Source: UN Data, 2012.

FIGURE 11: POPULATION DEPENDENCY RATIO OF PAKISTAN, 1980-2050



Source: UN Population Projections, UN Data, 2012.

Tabale above and figure presents the time of the “opportunity window” or Demographic Transition period for Pakistan. We can observe that dependency ratio tend to fall in 1990s when it started decline. It will keep on declining till 2045. Then it again tend to increase after 2045. So we can estimate that Pakistan is in demographic Dividend since 1990 and it will remain till 2045. Decline in Dependency Ratio means, there is a very short ratio of the people who cant earn. They just go on spending the money. Different authors argued that if there is less dependency ratio then it means people more than they spend and it resulted in savings and saving are resulted in investments. The higher the investments are, the higher the economic growth.

According to John (2004), Demographic Dividend can prove beneficial for a country in 3 ways:

1- Labour Supply
2- Savings
3- Human Capital

LABOUR SUPPLY

It is said that when the demographic dividend comes then children born in high fertility rate leave the dependency and start earning. When women have to broad up few babies then it is easy for them to work with household life which can result in higher earning ratio for the country.

SAVINGS

Pople to tend earn more money than they need to spend thus they save money. This saving enhance their personal savings as well as national saving, too.

HUMAN CAPITAL

When women have to beget only few babies then they will be healthy and can participate in the progress of country. Futher more, when the dependency ratio is at declining point then the families have enough resources to feed their children more and with quality of food.

PAKISTAN AND DIVIDEND

As it has been mentioned earlier that this Demographic Dividend can give benefit in three ways to a country. Now it is a county responsibility to take benefit from this by planning and implementing those policies which can enhance the employment rate with decreasing inflation and keeping peace in their country.

As we have described that this paper will look into Educational management and leadership and we will put some reommendations to speed up the educational progress that at last enable us to put our share in Pakistan’s Progress.

Pakistan’s Education can be divided into four major categories which are as below:

1- Primary
2- High
3- Higher Secondary

4- University Level.

Pakistan's Literacy Rate is below 60%. It means that near half of the population is illiterate or don't know how to read or write. Pakistan in far behind from other nations like India, China, Indonesia and Sri Lanka [World Bank, World Development Indicators, 2012]. Pakistan's govt is trying to promote literacy and putting its full efforts.

Government of Pakistan needs two types of plans:

1- Short Term Plans
2- Long Term Plans

SHORT TERMS PLANS

Our more than 60 % of the population is in 15-64 years of age [World Bank, World Development Indicators, 2012]. But most of them are unemployed. There are a number of factors playing there role in this unemployment behind the curtains. One of them is our defective educational system. After completing of 16 year education, University level education, our student is unable to decide which career is more suitable for him. Due to non-proper guidance majorty of the students choose career by force. But, in developed countries, like USA, Uk, Israel and so many others, they provide counsltancy to their young ones to selcect the career for their life. Due to globalization and internet, we can fine a lot of tests available which can be helpful in choosing career, i. e MBTI, Thomas Killman, 16PF, RIASEC and MMPI. All thes tests and other prove useful and help one to choose it best career.

Government of Pakitan should have to create plan for the ones who are getting education and have completed their school life education. This generation should be taught according to their taste and skills so that they can prove beneficial to their country. Govt. can follow the Mahteer Muhammad's plan who called back the Malaysian brains on double salary figures to train and teach the Malaysian youth. These plans should be consisted over 5-10 years. Japan sent their teachers and other faculty to the different countries to get higher education and after coming back they trained the Japenese people. Now-a-days, we can see Japan is one of the leading countries of the world. These short term plans are consisted over the ways to enhace the capacity of teachers, high enrollment in schools and colleges, promotion of literacy rate in Pakistan, send Pakistan's faculty members to other developed countries so that after training they can come back and educate the nation. Today, it is time to put emergency in education sector and it has to work days and nights.

LONG TERM PLANS

Before going to Long Term Plans, we have to look over the famous learning style which is implemented in the world. Multiple Intelligence Theory is presented by Dr. Haward Gardner who was a faculty member in Haward University. He claimed that there are 8 intelligence in a man. Which are:

1. Linguistic and verbal intelligence: good with words
2. Logical intelligence: good with math and logic
3. Spatial intelligence: good with pictures
4. Body/movement intelligence: good with activities
5. Musical intelligence: good with rhythm
6. Interpersonal intelligence: good with communication
7. Intrapersonal intelligence: good with analyzing things
8. Naturalist intelligence: good with understanding natural world

In today's world, there is a lot of work going on in the world. Films are made on this topic to make it familiar in the people; i. e. Three Idiots (Indian Movie, 2010). In 1983, Haward was awarded by Israelian Govt. on his life time educational work named, Multiple Intelligence Theory. There is a Chinese famous proverb, "If you have 1 year plan, reap crops. If you have 10 years plan, plant trees. But, if you have 100 years plan, educate the children." Nations are built not in days but in decades or in centuries.

Government of Pakistan has to do planning for almost 25 years. It should take help from the personality test which are existing in the world or do has to copy any developed nation action plan for the education. If a baby is getting born in 2012, after getting admission in a pre-primary school in the age of 3.5 years, he or she will take almost 18 to 19 years to complete his or her university level education. In year 2035, he or she will be in an age where they can perform their role in the progress of their country, Pakistan. It is also a fact that near 2040, Pakistan will be or going to be the 3rd largest country by population. At that time, in majority of the developed countries human resource will be transffering from Pakistan, Bangladesh and Indonesia. That will be a favorable time for the Pakistan to earn heavy foreign reserves and strengthen its economy.

CONCLUSION

Pakistan is one of the few countries which are blessed fully by the nature. It has four seasons; which a majority of countries don't have. It has 5 rivers; there are the countries in the world which don't have a single river or seaside. Pakistan has the minerals treasures, trillion dollars minerals treasures are buried, but we can found a lot of countries which have not these treasures. Further more, if you keenly study this paper and material available, you will be surprised to know that most of the countries which have gone through or which will have the opportunity window opening, they will avail only 20 to 30 years, whereas Pakistan's Demographic Transition Period is almost 55 years along the path. From which 17 years have been passed and rest of the time period has to be passed. Still we have the chance to avail this opportunity.

This paper explores the time period of different selected countries of Asia. It also throws light on the economic growth of these countries as GDPs are mentioned and described in the paper. This paper also includes the responsibilities and duties of Government of Pakistan as well as Educational Leaders and Leadership prevailing in the Universities and in Pakistan. Government can not do anything alone. It needs the collaboration of the Educational Leaders, Civil Society and each and every stakeholder relevant to this sector to promote that nation which can compete internationally and may have the skills which are necessarily needed to put our country, Pakistan, on the way of progress. It is not necessary that they share these responsibilities on equal level but something practically should have to be done. We would like to end our paper on Confucius, first Teacher of the world, Chinese Scholar, *"It is better to light a lamp than criticizing on the darkness".*

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RESEARCH IN DEVELOPMENT ARENAS

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ABSTRACT

Research plays a vital role in the field of development by involving development managers, agencies, stakeholders, policy makers, and organizations. It depends on theoretical background, specific information, experience, responsive behaviour, analytical skills at conceptual level, contextualization, and ethical standards and perspectives. Development research also makes a link between the epistemological stand of the research and validity of the research. Both positivists and non-positivists recognize the need for setting boundaries, given time and resource constraint in development researches. In the positivistic tradition, the researcher is independent and observable, system is inflexible, less descriptive and value free. There are two different boundaries systems-close and open, depending on how research is formulated, articulated and implemented. On the other hand, the selection of research method is one of the most important issues, which are required rigorous design and a great deal of expense. It is clear that over time different sets of thought about the quality of research will be associated with different methods and the type of research and will be associated with the epistemological stance. It will develop a relationship among epistemology, methodological preferences and various type of research.

KEYWORDS

Epistemology, Development arena, Ontology, Rigour, Conceptualization, Brute data.

INTRODUCTION

Research is the systematic process of collecting and analysing information to increase our understanding of phenomena. So, research is one of the most important learn for finding out to solve problems. Through research we search knowledge, carry out any systematic investigation, establish novel facts, solve new or existing problems, draw new inferences, prove new ideas or develop new theories, learn the demand/necessity, know the present status of any subject or situation and so on. Development is a process in which something gradually changes from a simple to a more complex level or to a different stage, especially a more advanced or matures stage. Moreover, development is related to time, place, efforts of human beings, policies, strategies, plans, guidelines, and circumstances for which there is no universal formula.

Most development interventions of the past few decades share one common characteristic. This characteristic is top-down programme architecture where only experts/professionals assumed to make standardized poverty diagnosis and thus command development action (Chambers, 2010). This approach however resulted in poor conceptualization of development problems and ineffective programme implementation. This was essentially because local communities were considered as 'mere beneficiaries' and thus left out in the designing and operationalization of development programmes (Chambers, 2010). However, experiences have proved that local communities, as immediate witnesses of poverty, have primary information and important perspectives on development issues, which should be used to inform development actions.

Hence, it is no more sensible to design development programmes at the top and instruct local people to take part only at implementation phase. Accordingly, under the new 'socio-institutional paradigm' of development intervention, the perspectives and socio-structural dynamics of local communities are perceived as change factors, thus necessitating public participation in the whole development process (Dreze and Sen, 1989; De Herdt et al., 2004).

After defining the link between applied research and development activities, the following sections of this paper will examine the different philosophical stances on how development researches should be framed and conducted. In so doing, this paper aims at highlighting on the strength and weakness of different approaches and making a value judgement on which approach best benefits development researches.

THE ROLE OF APPLIED RESEARCH IN DEVELOPMENT ARENAS

Applied researches, unlike scientific researches, are not intended to build on abstract concepts and theories (Sumner and Tribe, 2008). They rather are meant to generate information on real problems with the core aim of solving them. Hence, applied researches are sometimes referred to as problem-oriented investigations that can be used as a means to facilitate realization of socially desirable changes (Thomas, 1998).

As poverty is one of the main problems of human kind, applied research has a central role to play in the effort to tackle such a developmental problem. In particular, applied research plays an immense role in informing development workers and policy makers on the progress, outcome and impact of their action (De Herdt et al., 2004).

In development projects, applied research is employed throughout the project cycle - in the project design, during operationalization of the project and even after project implementation (Sumner and Tribe, 2008). In the project design stage, conducting applied research is crucial in several ways. First, applied investigation in the form of needs assessment is useful to decide on areas of development intervention (Sumner and Tribe, 2008). With such investigation, development workers can identify whether or not a particular development project is needed in a certain society. Also, applied research is employed for conducting a baseline study that aims at identifying socio-economic situations the on ground before launch of a development project. Such investigation is important because its findings will be used afterwards to assess the post-implementation outcome and impact of a development project. More importantly, development workers mostly conduct applied research in the project design stage to identify set of people and/or institutions that might affect or be affected by the project – stakeholder analysis (Thomas, 1998). As development intervention is a multi-actor process, identification of areas of convergence and divergence among different stakeholders is an important exercise to make an informed decision on the level and mode of future partnership with stakeholders (De Herdt et al., 2004).

The role of applied research in development projects continues in the project implementation stage through monitoring and evaluation of the project implementation (Sumner and Tribe, 2008). Here also, applied research informs the monitoring and evaluation process by assessing what is actually done on the ground. Also after completion of project implementation, applied research is employed to examine whether and to what extent a development intervention brings the desired change on the ground – evaluation of project outcome or impact (De Herdt et al., 2004). Sometimes, applied research may also be conducted as a follow-up study to investigate future action.

In addition to development intervention, development policies also benefit from applied research through policy analysis studies (Sumner and Tribe, 2008). Such policy investigations are crucial in analyzing the impact of existing/proposed policies and suggesting for policy change if that is needed. Even if findings of a single applied research may not dictate policy reform, it will at least add to the policy debate and make a discursive struggle with other competing policy stances.

In general, applied research has an undeniable role in informing and shaping development works and policies. It is however worth noting that development researches may not always bring the desired change on the ground. This is partly because of the possible value based conflict among diverse development actors (Thomas, 1998), which therefore requires a researcher either to look for a negotiated value or represent all the different values as they are. Hence, the effectiveness of a development research in bringing social change always depends on its quality and composition.

EPISTEMOLOGICAL ISSUES AND BOUNDARY SETTING IN DEVELOPMENT RESEARCH

As defined by Sumner and Tribe, epistemology is a ''branch of philosophy that is concerned with the nature, origin, scope of knowledge and 'how we know what we know'' (Sumner and Tribe, 2004: 30). Hence, epistemology studies the ways with which one can reach to the truth or reality. However, because there are divided views on what constitutes the truth or reality (question of ontology), the same division extends in answering epistemological questions.

Though there are numerous ontological and epistemological standpoints, the two best known stances are empiricism/positivism/things paradigm and non-positivism /people paradigm (Prowse, 2010).

According to the positivist paradigm, reality exists independent from observation (Sumner and Tribe, 2004). This reality being out there in a form of objective brute data, positivists claim that one can reach to such truth through quantitative data verification (Kanbur and Shaffer, 2007). Hence, research is considered as a process of matching or creating causal explanation with reality, much focus placed on verification. Because such paradigm inclines to numerical data and ignores the impact of language in research process, it is mostly associated with researches on areas of natural science like engineering (Chambers, 2010).

On the contrary, non-positivists, including both interpretivists and social constructivists, allege that there is no single reality as contended by positivists. While radical interpretivists deny the very existence of reality but subjective meaning systems to every action (Schwandt, 1994), social constructivists assert that there are multiple realities, which are perspectives socially constructed through dialogue and discursive struggle among different actors (Sumner and Tribe, 2004). According to non-positivists, as humans act internationally/within their own meaning system, what a human science can best do is to contextually understand the intention and interests of the people involved in the research (Sumner and Tribe, 2010). Hence, the epistemological focus lies on understanding of views and interpretation of social action (Schwandt, 1994). As a result, the non-positivist paradigm stresses on the need to use local ''[...] knowledge, aspiration, capability and priority'' as an important ingredient to development research by getting into the mind of such local actors (Chambers, 2010: 13).

The philosophical and methodological difference in the two main paradigms above further extends with respect to the issue of boundary setting, which is a process of setting a conceptual line to demarcate what is within a research from what is outside (Blackmore and Ison, 1998). By setting a boundary, a researcher will limit the size and type of participants in the research process as well as the scope of coverage of the research, including geographical coverage (Blackmore and Ison, 1998).

While both positivists and non-positivists recognize the need for setting boundaries, given time and resource constraint in development researches, they have divergent stances when it comes to the method of boundary setting (Blackmore and Ison, 1998).

The first divergence comes with respect to the question 'who should be involved in boundary setting?' For social constructivists, because realities are there within the contextual thoughts and values of local communities, a boundary setting process should involve such local communities through joint and continuous dialogue and negotiation (Prowse, 2010). This is crucial, particularly to create a shared vision with local actors and bring a sense of joint ownership in the whole process.

Yet in the positivists' view, as knowledge is out there independent of values, boundaries are centrally set by the researcher herself or external organs (like donors) without any need to discuss or negotiate it with local actors (Chambers, 2010). This however goes against the very foundation of development research which requires according to Deeze and Sen ''participation by the public in the process of social change'' (Dreze and Sen, 1989: 259).

The divergence between positivists and social constructivists further extends in their choice of boundary type. For positivists, once boundaries are initially defined in the planning stage, there is no need to make modifications overtime since knowledge is perceived as stable or independent from changing views and perspectives (Blackmore and Ison, 1998). Hence, boundaries are fixed; leaving less/no room for reconceptualization of research questions. However, for social constructivist, as knowledge is fluid and unpredictable, requiring continuous conceptualization and reconceptualization of research frameworks, boundaries need to be set in a flexible manner allowing adjustment to changing ideas (Blackmore and Ison, 1998). Setting flexible boundaries is an important exercise in development researches given the fact that a development research is part of an ongoing policy process which is open to change and thus requires continuous reconceptualization of frameworks (Thomas, 1998).

To conclude, with its flexible, participatory and bottom-up approach to research undertaking, the social constructivist paradigm best fits development researches. Even though Chambers (2010) categorizes economics as a discipline close to the positivist approach, fundamental causes of economic problems in most developing countries are factors related to governance, culture, social norms and values, which clearly fall still under the people paradigm of Sociology and Anthropology. As such, one can best understand deep-rooted economic problems in a development research if a holistic and participatory approach is adopted so as to bring key socio-cultural issues into picture.

CHOICE OF RESEARCH METHODS (QUANTITATIVE-QUALITATIVE): WHICH? WHEN? WHY?

Qualitative and quantitative approaches are research methodologies or frameworks that a researcher adopts in order to decide on the different methods of gathering information (Prowse, 2010). While a quantitative research mostly involves collection and analysis of numeric data using methods like survey, statistical correlation and mathematical simulation, qualitative researches employ more interactive methods of gathering information through focus group discussion, ethnography, semi-structured and life history interviews (Rao and Woolcock, 2003).

Although the two methodologies are quite different in terms of approach, both are very important depending on the nature and objective of an investigation; the type of research question as well as the environment in which the research will be conducted.

In terms of research objective and questions, a quantitative methodology is most appropriate when our research objective is to simply measure the degree or prevalence of a certain indicator/factor at a certain point in time, like measuring impact levels in a positivist fashion (Bryman, 2004). In such cases of what and when questions, a quantitative approach is suitable because measurement involves quantification of factors through data collection and analysis that falls in the domain of quantitative methodology.

On the contrary, a qualitative approach is applicable when the objective of a research is to make in-depth examination of reasons behind observed behaviour and outcome (why and how questions); sometimes involving unquantifiable psychological factors like level of satisfaction, trust or motivation (Kanbur and Shaffer, 2007). In such instances, with its participatory and flexible ways of collecting information, a qualitative approach allows a researcher to broadly identify and contextually understand multitude of human factors be they quantifiable or unquantifiable (Potter and Subrahmanian, 1998; Rao and Woolcock, 2003). This is so unlike a pure quantitative approach under which ''if it can't be measured, it won't happen'' (Chambers, 2010: 14).

The other relevant factor in choice of research methodology is size of research population. In this regard, a quantitative approach is desirable when a researcher has a large research population (Prowse, 2010). This is because conducting survey is not as engaging and thus time consuming as most of the participatory methods under qualitative approach. Also in quantitative research it is possible to collect data only from a sample population and generalize the result to the broader population. However, if a research is to be conducted on a small population size, qualitative method can be rightly adopted with the benefit of extracting thicker data (Sumner and Tribe, 2004).

Employing a qualitative methodology is beneficial also when respondents are illiterate or less familiar with quantitative measurements and ambiguous research terminologies (Rao and Woolcock, 2003). In such a case, qualitative methods like focus group discussion, storytelling and participatory rural appraisal are preferable because such methods will allow the researcher to define concepts and contexts together with respondents – avoiding threats of respondent effect (Prowse, 2010).

From the points raised above, it can be generally concluded that both quantitative and qualitative methodologies have their own strong and weak sides. Hence, choice of any of the methodologies will involve some trade-off.

But if we compare the two methodologies in the context of development research, a qualitative approach is more suitable than that of pure quantitative approach. This is because a pure quantitative approach has the effect of underestimating development problems on the ground since it only takes into account few quantifiable variables, holding other social and institutional factors constant, while that is not the case in reality. This is also contrary to the multi-factor and multi-actor nature of development research (Thomas, 1998). Besides, quantitative methods in development researches tend to ignore or downplay the role of local politics and social structure in development process while in fact such factors are fundamental drivers of development (Rao and Woolcock, 2003).

Moreover, adoption of participatory methods in a qualitative approach will allow a development research benefit from local knowledge and commitment which are key ingredients for effective implementation and sustained use of research findings on the ground (Dreze and Sen, 1989).

Yet at times, it may be useful to employ some quantitative instruments, within a qualitative research framework, when quantification of some of our research findings is important (Maxwell, 2005).

WHAT CONSTITUTES RIGOUR IN DEVELOPMENT RESEARCH?

Thomas defines rigour as ''[...] being able to show that one has enough evidence to justify one's conclusions, that the evidence has been obtained properly and that contrary evidence has been sought but either not found or found to be relatively unconvincing'' (Thomas, 1998: 13). Hence, rigour is a question of credibility, validity or strength of a research finding and not a simple methodological question (Maxwell, 2005). This is to mean that a research finding cannot be valid simply because the research is conducted within a certain methodological framework or using a particular research method.

However, one's expectation from a research finding or requirements of valid research differs depending on the type of research under question and its epistemological foundation. Given the apparent difference between positivists and social constructivists on what constitutes the truth and how one can reach to such truth, the requirements for rigour and validity are also different in each of the epistemological standpoints.

For positivists, mostly representing quantitative approach (Sumner and Tribe, 2004), the term validity is used to refer to ''the approximate truth of an inference'' (Shadish et al., 2002: 34). Also because there is one 'single truth', a research is said to be valid when its result corresponds to such single reality that can be observed in the form of brute data (Sumner and Tribe, 2008). However under social constructivism, because there is no single truth to which we can correspond our research finding, the concept of validity is used to refer to the extent to which our research recognizes and incorporates existing multiple realities which take the form of local perspectives, values and interests (Lincoln and Guba, 1985). The subsequent paragraphs will explore how the specific requirements of validity and rigour are different in the positivist and social constructivist paradigm.

The first and most important criterion of validity under the positivist tradition is the requirement of causal verification or internal validity (Seale, 1999). Under this requirement, findings of statistical association or correlation between researched factors should correspond to actual causality on the ground (Shadish et al., 2002). This requirement assumes that there is an ordered and predictable relationship between different factors which can be perceived by professionals or experts (Chambers, 2010). However in reality, especially in development arenas, there is a continuous interplay among multitude of factors all affecting each other and thus always posing simultaneity bias (impact of unanticipated or uncontrolled factor) and ambiguous temporal (which factor causes which and which comes first) (Shadish et al., 2002; Sumner and Tribe, 2004). In recognition of this fact, the non-positivists/social constructivists assert that the validity of a research finding is not dependent on the degree of causality it establishes between different factors but on the extent to which all surrounding factors are taken into account and interests represented through active engagement (Lincoln and Guba, 1985). This point can be illustrated with an example of qualitative researches conducted on psychological factors like commitment, motivation or trust, which are mostly criticized by positivists as imprecise/non-verifiable (Kanbur and Shaffer, 2007). But for social constructivists, as validity is not about correspondence/verification to the 'truth' but representation of different views, researches on psychological factors can be conducted with the utmost validity and rigour.

The second requirement of validity in the positivist approach is transferability of a research finding in to other areas or settings (Shadish, et. al, 2002). This requirement also is hypothetical for the dynamic world we are living in as it assumes possible homogeneity of local realities and contexts. Such assumption does not especially hold true in the context of development researches. This is because even if two countries or localities have similar rules and institutions in place, still social norms and values, which are fundamental drivers of development, greatly vary from place to place (De Herdt et al., 2004). In this regard, Seale noted such positivist requirement of transferability of results in social studies as an effort to ''promote artificial consensus [...] and somewhat unrealistic demand'' (Seale, 1999: 6). Accordingly, social constructivists perceive validity not as transferability of a research result in different setting but credibility or generalizability of the finding in that same setting (Thomas, 1998). Hence, once again, the requirement of rigour is representation/incorporation of all the different interests so that the result can be generalized for all members in the study group (Maxwell, 2005).

The third requirement of research validity/rigour is related to the identity and role of the researcher in the research process. For positivists, the validity of a research finding is highly dependent on its objectivity from values (Sumner and Tribe, 2004). This means, the researcher has to be ''detached from the researched'' and conduct her study with no value judgement or interference both in the process and the result (Sumner and Tribe, 2004: 16). This requirement is highly challenged by social constructivists for whom a researcher do not have to be value free but value-driven (Thomas, 1998). Hence according to social constructivists, the validity of a research finding will not be compromised if a researcher knowingly and openly employs some of her personal values or perspectives in the research process in such a way that does not obstruct her from seeing the perspective of the researched and other actors (Schwandt, 1994).

The divergence between positivists and social constructivists persist in answering the question 'at which stage in a research process should we worry about validity?' In most quantitative researches conducted within a positivist tradition, validity is an important issue only at the research design stage (Maxwell, 2005). This is because of the positivists' thought that once research questions and methods are selected in a 'valid way', then there will be less/no validity threat afterwards. This is in accordance with the positivist notion of research with a 'preset' question and 'blueprint' design (Chambers, 2010). However, development researches are far from such characteristics since they are conducted in a multi-factor and multi-actor environment where there is a continuous process of conceptualization and reconceptualization of research designs (Thomas, 1998). Accordingly, the social constructivists' stand of employing validity requirements in the whole process of research undertaking (Maxwell, 2005) best fits the above mentioned features of development research.

In conclusion, there is both conceptual and practical difference in the requirements validity and rigour under the different epistemological stances. But in the context of development research where there are multiple actors and interrelated development factors in play, the social constructivists' requirement of rigour including comprehensive representation of different factors and interests in the research; credibility of findings to the researched as well as recognition of personal bias have a key role to play in ensuring that development researches can meet their ultimate aim of bringing social change.

CONCLUSION

Nowadays there is a relatively high inclination towards adopting a multi-disciplinary approach in development researches. This is justified given the multitude of socio-cultural and institutional factors that are highly tied to development. However, while bringing together diverse disciplines under the umbrella of development, we should be cautious of the possible difference in ontological, epistemological and methodological foundation of such different disciplines.

After analyzing the strength and weakness of each of the epistemological and methodological stances in the context of development research, this paper found that the social constructivist paradigm, characterized by participatory approach and in-depth analysis of social accounts, fits best development researches.

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COMPARATIVE EVALUATION OF THE RELATIONSHIP BETWEEN STOCK RETURNS FIRM WITH PRICE COEFFICIENTS: CEMENT LISTED ON STOCK EXCHANGE

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ABSTRACT
The purpose of this study is to find the coefficients of correlation between price and stock returns in the cement industry stock price coefficients valuation methods are among the best and most popular methods in relative stock market valuation of capital. This is indicated by the coefficients price that value depends on the amount of profits or other value that is caused by the stock ownership. Price coefficients are used in this study included. P/E, P/B, P/S, P/CFO and EV/EBITDA.In the coefficients, we decided to compare the stock price index justified, cheap or expensive relative to stocks. So the share is cheap if the price coefficient is a certain share price justified less than the coefficient. Research has been conducted in the seven years period 2004 to 2010. Studies of the type library after the event that by using the correlation test of the correlation coefficient test involves use of simple and multiple regression analysis panel shows the results of hypothesis testing first to fifth, which is no stock return variables P/E, P/B, P/S and EV/EBITDA relationship and inversely with the variable P/CFO relationship and on the sixth hypothesis variables P/E, P/B and EV/EBITDA are respectively the highest stock returns in the cement industry.

KEYWORDS
valuation methods, price coefficient and return on equity.

INTRODUCTION
World in the twenty first century is a world full of competition, market development, and promote the emergence of superior technologies and business development. One of the topics of interest to the Iranian economy is in long-term prospects for growth, investment, production, employment in this regard , one of the most important and most sensitive to economic center of interest , is the securities market . Tehran Stock Bahadar mechanism can identify aspects and different angles the better anticipants future changes market, reduce investment risk. Among the participants in this market are share holders, brokers , they are continually being assessed value compared to shares of different companies , to identify cheap stocks to buy and sell shares above the actual price , stock dealing and taking different investment decisions. (D, 2003)

In addition, many investors consider the financial and non financial factors within and outside the company for prediction making decision, can be aware of the factors that affect stock returns, to determine more accurately the behavior of share prices and better quality so decision adapt more effective. Stock returns would be affected by factors including changes in economic conditions, political, cultural social, emotional reactions in buying stocks, risk, asset returns and financial statements and information provided by their very special items from the other factors. Valuations based on price coefficients are the most common and most popular methods of stock market valuation of capital. In this study has been determined the relationship and correlation coefficient as independent variables stock returns as the dependent variable in the cement industry to say that if it can be whether the dependent variable explained by independent variables?

THEORETICAL AND RESEARCH BACKGROUND
Capital market investors use different models for the valuation of shares. Application of this model is different from the fitness industry and major corporate activities together. Theories of general price estimate based on two approaches to value companies, the first fundamental analysis model, which is estimated to directly participate in the value of expected future payments to other companies without reference to market value second, market-based valuation model that is obtained by using the value of the similar companies. This approach matches the coefficient of similar companies with the incentive value (profitability) of the company. (V. Behojaj 2002)

THEORETICAL MODE OF FUNDAMENTAL ANALYSIS
Fundamental analysis model is the analysis of pat and current financial information, information of other companies, industry and macroeconomic information for forecasting and finally paid to the company`s intrinsic value (pan man 2004). The main motivation is fundamental analysis to identify stock with incorrect pricing for investment purpose.

However there is a role for an efficient market, fundamental analysis model since this model is used to help determine the company`s market value. It will facilitate the decision process and evaluation of private companies and investors. (Kutar 2001)

COEFFICIENTS PRICE VALUATION METHOD
Coefficient method is the fact that depends on the value of the profit, assets or other value that is caused by stock ownership. The coefficients , comparing the ratio of stock prices to justify the price factor, we decided to cheaper expensive shares , (B, R 2009) way that is less expensive than justified by the coefficient of the price of a particular share its share price index is less.

METHODS OF CALCULATING THE PRICE INDEX JUSTIFIED
There are generally two methods for calculating the price index justified. The first method is the benchmark price, which analysis use to calculate the coefficient of the most similar stock price index.
Average and median coefficient of the price of similar companies or active companies in the industry price index or an index average of past values of the coefficients of stock prices (B, R2009) The second method is justifiable price coefficient, is the schema used for example to calculate the coefficient of this method can be divided into share value and earnings per share calculated using the model (B,R2009)

FOLLOWER AND THE LEADING COEFFICIENTS
When constructing a price index refers to the fraction of market prices to last forever if the stimulus value of the price coefficients in the denominator the numbers prior period financial statements coefficients of this type , it called sequence of coefficients. It`s used because of historical information. If the drive is worth the price factor (denominator) to predict the next one or two years is called the leading coefficient (Bnnynga and Saryi 1998)

STRENGTHS AND WEAKNESS OF THE PRICE COEFFICIENTS STRENGTHS
The main advantage is the simplicity in the application of cast coefficients. Coefficients calculated by the application require less time and information to fully analyze the fundamental Dkf model (Damudaran 2006). In addition, this is understandable to a easy and simple evaluation based on price analysis is to provide customers (Danglo 1990). The third advantage of the price coefficients are available for investors though newspapers, magazines,etc. (penman 2006)

WEAKNESS
The first weakness is that basic assumptions may be overly simplistic because it ignores the effect of different levels of profitability, growth or values shares in the company`s risk. (Suzo, kooper and etc. 2001). Second , the price coefficients are seen as short they can only represent a snapshot of the company specified in point of time and makes the assumption that the stimulus remains constant since the company`s value . (Aykls,herz, etc 2002)Price to earnings ratio (P/E)

SOME ANALYSTS HAVE CITED REASONS FOR USING THE RATIO P/B ARE
- Even when the EPS is negative, the book value per share is (in many cases) positive integer. So where is the ratio P/E ratio of negative analysts use P/B for value instead?
- In some cases the EPS was highly variable and is unusually large of small. In such cases, the book value does not vary much the use of the ratio P/B.
- Describe some draw back of the ratio P/B :
- In many cases, the himation of non-physical assets such as expertise and technologies developed by company employees, a large part of the value of the company. Since the company`s book value generally represents the value of physical assets, the coefficient P/B will evaluate the company worth less than they should.

If the volume of assets used to produce a single commodity by different companies, using the coefficient P/B will be valuable for comparing companies with an error.

PRICE TO SALES RATIO P/S
Coefficient is used in P/S for valuation of non-public joint stock companies, such as asset management companies.
In recent decades has been used for valuation of companies going public, this coefficient is also widely. This coefficient is a way of comparing companies in the industry cycle, cycles is primarily industry more that investors who acquire an investment in early years. Because they are confident of further growth of the company. (Gdds 2003)
Some analysts have cited reasons for using the ratio P/S include company management is able to choose accounting methods and assumptions used, affect a large extent on the company`s net profit but the possibility of manipulating the sale of the company`s management is less than net income.
Even are cases where the loss of ten companies the P/S positive.
Therefore can be used in cases of this coefficient is the ratio P/Share negative.

SMOOF THE WEAKNESSES OF RATIO P/S ARE
The main problem is the ratio P/S that the stock market price of the company is considering selling the information to be ignored that the company`s operational efficiency is lower as profit and loss. (B and S 1997)
Although the possibility of manipulation by the management sales is limited butyl has been unable to affect the sales in the come statement. (B, R 2003)

PRICE TO CASH FLOW RATIO. (P/cFO)
Some analysts consider the most important measure of cash flow and corporate financial performance is better than the stock price to operating cash flow ratio price to corning's per share for the company`s evaluation price to cash flow ratio is desirable to evaluate the companies that are big and heavy assets such as oil companies. (Jermy rozal 2000)
Some analysts have cited reasons for using the ratio (P/CFO) Include Possibility of manipulation by the management company`s cash flow is less than the profit.
Price to cash flow ratio is less sensitive to accounting methods and assumptions.Coefficient value of the organization to profit before

INTEREST TEXTS AMORTIZATION (EV/EBITDA)
EBITDA is the allocation of cash available to shareholders creditors of the company. The value is set, total value of the company (common stock, preferred stock & debt value of the company) minus the value of the company's cash & Investments Company. In other word, the organization is equal to the price paid for the purchase of corporate assets. Buyer shall pay to the shareholders of the company's stock price and the price of the company's debt to lenders. But the buyer to achieve the company's cash & investments available for sale, this amount will be deducted from the value of company shares & loans. (B, R2009)
Same analysts have cited reasons for using the ratio EV/EBITDA are:Because EBITDA is craning before deducting interest to compare companies with different financial leverage ratio, coefficient of EV/EBITDA ratio is better than P/E.
In the case of companies with high fixed assets is significant (cash as steel companies) cost of depreciation expenses, is calculated &it's in fluency on corporate profits. Because EBITDA is earnings before deduction of depreciation expenses, will be no effect on the rate of depreciation costs EV/EBITDAcoefficient is a drawback as follows.
It's not a good approximation of operating cash flow EBITDA participate. for example: where is the increasing working capital EBITDA & operating cash flow will be larger (B&R 2009) stock returns.
Return on the investment process is the driving force that is motivating & rewarding for investors. Purpose of the R (total return) collection of benefits that are accrued during a period, the share of these benefits is to calculate the annual return for stocks include.

PRICE DIFFERENCE
Stock price at the end of the year is considered a first difference in prices at the being of the year and write them. Cash earnings per share: is the benefit of the proposed cash dividend approved at the general assembly of shareholders which has been divided by the number of shares at the date of approval.

THE BENEFITS OF PRIORITY

Be increased if the nominal price of capital from the shareholders in cash priority value is obtained with the consideration will be placed as one of the benefits to shareholders in the capital increase the total rate of return.

Benefits resulting from the payment of share dividends (bonus shares)Increasing capital reserve of legal practices by the shareholders resolved to share the profits with stock awards that have value & should be considered in calculating the total return(2006)

RESEARCH BACKGROUND

A.khosroabadi (2006) showed that buyers& sellers regardless of their P/E the percentage change in stock price & EPS expected to buy or sell shares. R fallah (2007) comparative stuffy of the relationship between the ratio of price to earnings per share & earning per share of stock returns of companies list in Tehran stock exchange the obtained results indicate there is a significant relationship between EPS & P/E companies in Tehran stock exchange with stock returns, But these relationship are weak & investors should take note not only of these two factors to decide.

Qhaemi&moini (2010) studied the relationship during a P/E multiple Tehran stock market macroeconomic variables in the study were selected to separate monetary & 21 real macroeconomic variables the results of multiple regression coefficients between selected economic variables are all showing the same strong linear relationship between selected variables were confirmation of the relationship between independent variables & dependent variable.

Radan (2009) has examined the relationship between P/E multiple of net profit growth rate in Tehran stock market shows the test result in time space study area one fifth of the companies that have the highest PLE the minimum pass grade in in the fifth had the lowest PLE had a higher net profit growth.

S. Abbasi (2010) reviewed the research &a valuation related to liquidity ratios in the Tehran stock Exchange with stock returns. Revealed that no study of the efficiency ratio of cash flow, the cash adequacy ratio, the (ratio of cash flowan& share of market value to book value) of petro learn & petrochemical industry. Investment & related vehicles.

Key sort waited (2003) were evaluated during the study as a new tool in investment decision making by using the regression relationship between P/E multiple & variable growth rates than dividends earnings per share growth rate fast or risk criteria, and rinallyabtained the flowing relation : P/E = 8/2 + 1/5g + 6/7b – 0/26

Research by Azhar, osman (2009) was carried out as ration of capital markets & stock valuation was shown that to be associated with changes in value than the price to earnings ratio of current profits to the total value of the company profit Erfan khan (2009) examined during the study compared the effects of P/E ratio P/B companies listed on stock returns in the stock market in Pakistan the results show that the coefficients of independent variables are statistically less important, this means that the stock returns are rot dependent on any one of these two variables In addition, low coefficient of independent variable nature is very low coefficient of determination in each case.

Shoaib Abdullah (2010) raises the price to the article entitled profitability equity cost of capital as a predictor of the outcome that exists between the P/E costs on equity capital (exported return rate of stock) but weak negative correlation.

Jacvelk (2010) to evaluate the usefulness of your paper. The fundamental factor in the differentiation between the stock price to justify the sale of the big ways valued by the valuation of the stick versa Results indicate has created versa in stock., baying stock sat Astray evaluated at on average annual return less than other Astray efficiencies based on similar values & the general market average annual returns. This means that increases the coefficient of correlation between GH & stock assessment of the validity of the fundamental variables.

RESEARCH HYPOTHESES

1. Exists between the ratio P/E and stock returns cement companies listed in stock exchange relationship.
2. Exists between the ratio P/B and stock returns cement companies listed on stock exchange relationship
3. There is a significant relationship between the ratio P/S & comment companies stock exchanges listed on stock returns.
4. There is a significant relationship between the ratio P/CFO & stock returns cement companies listed in stock exchange.
5. There is a significant relationship between the ratio EV/EB
6. stock returns cement companies listed in stock Exchange
7. there are signihicantdillerences between the cochlicient of P/E , P/B, P/CFO, and EV/EBITDA in determining stock returns cement companies listed on stock Exchange

POPULATION

The study population includes all cement companies listed on the Tehran stock market and this is the period of 2004 to 2010

METHODS

The aim of this study is the type of applied research is classified according to the nature of the event methods study among research which is used to collect data from field study and library. After extraction of the new data has been entered for data analysis software reviews estimated the descriptive statistics of variables, the mean, median, variance, skewness and strain calculations, the correlation coefficient correlation test involves use of simple and multiple regression analysispanels, models. And test hypotheses coming.

Has been used to investigate the correlation between test variables Watson camera the regression assumptions of normality was Simonov the using the distribution of the dependent vaviabledatu – Simonov it's tested and controlled. Deduced from assumptions about the test is based on significant level when the test is thus a significant level of less than of / is zero rejected of the 95% level --- otherwise zero is not rejected. This is the regression error on your test correlation decision rule which is in dilative of the lack of correlation values close of 2. Are required type test statistic used for simple regression analysis. A few branches in the image number table 1.

TABLE 1

Usagestatistics	Typeof testused	hypotheses
FStatistics	Meaningfultestof theregression equation	Allhypotheses
tStatistics	Meaningfultestof thecoefficients	
Mardvrbyn-Watson(DW)	Totestthe correlationof regressionerrors	

FINDINGS

Qi it's a graphic presentation of descriptive statistics in this study Table (2) Descriptive & analytical dependent

TABLE 2

Strain	Skew	SD	Median	average	Variables
12/084	3/149	8/234	7/940	9/966	P/E
8/036	2/674	5/964	2/965	5/172	P/B
1/735	1/329	2/691	3/270	3/919	P/S
4/627	2/058	7/047	6/470	8/680	P/CFO
4/854	2/187	7/298	6/270	8/634	EV/EBITDA
1/546	0/94	26/057	-3/400	-2/083	R

INDEPENDENTVARIABLES

Is skewnese to the right? Value is approximately zero. The skewnese strain variables like normal distribution of these variables considered

NORMALITY TEST, THE DEPENDENT VARIABLE

Been normal practice to measure dependent variable is based on the assumption that this hypothesis hollows:

H_0: Dataforthe dependent variablefollowsa normal distribution

H_1: Dataforthe dependent variabledoes notfollow anormal distribution

Normal test results are shown in the image of the dependent variable number (3)

TABLE (3): TEST SIMONOV NORMALITY TEST BASED ON THE DEPENDENT VARIABLE-SMIRNOFF

P-value	KS TEST	Negative	Positive	Absolute	Standard deviation	Average	Total	Variable
0/203	1/069	-0/042	0/081	0/081	26/057	-2/08	173	Stock returns

The dependent variable is a significant level for more than 5 percent consuming the rule is zero when the amount is less than 5% significance level j is a normally distributed dependent variable.

Investigate the correlation between variables the correlation is zero is written as the hollowing variables.

$$\begin{cases} H_0: Pxy = 0 \\ H_1: Pxy \neq 0 \end{cases}$$

It is calculated in the image number (4) Pearson correlation between the dependent and independent variables.

TABLE 4: TEST PEARSON CORRELATION COEFFICIENTS BETWEEN STOCK PRICES AND RETURNS

R					
EV/EBITDA	P/CFO	P/S	P/B	P/E	Parameter
-0/177	-0/095	-0/16	-0/153	-0/16	The correlationcoefficient
0/027	0/239	0/038	0/047	0/036	Significantlevel
155	***156***	***168***	***170***	***172***	TOTAL

Given the significant level variables indicate the results of this test that there is a significant inverse relationship between stock returns and variables. But no significant relationship between stock return.

INTER – PARE L MODEL ANALYSIS METHOD

This section is used to evaluate --- estimate the general model of panel analysis, pattern is given for first to fifth the hollowing assumptions: Rest = $\beta + \beta_1 X_{i,t} + \varepsilon_{it}$

Model assumed for the sixth hypothesis is as follows:

$R_{i,t} = \beta_0 + \beta_1 P/E_{i,1} + \beta_2 P/\beta_{i,} + \beta_3 P/S_{i;t} + \beta_4 P/CFO_i + \beta_5 EV/EBITD_{i,t} + \varepsilon_{i,t}$

Auto correlated error regression hypothesis test is performed following: serial correlation does not exist: H: P=O

Serial correlation exists: H: P=0

TABLE 5: PANEL ANALYSIS

dw Statistic	p-value	Statistic F	Coefficient of determination	p-value	statistics	Standard error	Coefficient	Independent variables	Dependent variable	Hypothesis
2/41	0/036	4/465	0/026	0/471	0/72	4/195	3/033	C	R	***1***
				0/031	-2/17	0/230	-0/499	P/E		
2/402	0/047	4/023	0/023	0/869	0/165	3/437	0/567	C	R	***2***
				0/008	-2/703	0/236	-0/637	P/B		
2/376	0/038	4/386	0/026	0/418	0/812	3/906	3/171	C	R	***3***
				0/003	-2/978	0/497	-1/479	P/S		
2/348	0/239	1/397	0/009	0/923	-0/097	3/110	-0/301	C	R	***4***
				0/065	-1/857	0/188	-0/349	P/CFO		
2/348	0/027	4/961	0/031	0/571	0/567	4/682	2/655	C	R	***5***
				0/029	-2/199	0/281	-0/619	EV/EBITDA		
2/455	0/049	2/686	0/051	0/072	1/811	3/019	5/466	C	R	***6***
				0/017	-2/390	0/107	-0/255	P/E		
				0/019	-2/367	0/205	-0/485	P/B		
				0/026	-2/246	0/166	-0/372	EV/EBITDA		

Fitting the image number (6) the results of all --- hypothesis tests, regression equation ---shows the relationship between independent variables and dependent variables type.

TABLE (6): FITTING THE RESULTS OF ALL HYPO THESIS REGRESSION EQUATION BETWEEN DEPENDENT VARIABLES AND INDEPENDENT TYPE

Model	Type ofrelationship	Totestthe correlation Regressionerror	Meaningfultestof Regression equation	Meaningfultest Coefficientsbeing	Hypothesis
$R_{i,t} = -0/499\,P/E_{i,t}$	Reverse	Acceptance H_0	Acceptance H_1	Acceptance H_1	First
$R_{i,t} = -0/637\,P/B_{i,t}$	Reverse	Acceptance H_0	Acceptance H_1	Acceptance H_1	Second
$R_{i,t} = -1/477\,P/S_{i,t}$	Reverse	Acceptance H_0	Acceptance H_1	Acceptance H_1	Third
NO	NO	Acceptance H_0	Acceptance H_0	Acceptance H_0	Fourth
$R_{i,t} = -0/619EV\ /EBITDA_{i,t}$	Reverse	Acceptance H_0	Acceptance H_1	Acceptance H_1	Fifth
$R_{i,t} = -0/255P/E_{i,t} - 0/485P/B_{i,t} - 0/372EV/EBITD_{i,t}$	Reverse	Acceptance H_0	Acceptance H_1	Acceptance H_1	Sixth

So are other findings that are in the sixth hypothesis, variables P/E P/B & EV/EBITDA respectively the highest stock return in determining the effect of cement companies.

CONCLUSION

Shows the results of this test are that the inverse relation between stock returns and this correlation coefficient in the cement industry due to the coefficient of determination. Investors are weak and can not be given to these factors, the decision this is indicative of the effect of other financial & nonfinancial factors such as economic, political & social returns on company stock. Follows other research that there is a relation between the coefficients and coefficeints of stock returns & P/E , P/B, and EV/EBITDA are respectivly the highest return on equity in the cement industry & finally recommended investors to achieve ehliciency in the cement industry int he stock that has lower risk factors such as shows as they cause less.

SUGGESTIONS FOR FUTURE RESEARCH

1. It is recommended to evaluate the usefulness of the research justify the price coefficients in the stock assessment.
2. It is recommended to be done research about the relationship between the coefficients of prices and macroeconomic variables.
3. That can be done a complete study about the relationship between price and cost coefficients cold equity (stock expected rate of return)

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IMPACT OF STOCK MARKET DEVELOPMENT ON ECONOMIC GROWTH: AN EVIDENCE FROM SAARC COUNTRIES

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ABSTRACT

The benefit of stock market development for the economy is irreversible issue in modern economic theory. The paper empirically makes an attempt to estimate the impact of stock market development on economic growth in SAARC region by suing the two dynamic panel models for the period of 1980 to 2008. The first model tries to assess the stock market effect directly after controlling for other variables where as the second one does it by having its influence through investment. The study finds out that none of the dynamic model is effective one to identify the stock market linkage to per capita growth rate in SAARC region. This implies that stock market size, activity and liquidity do not have any influence on the real economic activity in the region. The results did not lead support to empirical studies of Levive (1991), Levine & Zervos (1996, 1998); Islam (1998) as well as other studies and theory that stock market has direct association with per capita growth rate. The main reasons are identified that fund mobilsed by stock market in the region is still in transitional period and it is very small relative to its economy.

KEYWORDS

Economic growth, stock market development, turnover ratio, financial liberalization, dynamic panel model etc.

1.1 BACKGROUND OF THE STUDY

The deepening and level of sophistication of modern financial markets is arguably a recent phenomenon. Since the 1980s the irreversible process of financial reforms, financial globalisation, and the deregulation of the financial systems have been throwing up daunting challenging for developing countries. The very common ways of meeting these challenges are to overcome these apprehensions, to promote structural improvements to markets and to speedily move towards the development of regional stock markets.

The development of equity markets provides a more diversified set of channels (in channeling the limited resources from surplus units to deficit units) for financial intermediation to support growth, thus bolstering financial stability of economy. The most important measure taken in this regard by many Asian countries in general and South Asian (SAARC) countries in particular by the opening of their respective stock markets to international investors' i.e, liberalised their stock markets in the early 90s. It is noted that the growth in developing markets is evident from the fact that from 1985 to 1995, the period of stock market liberalization in many developing countries, the market capitalization of all developing markets increased by 1,007 percent compared to an increase of 253 percent in the case of developed markets. As a result, the share of developing markets in the world market capitalization increased from 4 percent in 1985 to 11 percent in 1995. The trend of stock market growth continues more positively beyond 1995 for each of the market segment described above.

The growth of South Asian stock market can be gauged by comparing their markets with the growth of developing and World stock markets. The table 1 below illustrates this significant role of the SAARC countries.

TABLE 1.1: ROLE OF SAARC STOCK MARKETS

Countries	Market Established	Market Liberalise	Market Capitalisation % of GDP			Value Traded % of GDP		
			1990	2006	2008	1990	2006	2008
Bangladesh	1954	1991	1.1	5.8	8.4	0.0	1.5	11.6
India	1875	1992	12.2	86.1	53.2	6.9	67.1	86.5
Pakistan	1947	1990	7.1	35.7	14.3	0.6	99.3	33.2
SriLanka	1896	1991	11.4	27.5	10.6	0.5	27.5	2.5

Source: World Development Indicators

It can be observed from the above analysis that the SAARC region has a long and varying history in equity markets. India and Sri Lanka have more than 100 years old markets whereas in Bangladesh and Pakistan the markets came into existence about 50 years ago. Although the South Asian equity markets have different history in terms of establishment, all these markets underwent for liberalisation at the same time, that is, in early 90s (meaning that equity markets in this region have been opened for the foreign investors since 1990). In 1990 the market capitalization in South Asia is 10.8 percent compared to World rate of 47.8 percent where only India represents 12.2 percent followed by Sri Lanka 11.4 percent and Pakistan 7.1 percent. In 2006 this ratio has increased for all the South Asian equity markets significantly, i.e the stock market in relation to GDP has, on an average, increased by 450 percent over the almost past two decades.

On the other hand, the value traded as percent of gross domestic product, which is a reflection of economy wide liquidity of the country, was below 1 percent for each country except for India in 1990. In 2006, this value traded ratio has become on average above 40 percent in region, an increase of 3900 percent over the past 16 years period. This reflects the fact that how stock market got its momentum in the region as a whole and has been the focal point of financial market policy making.

The following table makes an attempt to explain how the stock market in the South Asia region changes significantly at the end of most recent year 2010 in relation to other regions of the world.

TABLE 1.2: COMPARISON OF MARKET CAPITALISATION IN PERCENT OF GDP

	Market Capitalisation percentage of GDP
Latin America	57.7%
East Asia & Pacific	80.4%
OECD Members	90.4%
Middle East	37.8%
European Union	64.7%
Europe and Central Asia	51.9%
South Asia	83.4%
World	90.4%

Source: World Development Indicators

The above data statistics explicitly state the fact that although South Asian stock market is relatively small compared to stock markets of other regions, it has been able to attract investors towards the capital market which is unexpectedly in line with the world top rated stock market performances. The interesting outcome is that the market capitalization of South Asia in percent of GDP is higher than the stock market of Middle East, Latin America, East Asia even the European Union and almost parallel to the world market. This gives an indication that how the stock market in this part opens the avenues for policy makers to pay more attention on the stock market to channelize the funds in the economy.

1.2 THE OBJECTIVE OF THE STUDY

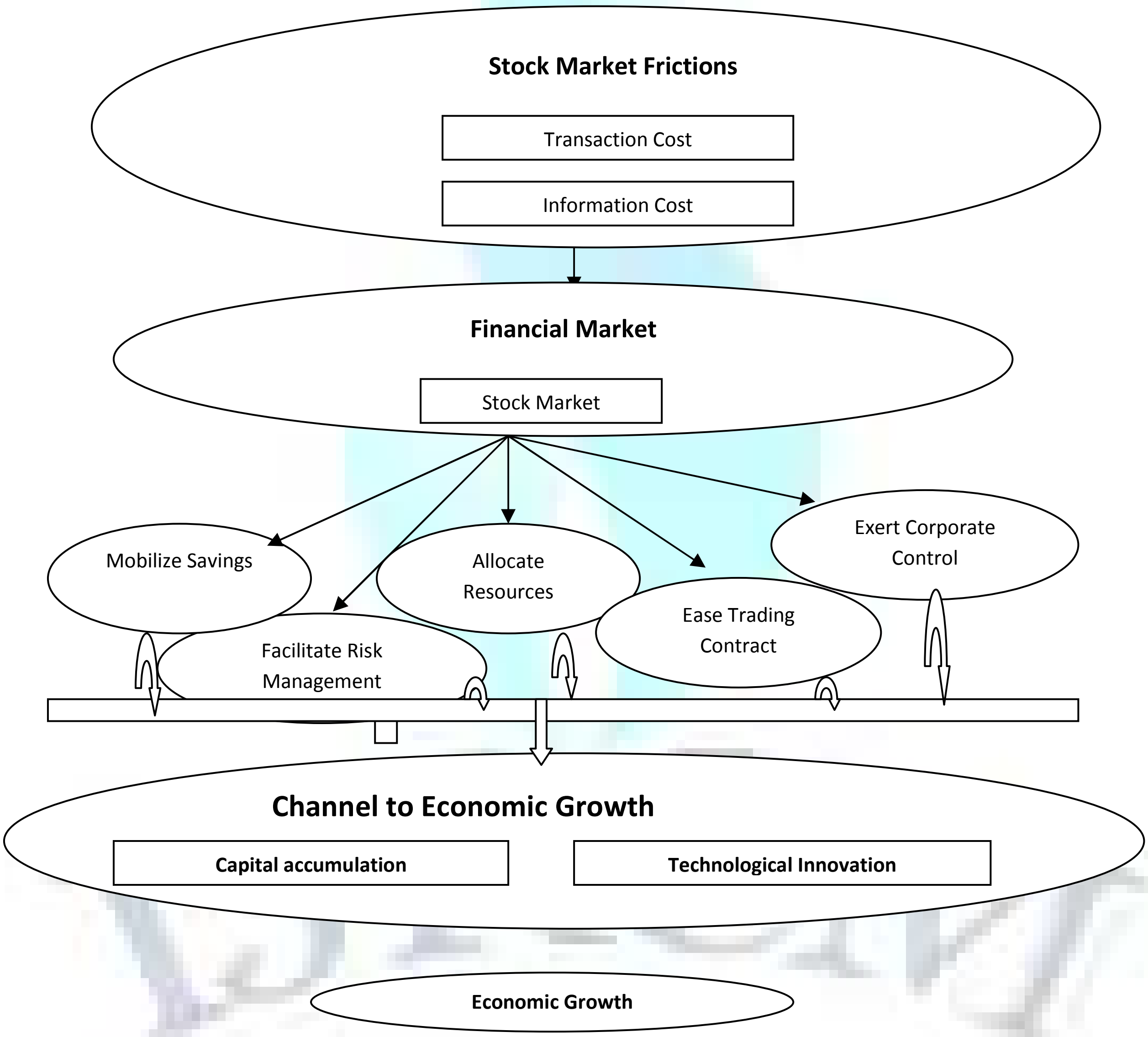
The linkage between stock market and economic growth has occupied a central position in the development literature (see Samuel, 1996; Demirguc-Kunt and Levine, 1996; Akinifesi, 1987; Levine and Zervos, 1996). The study attempts to investigate the impact of stock market development on economic growth for SAARC Region as a whole. The study also tries to ascertain the impact of stock market development on economic growth for each of the SAARC member countries.

2. THEORETICAL FRAMEWORK

The functional approach of Levine (1997) provides a useful framework to think about the role of stock market. Stock markets allow for more efficient financing of private and public investment projects. By representing ownership of large-value, indivisible physical assets by easily trade able and divisible financial assets, and making trade in them more liquid, they promote the efficient allocation of capital. They give lenders the opportunity to diversify their investments. In these roles, stock markets increase the quality and quantity of intermediated funds.

The following diagram demonstrates, in essence, how the stock market- in presence of market frictions (transaction cost and information cost) performing its different functions affects the economic growth in terms of capital accumulation and technological innovation.

FIGURE 2.1: THEORETICAL FRAMEWORK OF STOCK MARKET DEVELOPMENT ON ECONOMIC GROWTH



3. LITERATURE REVIEW

In recent times there was a growing concern of the role of stock market on economic growth. The stock market, in today's liberalized open market areana, is the center focus of the researchers and policy makers because of the perceived benefits it provides for the economy. The stock market provides the fulcrum for capital market activities and it is often cited as a barometer of business direction An active stock market may be relied upon to measure changes in the general economic activities using the stock market index.

Jensen and Murphy (1990) argue that in well development stock markets tying managers' compensation to stocks is an inventive compatible design that aligns the interests of principals (owners) and agents (managers) therby spurring efficient resource allocation and economic growth. Thornton (1995) analyzes 22 developing economies with mixed results although for some countries there was evidence that financial depening promoted growth. Luitel and Khan (1999) study 10 developing economies and find bi-directional causality between financial development development particularly stock market and economic growth in all the sample countries.

Levine and Zervos (1998) who are among the first to ask whether stock markets are merely burgeoning casinos or a key yo economic growth and to examine this issue empirically finding a positive and significant correlation between stock market development and long-run growth.

Barro(1991) and Barro-I-Martin(1995) explore the ability of a large number of macroeconomic and demographic variables to explain the cross-sectional characteristics of economic growth rates. Rodrick (1999) examines the relation between openness to trade and economic growth with standard cross-country regression methodology. With a proxy for the general openness to trade, the evidence suggests that the relation between economic growth and openness is statistically weak.

Levine and Zervos (1998) found that stock market liquidity and banking development for 47 countries from 1976-1993, had a positive effect on economic growth, capital accumulation and productivity even after controlling for various other important factors such as fiscal policy, openness to trade, education and political stability. Singh and weisse (1998) recently examined stock market development and capital flows for less developed countries.

Arestis, Demetriades and Luintel (2001) use data for Germany, the US, Japan, France and UK but their sample only spans the last 25 years. The evidence for stock market led growth is mixed across countries may be due to the short sample. Rousseau and Sylla (2005) focus instead on the early stages of economic growth in the US (1790-15-850). They convincingly argue that stock market development hadsignificant impact on business incorporations and investment.

Bencivenga, et. Al. (1996) and Levine (1991) have argued that stock market liquidity plays a key role in economic growth. Although profitable investments require long-run commitment to capital, savers prefer not to relinquish control of their savings for long periods. The finding is that liquidity led to increase investor incentives to acquire information on firms and improve corporate governance, thereby facilitating growth.

4.1 RESEARCH METHODOLOGY

The study attempts to examine the impact of stock market development on economic growth for four South Asian countries: Bangladersh, India, Pakistan, and SriLanka over the sample period of 1980-2005. To investigate the stock market impact, dynamic panel data approach is to be considered for the study. Two alternative models for estimating the long-run effects of stock markets development on economic growth will be used in this regard.

MODEL ONE (DIRECT EFFECT OF STOCK MARKET ON GROWTH RATE)

This model examines the relationship between stock market development and economic growth directly, rather than through investment behavior. Thus, the level of investments is used as a control variable. Since we focus on growth, the model is in the form of a dynamic panel estimate of growth following such works as Islam (1995) and Lee, Pesaran, and Smith (1997), as follows:

$$Growth_{it}=\alpha_i+\gamma_t+\rho Growth_{it-1} \; \theta_1(MCR_{it})+\theta_2(STR_{it})+\theta_3(TR_{it})+ \phi_1(INV_{it})+\phi_2(FDI_{it})+\phi_3(SE_{it})+\phi_4(OR_{it})+\phi_5(PC_{it})+\varepsilon_{it} \quad (\ldots\ldots\ldots 4.1)$$

MODEL TWO (INDIRECT EFFECT OF STOCK MARKET ON GROWTH RATE)

This model is a two-stage test of the hypothesis of whether the stock market affects economic growth. This is motivated by the well known theoretical study of Levine[1](1991) who proposes that investing in the stock market alleviates both the liquidity shock and the productivity shock that firms would otherwise face. Firms not facing liquidity shocks will have a higher level of investment leading to a higher growth rate.

In order to test the above theoretical hypothesis we regress investment on three measures of the stock market and then we regress growth on value of investments as shown below:

FIRST EQUATION

$$INV_{it}=\alpha_i+\gamma_t+ \theta_1(MCR_{it-1})+\theta_2(STR_{it-1})+\theta_3(TR_{it-1})+ \varepsilon_{it} \quad (\ldots 4.1.1)$$

EQUATION TWO

$$Growth_{it}=\alpha_i+\gamma_t+\phi_1 Growth_{it-1}+\phi_2(INV_{it-1})+ \phi_3(FDI_{it-1})+\phi_4(SE_{it-1})\phi_5(OR_{it-1})+\phi_6(PC_{it-1}) +\varepsilon_{it} \quad (\ldots\ldots\ldots 4.1.2)$$

Where,

$Growth_{it}$ refers to the per capita growth rate of gross domestic products of ith country for t period

MCR_{it} refers to the market capitalization ratio of ith country for t period

STR_{it} refers to the value traded ratio of ith country for t period

TR_{it} refers to the turnover ratio of ith country for t period

INV_{it} refers to domestic investment to GDP ratio of ith country for t period

FDI_{it} refers to foreign direct investment to GDP ratio of ith country for t period

SE_{it} refers to secondary school enrollment as percent of school population

OR_{it} refers to the openness ratio of ith country for t period

PC_{it} refers to domestic credits to GDP ratio of ith country for t period

ε_{it} refers to independent disturbances of ith country for t period

α_i refers to the country-specific effects

γ_t refers to the any common period-specific effects

Specifically, in such models the presence of lagged dependent variable (dynamic panel) implies correlation between the error term and the lagged dependent variable, rendering the OLS estimator biased and inconsistent. Instead, we use an instrumental variable approach that yields consistent estimators. The coefficient of the lagged growth variable would then capture any convergence effects of growth (e.g., see Islam, 1995; and Lee, Pesaran, and Smith, 1997).

4.2 SPECIFICATIONS OF VARIABLES AND HYPOTHESIS

Three variables are used as proxy for measuring the stock market development in the study:

i) Market Capitalization Ratio (MCR): The hypothesis is that there is positive impact of stock market capitalization ratio on economic growth. This measure equals the value of listed shares on domestic exchanges divided by gross domestic products (GDP). The ratio measures the size of the stock market relative to economy.

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[1]Levine and Zevros regress the growth rate of GDP per capita on a variety of control variables (to control for initial conditions) and a conglomerated index of stock market development, following the theoretical work of Atje and Jovanovic (1993). Though they find a positive and significant correlation between stock market development and long run economic growth, their approach entails possible measurement problems (use of two different sources: IFC and IFS), statistical problems (cross-sectional approach) , and conceptual problems (combining several measures into a single measure) which may affect their results. The present paper is an attempt to address these shortcomings.

ii) Total Value of Shares Traded Ratio (STR): It is hypothesized that the value-traded ratio of stock market has significant influence on the economic growth. This measure equals total value of shares traded on the stock market exchange divided by GDP. The total value traded ratio measures the organized trading of firm equity as a share of national output and therefore should positively reflect liquidity on an economy-wide basis. It measures the trading relative to the size of the economy. Atje and Jovanovic (1993) and Levine and Zervos (1998) study considered value traded ratio as a measure of stock market activity to test the stock market influence on GDP growth.

iii) Turnover Ratio (TR): The hypothesis is that turnover ratio has a positive association with GDP per capita growth rate. This ratio equals the value of total shares traded on domestic exchanges divided by market capitalization of the stock market. This ratio measures the size of the liquidity of the stock market. The turnover ratio measures the volume of domestic equities traded relative to the size of the market. The higher the ratio, the higher will be the liquidity of the stock market. Levine (1991), and Bencivenga, Demirguc & Levine (1996), Murinde (1996) used in their studies turnover ratio as one of the explanatory variable for assessing the stock market impact opn GDP growth rate.

5. INTERPRETATION OF RESULTS

5.1 UNIT ROOT TEST

Before the study makes attempt to estimate teh impact of stock market development on economic growth rate among the SAARC countries, the unit root test has been made for all the variables for the study by using the Augmented Dickey Fuller test.

The market capitalization ratio for Bangladesh, Pakistan, and India found staionary at the first difference form where as for Sri Lanka it is found at level form. The value traded ratio of Bangladesh, India, and Pakistan has unit root at the level form but for SriLanka this variable has no unit root. The turnover ratio of Bangladesh, Pakistan and SriLanka has been found stationary at the first difference form while for India it is at the level form.

Now look at other control variables considered for the study. For Bangladesh and India, FDI is stationary at the first difference form while for Pakistan and SriLanka it is stationary at the level form. Private credit to GDP ratio of Bangladesh is stationary at first difference form but it is stationary at the level form for India, SriLanka and Pakistan. The secondary school enrollment ratio of all the SAARC member countries is stationary at the first difference form except for SriLanka which is found at the level form. The openness ratio of India and Srilanka is stationary at the first difference form where as it is stationary for Bangladesh and Pakistan at the level form. Finally, the per capita GDP growth rate is stationary at the level form for Bangladesh, India, and SriLanka while it is stationary at first difference form for Pakistan.

TABLE: 5.1 SUMMARY RESULTS OF UNIT ROOT TEST

Order of Integration				
Variables	Bangladesh	India	Sri Lanka	Pakistan
Market Capitalisation Ratio	I(0)	I(0)	I(0)	I(0)
Total Value Traded Ratio	I(1)	I(1)	I(0)	I(1)
Turnover Ratio	I(1)	I(0)	I(1)	I(1)
FDI as % GDP	I(1)	I(1)	I(1)	I(0)
Domestic investment to GDP Ratio	I(1)	I(0)	I(1)	I(1)
Private Credit to GDP Ratio	I(1)	I(0)	I(0)	I(0)
Openness Ratio	I(0)	I(1)	I(1)	I(0)
Secondary School Enrollment % secondary age population	I(1)	I(1)	I(0)	I(1)

The table highlights the summary of unit root test for all the stock market development indicators as well as other control variables taken into account in the study. The results found that some of the variables stationary level form and some at first difference form. Therefore, in order to accurately estimate the regression equation all variables are expressed in difference form while running the models.

5.2 INTERPRETATION OF DYNAMIC PANEL MODEL

The study uses two dynamic panel models to ascertain the impact of stock market development on economic growth..

5.2.1 Direct Effect of Stock Market on Per Capita Growth Rate (Model One)

Model one attempt to assess impact of the stock market development directly on per capita growth rate. The following tables represent the results of first dynamic model using both common and cross section coefficients.

TABLE 5.2: REGRESSION RESULTS UNDER DIRECT MODEL

Common Coefficient		Cross Section Coefficient			
Variables	SAARC	Bangladesh	India	Sri Lanka	Pakistan
D[Per Capita GDP Growth(-1)]	-0.561 (-6.626)*	-0.5073 (-3.501)*	-0.686 (-3.113)*	-0.520 (-3.429)*	-0.386 (-2.640)*
D[Market Capitalisation Ratio]	0.019 (0.436)	-0.098 (-0.224)	-0.017 (-0.183)	0.080 (0.882)	-0.093 (-1.049)
D[Total Value Traded Ratio]	-0.018 (-0.564)	0.655 (0.247)	-0.242 (-1.435)	-0.529 (-0.609)	-0.018 (-0.503)
D[Turnover ratio]	0.011 (1.573)	-0.009 (-0.189)	0.035 (0.888)	0.264 (1.094)	0.013 (1.792)
D[FDI as % GDP]	-0.215 (-0.580)	2.595 (0.658)	-3.971 (-1.924)	-0.159 (-0.300)	3.513 (2.856)*
D[Domestic Investment % GDP]	0.311 (2.512)*	-0.584 (-1.796)	0.486 (1.891)	0.220 (1.137)	0.194 (0.590)
D[Private Credit to GDP Ratio]	0.003 (0.257)	-0.069 (-0.768)	0.481 (1.250)	0.312 (1.893)	0.0790 (1.097)
D[Openness Ratio]	-0.001 (-0..1)	-0.000 (-0.084)	0.525 (1.645)	0.016 (0.254)	-0.156 (-2.854)*
D[Secondary School Enrollment % secondary age population]	0.027 (0.304)	-0.302 (-2.244)*	-0.198 (-0.492)	0.157 (1.056)	0.318 (1.789)
R-squared	0.372	0.626271			
Adjusted R Square	0.277	0.345974			
No. of Observations 23 after adjustment					
Note: Value without parentheses represents coefficient and within parentheses represents t statistics. D refers to all variables are expressed in difference form.					

Look at the performance of the SAARC region under both common and cross section coefficients using the first model. Lag of per Capita GDP growth rate has a negative sign with statistically significant coefficient. This means that lag value itself has negative effect on per capita GDP growth rate. Market capitalization ratio, turnover ratio, private credit to GDP ratio and secondary school enrollment percent of secondary age population all have the positive sign and not found significant. The results indicate that these variables do not have effect on the per capita GDP growth rate.

On the other hand, total value traded ratio, FDI to GDP ratio, and openness ratio have the negative sign and not statistically significant. This means that all these variables will not have any effect on per capita growth rate. Only the domestic investment to GDP ratio has positive sign with statistically significant coefficient, This implies that if this ratio changes by 1 percent then per capita growth rate will increase by 0.311 percent in SAARC region. The investment can affect teh growth rate in the region. The R square value is 0.37 meaning that 31 percent of per capita growth rate can be explained by the variables taken in the model.

5.2.2 Indirect Effect of Stock Market through Investment (Second Model)

Second model attempts to ascertain the stock market impact on growth rate through its effect on investment. It is to mention here that this model has taken into account lag value for all of its variables considered. The table below represents the indirect effect of stock market development by using both common and cross section specific coefficient.

TABLE: 5.3 RESULTS OF REGRESSION UNDER INDIRECT EFFECT

First Equation: Regression of Stock Market on Investment					
	Common Coefficient	**Cross Section Coefficient**			
	SAARC	Bangladesh	India	Sri Lanka	Pakistan
D[Market Capitalisation Ratio]	0.039 (1.393)	-0.013 (-0.083)	0.032 (0.381)	0.0559 (0.597)	0.070 (1.4155)
D[Total Value Traded Ratio]	0.0107 (0.360)	-0.000 (-0.01)	0.009 (0.345)	-0.054 (-0.198)	-0.002 (-0.425)
D[Turnover Ratio]	-0.002 (-0.48)	0.105 (0.097)	-0.033 (-0.393)	0.715 (0.708)	0.013 (0.329)
R-squared	0.1126	0.146			
Adjusted R Square	0.049	-0.021			

Second Equation: Regression of Fitted Value of Investment on Per Capita GDP Growth					
	SAARC	Bangladesh	India	Sri Lanka	Pakistan
D[Per Capita GDP Growth(-1)]	-0.538 (-5.724)	-0.401 (-2.141)*	-0.475 (-2.752)*	-0.460 (-2.389)*	-0.231 (-0.979)
D[Fitted Value of Investment(-1)]	-0.121 (-0.874)	0.7080 (1.846)	-0.106 (-0.445)	-0.190 (-0.906)	-0.1287 (-0.942)
D[FDI to GDP Ratio (-1)]	-0.064 (-0.151)	-2.898 (-1.065)	0.030 (0.016)	-0.264 (-0.437)	-2.533 (-1.462)
D[Private Credit t/GDP Ratio(-1)]	0.001 (0.117)	0.088 (0.857)	0.200 (0.801)	0.0265 (0.126)	-0.0435 (-0.442)
D[Openness Ratio(-1)]	-0.000 (-0.304)	0.001 (0.512)	-0.020 (-0.075)	-0.198 (-1.942)	0.096 (1.141)
D[Secondary School Enrollment % secondary age population(-1)]	0.001 (0.015)	0.1724 (1.075)	-0.193 (-0.512)	-0.198 (-1.042)	0.236 (0.825)
R-squared	0.288	0.401			
Adjusted R Square	0.205	0.132			
No. of observations 22 after adjustment					
Note: Value without parentheses represents coefficient and within parentheses represents t statistics. D refers to all variables are expressed in difference form.					

Have a look at the first equation of the above table which indicates that all the stock market indicators in the SAARC region as a whole are not statistically significant. This can be interpreted in such a way that stock market does not have any positive impact on the investment ratio in the region. On the other hand, stock market indicators in Bangladesh, India, Sri Lanka, and Pakistan do not reflect the statistically significant coefficients meaning that stock market development variables considered in the study will not have any positive direct effect on the investment rate for any one of the SAARC member countries. The R square value signifies the findings that only 28 percent of the domestic investment can be explained by the stock market indicators. Now look at the second equation of the model when fitted value of investment is regressed on per capita growth rate. The results indicate that FDI to GDP ratio, private credit and openness ratio all are not found significant meaning that they do not have any effect on per capita growth rate of SAARC region.

6. CONCLUSION

In case of first dynamic panel model which assumed that stock market will have a direct impact on the per capita growth using the common coefficient state that domestic investment has the significant influence on the per capita growth in the SAARC region. All the stock market indicators: market capitalization ratio, value traded ratio, and turnover ratio are not statistically significant for the region meaning that stock market does not have any contribution to the per capita growth rate in the region. No other control variables have found significant for the SAARC region except for the lag value of per capita GDP growth rate although it has the negative sign. This implies value of last year per capita growth rate has negative impact on this year growth rate.

On the other hand, second panel model is a two stage equation to measure the stock market impact on per capita growth rate. First equation measures the impact of stock market variables on domestic investment and then second equation measures the impact of fitted value of investment developed from the first equation on per capita GDP growth rate. The results reflect that stock market size, activity and liquidity do not have any effect on the investment. Therefore, the fitted value of investment in the second equation is not found statistically significant. The implication is that stock market in the SAARC region has no influence on the per capita GDP growth rate. It is also to be mentioned that no other control variables have any significant coefficient except for the lag value of per capita growth rate. But the sign is negative for this lag value meaning that last year per capita growth rate has inverse effect on this year growth rate of SAARC countries.

The results did not lead support to empirical studies of Levive(1991), Levine & Zervos (1996, 1998), Islam(1998) as well as other studies and theory that stock market has direct association with per capita growth rate. The reasons may be due to the fact that fund mobilsed by stock market in the region is still in transitional period. That's why it is very small relative to its economy. The stock market in SAARC countries liberalised in the early 1990s and their effect has not yet been flourished. The stock market in SAARC region has not been developed like other sector s in economy. Different strategies are being taken in order to develop the stock market for the whole region in recent years. As its outcome South Asian Federation of Exchanges comes into existence to promote the stock market in the region.

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PREDICTING SUKUK DEFAULT PROBABILITY AND ITS RELATIONSHIP WITH SYSTEMATIC AND UNSYSTEMATIC RISKS: CASE STUDY OF SUKUK IN INDONESIA

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ABSTRACT

Objective-The objective of this research is to analyse comprehensively the default risk of sukuk in Indonesia. It discusses the analysis of default probability of sukuk in Indonesia bond market, and, to find the relationship of default probability of sukuk with the systematic and unsystematic risks. Design/Methdology/Approach- Merton model is used to identify the default probability of Sukuk in Indonesia. In addition, to find the systematic risk and unsystematic risk which have impact on sukuk default this research will use Panel data analysis will be used as a main tool analysis. Finding- analysis on sukuk default probability using Merton Model shows that there are two companies issuing sukuk with very high default risk, namely, PT Berlian Laju Tanker with average default probability of 74.456% and PT Pembangkit Listrik Negara which has a default risk by 61.339%. Comparatively, other sukuk has quite low default probability which is around 20% on average. Systematic and unsystematic variables are able to explain sukuk default. Money supply and the exchange rate are two systematic variables that could explain sukuk default. In addition, the unsystematic variables show that the solvency ratio (debt to equity ratio) and the profitability ratio (Return on Assets) have significant implications on default probability of sukuk. Originality- This paper provides an original insight into understanding sukuk default in Indonesia and its determinant. It also contributes to the literature on Islamic finance especially in term of sukuk default.

KEYWORDS
Sukuk Default, Default Risk, Default Probability, Merton Model, Systematic Risk and Unsystematic Risk.

1. BACKGROUND

Sukuk is an interesting instrument in Islamic finance. This instrument has a specific form in the structure of Islamic finance based on several reasons. First, *sukuk* embarked as a benchmark for bond in the conventional system where bond market was increasing rapidly in the last several years. Therefore, the appearance of *sukuk* in Islamic finance can attract the economic world. Second, *sukuk* rose significantly, when the condition of financial industries was in a serious crisis and the debt (interest base) was recognized as the main factor causing the financial crisis. Therefore, sukuk as an alternative to conventional bonds can help in stabilizing financial market (Qoyum and Ardiansyah 2010).

Nevertheless, in case of default risk the number of *sukuk* facing default increases significantly. A default occurs due to the breach of any binding obligations under the original terms of the agreement between the issuer and the *sukuk*holders. Apparently, both contractual parties must fulfill their obligations under the contract or agreement. The complexity of structure and several legal issues may be significant on rating process, but from a rating perspective, assessing the risk of the issuer's inherent credit strength is fundamental to the final rating outcome. In other words, performance of the *sukuk*issuer highly affects the final rating on the *sukuk* itself (Majid, Sahimi, Abdullah, 2011).

In Indonesia, recently, on the 28th February 2012 Indonesia's Islamic capital market was at shocked as the PEFINDO (rating agency) lowered the ratings of *sukuk*Ijarah II/2009 of PT BerlianLaju Tanker Tbk (BLTA or the Company) from"idCCC" to "idD" as BLTA failed to fulfill payment and Ijarah Benefit Installment on those notes. The increase of *sukuk* market naturally will be accompanied with the rise of company that tends to default. Therefore, in this point of view, the existence of some tools for predicting the default risk is very crucial in order to reduce the potency of default in *sukuk* market (KFH 2012).

In the context of business, default is caused by many factors both in macro and micro. Macro means that factors that could affect the performance of any companies. In portfolio theory, this factor cannot be eliminated by diversification. This factor is popularlyknown as systematic risk. On the other hand, micro level can be diversified to eliminate the risk, or well known as unsystematic risk. However, there are means to determine the important factors (systematic risk or unsystematic risk) that could cause the default of a company.

To detect the probability of default of sukuk in Indonesia, Merton model (1974) will be applied. Merton model is one of the most popular methods for predicting default.From this analysis, probability of default of sukuk will give general overview on the condition of sukuk market Indonesia especially in recent time after BerlianLaju Tanker (BLTA) was reported default by Pefindo rating agency. Furthermore, this research also can provide prediction on other *sukuk* in Indonesia on the chances for such sukuk to default. Finally, panel regression will be used to analyze the relationship between systematic risk and unsystematic risk. Financial ratio will be used as proxy of Systematic, while macroeconomic variable represents the unsystematic risk.

2. WHAT IS SUKUK

Sukuk (plural of *sakk*) had been extensively used by Muslim in the Middle Ages, as papers representing financial obligations originating from trade and other commercial activities. However, *sukuk* as applied in the capital markets pertaining to the process of securitisation. According to AAOIFI, *sukuk* is a certificate of equal value that represents an undivided interest in the ownership of an underlying asset[1], usufruct and services or assets of particular projects or special investment activity.

Based on the recourse over underlying asset, currently issued *sukuk* can be classified into Asset-based and Asset-backed, which are semantically similar descriptions but mask significant differences in credit risk.

ASSET BASED *SUKUK*

Sukuk is structured such that investors have a beneficial interest only in the cash flow generated by the underlying asset. Assets are usually sold by the originator to SPV (Special Purpose Vehicle) in the form of trust. The trustee issues certificates representing the investor's ownership interest, while the proceeds are used to purchase the assets. The investors receive a distribution income representing a proportion of the returns generated by the assets.

In an asset-based Sukuk, it is clearly determined that the credit of *sukuk* reflects that of the originator rather than the underlying assets. This is because the investors do not have any recourse to the underlying assets in the event of default. The *sukuk* holders will ordinarily rank as senior unsecured creditors of the originator. They would rank paripassu with other senior unsecured creditors of the originator company.

ASSET BACKED SUKUK

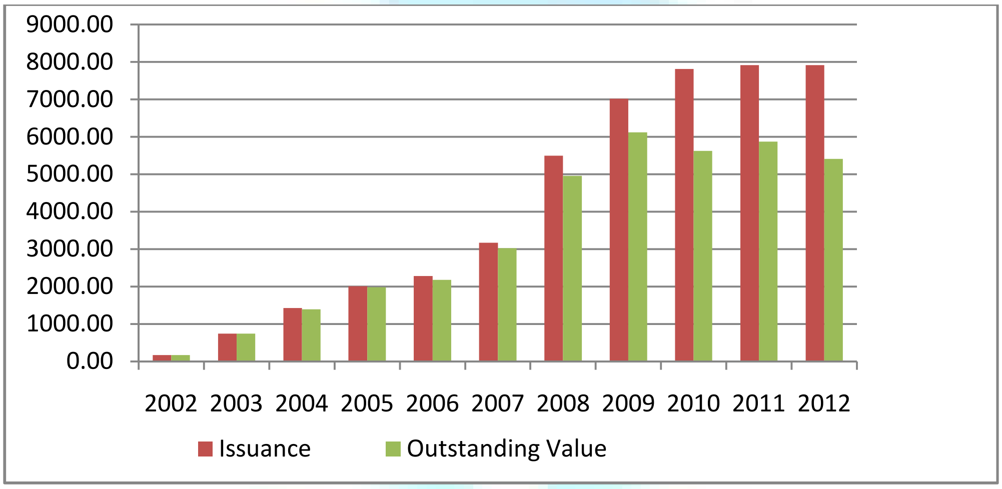
Asset backed *sukuk* represent a true sale. The underlying asset has been validly transferred to the SPV on behalf of the investors. However, the underlying asset should generate income so the profit solely comes from the asset. In the event of insolvency of the originator, the underlying assets will remain completely separate from the originator. In addition, the risk of any insolvency proceedings being brought against SPV should be remote, while the investors has the full claim over the underlying asset, without any risk of the sale subsequently being overturned by the local or *Shariah* courts.

3. DEVELOPMENT OF SUKUK IN INDONESIA

The present of sukuk pioneered by PT Indosat in early September 2002 issued Islamic bonds worth Rp. 175 Billion. This step was then followed by Indosat, Muammalat and Bank Syariah Mandiri (BSM), PT Berlian Laju Tangker with *sukuk* issuance worth Rp. 175 billion on May 28,2003. PT Bank Syariah Bukopin issued Mudharabah bonds on July 10, 2003 with the issuance Rp.45 billion.

Sukuk that use *Ijarah* contract was first published in 2004 by Matahari Putra Prima with a nominal value of Rp.150 billion with 13.80% return. Prior to 2004 all Islamic bonds issued by companies in Indonesia were using mudaraba aqad. Based on the Decree of the Chairman of the Capital Market and Financial Institutions (Bapepam-LK) Number: KEP-194/BL/2008 About Islamic Securities Code and Decree of Chairman of Bapepam Number Determination KEP-222/BL/2008 About *Sukuk* Ijarah I Summarecon Great Year Then in 2008 there were 21 Bonds Indonesia *Shariah* With Total Value Reached Rp. 4.697 trillion.

TABLE 1: SUKUK MARKET IN INDONESIA



Since its first appearance in 2002, Islamic bonds in Indonesia is experiencing amazing growth, especially in the year 2003 which grew 423% from 175 billion in 2002 to 740 billion in 2003. The second largest growth is recorded in 2004, approximately 125%. Islamic bonds nevertheless grew at a slower rate in 2005 and 2006. Market however rebounded in 2007 and 2008. In 2009, the issuance of Islamic bond grew significantly around 62.05% from 1,690 trillion in 2008 to more than 2,486 trillion in 2009.

Islamic bonds growing phenomenon occur between the period 2002 to 2008 is very interesting to be observed. In the initial period of 3 years of Islamic bonds as the new financial instruments much ogled by both market issuers and investors. However, the next period is between 2005 and 2006, the growth of Islamic bonds so rapidly experience a correction, it is very reasonable because at this stage Islamic bonds are ideally looking for form. However, in the period 2007 and 2008 re-grown Islamic bonds significantly, this is because the market has been able to see the real prospect of Islamic bonds either from the aspect of yield and risk.

4. DEFAULT IN SUKUK MARKET

The table below shows the evidence that the case for *sukuk* default increased significantly. In 20 months only, the number of *sukuk* default was around 21 *sukuk* defaulted. In 2009, Malaysia took the lead by 9 cases, Pakistan (2) and one default event in Saudi Arabia, Kuwait. In 2010 a continuation of the previous one, the 6 cases were divided equally between Malaysia, Pakistan (Khnifer, 2010).

In Malaysian case of *sukuk* default, so far, among all the available structures, *sukuk BBA* and *sukuk murabahah* are the two *sukuk* with the highest default cases in Malaysia. In fact, *sukuk BBA* was the *sukuk*with the most issuance in Malaysia in 2004, before the Malaysian *sukuk*market got dominated by *musyarakah sukuk* beginning 2006. *Sukuk BBA* is a financial certificate based on *BBA* contract as evidence of ownership right of the investors on the underlying assets (AbGhani, 2006). This *sukuk* is not similar to bond because the latter represents debt obligation of the issuer. It is created to service the need for working capital or to re-finance existing debt, normally to be used in the transportation sector, especially in the shipping and aircraft sectors, real estate, construction, and also in the petrochemical projects.

[1] According to AAOIFI Definition of Sukuk, Sharia Standard no.17, the asset should be tangible. However, SC Malaysia permitted both tangible and intangible.

TABLE 2: SUKUK DEFAULT

Company	Year Default	Outsatanding
SaadGroup'S Golden	2010	$165.5 Million
East Cameron Gas	2010	$165.6 Million
The Investment Dar	2010	$100 Million
New Allied Electronics	2010	$16.4 Milion
Maple Leaf	2010	Rs 8 Billion
Oxbridge Height	2010	$ 2.82 Million
Hartaplus	2010	
Ingress	2010	$7.2 Million
OilcorpBhd	2010	$ 20.6 Million
PSSB Ship Management	2010	RM 40 Million
Tracoma Holdings	2010	RM 100 Million
M-Trex Corporation	2010	RM 60 Million
Englotechs Holding	2010	RM 50 Million
Straight A's Portfolio	2010	RM 200 Million
Malaysia ITP	2010	RM 240 Million
Merchant Marine	2011	RM 120 Million
Nam Fatt	2011	RM 250 Million
Eden Housing Sukuk	2011	Rs 1.63 Billion
Eden Housing Sukuk	2011	Rs 730 Million
Tabreed	2011	$ 463 Million
IIGF Funding	2011	$ 200 Million

The case of Indonesia *sukuk* market, from the first issuance in 2002 until 2012 there is only one case of *sukuk* default. PT BerlianLaju Tanker (PT BLTA) is the first company that face default in Indonesia.Evidenced by the PT PEFINDO (rating agency)which have been lowered the ratings of *sukuk Ijarah* II/2009 of PT Berlian Laju Tanker Tbk (BLTA or the Company) from"idCCC" to "idD" as BLTA failed to fulfil payment and *Ijarah* Benefit Instalment on those notes.

5. PREVIOUS STUDIES

Maria Vassalou and Yuhang Xing (2003) examine default risk in equity returns. This papers uses the Merton (1974) model to compute monthly DLI (default likelihood indicators) for individual firms, and examine the effect that default risk may have on equity returns. This research shows that the size and book to market value are intimately related to default risk. Small firms earn high returns than big firms, only if they also have high default risk. Similarly, value stock earns higher returns than growth stock, if their risk of default is high. In addition, high default risk firms earn higher returns than low default risk firms, only if they are small in size and/or high BM. In all other cases, there is no significant difference in the return high and low default risk stock.

Trussel (1999) conducted a study trying to find a relationship between the bond rating companies and the components of Black Scholes model. The study concluded that the value of par (face) loans, company size and variance of asset can be explained bond rating. Where, the model is capable to explain 68% of the total sample correctly.

In addition, Hillegeist (2002) compare prediction model of bankruptcy which accounting information base (Z-score and O-score) and Merton model. The result of research is that Merton model has better capability for predicting the default probability rather than accounting information namely Z.-Score and O-Score.

Charkau (2006) also tried to compare the Merton model with Accounting Information model with the credit rating of company. The finding was that the Merton Model can explain additional information better than Z-score and O-score.

Tudela and Young (2004) use Merton model to predict the default probability of companies in United Kingdom. The researchers find that Merton model estimation is quite good for predicting and explaining companies which defaulted or not defaulted.

Manurung (2008) use Merton Model for predicting default probability of company that listed in LQ-45 in Indonesia. The result shows that company which has high stock liquidity also have chance to default. Company in financial sector have a higher default probability than the other sector.

Pasaribu, Tobing and Manurung (2009) also try to analyse the default probability based on Merton model. The research finds that some large company has high default probability, especially Bakrie and Brothers Subsidiaries. The result panel regression shows that liquidity ratio (cash to current asset ratio) and solvency ratio (debt to asset ratio) are the most important ratio to explain default probability. Profitability ratio (Net profit margin ratio) also can be good measure to predict Merton default probability.

Yiping Qu (2008) tested the relationship between macroeconomic variables and the probability default. The research finds that several results have been found. In Sweden, there are changes in macro factors such as Industrial Production, Interest Rate Spread, Exchange Rate, and Share Price affect the Probability of Default. However, this result cannot be used to generalise other countries cases, since this impact varies with countries.

6. DATA AND METHODOLOGY

6.1 SAMPLE SELECTION

In this part, we will describe the sample selection process. We use a training sample to build this model. The training sample is current companies which still have outstanding sukuk in the market. Originally it contains of 30sukuk listed in IDX during period of from 2007 until February 2012. Furthermore, the data for some of originator companies are not accessible due to un-listed companies. As a result, out of total 30 sukuk issued listed in IDX and only 17 sukuk companies are relevant. The data is reduced to 7 sukuk because we have to make sure that each originator companies have a complete financial data and we drop companies that have missing variables. In addition, because of data limitation the observation periods of this research are from quarter 3 2007 till quarter 4 2010.Totally in this research we use 120 samples data of sukuk. All financial ratio data are obtained from Indonesia stock exchange (IDX), Bloomberg. In addition, for systematic data, we collect from some important sources namely www.bi.go.id, www.depdag.go.id.

To test the determinant of sukuk default, panel data analysis with Random Effect will be used as a main tool to analyze the impact of systematic risk and unsystematic risk on the Sukuk Default Probability. The random effects model a regression with a random constant term (Greene, 2003). The model is as follows;

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + \dots .. + \beta_n X_{nit} + \varepsilon_{it} + \mu_{it}$$

Where,

Y_{it} = Sukuk Default Probability

β_1 = Intercept

β_2 = Slope Coefficient

$X_2 - X_6$ = *Systematic Risk*

$X_7 - X_{15}$ = *Unsystematic Risk*

The study uses two main variables, namely systematic variables and unsystematic variable. Unsystematic variables used in this study are some of the financial ratios used by previous research, especially Pasaribu, Tobing, Manurung (2009), Beaver (1966), Altman (1968 and 1977) and Ohlson (1980). There are nine financial ratios that will be used to cover the liquidity ratios (Current Ratio, Quick Ratio), profitability ratios (Net Profit Margin, Return on Asset and Return on

Equity), activity ratios (Total Asset Turnover and Fixed Asset Turnover) and the Solvency Ratio (Debt to Asset Ratio and Debt to Equity Ratio). In addition, this study also included some systematic factors to see how this may affect default probability of Sukuk. There are five systematic variables, namely industrial production index (IPI), Money Supply (M1), the Base Lending Rate (BLR), Exchange Rate and Consumer Price Index (CPI).

6.2 MERTON MODEL FOR PREDICT THE DEFAULT PROBABILITY

The core concept of the structural models, which originated from the seminal work of Merton (1974), is to treat a firm's equity and debt as contingent claims written on the firm's assets value. Default is triggered when the underlying asset process reaches the default threshold or when the asset level below the face value of the debt at maturity date. (Jones and Hanser, 2008).

The total market value of the firm's asset at the time t, Vt, is assumed to follow a standard diffusion process of the following form:

$$\frac{dVt}{Vt} = (\mu - D)dt + \sigma dz$$

Where μ denotes the expected total rate of return on the firm's asset value (subsequently 'expected asset return' μ) reflecting the business prospects (equal to the risk free rate, r, plus an asset risk premium), D is the total payout rate by the firm to all its claimant (including dividends to equity-holders and interest payment to debt holders) expressed as a percentage of of V, σ is the business volatility or standard deviation of a firms asset returns (percentage asset value changes), and *dz* is an increment of a standard wiener process.

Recall that the holders of a firm's equity have a residual claim on the firm assets at the same time as they have limited liability. Merton (1974) recognized that this makes a firm's equity equivalent to a long position in call option on the firm's assets and uses this equivalent to derive the market value and volatility of the firm's underlying assets.

The Merton model is derived from by treating the value of leveraged equity as a call option on the assets of the firm.

$$V_E = V_A N(d_1) - e^{-r(T-t)} DN(d_2)$$

Where V_E, is the value of equity, V_A is the value of asset and D is the face value of debt. (T-t) is the time to maturity of debt, r is the risk-free rate

$$d_1 = \frac{\ln\left(\frac{V_A}{D}\right) + (r + \frac{1}{2}\sigma_A^2)(T-t)}{\sigma_A\sqrt{(T-t)}}$$

$$d_2 = d_1 - \sqrt{(T-t)}$$

And N (.) is the function for cumulative normal distribution. To calculate σ_A we adopt an iterative procedure. We use daily data forms the past 12 month to obtain an estimate of the volatility of equityσ_E, which is then used as an initial value for the estimation of σ_AUsing Black-Scholes formulas, and for each trading day of the past 12 month, we compute V_A using V_E as the market value of equity of that day. In this manner, we obtain daily values forV_A. This then used to compute the standard deviation of thoseV_A, S, which is used as the value ofσ_A, for the next iteration. That procedure is repeated until the value ofσ_A, from the two consecutive iteration converge.

This approach also provides a relationship between equity and asset return volatility:

$$\sigma_E = \frac{V_A}{V_E} N(d_1)\sigma_A$$

Once daily value of $V_A$are estimated, we can compute the driftμ, by calculating the mean of change in lnV_A.

The default probability is the probability that the firm's assets will be less than book value of the firm's liabilities. In the other word,

$$P_{def,t} = Prob\left(V_{A,t+T} \leq \frac{D}{V_{A,t}}\right) = Prob\ (\ln(V_{A,t+T}) \leq \ln(D)/V_{A,t})$$

Since the value of assets follows the GBM of equation, the value of the assets at any time t given by:

$$\ln\ (V_{A,t+T} = \ln(V_{A,t}) + \left(\mu - \frac{\sigma_A^2}{2}\right)(T-t) + \sigma_A\sqrt{(T-t)\varepsilon + T}$$

$$\varepsilon_{t+T} = \frac{W(t+T) - W(t)}{\sqrt{T}} \text{and} \varepsilon_{t+T} \sim N(0{,}1).$$

Therefore we can write the default probability as follow:

$$P_{def,t} = Prob\left[\ln(V_{A,t}) - \ln(D) + \ (\mu - \frac{\sigma_A^2}{2}\right)T + \sigma_A\sqrt{T_{\varepsilon_{t+T}}} \leq 0]$$

$$P_{def,t} = Prob\ (-\frac{\ln\left(\frac{V_{A,t}}{D}\right) + \left(\mu - \frac{\sigma_A^2}{2}\right)T}{\sigma_A\sqrt{T}} \geq \varepsilon_{t+T}$$

Then we can define the distance to default (DD), as follow;

$$DD = \frac{\ln\left(\frac{V_{A,t}}{D}\right) + \left(\mu - \frac{1}{2}\sigma_A^2\right)T}{\sigma_A\sqrt{T}}$$

Default occurs when the ratio of the value of asset to debt is less than 1, or its log is negative. The DD tells us by how many standard deviations the log of this ratio needs to deviate from its mean in order for default to occur. We use Vassalu and Yuhang method that use Merton models. The theoretical distribution implied by Merton's model, which is the normal distribution. In the case, the theoretical probability of default will be given by:

$$P_{def} = N(-DD) = N(-\frac{\ln\left(\frac{V_{A,t}}{D}\right) + \left(\mu - \frac{1}{2}\sigma_A^2\right)T}{\sigma_A\sqrt{T}})$$

7. EMPIRICAL RESULT

7.1 *SUKUK* DEFAULT PROBABILITY

Result of test for default probability shows that there are two *sukuk* issued in Indonesia which have very high default probability. BerlianLaju tanker (BLTA) and PT PembangkitListrik Negara (PLN) are the two companies which have very high default probability. Using data from 2007 till 2010 this study finds that the average of default probability for BLTA was around 0.74546. This shows that the probability for *sukuk* that has been issued by PT BerlianLaju Tanker (BLTA) is about 74.546%. In addition, this number is also the highest probability in all *sukuk* in Indonesia.

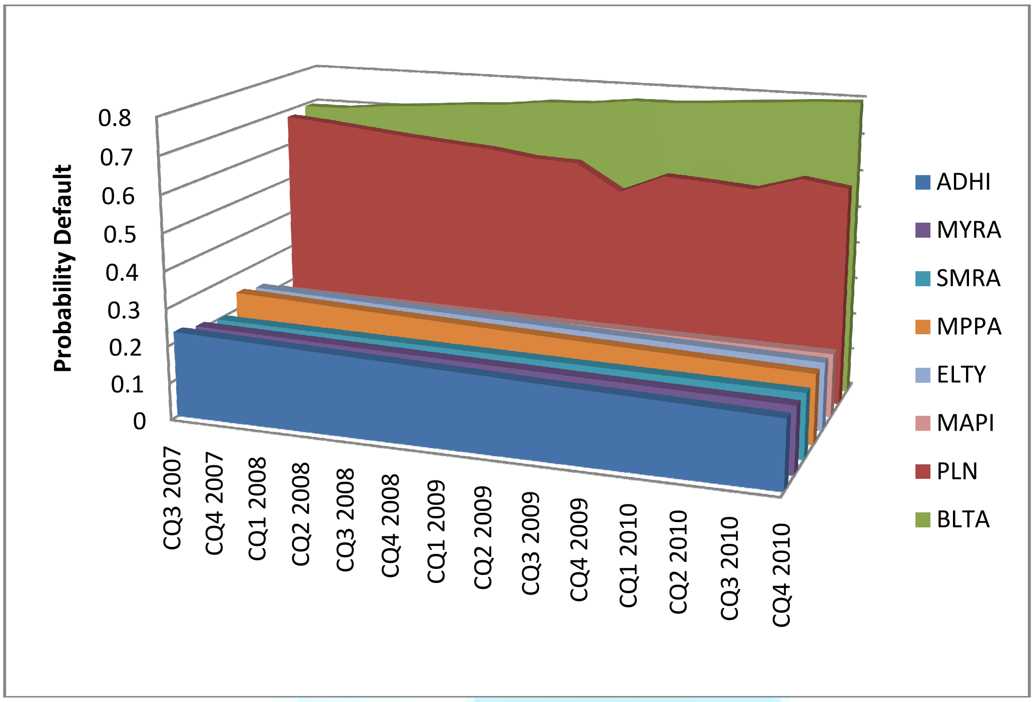
TABLE 3: DEFAULT PROBABILITY OF SUKUK

	Sukuk Type	Default Probability
AdhiKarya	Mudharabah	**0.20529**
BerlianLaju Tanker	Ijarah	**0.74546**
PembangkitListrik Negara	Ijarah	**0.61339**
Mayora	Mudharabah	**0.19474**
SummareconAgung	IJarah	**0.1866**
Matahari Putra Prima	Ijarah	**0.21593**
Bakrie Land Development	Ijarah	**0.20674**
MitraAdi Perkasa	Ijarah	**0.18457**

The Table above also describes that PT Pembangkit Listik Negara (PLN) which is a public company owned by Indonesia government and the second company with the highest default probability. On average, the probability of default for PT PLN is about 0.61339. This means that PT PLN, a government owned company, has a probability of default of 61.339% for its sukuk issued to increase their capacity for providing electricity in Indonesia.

In addition, the table above also describes the other company has lower default probability of default. These companies are such as PT Adhi Karya, PT Mayora, PT Summarecon Agung, PT Matahari Putra Prima, Bakrieland Development and PT Mitra Adi Perkasa. All company except BLTA and PLN have probability default from 0.18457 until 0.21593.For example, PT Adhi Karya has Default probability at 0.20529, Bakrieland Development around 0.10674. In this research, company that has lowest default probability is PT Mitra Adi Perkasa with the probability default around 0.18457

GRAPH 1: DEFAULT PROBABILITY OF SUKUK



This study is conducted to analyse why PT Berlian Laju Tanker defaulted and this is the only case of default reportedin Indonesia *sukuk* market. Of course this case can be the bad precedent for the *sukuk* development in Indonesia. From the graph above, this study derives a very important finding that there are very high gap between two groups of company. PT BLTA and PT PLN in the first group and the other company comprise PT Adhi Karya, PT Mayora, PT Summarecon Agung, PT Matahari Putra Prima etc as the second group. PT BLTA and PT PLN have very high default probability compared with the other company. Therefore, from this research we can predict that PT BLTA and PT PLN will default. In case of PT BLTA, in February 2012 we had sufficient evidence that PT BLTA did default.

TABLE 4: DEFAULT PROBABILITY QUARTERLY

	Q3 07	Q4 07	Q1 08	Q2 08	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09	Q1 10	Q2 10	Q3 10	Q4 10	**average**
ADHI	0.23	0.23	0.22	0.218	0.214	0.21	0.207	0.2	0.199	0.196	0.19	0.189	0.19	0.18	**0.2053**
BLTA	0.693	0.69	0.71	0.7149	0.726	0.73	0.747	0.75	0.765	0.765	0.77	0.782	0.79	0.8	**0.7455**
PLN	0.68	0.67	0.66	0.6456	0.636	0.63	0.61	0.61	0.534	0.586	0.58	0.568	0.6	0.59	**0.6134**
MYRA	0.213	0.21	0.21	0.2046	0.202	0.2	0.196	0.19	0.19	0.188	0.18	0.182	0.18	0.18	**0.1947**
SMRA	0.201	0.2	0.2	0.1942	0.192	0.19	0.188	0.19	0.183	0.181	0.18	0.177	0.17	0.17	**0.1866**
MPPA	0.247	0.24	0.24	0.2319	0.227	0.22	0.218	0.21	0.209	0.204	0.2	0.195	0.19	0.19	**0.2159**
ELTY	0.232	0.23	0.22	0.22	0.216	0.21	0.208	0.2	0.201	0.197	0.19	0.19	0.19	0.18	**0.2067**
MAPI	0.198	0.2	0.19	0.1915	0.19	0.19	0.185	0.18	0.181	0.179	0.18	0.176	0.17	0.17	**0.1846**

Moreover, this study also describes the default probability of *sukuk* issued by company between Quarter 4 2007 and Quarter 4 2010. The table above shows the default probability per quarter from 2007 until 2010. From the table, we see the default probability of PT Berlian Laju Tanker (PT BLTA) increased gradually per quarter from 0.68 in quarter 4 2007 to 0.73 in quarter 4 2008, and increased until Quarter 4 2010 around 80%. It means that year by year the default probability of company increased.

Although PT Pembangkit Listrik Negara (PLN) has very high defaultprobability on average, from the table above the number fluctuates in each quarter. For example, in quarter 4 2007, the default probability of *sukuk* was at 0.68 and down to 0.63 in quarter 4 2008. In quarter 4 2010 the default probability decreased even more to around 0.59. This finding shows that in term of financial condition, PT PLN has better condition than PT BLTA.

7.2 DETERMINANT OF SUKUK DEFAULT PROBABILITY

After we have identified the default probability *sukuk* in Indonesia, this research will analyse the impact of systematic risk and unsystematic risk to default probability. Moreover, this study also will provide evidence which variable are more important to predict the default probability either systematic risk i.e. macro-economic variable or unsystematic variable namely financial performance of company issuing *sukuk*.

Therefore this study uses panel regression to find the impact of systematic and unsystematic variable on the default probability. This panel regression model tests are conducted to meet the objective of the study. This regression model tests carried out by using the F test and the test T, in which significant results of the test F and T tests should be below the level of significance α was set at 5%.

F-statistic (260.8617) is significant at 1% level. Because the probability is less than 0.05, the model can be used to predict the default probability of *sukuk*. Result of panel data analysis in the table shows that the independent variables namely systematic variable and unsystematic variable have a significant effect on default probability of *sukuk*.

Weighted Statistics			
R-squared	0.980223	Mean dependent var	0.558149
Adjusted R-squared	0.976465	S.D. dependent var	0.281241
S.E. of regression	0.043145	Sum squared resid	0.186151
F-statistic	260.8617	Durbin-Watson stat	0.627107
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.980223	Mean dependent var	0.558149
Sum squared resid	0.186151	Durbin-Watson stat	0.627107

T-test results show that there are two systematic variables and two unsystematic variables that have significance effect to the default probability of *sukuk*. Money supply (M1) has significant effect to probability default of *sukuk*, which from the statistical analysis show the t-value at 2.482009 and Probability 0.0147 less than 0.05. In addition, Exchange rate is the second variable of systematic factor that has significant impact on the *sukuk* default. The t-test result shows at 2.230964 with probability 0.0279 below 0.05, means that this variable is significant.

Dependent Variable: PD				
Method: Panel EGLS (Period random effects)				
Date: 04/27/12 Time: 21:54				
Sample: 1 120				
Periods included: 15				
Cross-sections included: 8				
Total panel (balanced) observations: 120				
Swamy and Arora estimator of component variances				
White cross-section standard errors & covariance (no d.f. correction)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.494448	0.052721	9.378561	0.0000
IPI	-0.000573	0.000595	-0.962360	0.3382
M1	1.31E-07	5.27E-08	2.482009	0.0147
BASE_LENDING_RATE	-0.000192	0.001289	-0.148995	0.8819
EXCHANGE_RATES	3.71E-06	1.66E-06	2.230964	0.0279
CPI	0.000102	0.000112	0.910101	0.3650
QR	-0.003235	0.002501	-1.293520	0.1988
NPM	0.000295	0.005924	0.049768	0.9604
ROA	-0.123388	0.046639	-2.645618	0.0095
ROE	-0.002984	0.002337	-1.276794	0.2046
TAT	0.006706	0.019031	0.352377	0.7253
DTA	-0.066273	0.055414	-1.195956	0.2345
DTE	0.000203	8.92E-05	2.278624	0.0248
	Effects Specification			
			S.D.	Rho
Cross-section fixed (dummy variables)				
Period random			0.000000	0.0000
Idiosyncratic random			0.044819	1.0000

Furthermore, from the unsystematic variable namely financial ratios, there are only two variables that have significant impact to the default probability of *sukuk*. Profitability ratio and Solvency ratio are the two financial variables that can be used as predictor analysis in default probability of *sukuk*. Profitability ratio specifically return on equity has t-value around -2.645618, with the probability at 0.0095. While, for Debt to Equity Ratio (DTE) is the last variable that has significant impact to the default probability of *sukuk*.

From the results of statistical tests above, we can create a model that is

$$Y = 0.494448 + 1.31E-07M1 + 3.71\text{E}-06ExchangeRate - 0.123388ROA + 0.000203DTE + \varepsilon_{it} + \mu_{it}$$

The ability of variable independent for predicting the default probability is very high around 98%. It is described by the R-square around 0.980223, meaning that the model can predict the default *sukuk* at 98%. Therefore from this point we can note that macro-economic variable, profitability ratio and solvability ratio are very important to analyse*sukuk* default probability

This research finding has similar result with the previous studies, especially Pasaribu, Tobing and Manurung (2009) which stated that profitability and solvency ratio are the two variables which have impact on the default probability. However, this research is different in term financial ratio. The previous study finds that the Net Profit Margin (Profitability ratio) significant, but this research find ROA that has significant impact to Default Probability. The coefficient is about -0.123388, means that when ROA increase 1%, the Probability default of *sukuk* will decrease at 0.123388%. In addition, this study reported similar resultto the previous study that accepted ROA, EBIT to Asset and cash flow having significant role in determining default probability (Pasaribu, Tobing and Manurung 2009). In the context of profitability ratio, company that issues*sukuk* with higher profitability namely ROA will have smaller default probability.*Sukuk* are paid by the cash flow from profit. Therefore, company that has higher ROA will have more ability to pay its obligation *i.e* the*sukuk* fee.

Solvency ratio is another financial ratio that has significant impact on the default probability of *sukuk* with the coefficient of 0.000203. Means that when Debt to equity increases by 1% the probability default of *sukuk* will increase at 0.000203%. Debt to equity ratio (DTE) is the most important variable for predicting the default probability of *sukuk*. This means, company which has higher debt, when this company issues *sukuk*, it will have a higher default probability. Of course it is in line with the nature of *sukuk* and debt. Mostly, company issuing*sukuk* also in debt perspective, or there are no different between sukuk and debt interest base, in term of purpose, uses of sukuk and debt, and accounting treatment. Actually, if company uses *sukuk* with ijarah or mudharabah or musharakah, company must have special treatment to this instrument. For example, *Sukuk ijarah* is the Islamic financial instrument that will pay *sukuk* holder based on the fee, or *ijarah* fee, but in reality all *sukuk* issued by financing purpose, capital structure purpose, or even company that has very high debt ratio will issue sukuk in order more attractive to the investor since this instrument is shariah base.

In addition, this study also uses macroeconomic variable as the benchmark for systematic risk. This study finds that there are two main macro variables that have significant impact on the default probability namely Money Supply (M1) and Exchange Rate variable. This finding is similar to the previous research conducted by YipingQu (2008) that finds changes in macro factors such as Exchange Rate, affect the Probability of Default. Furthermore, this research also finds the impact of Money Supply to the default probability. Money supply is animportant macroeconomic tool in controlling the economic condition. Money supply has an impact on the interest rate. And as the result Money supply will have effect on the default probability.

8. CONCLUSIONS

This paper analyzes the concept of default from *Shariah* perspective, especially default in *sukuk* that also can be categorized as debt based instrument. From literature analysis, this study has found that there are specific concepts of default in Islam namely concept of "*taflis*" that has been regulated in *Shariah* law. Therefore, as a preliminary research about default in *sukuk* and its relationship with *taflis* concept, this study concludes that the *sukuk* needs to be synchronized with the concept of *taflis* when this *sukuk* are defaulted. It is very important to ensure that all *sukuk* processes are clear in relation to the right and obligation of debtor and creditor, even in the case of default.

Analysis of *sukuk* default probability using Merton Model shows during the period of 2007-2010, there are two sukuks with high default risk, PT Berlian Laju Tanker with an average default probability at 74 456% and PT Pembangkit Listrik Negara at 61 339%. In addition, the other sukuk has quite low default probability which is around 20% on average. More interestingly, in February 2012, PT Berlian Laju Tanker declared to be defaulted. This indicates the predictive power of Merton Model to detect probability of default.

Panel regression analysis shows that the systematic variables and unsystematic variables are able to explain *sukuk* default risk. Money supply and the exchange rate are the two systematic variables that could explain the changes of the *sukuk* default probability. In addition, unsystematic variables show that the solvency ratio (debt to equity ratio) and the profitability ratio (Return on Assets) have significant implications for default probability of *sukuk*.

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POVERTY ALLEVIATION IN THE INFORMAL SECTOR AS A CATALYST FOR NIGERIA'S ECONOMIC GROWTH

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ABSTRACT

The paper was aimed at demonstrating the need to develop the informal sector of the economy as a catalyst for economic growth. Secondary sources of data were utilized, while employing the method of critical analysis. It is the position of the author that the matrix of problems endemic in the unrecorded economy is perpetuated by official laxity mixed with indifference, while noting the imperatives of the informal sector as the real bedrock of the economy, in that majority of Nigerians are eke out their living outside official benefits. Because predominantly people engage in informal activities, and due to the astronomical poverty levels, strengthening the informal sector is a ready mechanism of exiting the pigeon-hole of underdevelopment and mass misery. It is recommended that for stable long term growth, economic structures, which deliberately ventilate the activities of the informal sector, be strengthened and while non-existent, instituted.

KEYWORDS

Growth, Informal sector, Poverty, Nigeria.

INTRODUCTION

A plethora of terms have been used to refer to the term "informal" in literature. These include shadow, subterranean, black, unreported, second, bazaar and invisible. Others are backyard, underground, unorganized, hidden, irregular, clandestine, illegal, unobserved, unreported, murky, unrecorded and residual. ILO (1972) was the first to employ the term "informal sector" in its report on Kenya.

Poverty in Nigeria particularly affects the informal sector. This is because apart from having a high correlation with the poverty level, it engages more than half of the country's population in one form of economic activity or the other. The informal sector is a group of household enterprises or unincorporated enterprises, which may employ contributing family workers and employees on an occasional basis; and enterprises which employ one or more workers on a continuous basis. This sector has particularly been paid lukewarm attitude to in Nigeria and bedeviled by such problems as inaccessibility to finance and inappropriate technology.

It is not in contention that various governments have embarked on one form of poverty alleviation strategy or the other. What is however contentious is the degree to which the various initiatives have impacted on the target population, especially those in the informal sector of the economy. There is increasing disenchantment among people in the informal sector about government's initiatives at addressing their plight, as their perception is that of total and unmitigated failure about agencies charged with the responsibility of reducing poverty. In a nutshell, there is astronomical increase in people living under poverty than those who escape it.

Very little has been done to elevate the downtrodden and poverty-stricken masses of the Nigerian society, in terms of the appalling state of want and misery through a rather unbecoming and unnecessary concentration on those sectors of the economy, whose linkage effects on the aggregate welfare of the people, have had very little, if any beneficial results. Little attention is paid to the informal sector which comprises individuals and entities that operate outside the ambits of the benefit system of government.

Various institutional bottlenecks have tended to engender a feeling of indifference to the informal sector as an important catalyst of growth. With inaccessibility to the formal acquisition of skills through public institutions and blockage to finance, coupled with occasional cosmetic government gestures, those who practice within the informal sector have had to eke out their living in the midst of social discontent.

The paper explores the evolution of the informal sector in Nigeria, the role it plays, the extent to which it has been empowered by government policy initiatives as well as how the endemic poverty levels can be addressed. The mechanism by which the informal sector can be incorporated into the mainstream economic hub is x-rayed, with a view to harnessing its potential of employment creation, poverty reduction and income generation, to meet the country's developmental needs.

LITERATURE REVIEW

MEANING AND NATURE OF THE INFORMAL SECTOR

Academic fuzziness appears to be endemic in terms of having a consensus definition of the informal sector. However, there are common grounds of agreement in relation to informal sector activities which encompass operations that are usually small in scale, ownership predominantly private and vested in family members with few paid employees and production method largely labour-intensive.

Two approaches currently exist in the definition of the informal sector. These are the definitional and the behavioural (legalistic). While the definitional approach looks at the informal sector activities as those not captured in the Gross domestic product (GDP) or national income estimates, the behavioural approach considers the extent to which activities are in compliance with established regulatory, judicial as well as institutional framework (Feige, 1990).

According to the International Labour Organization (2002), the informal sector is "a group of household enterprises or unincorporated enterprises owned by household that include informal own-account enterprises, which may employ contributing family workers and employees on an occasional basis; and enterprises of informal employers, which employ one or more employees on a continuous basis." This definition provides criteria for specific circumstances and thus gives each country some flexibility in terms of the upper limit on employment size, the non registration of either the employees or the enterprise, the inclusion or exclusion of domestic or professional personnel as well as the inclusion or exclusion of an occupation such as agriculture, which is predominant in many parts of the world. The informal sector is characterized by family ownership of enterprise. This is particularly true of Nigeria where it is pervasive to find sons and daughters actively participating in it, making succession and business inheritance prevalent. Only a negligibly few practitioners can be found where family ownership and control of business are not rife. This sector operates outside the system of benefits and regulation of government which essentially characterize the formal sector.

To Ademu (2006), the informal sector consists of those activities which generate employment for some urban residents and engaged in for the purpose of survival in the absence of formal employment. Ekpo and Umoh (2011) define the informal sector as economic activities in all sectors of the economy operated outside the purview of government regulation.

Perhaps, informality may be better appreciated when contrasted with the view of scholars on the formal sector and its practitioners or activities. Weeks (1975) defines formal firms as those recognized, nurtured and regulated by the state, while Mazumdar (1975) distinguishes between formal and informal sectors in terms of state protection. Hart (1973) defines the formal sector as wage earners compared to the self-employment scenario of the informal sector. These views are reflective of the dualistic nature of the labour market, especially in developing or transition economies and the definitions offered have their root in the seminal work of Lewis (1954), who stressed that there is an abundance of labour supply in the informal or rural economy.

There are reservations about the definitions offered above. Sethuraman (1981) asserts that many of the definitions are ambiguous, while Bromley (1978) attacks some of the definitions as too simplistic. This has led to the context-specific view of the informal sector given by Cartels et al (1989) who maintain that informal sector activities connote a process of income generation unregulated by the institutions of society in a legal and social environment in which similar activities are regulated. This can be applied to Nigeria in which the activities of the informal sector tend to go relatively unnoticed by the institutions of state. Very many activities go unregulated. For example, it is rather unheard of to see activities such as hair-dressing, bicycle and motor cycle repairs, brick-making, vulcanizing works, dress-making and the like directly regulated by government, whereas in activities like civil and mechanical engineering, formal standards are applied and recognized by state institutions.

What can be said is that the informal sector covers a wide range of activities that combine survival behavior of people in an environment of scarce opportunities as well as being the product of rational behavior of entrepreneurs who wish to evade the regulation of the state. The two types of activities are briefly described:

Survival activities: These activities are engaged in as a way of coping with limited opportunities. They include casual jobs, holding many (multiple) jobs, doing temporary jobs, engaging in subsistence agriculture and the like.

Unofficial strategies to earn money: These include illegality in business such as tax evasion, non-registration of business, avoidance of labour, government or institutional regulations, in addition to underground activities such as crime and corrupt tendencies.

It should be noted that the informal sector is usually outside the tax structure and not captured in tax revenues of government; and consequently, not included in gross national product (GNP).

From the literature, the nature or characteristics of the informal sector can be viewed from the following:

1) Business is usually family owned;
2) Dependence on indigenous resources;
3) Labour intensive method of production;
4) Skills are acquired outside of the formal sector;
5) Ease of entry;
6) Operations are usually small-scale;
7) Markets are unregulated and competitive.
8) Technology used is adaptive;
9) Little unionization;
10) No legal minimum wage;
11) Weak safety standard at work;
12) Temporary activities;
13) Sometimes clandestine employment

SCHOOLS OF THOUGHT

Four schools of thought exist as far as the informal sector of a nation's economy is concerned. One of them is the Dualistic School. According to Sethurama (1976)**,** the school subscribes to the idea that the informal sector comprises activities of marginal dimension which provide incomes and a safety net in time of crisis for the poor of the society. The presence of the informal sector can be traced largely to the unavailability of modern jobs to absorb surplus labour, a result of slow rate of economic growth or faster growth rate of the population. This is not completely true of Nigeria. The marginality of the informal sector is not a result of slow economic growth or faster growth rate of the population. To attribute the poverty level of majority of Nigerians to simply a lack of growth is to miss the point. What the theory fails to observe is that a higher growth rate does not necessarily imply poverty reduction. What has happened in Nigeria over the years is simply growth without development, surplus (windfall) without redistribution, a position supported by studies by Yesufu (1996), Ogwumike (1997) and Bulama (2003).

The second school of thought is the Structuralist School. According to this school, it is the nature of capitalist development rather than a lack of growth that is responsible for the pervasiveness of the informal sector (Cartels et al, 1989). This is a perfect description of Nigeria's economic and political woes, reflected in her poverty levels. The local economic environment suffers from many bottlenecks resulting from wholesale adoption of western concocted economic paradigms which ignore the social and cultural conditions of the country. The economy has been bastardized by colonialism, and the subsequent neo-colonial exploitation. This is coupled with undue emphasis on competition, free markets, liberalization and globalization as dictated by international financial institutions, all of which have tended to weaken the productive capacity of the vast majority of people. This has led to heavy capital accumulation in the hands of a few, to the detriment of the millions of able-bodied Nigerians in the informal sector who are left in abject poverty.

There is the Legalist School. According to de Soto (1989), the informal sector is made up of micro-entrepreneurs who choose to carry out their activities informally so as to avoid the time, cost and effort needed for formal registration. Lastly, there is the Il-legalist School. To thinkers in this school, the informal sector can be seen as an underground or black enclave and its operators may choose to operate illegally and thus avoid taxation, rental fees, operational costs as well as commercial regulations which exist in the formal sector (Maloney, 1999).

Both the legalist and Il-Legalist schools do not seem to be supported by evidence in the Nigerian economy. For one thing, if entrepreneurs in Nigeria choose to avoid the time, cost and effort of formal registration, this could be explained by the apparent apathy in government's programmes, which while laudable in outlook and theory, do not encourage genuine people's participation. A classic example is the parlous state of power supply, where discrimination in tariff is pervasive. Nigerians have shown capacity to pay for services delivered as evidenced by the successes of telecommunications operators. Disinterest in paying for power is symptomatic of official gross irresponsibility, corruption and ineptitude and has very little to do with an inherent desire to avoid payment for useful social services.

The fact that most of the practitioners in the sector are secluded from the formal education system further reinforces their low capacity and general complacent attitude towards latest methods and innovation. A vast majority of the practitioners in the sector is not accessible to modern techniques and processes. Consequently, most of the skill acquisition results from apprenticeship where the "student" undergoes a few years of training under a "master" and in some cases only a couple of months as in the case of hair-barbing and vulcanization. This is further worsened by the fact that foreign technology is a far cry and outside the reach of the practitioners, thus deepening conservative methods and outlook which has been disastrous to local productivity.

INFORMAL SECTOR POVERTY AND EXTERNAL DYNAMICS

A link can be established between poverty and the informal sector, both of which are significantly influenced by external dynamics. Internal and external factors are responsible for the size and plight of the informal sector. Internally, corruption, lack of transparency and accountability at all levels of governance, gender inequality among others contribute to rising poverty levels. Economic growth of nations occurs in different ways that can reduce poverty, promote gender equality and enhance viable development. This creates a link between economic growth and poverty reduction. In Nigeria, the reverse has been the case. While revenue profile of Nigeria rose from N4 billion in 1975 to N26 billion in 1980, and GNP per capita rose from $360 to more than $1000 in the same period, the percentage of the population that was poor grew from 15% in 1960 to about 70% in 2007 (Oyemomi, 2003; Bulama, 2003; Elaigwu, 2007).

Although it can be said that there has been rising gross domestic product in Nigeria, what is however important is the nature of income distribution to various sectors of the economy, as this has much to do with how the poverty of the informal sector is addressed. Economic growth adequately reflected in the Gross National Product (GNP) of a country, has been perceived to be an index of national welfare, so that any strategy to grow it can be adduced as poverty alleviating. However, it is known that a rising level of absolute GNP which theoretically tends to indicate that the poor of society would be better off, is not reflective of what obtains in the real world. While the improvement in a society's productivity may be seen as desirable, it does not necessarily imply poverty alleviation,

since mere growth in output is of little consequence if the incomes from expansion go to a negligible segment of the population, as has been the case in Nigeria (Ogwumike, 2003).
Garba, (2006) and Obadan (2001) are of the view that policies that merely increase the growth of an economy without spreading the gains of growth to groups which suffer the most certainly improve the incomes of the rich. This is the case in Nigeria, where rising per capita incomes merely camouflage the sorry state of poverty in which the majority of Nigerian wallow. Because majority of Nigerians are in the informal sector, it follows that the structure of the economy is largely responsible for the high level of poverty. Thus, poverty has been an outcome of economic, social and political processes that interact with and reinforce each other in ways that worsen the deprivation of those in the informal sector of the Nigerian economy.
Externally, the forces of globalization reflected in international institutions' policies reinforce internal forces and tend to weaken the capacity of Nigeria's informal sector to develop. The deliberate policy measures and prescriptions by the Federal Government over the years have yielded only what can be properly referred to as marginal results, as various domestic and foreign distortions have tended to make such policies superfluous without adequately solving the multi-faceted developmental needs of the country. Though it is passionately argued in the international economic arena that governments can seek to dramatically put their countries on the path of sustainable growth through the delivery or provision of infrastructure, poverty reduction, and provision of essential services that adequately respond to effective and efficient demand (World Bank 1994), the case of Nigeria cannot be said to have safeguarded the interests of the millions of poverty-stricken masses, nor have environmental and cross-sectional conditions improved. For example, inflationary trends that were the logical consequence of expanded government expenditure in the 1970's became horrendous and catastrophic in the 1980's especially following the introduction of the Structural Adjustment Programme (SAP), with the low-income earners and the informal sector hit the most.
A strong link exists between the international economic system and the poverty levels in the informal sector of the Nigerian economy. This has its origin in imperialism with its attendant colonialism and neo-colonial tendencies. There has been failure to change inherited colonial economic and political structures, situations that have seriously affected the nature of domestic production. With modern technology in the advanced countries in the production of synthetic substitutes of raw materials, the collapse of international commodity agreements as well as the various policies of protectionism of the developed countries for their own product, the productive capacity of Nigeria's informal sector has been severely weakened. Rising poverty has been the aftermath.
Programmes concocted and crafted by technocrats from international financial institutions have exacerbated, rather than ameliorated the countless ills of the country, as they tend to strangulate industries and sectors where the majority of Nigerians eke out their living. Liberalization in the banking sector for instance has done little to address the poverty in the informal sector, as there appears to be very weak link between banking and the informal sector. The lukewarm attitude of banks to the informal sector stifles hopes of improvement and expansion in such areas as tailoring, welding, barbing, block-making and vulcanization works, among others. One reason for the inaccessibility of informal sector operators to the banking sector for finance is their inability to meet harsh conditions (e.g. collateral security), as well as bank distrust of their performance and poor record-keeping. This is in addition to poor credit transactions in the country, as in the case of hire purchase arrangements, necessary for the advancement of equipment. Thus, poverty reduction in the informal sectors is not supported by the liberalization of key economic areas as advanced by international financial institutions (Abeng, 1997).

THEORETICAL FRAMEWORK
The incidence of poverty in Nigeria's informal sector can be aptly situated within the context of the International Structuralist Model or approach, which lends credence to the existence of institutional and structural rigidities in poor countries occasioned by a dependence and dominance relationship to the advanced countries. The poverty level of the informal sector in Nigeria can be explained using the two prongs of the model i.e. the Neo-Colonial Dependency Model and the False Paradigm Model.
Baran (1962), Dos Santos (1973), Onimode (1980) and Ake (1981) are of the view that the bottlenecks and utter unresponsiveness of local economic environment are due substantially to the wholesale adoption of western concocted economic paradigms which ignore the social and cultural conditions of developing countries of Africa, Latin America and South-East Asia, which had in the past been brutally and ignominiously bastardized by colonialism, and the subsequent neo-colonial exploitation, with undue emphasis on competition, free markets, liberalization and globalization. In Nigeria, these conditions have tended to engineer a regime of heavy capital accumulation in the hands of a few to the detriment of the millions of Nigerians.
The second strand of the International Structuralist Model is the False Paradigm Model which stresses that inappropriate and faulty advice offered by international experts from international institutions such as the World Bank, IMF, UNDP and ILO do little or nothing to help the poor countries. The advice, no matter how well intentioned fail to take into account various institutional and structural constraints of poor countries and consequently promote the vested interests of rich countries and their local surrogates rather than the majority of the people. More disgusting is the overdose of elegant concepts, models and paradigms with which the scholars, government functionaries and policy makers are fed by the institutions, with little if any attention paid to prevailing underlying causal factors of poverty such as inequality in land ownership and unequal access to domestic and foreign financial assets.
A classic example of the false paradigm model in Nigeria is the Structural Adjustment Programme (SAP) of 1986, which was thought to work through market forces to remove distortions in the economy, with little or no government intervention (Odejide, 1996). The utter irrelevance of SAP has been demonstrated by Garba (1996) in his study that shows that there was a resumption of positive growth in aggregate and sectoral GDP before SAP was introduced. The Structural Adjustment Programme merely camouflaged the many problems besetting Nigeria and the economy buckled under the policy and under the same set of conditions which had made previous development plans fail (Yesufu, 1996). Even the recent efforts at developing the country through the National Economic Empowerment Development Strategy (NEEDS) follow a similar false paradigm model as the strategies are merely couched in World Bank framework, without taking due cognizance of Nigeria's economic and structural bottlenecks.
The International Structuralist Model gives rise automatically to the concept of dualism, with its domestic and international dimensions. Dualism represents the existence and persistence of increasing divergence between rich and poor countries as well as between people on various levels. Singer (1970) outlines four principal elements of dualism. First is the existence and persistence of different sets of conditions in which some are regarded as "superior" and others "inferior." This is particularly instructive in the case of Nigeria where there is the co-existence of the wealthy with the poor, the highly educated with the illiterate and at the international level, Nigeria with the advanced and developed countries.
Second, the co-existence of the sets of conditions is not merely transitional but chronic. Nigeria's poverty conditions have not only been sustained overtime but have also become rather exacerbated and reinforced by a conglomeration of internal and external forces. Consequently, orthodox growth theories and paradigms for poverty alleviation which assume that the pandemic will be eliminated with time (as it is considered a mere historical phenomenon) have been refuted by the historical facts of increasing global inequalities.
Third, rather than showing any signs of diminishing, the degrees of the dual sets of conditions tend to increase. Nigeria is a glaring case of worsening poverty levels with the pandemic skyrocketing from 15 percent in 1960 to 66 percent in 1996 and 70 percent in 2007. While the average Per Capital Income of the world in 2004 was $7170, that of Nigeria was a dismal $290 (FOS, 1996; Garba, 2006; Elaigwu, 2007).
Lastly, the existence of "superior elements" in the international economic order has tended to do little or nothing to pull up the "inferior elements." Nigeria has been a particular victim, as various policies and programmes doled out to her from the advanced countries, couched in elegant concepts and flowering semantics have rather undermined her growth and development rather than be succour for the great majority of her population who live in abject poverty.

CATEGORY OF THE INFORMAL SECTOR
There are three categories of the informal sector, according to the International Labour Organization (ILO, 2002):
1) Owner-employers of micro enterprises
2) Own-account workers, who own and operate one-person business,
3) Dependent workers, paid or unpaid. These include wage workers in micro enterprises, apprentices, contract labour, home-workers, unpaid family workers and paid domestic workers

Based on the wide range of activities encapsulated by the informal sector in Nigeria, it can be categorized into the following sub-sectors:

(a) **Primary Informal Sector**: This sector involves the production of goods which require further processing, in other words exploitation of materials in their natural setting. Food and cash crop farming, fishing, quarrying (petroleum excluded), lumbering and hunting are some of the activities predominant in this sector in both the urban and rural areas of the economy.

(b) **Secondary Informal Sector**: Activities here involve the transformation of raw materials through value addition into other forms. Such transformation could lead to the production of either finished or semi-finished goods. Essentially, secondary informal sector encompasses activities ranging from manufacturing to construction. Activities under this sub-sector include iron works, furniture production, small-scale manufacturing and construction, brick-making, saw-milling, cloth making and the like.

(c) **Tertiary Informal Sector**: This is the services sub-sector. Activities include tailoring, transportation, retail-trading, medical practice (such as birth attendants, native orthopedic or bone-setting, traditional spiritualists, etc). Financial services are also a part of the tertiary informal sector. It includes savings schemes such as Esusu among the Yoruba, Adashi among the Hausa and Isusu/Utu among the Ibo. The practice generally is one in which part or whole of the accumulated fund is given periodically and rotationally to members/contributors until every member has benefited. It is prominent in rural areas where funds are usually channeled to such activities such as building, small-scale trading, marriage ceremonies, purchase of land, procurement of trade tools and the like. Even among the educated in towns and cities, this practice is prevalent. Teachers in primary, secondary and tertiary institutions for instance engage in informal saving schemes ("contributions") at month-ends or such times when salaries are paid and the fund rotated among the members of the fund. Money lending is also noteworthy among the financial services providers in the informal tertiary sub-sector. Under this, credit facilities are offered by the lenders for interest ranging between 10% and 30% monthly, a condition suggestive of exploitation and rent-seeking.

THE EVOLUTION AND SIZE OF THE INFORMAL SECTOR IN NIGERIA

The informal sector in Nigeria is not a recent phenomenon. It is rooted in the distant past, although dynamics of economic, political and social life overtime have had their impact on its evolution. Traditional arts and crafts, predating colonialism can be said to have brought the informal sector into existence, even though in the distant past, the size was relatively small. Artisans, gold and black smiths, repairers, petty traders and a host of others existed long before the advent of either the west or east to Nigeria. Changes in economic life engendered by both internal and external forces have largely changed the nature of activities of the informal sector such as hawking, fashion design and carpentry, so that it can be said that such changes have only added impetus and variety to activities of the informal sector, whereas the basic characteristics (such as small-scale production and family ownership of the business) have remained largely unchanged.

About 83.4% of informal sector enterprises in Nigeria are individually owned, a situation that varies across cities. A study conducted showed that while Nnewi had ownership rate of 98.5%, Aba had a rate of 57.3%. About 50% of the enterprises in the sector are registered in one form or another with government. The sector is characterised by low capitalization. Investment generally lies between N10,000 and N100,000, with only 6.9% having gross annual income in excess of N500,00. Specifically 1.3%, 3.0%, 1.7% and 5% of the study group in Lagos, Ibadan, Kano and Nnewi respectively had gross annual income in excess of N500,00 (Abumere et al, 1988). The situation has not far changed and might have become worse due to the devastation of many informal small scale businesses occasioned by infrastructural decay.

THE ROLE OF THE INFORMAL SECTOR

The role of the informal sector as an engine of growth is widely known. Its employment generating capacity is global. Studies conducted in the mid-1970s on leading urban centres in selected African countries showed that the contribution of the informal sector to employment generation was 50% for Lagos (Nigeria), 95% in the Republic of Benin and 65% in Kumasi (Ghana) (ILO, 1985). According to Rukmana (2007), the proportion to the total urban employment of informal sector is highest in Africa, followed by Asia, Latin America and the Caribbean, with estimates ranging from between 50 to 60 percent in some South East Asian and South Asian cities. For the countries surveyed in 1999 by the International Labour Organization (ILO), the proportion of the urban work force engaged in the informal sector is highest in sub-Saharan Africa, accounting for more than 50% of urban employment in two-thirds of the countries surveyed (Nwaka, 2005).

According to Abumere et al (1988), only a few informal enterprises existed in Nigeria before 1981 with just 4.5% of them in existence before 1970 and about 16.4% up to 1980. The excesses of the Structural Adjustment Programme of the 1980s led to an astronomical rise in the number of informal enterprises due to the presence of a huge army of unemployed labour which had to be absorbed by the informal sector. Consequently, in the midst of monumental failure of government policy drives, the informal sector has amply demonstrated a capacity as a safety net, an economic shock-absorber and a remedy when there is a collapse of official economic management. That Nigeria's economy has defied all known economic theories as said by Ibrahim Badamasi Babangida, a former military leader, can be traced to the solidity of that massive and potential pool of resourceful individuals and groups that constitute the informal sector, and not to official state apparatuses, many of which were and still being swept away by both centrifugal and centripetal political, economic and social forces.

The informal sector has catapulted from a relatively unknown horizon to one whose activities have become indispensable as a bulwark of the economy. It is imbued with dexterity and flexibility which has enabled it to weather the storms of policy summersaults of the 1980s to the recklessness of the 1990s and the misdirection of the 2000s.

In the Nigerian economy, the size of employment of the informal sector has been significant. Within the urban labour force, the informal sector accounts for between 45% and 60%, contrasted with the mid-1960s, when the figure was 25% (Nwaka, 2005). According to FGN (1993), out of total gainful employment in Nigeria, the share of informal economic sector rose from 27.3% in 1970 to 38.2% in 1989. Amidst worsening urban poverty and misery, the urban informal sector is a major provider of employment and income to three categories of socio-economic groups, viz the survivalists, the self-employed and very small businesses. The survivalists are very poor people who work on part-time basis in income-generating activities (Fidler & Webster, 1996).

Against the backdrop of skyrocketing inflation, huge public debt, monumental poverty rate and monstrous fall in living standards, in addition to high and increasing unemployment rate, the informal sector has remained resilient and responsive to the gale. What can be concluded here is that the economy of Nigeria has had to depend not on formal activities in the midst of tempestuous economic times, but on the activities of the petty trader, the small-scale farmer, the small scale producer, the artisan, the bean-cake seller and the like to still wear the toga of the word "economy." The informal sector accounts for more than 90% of Nigeria's food supply (Nkom, 2000). The implication of this is that the survival of millions of Nigerians is inevitably dependent on the informal sector.

Akintoye (2008) maintained that the informal sector accounts for about 70% of total industrial output in Nigeria. Its contribution to the economies of the developed world is not in question. In the United States, about 6.2% of total employment comes from the informal sector, while in emerging economic powerhouses like India, it provides about 80% of aggregate employment.

Because self-employment is high, the informal sector is a mechanism for the nurture, development and sustenance of entrepreneurship in Nigeria. Self employment most times implies a capacity and or willingness to exercise discretion in the control and management of an entity on a continuous basis, impelled by the desire to succeed and escape the straight-jacket of dependence and penury. Owing substantially to the pride of ownership which self employment affords, coupled with the exacerbation of unemployment which government initiatives have done very marginally to alter, it can be said that placing emphasis on the growth of the informal sector will go a long way in dealing frontally with the plethora of problems ranging from youth restiveness to retarded economic growth.

ALLEVIATING POVERTY IN THE INFORMAL SECTOR: CONSTRAINTS AND POLICY RESPONSES

The growth of the informal sector activities, effectively supported by the state is one of the requirements for solving the myriad of economic problems bedeviling the Nigerian state. Table 1 shows the poverty levels in rural and urban centres of Nigeria from 1980 to 2004.

TABLE 1: SPREAD AND TREND IN POVERTY LEVELS

Levels	1980	1985	1992	1996	2004
NATIONAL	27.2	46.3	42.7	65.6	54.4
Urban	17.2	37.8	37.5	58.2	43.2
Rural	28.3	51.4	46	69.3	63.3
ZONE					
South- South	13.2	45.7	40.8	58.2	35.1
South East	12.9	30.4	41	53.5	26.7
South West	13.4	38.6	43.1	60.9	43
North Central	32.2	50.8	46	64.7	67
North East	35.6	54.9	54	70.1	72.2
North West	37.7	52.1	36.5	77.2	71.2
SIZE OF HOUSEHOLD					
0-1	0.2	9.7	2.9	13.1	12.6
2 - 4	8.8	19.3	19.5	51.5	39.3
5 - 9	30	50.5	45.4	74.8	57.9
10 - 20	51	71.3	66.1	88.5	73.3
20+	80.9	74.9	93.3	93.6	90.7
EDUCATIONAL LEVEL					
HOUSEHOLD HEAD					
No Education	30.2	51.3	46.4	72.6	68.7
Primary	21.3	40.6	43.3	54.4	48.7
Secondary	7.6	27.2	30.3	52	44.3
Higher than Secondary	24.3	24.2	25.8	49.2	26.3

Source: National Bureau of Statistics

Poverty has been on the upward trend. From a modest 27.2% in 1980, it rose to 54.4 in 2004. The rural area (where majority of Nigerians live and where there is predominance of the informal sector) was hit the more, considering that between 1980 and 2004, poverty rose from 28.3% to 63.3%. Also worthy of note is the size of the level of poverty in the regions. The north generally has shown higher poverty levels than the south, although there was an increase in poverty levels in all the regions.

Studies in the informal sector of the Nigerian economy have inevitably been undertaken within the context and purview of small scale enterprises, both small and medium enterprises as well as micro-enterprises. The literature is replete with attempts to substitute SMEs with the informal sector. This approach is borne out of the considerable difficulty inherent in the attempt to isolate those enterprises within the ambit of SMEs that are informal. It should be understood that if the informal sector definition is contextually situated to refer to enterprises with no link to the formal or modern institutions of state, it is often discovered that some if not many SMEs do have some form of link to such institutions as the bank and public agencies. It can be said that government’s recognition of SMEs and the resultant attempt to develop them can be seen also as an attempt to respond to the ever-growing needs of the informal sector, since by definition the informal sector is predominantly small scale in operation. In other words, the development of the SMEs and micro-enterprises as an engine of growth can be said to be somewhat synonymous with informal sector development. Government policy response to the promotion of the informal sector activities is thus seen in the light of policy initiatives aimed at promoting SMEs in Nigeria.

Poverty alleviation in the informal sector is informed by the many constraints. These are discussed as follows:

INACCESSIBILITY TO FINANCE: In Nigeria, one major problem besetting the informal sector and which is responsible for the dismal level of poverty is the inaccessibility to formal credit institutions. Banks are particularly reluctant to grant credit facilities to the informal sector for reasons that range from doubt about their production performance (Vincent, 1997) or poor management and improper documentation (Abeng, 1997). This response from banks has further entrenched low productivity of the sector, with the inevitable consequence of low income and low savings. This partly accounts for the rather continuous small operations of the enterprises, with little growth recorded overtime.

Inadequacy of finance and access to credit facilities inhibit economic growth. Inadequacy can be explained in terms of the number of specialized banks that cater for the financial needs of small producers and the volume of loans and advances given. Government established community and microfinance banks as an initiative to address this constraint. Table 2 shows the number of community/microfinance banks in Nigeria and the amount of loans and advances granted for the period 2006 to 2010.

TABLE 2: NUMBER OF COMMUNITY/MICROFINANCE BANKS

Year	Number of Banks	Loans and Advances (N' Million)	% Change in loans and advances
2006	757	16,498.60	13.41
2007	709	16,450.80	-0.29
2008	745	42,024.40	155.46
2009	828	55,818.90	32.82
2010	800	54,348.60	-2.63

Source: Central Bank of Nigeria

From table 2, it can be seen that the number of banks is abysmally low to serve the interest of a vast country like Nigeria. As at 2010, the average number of Community/Microfinance Banks in Nigeria is 1 per local government area. A look at the percentage change in loans and advances granted between 2006 and 2010 show that within the 5-year period, only 2008 showed an appreciable increase in the amount of credits granted. As at 2010, there was a fall in the amount of loans and advances granted.

For commercial banks in the country, there has been a downward trend in the amount of support offered to small scale enterprises. Table 3 shows the ratio of commercial banks' loans to small-scale enterprises for the period 2001 to 2010.

TABLE 3: RATIO OF COMMERCIAL BANKS' LOANS TO SMALL-SCALE ENTERPRISES

Period	Commercial Banks Loans To Small Scale Enterprises (N' Million)	Commercial Banks Total Credit (N' Million)	Commercial Banks Loans To Small Scale Enterprises as Percentage of Total Credit
2001	52,428.4	844,486.2	6.21
2002	82,368.4	948,464.1	8.68
2003	90,176.5	1,203,199.0	7.49
2004	54,981.2	1,519,242.7	3.62
2005	50,672.6	1,991,146.4	2.54
2006	25,713.7	2,609,289.4	0.99
2007	41,100.4	4,820,695.7	0.85
2008	13,512.2	7,799,400.1	0.17
2009	16,366.5	9,667,876.7	0.17
2010	12,550.3	9,198,173.1	0.14

Source: Central Bank of Nigeria

From Table 3, only a negligible fraction of commercial banks' total credit is given to small scale enterprises. For the 10-year period, 2003 had the highest record. From 2006 onwards, there was a sharp fall in the amount of credits to small-scale enterprises with the lowest recorded in 2010 of less than 1 percent.

The problem of inadequate finance is compounded by lending requirements of banks which often include registration as a limited liability company, collateral and submission of feasibility studies, all of which are difficult if not impossible to satisfy by practitioners in the informal sector, many of whom do not have bank accounts and have very little idea of how banks function and the benefits they can derive from them.

In recent times, there has been attempt to increase the quantum of liquidity to small and medium enterprises. In 2010, the Central Bank of Nigeria initiated the 200 billion naira long tenor fund to boost the growth of small and medium enterprises (Akanji, 2010).

HIGH OPERATIONAL COSTS: High costs of operations, reinforced by a mix of factors, are rife in the informal sector**.** A study of Lima, Peru estimates that 80 percent of finances employed by the informal sector are self-generated. Of particular interest is the finance needed for formal entry. Such costs are related to approvals by bureaucratic institutions, bribes and licenses. While it requires about ten months to establish a legitimate business in Lima Peru (de Soto, 1989), only 3.5 hours and 4 hours are needed to do so in Florida and New York (Chickering & Salahdine, 1991). The same cannot be said about Nigeria, where corruption and ineptitude are rife. Bribery appears to be part of the costs of production in the country.

Another area of high operational costs is in terms of inadequate power supply. The inadequacy in power supply in Nigeria has had untold negative impact on small businesses and consequently on the informal sector. Table 4 displays electricity production in Nigeria for the period 2000 – 2007.

TABLE 4: ELECTRICITY GENERATION

Year	Electricity generation (Megawatts)
2000	1,738.3
2001	1,689.9
2002	2,237.3
2003	6,180.0
2004	2,763.6
2005	2,779.3
2006	3600
2007	4914

Source: National Bureau of Statistics

The table shows that as at 2007, only a paltry 4914 megawatts of electricity was produced for a population of 140 million, despite the huge resources officially claimed to have been allocated to the sector.

Energy costs take as much as 40 percent of the total costs of production in Nigeria. The state of Nigeria's electricity sector was succinctly captured by the Manufacturing Association of Nigeria, which carried out a survey in 2005 and in the first quarter of 2006. It showed that only 10 per cent of manufacturing entities could operate at 48.8 per cent of installed capacity. About 60 per cent of the companies operating were barely able to cover their average variable costs, while 30 per cent had completely closed down. Consequently, most of the industrial areas were comatose with an average of 14.5 hours of power outage per day as against 9.5 hours of supply. The cost of generating power supply by firms for production constitutes about 36 per cent of total cost of production (Okafor, 2008). It is for this reason that Nigeria has aptly been referred to as a generator economy (Ekpo, 2009).

POOR MACROECONOMIC ENVIRONMENT: Nigeria's macroeconomic environment has since the 1980s generally been one of underperformance and bottlenecks. This was partly due to the incursion of the military, successive policy summersaults and corruption. Table 5 shows two macroeconomic indicators between 2000 and 2010.

TABLE 5: SELECTED MACROECONOMIC INDICATORS

Year	Inflation Rate	Average official exchange rate (Naira/US$)
2000	6.9	102.1052
2001	18.9	111.9433
2002	12.9	120.9702
2003	14.0	129.3565
2004	15.0	133.5004
2005	17.8	132.1470
2006	8.2	128.6516
2007	5.4	125.8331
2008	11.6	118.5669
2009	12.4	148.9017
2010	13.7	150.2980

Sources: Central Bank of Nigeria; National Bureau of Statistics

Inflation has maintained double digits since the dawn of year 2000. Worse still is the state of exchange rate which has been worsening from year to year, with its negative impact on the domestic economy, in the midst of low capacity utilization. The informal sector has been severely hit in the process.

INTENSE GLOBAL COMPETITION: The informal sector in Nigeria increasingly faces the stiff competition induced by economic liberalization and globalization. Although the benefits of liberalization have been felt in such areas as telecommunication, what cannot be dismissed is the burden placed on small producers to compete with the advanced capitalist West and emerging economic giants like China, Malaysia and India whose goods flood the domestic market. Such items as foreign clothes, shoes, woodwork and various food items have been allowed to erode local capacity, with the result that the consumptive rather than the productive capacity of the economy has been fuelled. It has degenerated to a situation where toothpick is imported.

Some of the government policy responses to the problems bedeviling the informal sector in Nigeria are briefly discussed as follows:

FAMILY ECONOMIC ADVANCEMENT PROGRAMME: This programme was initiated in 1997, with a view to harnessing the vast potential inherent in the informal sector of the Nigerian economy, in addition to empowering both the rural as well as the urban poor.

The People's Bank and same commercial banks were encouraged to participate in the scheme through granting of fiscal incentives by government.

DEVELOPMENT OF ENTREPRENEURSHIP: In the 1980s, both the federal and state governments through the National Directorate of Employment (NDE) initiated the enterprise development programme as a measure to combat graduate employment which had assumed monstrous proportions, a situation has become exacerbated.

Provision of extension services, product design and the rendering of free technical and managerial services by the Ministry of Industry through the establishment of Industrial Development Centres across Nigeria were efforts exercised by government to respond to the need for the development of the informal sector.

State governments have also had their own initiatives, such as the collaboration with the federal ministry of industry to establish industrial estates for small and medium enterprises (SMEs)

CREDIT POLICIES: To confront the problems of inadequate funding endemic in the informal sector, the government established the People's Bank and Community banks to encourage savings and availability of credit facilities.

The emergence of Microfinance banks is a direct response to stimulate the informal sector and to link it with the formal sector of the economy.

NATIONAL DIRECTORATE OF EMPLOYMENT (NDE): Established on November 22, 1986, the National Directorate of Employment was geared towards confronting the pervasive unemployment in the country through the design and implementation of programmes for training and giving support to graduate farmers and small scale entrepreneurs, the development of vocational skills among others, all of which were to help generate income and reduce the level of poverty.

RECOMMENDATIONS

Based on the several constraints faced by the informal sector in Nigeria, the following recommendations are made:

(1) Power supply must be given priority. Efforts should be exerted to complete ongoing power projects across the country, while deliberate efforts should be made to encourage private sector investment, as a means of boosting power to engineer informal sector growth.

(2) The informal sector should be streamlined to incorporate it into the formal sector in order to capture its activities in national statistics. Free business registration can be used to encourage registration while tax holiday can be offered to encourage growth during the formative years of new businesses.

(3) Capacity building should be pursued through partnership with donor agencies, in order to provide the requisite skills for setting up of businesses, management, control and exposure to opportunities and constraints.

(4) Monetary policy should be geared towards encouraging financial institutions to grant the informal sector access to loanable funds on terms that are favourable. Rural financing is fundamental if the poorest of the poor must be reached in a bid to increase their productive capacity. The 2% fee on companies for the development of SMES should be vigourously pursued and implemented. Policies that promote the establishment of more microfinance banks need to be developed, in order to shore up the number of financial institutions especially in the rural areas, where majority of poor and small producers live.

(5) Implementing policies for a sector with a variety of activities entails a database. Consequently, efforts should be made to study the informal sector on a wide scale with a view to providing sufficient data to facilitate planning, policy making and implementation.

(6) Women are particularly vulnerable in the informal sector while making up a bulk of the participants. Deliberate efforts to build their capacity are necessary if increased productivity in the sector is to be crystallized.

(7) Proper macroeconomic environment is germane. Habitual policy reversals should be discouraged.

CONCLUSION

The Nigerian economic landscape and the informal sector are littered with the mosaic of poverty. Engendered by factors ranging from habitual policy reversals to corruption that has assumed the status of officialdom, poverty has among other debilitating effects eroded the productive capacity of the economy. The informal sector is an engine of growth. Majority of Nigerians are engaged in it. The corollary of this is that there is an abysmal level of poverty in the informal sector. Reducing the level of poverty in the informal sector is imperative as a catalyst of growth and consequently on economic and social regeneration.

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THE MACROECONOMIC IMPACT OF TRADE ON ECONOMIC GROWTH OF NIGERIA

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ABSTRACT

It is generally believed in literature that trade plays a vital role in promoting and restructuring economic growth. The theoretical and empirical nexus between economic growth and trade have been discussed in economics for a long time following the theory; that sustainable trade is the main driver of economic growth. This paper examines the impact of trade on economic growth in Nigeria. It uses annual data for the period 1980--2010, employing OLS analysis with e-views 7.0 software. The result of the analysis is intuitive showing that that real gross domestic product, Export, Import, Exchange Rate and the degree of Economic Openness are significant in economic growth determination of the Nigerian economy. The empirical results of this study clearly emphasize the significance of trade on economic growth in Nigeria. The results also provide a theoretical justification of the model and observed data. The policy implication of this is that the government should have a change in the orientation of her policies as far as trade is concerned and should rigorously embrace more export promotion strategies.

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Exchange rate, Export promotion Globalisation, Macroeconomics, Trade, liberalisation.

INTRODUCTION
Trade has been regarded as the major driver of growth which can lead to steady improvement in human status by expanding the range of people's standard and preference. Since no country has grown without trade, it can therefore be said that it plays a vital role in restructuring economic and social attributes of countries around the world, particularly, the less developed countries (Adewuyi, 2002).

Trade is believed to stimulate economic growth due to its influence in integrating world economies and generating better markets. Nigeria, a typical developing country is lagging behind in reaping the benefits of trade, especially, the international trade judging by the degree of openness of the economy. Since the SAP era in 1986, government policies have been centered on increasing trade and increasing granting of flow of foreign capital to the domestic economy all with a view to foster fast economic growth and attainment of development. Unfortunately, oil and gas have been major sources of commodity sales in the international market while non-oil products especially agricultural and finished outputs have no significant contribution. This consequently is the motivation of this study analyzed.

Vicious circle of poverty has been a common phenomenon in the nation since the SAP era in the mid-1980s and more than 30 years after that; there has not been any significant reduction in spite of various government policies. The nation's gross domestic products (GDP) as well as real per capita income are also subject of concern as these are far less than what can cause considerable economic progress. In addition, diversification of the economy, development of the non-oil sector, especially agriculture has been a hard nut to crack and yet, government policies aimed at arresting the situation and proffering lasting solutions have proved abortive. The study focuses on the empirical review of literatures, methodology, presentation of empirical results and finally gives summary, conclusions and policy recommendations.

REVIEW OF LITERATURE
Conventional trade relates trade patterns to comparative advantage, and suggests that for nations that engage in trade, each will specialize in the production of goods in which it has a comparative advantage, i.e., in production processes with lower opportunity costs prior to trade than the other country. Each country thus exports goods in which it has a comparative advantage. Usually, comparative advantage is assumed to be derived from either exogenous technological differences (the classical Ricardian model) or different factor endowments (the Heckscher-Ohlin model). Hence, conventional trade theory associates international trade with a reallocation of resources within the national borders determined by exogenous differences across countries. This reallocation of resources generates efficiency gains that increase the level of aggregate national income.

It is, however, believed that higher degree of openness ensures better flow of foreign investment from developed countries to their developing counterparts. It is equally evident that the latter, especially the ECOWAS member states have not fully aligned their economies to allow the investment to stimulate satisfactory growth. This has being attributed to such factors as inability of West African countries to formulate investment friendly policies, political and social unrest, reliance on primary products for exports, institutional and structural imbalances, and weak infrastructural base (Fosu,1990; Obadan, 2004; Aluko, 2003).

The conceptual relevance of trade to the Nigerian economy was emphasized by Loto (2002), where the Mundel-Flemming model of open economy was adopted to examine the impact of globalization on the Nigerian economy. Openness indicator was defined as the total volume of trade divided by the GDP. It was identified significantly that Nigerian's volume of trade was too low and for the nation to benefit immensely from globalization, a shift from production and export of mono-product type of commodity (oil and gas) to non-oil mineral resources and other products of international standard must be thoroughly pursued.

Consequently, according to Aremu (2005) and Briggs (2005), international market failures such as asymmetric information and perception problems, market segmentation and marginalization owing to the relatively small transaction size of the Nigerian economy shows that a sound principle of commercial policy would be to strike some balances between the need for rapid expansion of liberalization with some certain or sequential approach to liberalization.

IMPORTANCE OF THE STUDY
Conducting a study on the effects of trade on economic growth is of great significance in this globalized era. It helps policymakers map out appropriate policies by determining the source of economic growth with respect to trade liberalization. The research will help to evaluate the performance of different trade policies that the Nigerian government has adopted Empirical analyses of the connection between trade and growth in Nigeria is not conclusive; hence this study intends to extend the frontier of knowledge in that regard. It will also assist in providing the framework of where work has been done by earlier researchers by which further research in foreign trade could be carried out

STATEMENT OF THE PROBLEM
Although Nigeria is blessed with abundant human and natural resources and should be flowing in mass of wealth, but the paradox presented by sub-Sahara Africa growth experience is best exemplified by Nigeria. The economy has severally been described as a difficult environment for business. With a population growth of about 3 per cent, it has been acknowledge that the current average output growth rate of less than 4 per cent will see the country been poorer in the

next decade. A major challenge facing policy makers in the country is subsumed in the questions concerning the place and effectiveness of complementary macroeconomic and trade measures needed to put the economy on the path of sustainable growth.

In the past three decades, the trend of trade beyond the domestic border in Nigeria has risen to a considerable extent, but there has not been commensurable economic growth and development. In fact, Nigeria's benefit in international trade and globalization has been comparatively lower than other emerging economies. This study sets out to examine the effect of trade on the economic growth of Nigeria and assess the extent to which trade have impacted on the growth process of the Nigerian economy.

OBJECTIVES OF THE STUDY

This study specifically seeks to:

1. Assess the extent to which trade have impacted on the growth process of the Nigerian economy.
2. Examine the relationship between trade and economic growth.

HYPOTHESES

H_{10}: Trade does not contribute to the growth of Nigerian economy.
H_{11}: Trade contributes to the growth of Nigerian economy.
H_{20}: There is no relationship between trade and economic growth in Nigeria.
H_{21}: There is relationship between trade and economic growth in Nigeria.

RESEARCH METHODOLOGY

The theoretical framework in support of trade originates from the classical economic theory of international trade. The classical economists advocated trade among nations of the world to promote economic growth and development. Historically, the concept of trade across domestic borders had been emphasized by the mercantilists in the 15th to 18th century. It was further advocated by Adam Smith (1723-1790) and David Ricardo (1772-1823) in absolute advantage theory and comparative advantage theory respectively. The classical economists and their successors believed international trade and interrelations among nations are essential for economic progress, especially in a fast developing nation like Nigeria. The gains from trade could speed the pace of growth and attainment of sustainable development.

The theory of comparative advantage as propounded by David Ricardo (1820) buttresses the study of international trade. This theory is useful in the justification of exchange of goods, services and knowledge among different nations in the era of globalization. Specialization was specifically emphasized by Adam Smith. The principle of comparative advantage asserts that a country should, and under competitive condition will, specialize in the export of the products that it can produce at the lowest relative cost. This principle has been applied by economists to the exchange of goods (and services) among individual nations.

The neoclassical counterrevolution postulated that "by permitting market to flourish, privatizing state-owned enterprises, promoting free trade and export expansion, welcoming investors from other countries and eliminating government's regulations and price distortions in factors, product, and financial markets, both economic efficiency and economic growth will be stimulated" (Todaro, 2008). In other words, the theory emphasized the allowance of invisible hand of the market advocated by Adam Smith to be the dominant regulator of the economy that will boost international trade, invites foreign investors, and consequently, increase economic growth.

In Heckscher-Ohlin models, the comparative advantage takes the form of differences in resource endowment. The result obtained from the neoclassical models is that a country will have gains from trade liberalization with an increase in allocative efficiency. By lowering trade barriers, a country faces the international relative prices that induce the efficient allocation of domestic resources to sectors with comparative advantage, increasing aggregate welfare. However, Rodrik (1998), Devarajan and Rodrik (1999) and Krugman (1994) have challenged these results, arguing that the neoclassical models only capture increases in the level of income and that therefore trade liberalization may not lead to a persistent increase in the growth rate. They argue that, under conditions of economies of scale and imperfect competition, the welfare impact of trade liberalization can be negative.

Nevertheless, in a rather divergent view, models of endogenous growth suggest an active role for public policy in promoting economic development through the encouragement of foreign private investment in knowledge-intensive industries such as computer software and telecommunication.

The model of this study is adapted from earlier studies by Edwards (1998) and Obadan (2008) with some modifications. Real gross domestic product at constant prices is the dependent variable, while the explanatory variables are export value, import value, foreign exchange rate and economic openness. Economic openness is used as one of the variables to represent trade intensity and this shows the extent in which goods and services are allowed in a particular economy. The data employed in this analysis are secondary drawn from various issues of the Central Bank of Nigeria Statistical Bulletin over the period of 1980 to 2010.

MODEL SPECIFICATION

RGDP= F (EX, IM, EXRT, ECOP) **(1)**

Where:
RGDP= Real Gross Domestic Product
EX= Export Value
IM= Import Value
EXRT= Exchange Rate
ECOP= Economic Openness

The model is logged to show consistency, elasticity and degree of responsiveness as follows:

LogRGDP= $\beta_O + \beta_1$ Log EX+ β_2 LogIM+ β_3 LogEXRT+ β_4 LogECOP + μ **(2)**

PRESENTATION OF RESULTS

TABLE 1: ORDINARY LEAST SQUARE TEST RESULTS

Variable	Coefficient	Std Error	T Statitics	Probability
Log (import)	0.405118	0.008612	47.04368	0.0000
Log (openness)	-1.030277	0.009229	-111.6308	0.0000
Exchange_ rate	-0.171344	0.060006	-2.855451	0.0087
Log (export)	0.625763	0.011958	52.32925	0.0000
D01	-0.155144	0.045658	-3.397961	0.0024
C	0.471994	0.081200	5.812716	0.0000
Exchange_rate*D01	0.171147	0.05981	2.853373	0.0088
R-squared	0.999656	Mean dependent var		12.61564
Adjusted R -squared	0.999570	S.D. dependent var		0.604578
S.E. of regression	0.012539	Akaike info criterion		-5.724275
Sum –squared resid	0.003773	Schwarz criterion		-5.400471
Log likelihood	95.72626	Hannan-Quinn criterion		-5.618723
F-statistic	11619.93	Dubin Watson stat		1.712761
Prob(F-statistic)	0.000000			

SOURCE: Author's computation with E-views 7.0

Estimated values are imputed into equation 2 to become equation 3 as specified below:

LRGDP = 0.47 + 0.41LIMPORT – 1.03LOPENNESS – 0.17EXR + 0.62LEXP – 0.156D01 + 0.17EXR*D01 (3).

SUMMARY OF FINDINGS

Dummy variables are added to equation (2) to represent different exchange rate regimes (pre-sap and post-sap) before arriving at the above estimated model (3). The relationship between import and the gross domestic product is found to be positive. Therefore, a percent increase in importation will bring about 0.41% increase in the real gross domestic product value. Also, the import elasticity is found to be positive (0.41); though the result did not justify the a priori since import is found to be larger than export in Nigeria. Also, the relationship between openness and the real gross domestic product is negative. Therefore, a percent increase in openness in Nigeria will bring about 1.03 percent decreases in the real gross domestic product. The result shows that exchange rate impacts negatively on real gross domestic product in Nigeria with the value 0.17 thereby not satisfying the apriori expectation which may be due to the passitivity of the productive sector. Nevertheless, the relationship between export and real gross domestic product is found to be positive. Thus, a percent increase in exportation will bring about 0.62 percent increase in the gross domestic product. The dummy variable shows that the stable exchange rate period (pre-sap) has a negative impact on the growth of the economy with the value 0.156. This shows undervaluation of the gross domestic product which could have increased if the exchange rate was left to be determined by the market forces.

The interactive term between the dummy variable and exchange rate captures the effect of post-sap period on the economy. The positive relationship between the post-sap exchange rate and the gross domestic product in the result implies that an increase in the exchange rate will bring about 0.17 increases in the real gross domestic product. A priori expectation is that it should be a negative relationship but since post-sap era, the GDP has been on the increase because of the large exportation of crude oil to the extent that crude oil export constitutes about 95% component of Nigerian export.

The standard error is used to test the statistical significance of the parameters of the estimates, and the rule of thumb asserts that the standard error of the parameter estimates must be less than half of the coefficient of export. This implies that for the standard error of a parameter to be significant, S.E (b0) > bo/2 etc. From the results above, it was observed that all the variables are significantly different from zero. Using the t-test to ascertain the statistical significance of the parameter estimates, it was found that export and import are statistically significant at 1% while openness and exchange rate are not statistically significant at 1% but at 10% indicating that in Nigeria; export, import, openness and exchange rate are the major determinants of gross domestic product.

Both estimated R^2 and adjusted R-squared at 99% (very high) show that the model has a good fit, with approximately 99% of the real gross domestic product, being explained by import, export, openness and exchange rate while the remaining percentage (1%) is explained by factors not captured in the model. The F-statistics of 11619 reveals the overall significance of the explanatory variables at 1% level of significance, thereby suggesting that import, export, openness, exchange rate jointly determine the gross domestic product in Nigeria. The Durbin Watson statistics shows that there is no evidence of the error term being serially correlated; indicating that the models are free from autocorrelation, meaning that the estimated models are well specified and the results are well behaved.

TABLE 2: DIAGNOSTIC TESTS

Test statistics	Test Name	F-statistics
A. Serial Correlation	Bruesch Godfrey LM	0.19
B. Functional Form	Ramsey Test	2.85
C. Heteroscedascity	White test	4.83
D. Normality	Jarque Bera	1.93

SOURCE: Author's computation with E-views 7.0

Testing for the robustness of the results necessitated diagnostic tests to validate the classical regression assumptions.

From the above, the Bruesch Godfrey LM test implies that there is no presence of serial correlation in the model estimated above which was affirmed by the Durbin Watson test statistic. The Ramsey Specification test also implies that the above model specification is suitable for the study because the F-statistics is 0.19 meaning that the model is correctly specified. In addition, the heteroscedascity assumption is not violated using the White test giving F-stat to be 4.83. The Jarque Bera test also shows that the data follow the normal distribution criteria.

CONCLUSION AND POLICY RECOMMENDATIONS

The empirical results of this study clearly emphasize the significance of trade on economic growth in Nigeria. The analysis indicates that real gross domestic product, Export, Import, Exchange Rate and the degree of Economic Openness are significant in economic growth determination of the Nigerian economy. The results provide a theoretical justification of the model and observed data. Based on the findings of this research work, it is necessary to provide a set of policy recommendations that would be applicable to the Nigerian economy in the area of trade policies and implementation.

The government should encourage export diversification. Non-oil sector exports should be encouraged and concentration on oil sector export should be minimal. Nigerian government should also intensify efforts at diversifying her export base by using proceeds from oil revenue judiciously for this purpose. While she should strive to position herself more favourably in the oil market, conscious efforts must be made to revamp the commodity export's sector and harness the solid minerals for exports. In addition,the government should discourage the people from consuming foreign goods excessively by implementing the import substitution strategy and by encouraging the manufacturing industries to improve on their production so that their outputs would be competitive in the global market. Only the importation of capital goods that are essential should be encouraged since not all importations are necessary for economic growth in the Nigerian economy.

For now, devaluation of the naira should be de-emphasized. As much as the low exchange value of the naira would promote export and discourage import, it should be noted that not until the nation's exports become like those industrial goods and services whose foreign demand and domestic supply are elastic, the nation's economy stand little chance of gaining from an unguided exchange rate deregulation policy. This remains true so long as the economy depends on primary products whose foreign demand and domestic supply are inelastic. The government should put measures in place to stabilize our currency.

From the period under review, it is discovered that economic openness is negative, which implies that the nation observed more of import than export. The policy implication of this is that the government should have a change in the orientation of the policies as far as trade issue is concerned, and they should embrace more export promotion strategies. Lastly, Nigeria as Africa's giant should rise up to the challenge of "ever developing" by annexing all opportunities to combat underdevelopment. To this end, there must be co operation among the government, private sector and the people. Government functionaries also should be more transparent in policies formulation and implementations.

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APPENDICES

TABLE 3: HETEROSKEDASTICITY TEST: WHITE

F-statistic	4.858753	Prob. F(19,11)		0.0051
Obs*R-squared	27.69946	Prob. Chi-Square(19)		0.0894
Scaled explained SS	12.29678	Prob. Chi-Square(19)		0.8726
Test Equation:				
Dependent Variable: RESID^2				
Method: Least Squares				
Sample: 1980 2010				
Included observations: 31				
Collinear test regressors dropped from specification				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.343348	0.164646	2.085370	0.0611
LOG(IMPORT)	-0.029919	0.011686	-2.560348	0.0265
(LOG(IMPORT))^2	0.001844	0.000427	4.314877	0.0012
(LOG(IMPORT))*(LOG(OPENNESS))	-0.002629	0.001071	-2.455865	0.0319
(LOG(IMPORT))*EXCHANGE_RATE	-0.000553	0.000202	-2.737135	0.0193
(LOG(IMPORT))*(LOG(EXPORT))	-0.001002	0.000744	-1.346883	0.2051
(LOG(IMPORT))*D01	0.000286	0.000860	0.332635	0.7457
(LOG(IMPORT))*(EXCHANGE_RATE*D01)	0.000529	0.000200	2.652441	0.0225
LOG(OPENNESS)	0.057979	0.029673	1.953947	0.0766
(LOG(OPENNESS))^2	0.002681	0.001433	1.871009	0.0882
(LOG(OPENNESS))*EXCHANGE_RATE	4.58E-05	2.03E-05	2.249378	0.0459
(LOG(OPENNESS))*(LOG(EXPORT))	-0.002915	0.002220	-1.313159	0.2159
(LOG(OPENNESS))*D01	0.005874	0.003086	1.903276	0.0835
EXCHANGE_RATE	0.000528	0.000252	2.099892	0.0596
EXCHANGE_RATE^2	2.68E-07	1.31E-07	2.043365	0.0657
EXCHANGE_RATE*(LOG(EXPORT))	-2.33E-05	1.47E-05	-1.582437	0.1419
LOG(EXPORT)	-0.033081	0.024413	-1.355053	0.2026
(LOG(EXPORT))^2	0.002013	0.000954	2.109449	0.0586
(LOG(EXPORT))*D01	-0.003057	0.001772	-1.725646	0.1124
D01	0.035838	0.027249	1.315195	0.2152
R-squared	0.893531	Mean dependent var		0.000122
Adjusted R-squared	0.709630	S.D. dependent var		0.000151
S.E. of regression	8.12E-05	Akaike info criterion		-15.74629
Sum squared resid	7.24E-08	Schwarz criterion		-14.82114
Log likelihood	264.0675	Hannan-Quinn criter.		-15.44471
F-statistic	4.858753	Durbin-Watson stat		2.840951
Prob(F-statistic)	0.005119			

SOURCE: Author's computation with E-views 7.0

TABLE 4: BREUSCH-GODFREY SERIAL CORRELATION LM TEST

F-statistic	0.193410	Prob. F(2,22)		0.8255
Obs*R-squared	0.535648	Prob. Chi-Square(2)		0.7650
Dependent Variable: RESID				
Method: Least Squares				
Sample: 1980 2010				
Included observations: 31				
Presample missing value lagged residuals set to zero.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(IMPORT)	-0.000356	0.009269	-0.038444	0.9697
LOG(OPENNESS)	-0.000180	0.009669	-0.018572	0.9853
EXCHANGE_RATE	0.006000	0.064858	0.092509	0.9271
LOG(EXPORT)	0.000823	0.012538	0.065638	0.9483
D01	0.003018	0.048275	0.062520	0.9507
C	-0.008658	0.085234	-0.101583	0.9200
EXCHANGE_RATE*D01	-0.006010	0.064833	-0.092698	0.9270
RESID(-1)	0.118651	0.225099	0.527109	0.6034
RESID(-2)	-0.087949	0.264565	-0.332428	0.7427
R-squared	0.017279	Mean dependent var		-1.52E-15
Adjusted R-squared	-0.340074	S.D. dependent var		0.011215
S.E. of regression	0.012983	Akaike info criterion		-5.612672
Sum squared resid	0.003708	Schwarz criterion		-5.196354
Log likelihood	95.99642	Hannan-Quinn criter.		-5.476963
F-statistic	0.048353	Durbin-Watson stat		1.937980
Prob(F-statistic)	0.999922			

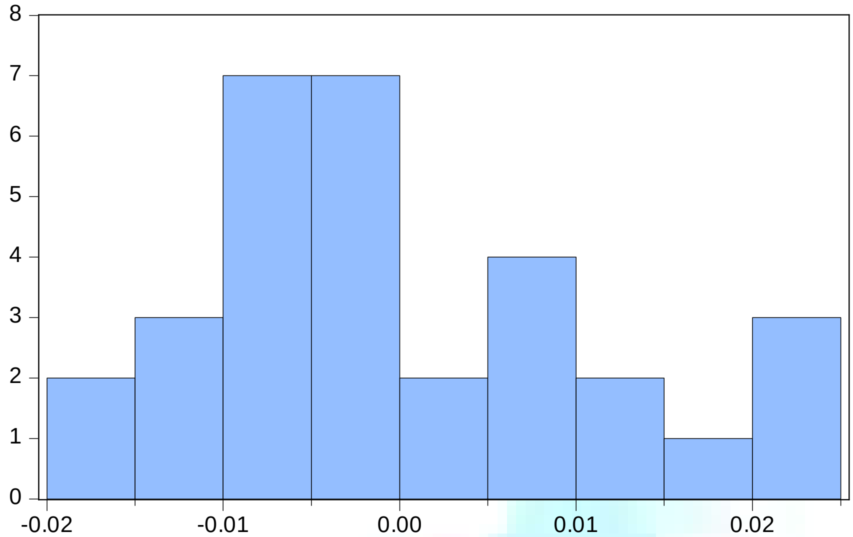
SOURCE: Author's computation with E-views 7.0

TABLE 5: RAMSEY RESET TEST

Specification: LOG(GDP) LOG(IMPORT) LOG(OPENNESS)				
EXCHANGE_RATE LOG(EXPORT) D01 C EXCHANGE_RATE*D01				
Omitted Variables: Powers of fitted values from 2 to 3				
	Value	df	Probability	
F-statistic	2.849178	(2, 22)	0.0794	
Likelihood ratio	7.140249	2	0.0282	
F-test summary:				
	Sum of Sq.	df	Mean Squares	
Test SSR	0.000776	2	0.000388	
Restricted SSR	0.003773	24	0.000157	
Unrestricted SSR	0.002997	22	0.000136	
Unrestricted SSR	0.002997	22	0.000136	
LR test summary:				
	Value	df		
Restricted LogL	95.72626	24		
Unrestricted LogL	99.29638	22		
Unrestricted Test Equation:				
Dependent Variable: LOG(GDP)				
Method: Least Squares				
Sample: 1980 2010				
Included observations: 31				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(IMPORT)	-1.613121	2.253860	-0.715715	0.4817
LOG(OPENNESS)	4.088827	5.734709	0.712996	0.4833
EXCHANGE_RATE	0.638885	0.966045	0.661341	0.5153
LOG(EXPORT)	-2.479076	3.487170	-0.710913	0.4846
D01	0.576373	0.870618	0.662027	0.5148
C	17.58827	19.72505	0.891672	0.3822
EXCHANGE_RATE*D01	-0.638052	0.965000	-0.661194	0.5154
FITTED^2	0.420664	0.459035	0.916409	0.3694
FITTED^3	-0.011793	0.012527	-0.941374	0.3567
R-squared	0.999727	Mean dependent var		12.61564
Adjusted R-squared	0.999627	S.D. dependent var		0.604578
S.E. of regression	0.011672	Akaike info criterion		-5.825573
Sum squared resid	0.002997	Schwarz criterion		-5.409254
Log likelihood	99.29638	Hannan-Quinn criter.		-5.689863
F-statistic	10058.61	Durbin-Watson stat		2.364427
Prob(F-statistic)	0.000000			

SOURCE: Author's computation with E-views 7.0

TABLE 6: NORMALITY TEST



Series: Residuals	
Sample 1980 2010	
Observations 31	
Mean	-1.52e-15
Median	-0.003118
Maximum	0.023867
Minimum	-0.018068
Std. Dev.	0.011215
Skewness	0.553466
Kurtosis	2.481327
Jarque-Bera	1.930165
Probability	0.380952

SOURCE: Author's computation with E-views 7.0

A STUDY OF OPERATIONAL EFFICIENCY OF SELECTED PUBLIC SECTOR BANKS IN INDIA – ISSUES AND CHALLENGES

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ABSTRACT

Operational efficiency is a vital indicator of economic performance and resilience of an economic system. It is a well known fact that the rate of economic growth of any country has a direct link with the efficiency of financial sector of the country and an efficient financial sector achieves faster rate of economic growth. Measuring the operational efficiency of banks assumes greater significance in the overall rating of banks. Banks normally use factorial productivity measures such as business per employee and business per branch for measuring operational efficiency. With the radical changes taking place in the economic scenario in general, and in the banking sector in particular, it is time that banks move beyond the concept of per employee business to a more realistic method in measuring their productivity. The focus of this paper is to measures operational efficiency on the basis of profitability and productivity of selected public sector banks in India, using a non-parametric model. It denotes operational; efficiency with which inputs are transformed into useful output within the production process as well as output is produced by the resources utilized.

KEYWORDS
operational efficiency, profitability, financial sector, factorial productivity.

MEANING OF OPERATIONAL EFFICIENCY
Operational efficiency is the ability for an organization to execute its tactical plans maintaining a healthy balance between cost and productivity. The process of identifying wasteful processes draining the organization's profits is termed as Operational Efficiency.

OPERATIONAL EFFICIENCY IN BANKING SECTOR
In a manufacturing industry, efficiency can be measured easily in quantitative terms but in case of service industry like banking, the outputs are not homogenous. The banking industry belongs to service industry, delivering financial services to their customers. In case of banking sector, it is very difficult to define the input and output of a bank as many of the financial services provided by the banks are jointly produced and they are priced for entire bundle of financial services.

OPERATIONAL EFFICIENCY AND PRODUCTIVITY
Productivity is reflected in the relationship between output of goods manufactured or services rendered and input of production resources used in supplying such output. The most common formula for expressing productivity is-
Productivity=output/ input
The productivity of a firm is therefore measured by considering the ratio of output and input of production factors.

OPERATIONAL EFFICIENCY AND PROFITABILITY
Profit is the difference between aggregate revenues and aggregate costs, while the ability to make or earn profits is known profitability. Efficiency, in simple words, is defined as ability to achieve business objectives (in the best way), whatever these objectives are: Maximization of profits is the main objective of a private business. Therefore in such cases profit provide the most important criterion of judging operational efficiency. But profit maximization is not, and never be, the reason of existence in public sector banks. Therefore, profitability alone cannot be used as the test of operational efficiency in the case of public utilities.

NEED OF THE STUDY
The study may be used as an important tool for the further references related to the Indian Banking Sector. Measuring the operational efficiency of Banks assumes greater significance in the overall rating of banks. Therefore the study on the topic "A study on operational efficiency of the selected Public sector

banks in India- Issues and Challenges" has the relevance and it is the demand of present day, as the growth in the Indian economy is expected to be stronger for quite some time especially in its service sector.

REVIEW OF LITERATURE

Subramanyam and Swamy (1994b) adopted taxonomic method through simple regression for the period (1974-76 and 1984-86). It was found that production efficiency differences between the firms arise not only from technological Improvements but also from competence**. Noulas and Katkar(1996)** analyzed scale and technical efficiency of public sector banks in India by using DEA and used cross-sectional data of 19 public sector banks for the year 1993. It has been observed that overall technical inefficiency was approximately 3.75% of which 1.5% was due to pure technical inefficiency and 2.25% due to scale inefficiency. Also, a majority of the public sector banks were found to be operating under increasing returns to scale**. Battacharya (1997)** examined the impact of partial liberalization during mid-eighties on the productive efficiency of different categories of banks in India using DEA. The study reviewed 70 commercial banks for the period 1986-1991 and found that public sector banks had the highest efficiency followed by foreign banks; private banks were found to be least efficient. They also found a temporal improvement in the performance of foreign banks, but no clear trend in the performance of a private bank and temporal decline in the performance of public sector banks. **Mukherjee (2002)** used DEA to explore technical efficiency and benchmark of the performance of 68 commercial banks for the period 1996-99. They found that in India, Public sector banks are more efficient than both private and foreign banks. Also, the performance of public sector banks improved during the study period. Besides these, publicly owned banks were rated uniformly in terms of self-appraisal as well as peer-group appraisal. **Mohan and Ray (2004)** measured the comparative performance among commercial banks using physical quantities of inputs and outputs to compare revenue maximization efficiency of banks during 1992-2000 by employed DEA. They showed that public sector banks performed significantly better than the private banks but not differently from foreign banks. **Sinha (2006)** estimated efficiency of Indian commercial banks (under constant returns to scale) using the data envelopment analysis. He considered loan as the output indicator. Number of bank branches and borrowed capital were taken as two inputs. The results were for 1996-97, 1998-99, 2000-01, and 2002-03 respectively. The results suggest superior performance by the observed private sector commercial banks as compared to the observed public sector commercial banks.

OBJECTIVES OF THE STUDY

The specific objectives of the study are

1. To measure the operational efficiency of the Selected Public Sector Banks in India.
2. To examine the variations in the operational efficiency of the Public Sector Banks and to indentify the influencing factors.
3. To rank the bank based on operational efficiency.

RESEARCH METHODOLOGY

SCOPE OF THE STUDY

The past second reform phase of five years (2005-2010) has been taken into consideration for the analysis of operational efficiency of selected public sector banks in India on the basis of different profitability and productivity parameters.

SAMPLE SIZE

The present study is based on five selected public sector banks in India. The selection of public sector banks for the purpose of study has been taken on the basis of business per banks as on 2010. Business per bank means total business of a bank (sum of deposits and Advances divided by no. of employees). This has been guiding consideration in the selection of the bank as the business is one of the determinants of performance of a bank.

DATA COLLECTION

The study is primarily based on secondary data. A major part of the database has been drawn from the published secondary sources, primarily the reports of Indian Bankers Association (IBA) and the Reserve Bank of India (RBI). The data relating to financial performance of the selected public sector banks have been obtained from various sources like "Financial Analysis of Banks" published by Indian Banker's Association, "Statistical Tables Relating to Banks of India". "Reserve Bank of India Monthly Bulletin", "Report on currency and Finance" and other publications of Reserve Bank of India.

SELECTION OF INPUT AND OUTPUT FACTORS

Various inputs and outputs have been undertaken for measuring operational efficiency on the basis of productivity.

INPUT FACTORS

1. Network of branches 2. Number of staff 3. Deposits

OUTPUT FACTORS

1. Advances 2. Interest spread 3. Net profit

In order to facilitate the comparison of one bank to the other, the market share of each factor in percentage terms is taken into account instead of the absolute levels.

DATA ANALYSIS

Due care has been taken while selecting input and output factors. There is bound to be some amount of correlation among inputs factors like number of branches and staff, branches and Total Deposits. Similarly among the output factors like advance and spread, spread and profits etc. There is bound to be inherent correlation. Simple arithmetic averages of the input and output factor measures in terms of respective percentage in market share. Diagrammatic and graphic presentation of data.

AVERAGE INDEX OF INPUT SHARE OF SELECTED PUBLIC SECTOR BANKS

TABLE 1: BRANCHES OF BANKS (in numbers)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	862 (10.35)	923 (10.71)	964 (11.10)	1035 (11.54)	1108 (11.45)	55.15	11.03
Oriental Bank of Commerce	1191 (14.30)	1334 (15.48)	1344 (15.48)	1422 (15.85)	1530 (15.81)	76.92	15.38
Bank of Baroda	2786 (33.45)	2812 (32.64)	2845 (32.77)	2915 (32.49)	3088 (31.92)	163.27	32.65
Punjab and Sind Bank	839 (10.07)	860 (9.98)	839 (9.66)	859 (9.58)	899 (9.30)	48.59	9.718
Canara Bank	2650 (31.82)	2686 (31.18)	2690 (30.98)	2740 (30.54)	3050 (31.52)	156.04	31.20
Total Market Share	8328 (100)	8615 (100)	8682 (100)	8971 (100)	9675 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 1 presents the details of average branches market share (in percentage) of five public sector banks during 2005-2010 . The amount shown in bracket shows the share of particular bank in total market. The table reveals that percentage of average market share of Bank of Baroda contributed higher i.e. 32.65% followed by Canara Bank i.e. 31.20%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 1

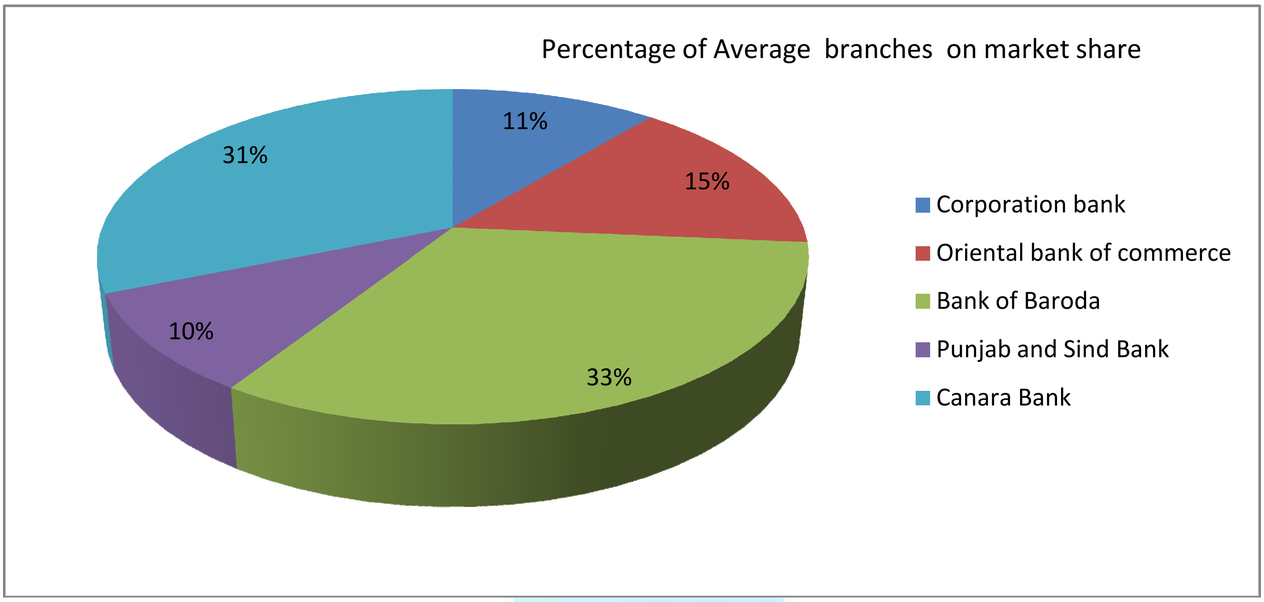

TABLE 2: NO. OF EMPLOYEES OF BANKS (in numbers)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	11325 (9.3)	11880 (9.8)	12010 (10.15)	12465 (10.68)	13143 (11.11)	51.04	10.21
Oriental bank of Commerce	14962 (12.31)	14730 (12.18)	14804 (12.51)	14656 (12.55)	15358 (12.98)	62.53	12.51
Bank of Baroda	38774 (31.91)	38604 (31.93)	37260 (31.48)	35838 (31.55)	38152 (32.25)	159.12	31.82
Punjab and Sind Bank	9542 (7.85)	9342 (7.73)	9013 (7.62)	8700 (7.45)	8259 (6.98)	37.63	7.53
Canara Bank	46893 (38.60)	46359 (38.34)	45260 (38.42)	44090 (37.76)	43380 (36.67)	189.61	38
Total Market Share	121496 (100)	120915 (100)	118347 (100)	116749 (100)	118292 (100)	`(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 2. Presents the details of average no. of employee's market share (in percentage) of five public sector banks during 2005-2010. The table reveals that percentage of average market share of Canara Bank contributed higher i.e. 38.0% followed by Bank of Baroda i.e. 31.82%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 2

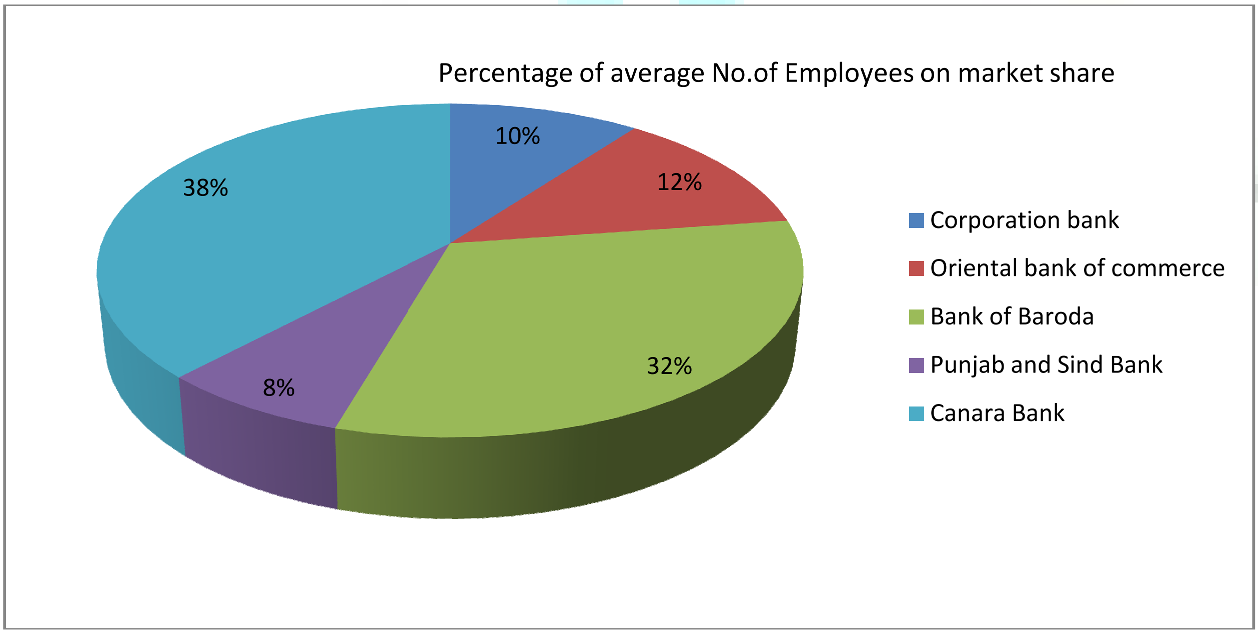

TABLE 3: DEPOSITS OF BANKS (in crore)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	3287653 (10.59)	4235689 (10.78)	5542442 (11.94)	7398391 (12.62)	9273367 (100)	58.49	11.70
Oriental bank of Commerce	5019746 (16.17)	6399597 (16.29)	7785670 (16.77)	9836885 (16.78)	12025759 (16.29)	82.30	16.46
Bank of Baroda	9366199 (30.17)	12491598 (31.79)	15203413 (32.75)	19239695 (32.81)	24126193 (32.69)	160.21	32.04
Punjab and Sind Bank	1692459 (5.45)	1931875 (4.92)	2483142 (5.35)	3467565 (5.9)	4915509 (6.67)	28.29	5.66
Canara Bank	11680324 (37.62)	14238144 (36.23)	15407242 (33.19)	18689251 (31.88)	23465144 (31.80)	170.72	34.14
Total Market Share	31046381 (100)	39296903 (100)	46421909 (100)	58631787 (100)	73805972 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table3. Reveals that percentage of average deposits market share of Canara Bank contributed higher i.e. 34.14% followed by Bank of Baroda i.e. 32.04% on the other hand Punjab & Sind Bank contributed less percentage on average deposits in market share i.e.5.66%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 3

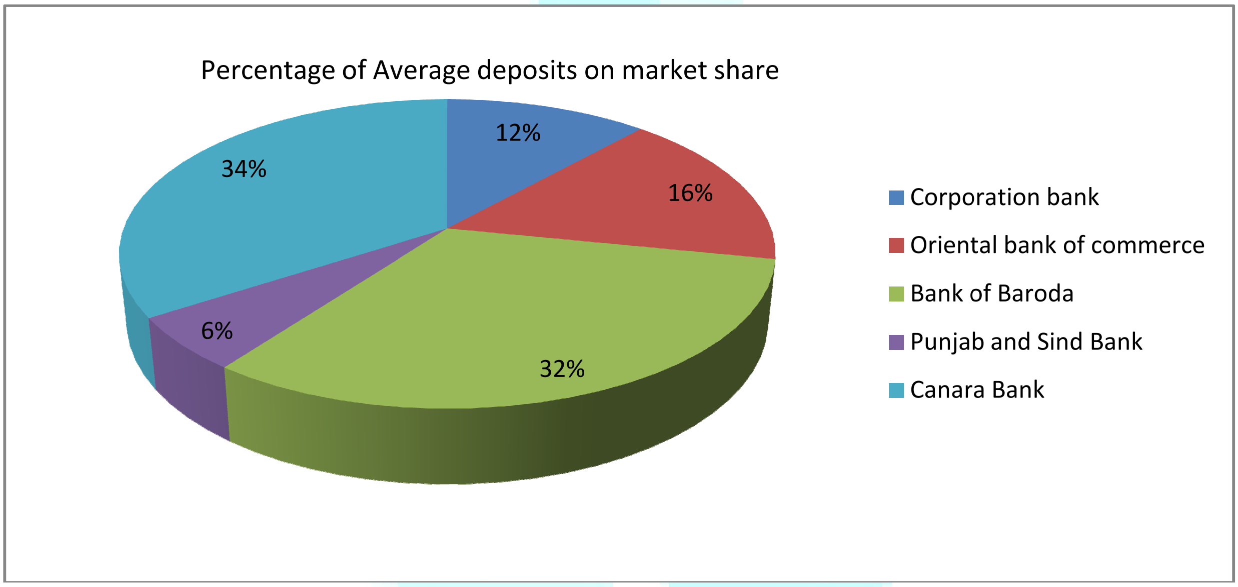

TABLE 4: MARKET SHARE OF INPUTS (in percentage)

Banks	Branches	No. of Employees	Total Deposits	Average Input
Corporation Bank	55.15	51.04	58.49	54.89
Oriental bank of Commerce	76.92	62.53	82.30	73.92
Bank of Baroda	163.27	159.12	160.21	160.87
Punjab and Sind Bank	48.59	37.63	28.29	38.17
Canara Bank	156.04	189.61	170.72	172.12

Table 4 Shows Average Percentage of all inputs on market share.

Average percentage of input factors namely branches, no. of employees and total deposits etc. on market share stood at the maximum of 172.12% for Canara Bank. The next index was registered by 160.87% of Bank of Baroda. Punjab & Sind Bank presented the lowest average market share percentage of index of all input factors at 38.17%.

AVERAGE INDEX OF OUTPUT SHARE OF SELECTED PUBLIC SECTOR BANKS

TABLE 5: ADVANCES OF BANKS (in crore)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	2396243 (11.63)	2994965 (11.18)	3918557 (12.0)	4851216 (11.47)	6320256 (12.07)	58.35	11.67
Oriental bank of Commerce	3357725 (16.30)	4413847 (16.47)	5456583 (16.74)	6850037 (16.19)	8348930 (15.94)	81.64	16.33
Bank of Baroda	5991178 (29.1)	8362087 (31.21)	10670132 (32.73)	14325141 (33.86)	17503529 (33.42)	160.32	32.1
Punjab and Sind Bank	910747 (4.42)	1173751 (4.38)	1834329 (5.63)	2461535 (5.82)	3263911 (6.2)	26.45	5.29
Canara Bank	7942569 (38.56)	9850569 (36.76)	10723804 (32.89)	3821940 (32.67)	16933463 (32.33)	173.21	34.64
Total Market Share	20598462 (100)	26795219 (100)	32603405 (100)	42309869 (100)	52370089 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 5 presents the details of average advance market share (in percentage) of five public sector banks during 2005-2010. The amount shown in bracket shows the share of particular bank in total market. The table reveals that percentage of average market share of Canara Bank contributed higher i.e.34.64 percent followed by Bank of Borada i.e. 32.1 %.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 4

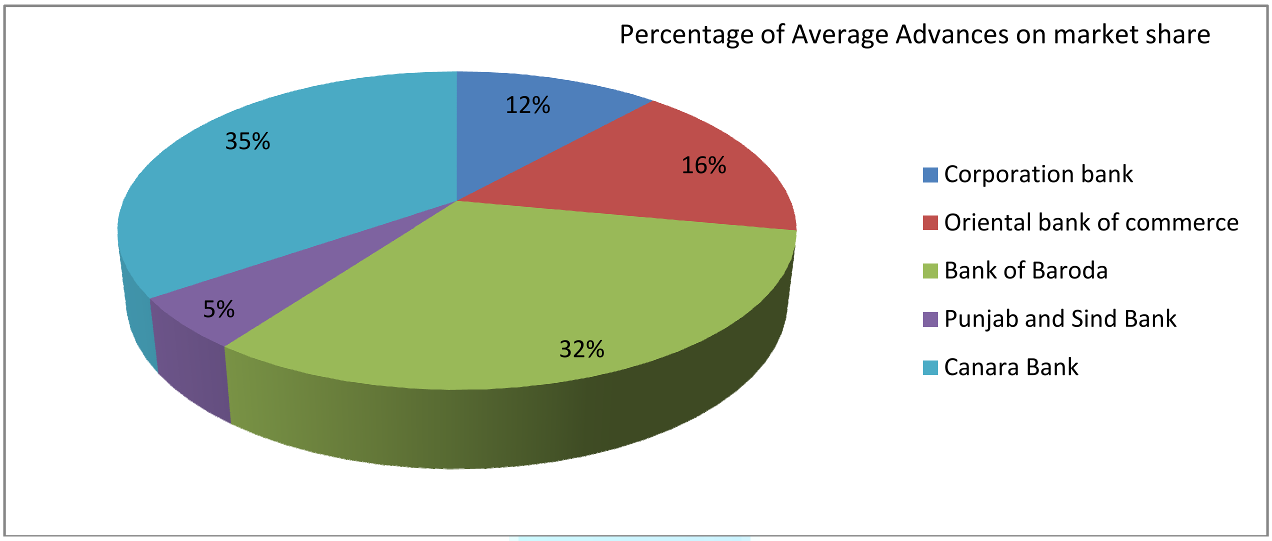

TABLE 6: NET PROFITS OF BANKS (in crores)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	44446 (13.55)	53614 (14.17)	73499 (16.44)	89278 (13.66)	117025 (13.16)	70.98	14.20
Oriental bank of Commerce	55719 (16.99)	58078 (15.35)	35323 (7.9)	90543 (13.86)	113468 (12.76)	66.86	13.4
Bank of Baroda	826978 (25.21)	102650 (27.14)	143552 (32.11)	222723 (34.08)	305833 (34.39)	152.93	30.59
Punjab and Sind Bank	10831 (3.30)	21852 (5.78)	38232 (8.55)	43718 (6.69)	50880 (5.72)	30.04	6.008
Canara Bank	134323 (40.95)	142081 (37.56)	156499 (35.0)	207240 (31.71)	302143 (33.97)	179.19	35.84
Total Market Share	328016 (100)	378275 (100)	447105 (100)	653502 (100)	889349 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 6 presents the details of average net profits market share (in percentage) of five public sector banks during 2005-2010. The table reveals that percentage of average market share of Canara Bank contributed higher i.e.35.84 percent followed by Bank of Baroda i.e. 30.59%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 5

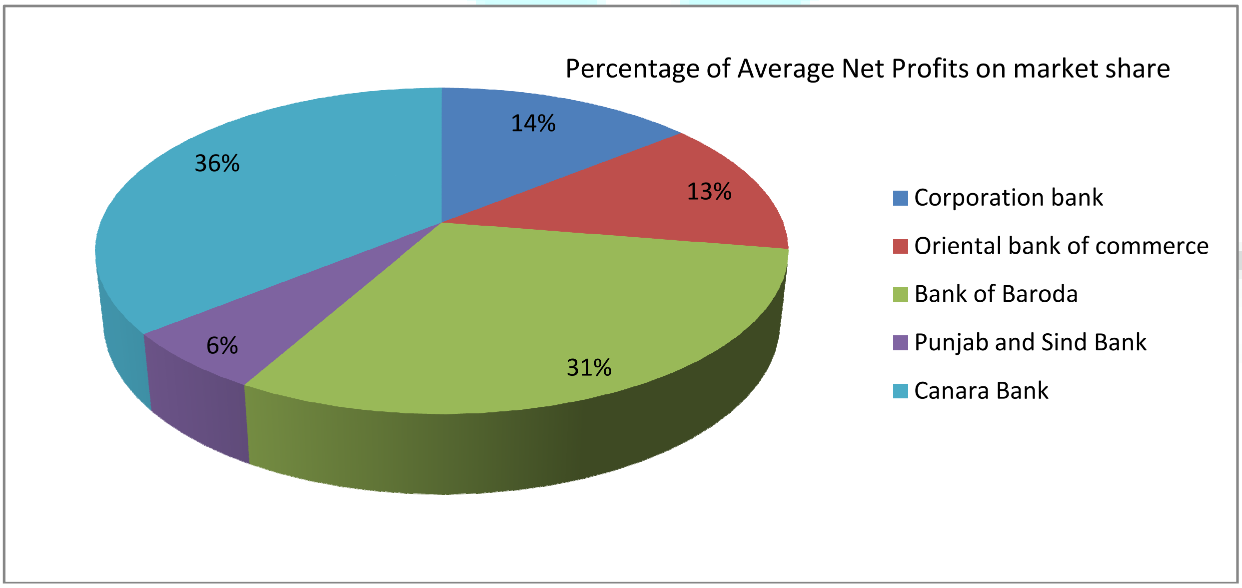

TABLE 7: SPREAD OF BANKS (in crores)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	122681 (12.0)	137780 (11.83)	144333 (12.67)	169098 (11.63)	221025 (12.33)	60.46	12.09
Oriental Bank of Commerce	160507 (15.71)	169133 (14.52)	168202 (14.77)	1996501 (13.73)	290744 (16.22)	74.95	14.99
Bank of Baroda	317486 (31.1)	378609 (32.50)	391180 (34.34)	512342 (35.24)	593948 (33.14)	166.32	33.26
Punjab and Sind Bank	63056 (6.17)	76701 (6.58)	81590 (7.16)	101187 (6.96)	118395 (6.60)	33.47	6.70
Canara Bank	358150 (35.05)	402683 (34.57)	353779 (31.06)	471780 (32.45)	568053 (31.70)	164.83	33.0
Total Market Share	1021880 (100)	1164906 (100)	1139084 (100)	1454057 (100)	1792165 (100)	(500)	(100)

The difference between interest income and interest expenses is known as spread or net interest income.Table7. Reveals that percentage of average spread market share of Bank of Baroda contributed higher i.e.33.26% followed by Canara Bank i.e. 33.0%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 6

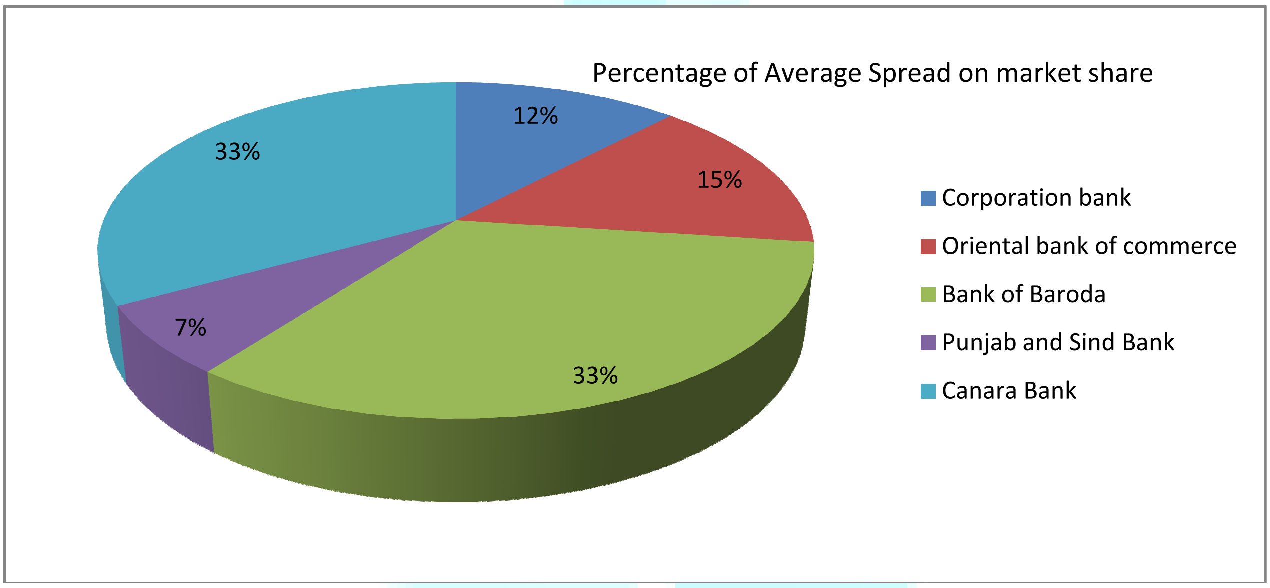

TABLE 8: MARKET SHARE OF OUTPUTS (in percentage)

Banks	Advances	Net Profits	Spread	Average Output
Corporation Bank	58.35	70.98	60.46	63.26
Oriental Bank of Commerce	81.64	66.86	74.95	74.48
Bank of Baroda	160.32	152.93	166.32	159.86
Punjab and Sind Bank	26.45	30.04	33.47	29.99
Canara Bank	173.21	179.19	164.83	172.41

Table 8 Shows Average Percentage of all Output on market share.

The table shows average percentage of output factors namely Advances, net profit and spread on market share stood at the highest of 172.41% for Canara Bank. The next higher index was register by Bank of Baroda i.e. 159.86 percent. Punjab & Sind Bank presented the lowest average index of all output factors that is 29.99 percent.

TABLE 9: PRODUCTIVITY OF SELECTED PUBLIC SECTOR BANKS ON THE BASIS OF OUTPUT / INPUT

Banks	Output	Input	Productivity Output/Input*100	Rank
Corporation Bank	63.26	54.89	115	I
Oriental Bank of Commerce	74.48	73.92	101	II
Bank of Baroda	159.86	160.87	99	IV
Punjab & Sind Bank	29.99	38.17	79	V
Canara Bank	172.41	172.12	100	III

Operational efficiency of the selected public sector bank has been determined by computing the efficiency ratio by using the following formula.
Efficiency ratio =Average % index of all output / Average % index of all inputs
The table shows that operational efficiency of Corporation Bank stood at the top with the highest productivity ratio 115% followed by Oriental Bank of Commerce with 101% and Canara Bank with 100% efficiency.

LIMITATIONS

Like any other study, this research is also not without limitations. The following are the main limitations of the study.

1. In the present study the operational efficiency of selected public sector banks has been examined, all public sector banks have not been considered for this purpose. Therefore, the study does not reflect the overall picture of the performance of banking sector.
2. The study is based on secondary data as published in various publications of RBI and IBA. This data is based on historical accounting concept, which ignores the impact of inflation.

3. In the present study, only the quantitative aspects of performance has been examined, qualitative aspects such as motivation of employees, customer satisfaction, image of the bank has not been considered which plays a definite role in the operational efficiency of a bank.

CONCLUSION

Due to financial sector reforms initiated during early nineties, the banks are focusing on productivity, profitability, efficiency, transparency etc. in order to make them work on high standards. Operational efficiency of Bank assumes greater significance in the prevailing financial and economic scenario. Public sector banks are competitive enough, so far as the productivity & profitability parameters (taken in the present study) are concerned. Of the five selected public sector banks in India one bank had achieved high level of efficiency. Corporation Bank stood at the top in operational efficiency among all five selected Public sector banks. The banking sector of India portrays a picture of a developing economy, moving towards being a developed economy through continuous efficiency improvement.

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SETTING UP LOCAL REINSURANCE COMPANY IN ETHIOPIA: ANALYTICAL REVIEW

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ABSTRACT

This paper is an analytical review of the prospects, challenges and potential for setting up local reinsurance company in Ethiopia. Modern insurance has been practiced in Ethiopia for more than a century. However, the Ethiopian insurance sector is said to be one of the less developed in the world and African countries. The insurance sector in Ethiopia has long been in the reinsurance business arranged with foreign reinsurers. Recognizing the role of local reinsurer, a number of African countries have set up national reinsurance companies. Ethiopia is not one of them. The issue has remained unresolved for years. The literature exhibits contrasting views on the relative merits and demerits of reinsurance business arranged locally and cross border. In this respect there is little research that focused on reinsurance in Ethiopian context. This study, thus, helps to that effort. It also provides the policy makers and governmental officials with insight information that they can see and consider the possibility of setting up local reinsurance company in Ethiopia. The paper concludes, abstaining from taking positions, by recommending on the measures to take before and after establishing the company if Ethiopia would have any.

KEYWORDS

Local reinsurance, Reinsurance, Reinsurance in Ethiopia, Analytical Review.

1. INTRODUCTION

The economic, social and political significance of insurance has been documented in the literature. As a key pillar of the financial sector, insurance plays a crucial role in economic development (UNCTAD, 2007). According to UNCTAD (1980, 2007), a sound insurance market is an essential characteristic of economic growth.

Reinsurance, one operation in the insurance market, plays a vital role in the proper functioning and development of insurance industry and risk management (Holland, 2009; David Cummins et.al 2007; You Lei and Joan Schmit, 2008). Primary insurers use reinsurance for both financial and operational purposes (James R. Garren and Joan Lamm Tenant, 2003; Rodolfo, 2009; Chen, Hamwi and Hudson, 2001). The reinsurance service can be arranged either locally or abroad. The need to diversify risks may call for the need to use foreign reinsurance. This need, however, does not preclude the necessity of increasing the amount of risk retained locally (UNCTAD, 2007).Hailu Zeleke (2007) stated that from risk management point of view foreign reinsurance cannot be eliminated altogether. Hence, the question that would rather left is whether optimum risk retention is obtained.

According to UNTCAD (2007), developing countries, which Ethiopia is not an exception, are highly dependent on foreign reinsurance. The literature exhibits contradicting views on the extent and dependency of developing countries on foreign reinsurance. Some (including Outreville, 2002; Wang, 2003) argue in favor of it while others are against as it would affect the domestic insurance in these countries (UNTCAD, 2007, 1987, 1980; Irukwu, 1987).

One mechanism that developing countries would use to increase the amount of risk retained locally and decrease foreign dependency is local reinsurance. A number of African countries have set up national reinsurance companies. However, Ethiopia is not one of them despite its long experience in reinsurance business arranged abroad (Hailu Zeleke, 2007; Zafu, 2006). Different stakeholders have been proposing to set up local reinsurance company in Ethiopia. However, the issue has remained unresolved for years and so far there is nothing despite all the efforts made to produce one.

The benefits of setting up a local reinsurance company do not come without costs. Before pushing ahead, analyzing the prospects, challenges and potential for setting up the company enables to proactively see the potential costs, risks, requirements and to push ahead with policies and strategies to avail the country with the benefits.

Hailu Zeleke (2007) indicated that a detail and rigorous study should be made to identify the merits and demerits of establishing national reinsurance company in Ethiopia. He also noted on the need to identify the experience of African countries and the benefits they derived by establishing a national reinsurance company. Mezgebe (2010) has also noted that despite its importance and unlike the wealth of literature in respect of the reinsurance business outside Ethiopia, there is little research in Ethiopian context.

Motivated by the literature review and the gap in there, this study analytically reviews the potential for setting up local reinsurance company and how to do it should Ethiopia have one. Drawing on the existing literature and reports, the paper analyzes and reports on the prospects, challenges and requirements for setting up local reinsurance company in Ethiopia.

The study has tried to answer four specific questions. These are:

1) What does the reinsurance business environment in Ethiopia look like?
2) What lessons would Ethiopia draw from the experience of African countries on establishing a local reinsurance company?
3) What are the prospects and challenges of setting up local reinsurance company in Ethiopia?
4) What are the measures to take in setting up local reinsurance company & its proper functioning if Ethiopia would have any?

The specific purposes of the study include:

i) Describing the reinsurance business environment in Ethiopia.
ii) Exploring the experience of African countries and the benefits they derived by establishing a reinsurance company & identifying lessons to Ethiopia.
iii) Identifying and analyzing the prospects and challenges of setting up local reinsurance company and its proper functioning in Ethiopia.
iv) Recommending on the specific measures to take for setting up and proper functioning of local reinsurance company in Ethiopia.

The significance of the study can be justified from two perspectives. The first perspective is the importance that it contributes to the literature on reinsurance business in Ethiopia. The second is the policy implications in that the study provides policy makers and governmental officials with insight information and recommendations by which they can see and consider the possibility of setting up local reinsurance company in Ethiopia.

The study is conducted through the following:

- Review of relevant reports, unpublished records of National Bank of Ethiopia (NBE) and the limited related studies in Ethiopia
- Assessment of policy, law & practice of Ethiopian reinsurance business.
- Discussion with employees of some insurance companies in Ethiopia.
- Assessment of African reinsurance experience and review of international organizations' recommendations.

The remaining sections of the paper are organized as follows. Section two provides basics of reinsurance and review of related literature on local and foreign reinsurance – developing countries perspective and African reinsurance. Section three presents the requirements for setting up and proper operation of local reinsurance company. Section four deals with the current condition in Ethiopia vis-à-vis the requirements for establishing local reinsurance Company. Finally, conclusion and recommendations are included in section five.

2. REINSURANCE-BASICS, DEVELOPING COUNTRIES AND AFRICAN PERSPECTIVE

2.1. BASICS OF REINSURANCE

Reinsurance is one of the important operations of insurance companies (George E. Rejida, 2008) that involves the shifting of part or all of the insurance originally written by one insurer (cedant) to another insurer (reinsurer). Scholars, including Garry S. Patric, Peter Falush, Peter Liebwein and Keith Purvis, James Allen Park, Robert Kiln, Rodolfo Wehrhan, Mike Adams, Holland D.M., Edwin W. Kopf, and others have defined reinsurance in a number of careful ways. Summarizing the definitions available, reinsurance can be understood as insurance for insurance companies. The reinsurer, in return of a premium paid to it, indemnities an insurer for a portion or all of the liabilities taken up by the latter due to a policy of insurance that it has issued. Percolation No. 86/1994, licensing and supervision of insurance in Ethiopia, defines '"Reinsurance' as an agreement whereby an insurer guarantees to share in the benefits and liabilities of another insurer".

The nature of reinsurance, either facultative or treaty which again may be proportional or non proportional, is like insurance except the parties involved, specification of the contract, and size and complexity of the transactions. Based on contractual relationships, reinsurance is to be differentiated from coinsurance, where the risk is shared and not transferred among insurance companies each of them having a direct contractual relationship with the insured. Thus, reinsurance involves legal entities and not individuals. The reinsurer can also transfer risks to other entities called retrocessionaires by means of a financial transaction called retrocession (Rodolfo Wehrhahn, 2009).

The most important reasons for an insurance company to use reinsurance include increasing underwriting capacity, risk capital improvement and diversification, surplus relief, catastrophic protection, expertise transfer, financing new business and reducing volatility of underwriting (Rodolfo Wehrhahn, 2009; Peter Liebwein and Keith Purvis,2005). The ultimate goal of reinsurance is to reduce insurers' exposure to loss. This goal enables to reduce the financial cost to insurance companies from the potential occurrence of insurance claims, and thus enhancing innovation, competition and efficiency in the market place and an economy.

How much businesses an insurer will reinsurer depends on the insurer's business model, its capital strength, risk appetite and prevailing market conditions. In particular, insurers whose profitability are heavily exposed to catastrophic events, small local players, specialized insurers, insurers with small number or risks with large exposures, insurers with a greater proportion of businesses containing a mortality or disability risk elements, insurers expanding into new products & insurers exiting markets or lines of business often need and use more reinsurance (Patrizia Baur and Antoinette Breutel-O'Donoghue,2004). Regulatory conditions also significantly influence the demand for reinsurance.

In general, reinsurance makes insurance markets more stable and attractive and results in less expensive products, higher profitability, enhanced insurability , lower cost of capital, secure industry, and growth and development of the insurance companies, the insurance sector and overall economy.

2.2. LOCAL VS FOREIGN REINSURANCE – DEVELOPING COUNTRIES PERSPECTIVE

Almost all insurance companies have a reinsurance program arranged locally or abroad; the cession of shares of liability spreads risks further and enables to achieve the ultimate goal of reducing exposure to loss. By passing the exposure to loss to a reinsurer or a group of reinsurers, insurance companies can transfer some of the risks to the reinsurer.

The insurance markets of the developing countries are characterized by low levels of growth and sophistication. The markets are also characterized by lack of local regulations governing the practice of insurance (UNTCAD, 2007).

Dependence on foreign reinsurance is much more persistent than dependence on foreign insurance. Even in countries where the insurance sector has been totally nationalized, dependence on foreign reinsurance cannot be eliminated altogether. This is particularly the case in developing countries, where the premium income is relatively small and where large risks cannot be covered by the premium receipts generated there. According to Cassandra R. Cole et al., 2008, between 1996 and 2004, two of the top six countries, in terms of total volume of reinsurance, are developing nations. Though, the demand for foreign reinsurance by developing countries varies across developing countries depending on structure of the insurance market, degree of development and the type and size of risks covered (UNCTAD, 1980), the volume of reinsurance service which these countries purchase aboard in order to balance their portfolios has increased significantly (Skipper, 1987; Outreville, 1995, 1990; Wang, 2003).

The nature and size of the market and lack of adequate diversification of risk on the business written by domestic insurers in the developing countries creates a need for a substantial transfer of their portfolio to the reinsurers. In addition, as the economies in these countries continue to grow, the domestic markets may no longer be able to meet the excessive demand in the countries (Outreville, 1990, 1995). According to UNCTAD (1980, 2007), inadequate market structure, under capitalization and insufficient know-how are among the factors that contribute for the dependency. Hence, developing countries often find themselves in the position of being net buyers of reinsurance. Cassandra R. Cole et al. (2008) find strong support for the importance of developing countries in the reinsurance marketplace and existence of higher demand for foreign reinsurance by developing countries due to the fact that their domestic markets may not be able to serve the domestic demand.

In relation to the extent and dependency of developing countries on foreign reinsurance, contradicting views are observed. Those arguing in favor of local reinsurance suggest that strengthening domestic reinsurance companies of developing countries improves the risk retention capacity locally, technical capacity of the primary insurers, and even can attract foreign market and generate hard currency. This helps minimize the outflow that may result from being completely dependent on cross border reinsures. The companies can create foreign currency earnings through dividends and earnings by making cross boarder investment using their skills, capabilities and competencies in emerging market opportunities (Zafu, 2006). According to UNCTAD (1980), UN considers the creation of strong and efficient domestic reinsurance institutions to save outflow of foreign exchange and growth, adequate legislation and supervision of reinsurance and professional training for efficient and sound national reinsurance institutions as objectives and strategy in developing countries. They also claim that dependency on foreign reinsurance has negative consequence to developing countries in terms of foreign currency outflow and deterioration of balance of payment. Excessive dependency affects the domestic insurance in developing counties resulting in low contribution to the national economy (UNCTAD, 2007, 1987, 1980; Irukwu, 1987).

Also, the dependence of developing countries, both financially and technically on foreign reinsurance, has implications to their development. These implications can be understood on the basis of the cost in foreign currency and the negative impact that excessive dependence has on the growth and development of the domestic insurance sector. According to UNTCAD (1980), heavy dependence on foreign reinsurance and the continuation of this dependence for a number of years prevents developing counties from building up their surpluses to enable them to retain a tangible volume of their premiums. This in turn affects their insurance companies' viability and development, and places them more in the position of brokerage firms than of genuine risk carriers.

On the other hand, some arguing in favor of foreign reinsurance to developing countries suggest that foreign reinsurer provides insurers with professional management expertise, financial leverage and foreign exchange inflows in times of claims (Outreville, 2002; Wang, 2003).

Despite all the existing views, the need to distribute risks as widely as possible does not preclude the necessity of increasing the amount of risks retained locally up to a sound maximum commensurate with the capacities of the local market and the companies of which it is composed. Measures at the individual and market levels can be adopted to attain this goal, supplemented by measures at the regional level (UNCTAD, 1964). Hailu Zeleke (2007) noted that from the risk management point of view, reinsurance cover from foreign reinsurance is unavoidable.

This indicates that an optimum retention of risk locally requires balancing between the two extremes. One mechanism that developing countries would use to increase the amount of risk retained locally and decrease foreign dependency is local reinsurance.

In practice, reinsurance placements for large risks in developing countries is mainly in the form of facultative cessions i.e., case-by-case reinsurance. This condition has resulted for small companies' disadvantage of virtually allowing the reinsurer to impose its terms and conditions on the direct writing company, not only as regards the terms of reinsurance but also as regards the terms of the original cover. The failure to find placement promptly for a given risk obliges the insurer to comply with the reinsurer's requirements. It is also true that facultative reinsurance allows the ceding company a much lower level of reinsurance commission and no profit commission is payable. Reciprocal exchange in reinsurance, allows to boost the level of premium income, stabilize the portfolio results, and enable the extend operations to other markets without the need to establish foreign representative abroad. Though, because of these advantages, reciprocal exchange in reinsurance has become an internationally recognized practice, in developing counties, however, most domestic insurers are not yet making extensive use of this practice due to lack of underwriting expertise. This caused the developing countries rely upon stable commission terms rather than venturing to carry foreign risks.

As Policy considerations, plans aimed at reducing the cost of foreign reinsurance and optimize the retention of risk locally, without losing sight of the need to satisfy the requirements of the market and of the companies, may be focused on at the individual company, market or regional level; and regularly measures need to be considered. However, the actions would be affected by the market's susceptibility to the risk of catastrophes and the ceding companies' interest to use reinsurance costs under better control. To retain risks locally at reasonable levels, establishment of central reinsurance companies is recommended by UNTCAD (1980).

The expansion of the reinsurance requirements of developing countries, coupled with a desire to save foreign exchange, has prompted many governments of these countries to set up central reinsurance companies normally with public participation in their share capital. These companies are endowed with compulsory or agreed cessions from all direct writing companies operating in the market. Moreover, compulsory cessions are often accorded to these companies against low commission terms in order to favor their quick growth.

2.3. CURRENT CONFIGURATION AND EXPERIENCE OF AFRICAN REINSURANCE – LESSONS TO ETHIOPIA

2.3.1. EVOLUTION OF AFRICAN REINSURANCE COMPANIES

According to UNCTAD (2007), the insurance industry in Africa is a phenomenon of the twentieth century, following independence in the 1950's. South Africa has a longer insurance history followed by Egypt. The insurance companies are most small and medium sized. The establishment of local reinsurance companies in Africa is a more recent practice and related to the development of insurance after independence. The aim for establishing local reinsurance companies was to conserve profitable reinsurance premium ceded out of their countries and indirectly control the operations of the primary insurers.

Foreign reinsurers – Swiss Re, Munich Re, SCOR and Hannover Re have been operating in Africa for several decades. In the continent, state/regional reinsurers were the first on the scene, followed later by privately owned local players (Elzabeth Amadiume, 2011). The Egyptian reinsurance corporation formed in 1957 and Merged with Misr insurance company in 2008, was the first African reinsurer. The Moroccan state owned societe central de reinsurance, followed in 1960. Ghana Re was created in 1972. Between 1972 and 1990, a number of national and regional companies, along with a few privately owned ones, were set up. Tan Re (2011) and Uganda Re (2011) joined in the 21st century.

Elzabeth (2011) identified that the common motivating factors for the emergence and establishment of regional reinsurance companies are the desire to address capacity shortage, provide services specific to the needs of the local markets, and the development of requisite skills through training and exposure. These factors are laudable objectives which are being achieved by the regional reinsurers.

State and regional reinsurers in Africa are now competing outside their geographical spheres of influence, with generally good financial results. These achievements are partially attributed to the steadily improving capital base of the companies. These impressive performances of state and regional companies gave local entrepreneurs the impetus to create private reinsurance companies. The first privately owned company was Best Re (1985) which started in Tunisia from where it moved to Malaysia in 2011. The Nigerian based continental Re (1987), and in 1995, Main Stream Re (Ghana) and FBC Re (Zimbabwe) were formed. From 2003 to 2010 a number of privately owned companies were set up in Cote D'Ivoire, Burkina Faso, Zambia and Zimbabwe (8 private non-life reinsurers). At the helm of affairs of the private companies are a good number of experienced, successful and responsible practitioners who had worked in the national and regional insurance and reinsurance companies.

Currently, though there are more than 600 local insurance companies in Africa, the number of reinsurance companies in the continent is not much more than 30. The growth in the number of African reinsurers has been generally slow. Regional reinsurers - African Re (1976), CICA Re (1982), PTA /Zep Re (1990) and WAICA Re (2011) are the largest local reinsurers which Africa Re is the first and market leader in the continent.

The modest economic activities in the early years, huge capital requirements, low investment returns, scarcity of hard currency, limited local capacity, outward flow of premiums and paucity of skilled local man power are identified to be the reasons for the slow growth of local reinsurers in African markets (Elzabeth, 2011). Legal and regulatory requirements are also not sound in African countries.

The share of foreign reinsurers, which for many decades dominated the African reinsurance market, is now reducing. There is, however, renewed interest from Europe, Bermuda, the Middle East and Asia. Based on ownership structure, of the 33 local reinsurers in Africa, 10 are state owned, 20 are privately owned and 3 are state /privately owned. Region wise, 6 are found in North Africa, 4 in East Africa, 8 in West Africa and 15 in Southern Africa.

2.3.2. THE PERFORMANCE OF THE AFRICAN REINSURANCE MARKET

a. PREMIUM INCOME

The premium income of the African reinsurance market has been controlled by limited number of countries. In 2009, for instance, the South African Market contributes 47.2% of the African Reinsurance market; South Africa, Egypt, Angola, Morocco, Nigeria, Algeria and Kenya together made up 78.4% of the continents reinsurance premium in 2009.

In 2009, the reinsurance premium as a percentage of insurance premium on regional basis was 26.6% (Anglophone West Africa) , 21.4% (Franco phone West & Central Africa), 23.0% (North Africa,) 21.4% (African Indian Ocean Islands). 32.9% (East Africa), 24.7% (South Africa non-life reinsurance) and 2.2% (South Africa life reinsurance). The total amount of insurance premium in Africa amounts US $51,474,772,561 of which 12.1% (US $6,247,149,896) represents reinsurance cession in 2009 (computed from national insurance commissions and associations).

b. PROFITABILITY

There is a sustained profitability of Africa's insurance market makers. 60% of the insurance premium income is from the life branch which reinsures about 2.2% of its business. On the non-life side, Africa is essentially a proportional reinsurance market making up 90% of the continent's non-life treaty reinsurance business. The non-life treaty reinsurance premium is high, estimated on average at 25 – 28%. Performance indicators of locally domiciled reinsurers reveal that the regional players and the other reinsurers posted profits. For instance in Tanzania, Ghana and Kenya, the ratio of underwriting profits to net earned premium in (2008, 2009) were (13.18, 11.51), (7.6, 2.10) and (3.54, 7.34) respectively. The ratios for Senegal and Nigeria were (2.79, 2.51) and (8.08, 6.17 (loss)). For the regional reinsurance companies, the ratios were (9.59, 8.35) and (3.37, 6.56) for Zep Re and Africa Re respectively; for CICA Re, in 2008 and 2009, were 13.82 and 10.8 respectively.

In general, UNTCAD (2007) find out that a number of African reinsurance companies performed well in conserving resources , reducing outgoing reinsurance premiums and at different times providing reinsurance cover to small respective countries' insurance companies. However, the performance of Africa's reinsurance companies has been hampered and challenged by a number of factors including: lack of adequate capitalization, shortage of qualified or professional staff, outdated legislation , non existence of information system and national insurance statistics, and lack of confidence in their security by the majority of insurance that they try to serve ,both within and outside.

2.3.3. REINSURANCE INDUSTRY CHALLENGES IN AFRICA

The insurance industry itself in Africa which form the major source of business for the reinsurance industry has major challenges, and on top of these, there are also specific ones affecting the reinsurance industry in Africa. These are:

i) Anti – selection – discrimination in their dealings with companies in the developed countries and to the business they secure in the local markets.

ii) Limited underwriting capacity as the companies have small capital which is continuously being eroded in hand currency terms due to currency devaluation.

iii) Foreign currency constraints as most insurance business is transacted in local currencies, reinsurance business by its very nature requires foreign currency, and its shortage is a challenge.

iv) Poor skills development / shortage of skills and brain drain to developed countries.

v) Poor Research & development capacity to meet the requirements of African situations.

vi) Information and communication technology (ICT) –insufficient investment in ICT and the training of its people to match the challenges of technological advances and take of its opportunities.

vii) Industry supervision –lack strong and effective regulations in most Africa markets mainly due to lack of resources.
viii) Infrastructure (physical and institutional) - lacking proper infrastructure which militates against the effective operation of reinsurance companies in Africa.

3. REQUIREMENTS FOR SETTING UP LOCAL REINSURANCE COMPANY AND ITS PROPER FUNCTIONING/OPERATION

A considerable part of the strength of local reinsurance companies derives from their ability to offer a fairly large amount of business with a reasonable degree of spread. This gives them bargaining power when seeking retrocession in the international markets, thus enabling them to obtain terms more favorable than those obtained by individual insurers. Moreover, local reinsurers have a better chance of obtaining more favorable reciprocal business. The companies, by monitoring terms and conditions offered by direct insurers, and by insisting on strict tariff rates, contribute to the reinsurance terms obtained by such markets as a whole. Finally, an important aspect of activities of these companies is their ability to function on a world-wide scale. Having a broad home base with a wide spread of capacity and know-how which they develop through their contacts with the ceding companies and their retrocessionaires, they can contribute to expansion.

The proper functioning of a central reinsurance company requires a sufficiently large market. If insurance market in a country is very small, a local reinsurer is less able to meet the needs of the national economy. Such markets need to bank their efforts together at a regional or sub regional level to create common reinsurance units. The creation of such regional units allows these markets to overcome the constraints and difficulties arising from their exiguity, the scarcity of their financial resources and the lack of the technical expertise necessary for the good running of a reinsurance company.

In addition to the aforementioned points, the potential benefits of local reinsurance company and its proper functioning requires enabling environmental, institutional and regulatory requirements which are inherent in setting up the company and its operation. Also, the reinsurance business hinges on successful partnership. The advantages of reinsurance service can be increased by realizing the reinsurer as a partner rather than as a means of risk deduction only. Achieving these advantages would demand strategic partnerships, efficient operating platforms, a better understanding and management of risks and transparency at all levels.

The most important requirements for setting up local reinsurance company and its proper operation as discussed in the literature include:

- Proactive regulatory framework and industry supervision

The general objectives of reinsurance laws are to protect customers, standardize the conduct of reinsurance and establish a sound system. Regulatory frameworks and the laws relating to the conduct of reinsurance must be proactive, timely, relevant comprehensive, adequate and unambiguous. Strong supervisory authority armed with adequate financial and human resource must be available. The regulator/supervisor must liaise with the legislative arm of government, industry players and other entities that could play a role in the market so as to ensure that the industry is proactive and effectively regulated thereby contributing its quota to the economy.

- Effective enterprise risk management and corporate governance

Every reinsurance company should have a chief risk officer who reports directly to the management. If effectively handled, the function, allows the company to have a better understanding of the different types of risk it is exposed to. Both internal and external auditors must be allowed to carry out their duties in line with stipulated guidelines approved by the board. Similarly, there must be segregation of the responsibilities between management and board. The directors are also increasingly expected to demonstrate that the board is indeed adding value through its functions and that its committees focus on good governance.

- Improved ICT platforms, actuarial /statistical capabilities and R&D

Up-to-date ICT platform in line with cutting edge technologies would enable the reinsurer to automate most processes, thereby reducing response time and the cost of doing business. Furthermore, the reinsurer to compete with the best from around the world must employ actuarial and statistical capabilities to better understand and manage risks. Research and development is pivotal to the success of the company. It is therefore necessary for local reinsurer to recruit staff with the requisite skills to support in this regard.

- Strong industry bodies

A heavy burden skill lies on the shoulders of the industry bodies to lead the way forward in a proactive way that would steer the industry in the right direction. The role of well organized industry associations such as insurers, brokers etc cannot be underestimated in shaping policies and serving as a united voice for lobbying and negotiating with government through the regulatory body, consumers and other relevant sectors.

- Consumer awareness

Although the reinsurer has no direct link to the policy holder who is the ultimate customer, it is still a stakeholder. In that sense, all stakeholders and the regulatory authorities should work together for the interest of consumer. It is also in the best interest of the reinsurance company and the market that the public is informed and knowledgeable so as to make decisions on risk protection, investments and retirement provisions.

- Reinsurance education and training, Professional standards and competence

It is an acknowledged fact that the dearth of skills, knowledge and understanding in many industries need to be addressed. Education is vital tool in raising awareness. The work force is the most valuable asset. The benefits of an educated, trained and up-to-date work force are many– improved performance and quality of service, innovation, adaptation and foresightedness, competitiveness, self–confidence, cost effectiveness/value for money, improved claims management.

- Stability of the operating environment and adequate capital

There is a real need for stability in the general economy, legal, political and policy issues. It is also necessary to ensure a reliable, secure and adequate infrastructure, capital and foreign currency.

4. ENVIRONMENT FOR SETTING UP LOCAL REINSURANCE COMPANY IN ETHIOPIA

4.1. REINSURANCE BUSINESS IN ETHIOPIA

All insurance companies in Ethiopia cede reinsurance business to foreign insurance and reinsurance companies, such as Munich Re, Africa Re and PTA Re on proportional and non-proportional reinsurance methods (Hailu Zeleke, 2007). The proportional reinsurance plan includes facultative and treaty (quota and surplus). The same author indicated that Ethiopia has been long in reinsurance business arranged abroad and the reinsurers have the upper hand in the reinsurance arrangements. The state owned insurer, EIC transacts in reinsurance business in similar policies on a reciprocal basis with insurance companies and regional reinsurers operating in Afro Asian Countries.

With regard to the regulation of the reinsurance business in Ethiopia , though proclamation no. 86/1994 states that directive addressing the issues on reinsurance business in the country shall be issued by NBE , no such directive has been issued so far. In this respect, Workneh (2006) recommended on the regulatory requirement for the reinsurance business in Ethiopia. Hailu Zeleke (2007) also noted on the regulatory gap that it makes the challenge more difficult for the insurance industry competitiveness in the country.

The premium cession rates of the Ethiopian insurance sector for the non-life insurance business has ranged between 24%(in 2000) and 36%(in 2002) over the period 2000 to 2011.For the life insurance it is between 9%(in 2004) and 20%(in 2002) over the same period (Computed from NBE unpublished report). Zafu (2006) indicated that reinsurance business classes with least loss ratios have experienced the highest cession rates. The Ethiopian insurance industry has been a potential reinsurance market over a number of years in terms of profitability and easy access to remittance (Alamirew, 2006).

4.2. PROSPECTS (OPPORTUNITIES) AND CHALLENGES FOR SETTING UP LOCAL REINSURANCE COMPANY IN ETHIOPIA

The literature shows that developing countries like Ethiopia can derive a number of advantages by setting up and operating local reinsurance company. These, among others, include:

i. To increase risk retained locally and to reduce dependency on foreign reinsurance that would otherwise have negative consequence in terms of foreign currency outflow, deterioration of balance of payment and affects the domestic insurance industry that prevents it from building up surpluses to enable retain a

tangible volume of premiums; this in turn affects the insurance companies' viability and development, and places them more in the position of brokerage firms than of genuine risk carriers.
ii. To serve the insurance companies with immediate effect, faster the development of the insurance industry and the economy, promote the growth of underwriting capacity. It can also assist the business development of primary insurers and provide direct insurers with essential technical knowledge.
iii. Beyond using the local reinsurer as a risk transfer mechanism, setting up local reinsurer would create awareness for the local business people, facilitate information exchange, create job opportunities and participate in various investments.
iv. Provide reinsurance cover to small insurance companies that would have been in difficult position to get adequate and affordable reinsurance cover internationally.
v. To help in setting up new insurance companies, property development and mobilizing of financial resources, active participation in financial markets and preservation of foreign currency by providing local insurance capacity and to underwrite some risks that would be shunned by foreign reinsurers.
vi. To generate foreign currency by possibly selling reinsurance for inward business.
vii. To create collaborations with regional and reinsurers, in addition to minimization of foreign exchange, to strengthen reciprocal trade and strongly negotiation for improved retention, reinsurance terms and conditions for the market.
In Ethiopian context, there are prospective conditions (opportunities) which place the country at a competitive advantage and create motivation and possibility for setting up and operating local reinsurance in the country. Parallel to this, however, are challenges that require due attention from the government and other stakeholders. These prospects (opportunities) and challenges are outlined as follows:
a. Opportunities:
i. The long experience of the Ethiopian insurance industry arranged with foreign reinsurers
ii. The economic growth and market oriented economic system, emphasis given to import substitution strategies aimed at strengthening foreign exchange holdings.
iii. Existence of profitable insurance companies and potential growing domestic insurance market and higher demand for reinsurance by the insurance companies, improving condition in investing public and the private sector.
iv. Potential support from regional and international organizations
v. Availability and increasing number of higher educational institutions for skilled and trained man power
b. Challenges
i. Low level of public awareness on reinsurance
ii. Lack of attention given to the reinsurance industry
iii. Non existence of reinsurance law and outdated insurance law
iv. Lack of skilled man power with adequate technical expertise
v. Lack of strong supervisory and other industry bodies
vi. Less developed financial market

5. CONCLUSION AND RECOMMENDATION

5.1. CONCLUSION

Reinsurance plays a vital role in the proper functioning and development of insurance market. Insurance companies use reinsurance, arranged locally or abroad, for both financial and operational purposes. The need to diversify risks may call for the need to use foreign reinsurance. This need, however, does not preclude the necessity of increasing the amount of risk retained locally. Then, the question that would rather left is whether optimum risk retention is obtained.
In the literature, contradicting views are observed in relation to the relative merits and demerits of foreign reinsurance for developing countries. While some argue in favor of it, others are against as it would affect the domestic insurance in these countries. The latter group, emphasizing on the advantages of local reinsurer, have been recommending on establishment and strengthening of local reinsurance companies. In response to this, many countries have set up the company in their economy. However Ethiopia is not one of them despite the long experience in reinsurance business and efforts to set up local reinsurance company in Ethiopia.
This study motivated by the literature review and the gap in there, analytically reviews and reports on the potential for setting up local reinsurance company in Ethiopia and how to do it should Ethiopia have one. In this, context, the following points are observed.
i. Reinsurance business in Ethiopia has been practiced for a long period of time without legal frame work. It is highly dependent on cross boarder arrangement which makes the country a net importer of the service with limited transactions in similar policies exchanged on a reciprocal basis. The reinsurers have the upper hand in the reinsurance arrangements. The reinsurance business classes with least loss ratios have the highest cession rates. The cession rates are high particularly in the non-life insurance which indicates that the insurance industry would be a potential market for reinsurance.
ii. The insurance market in Africa is controlled by a limited number of countries and most of the insurance companies are small and medium sized. The establishment of local reinsurance companies in Africa is a more recent practice with the aim to conserve profitable reinsurance premium ceded out and indirectly control the operations of the primary insurers. This has resulted in decline in the number of foreign reinsurers. In the continent, state/regional reinsurers were the first on the scene, followed later by privately owned local players. Currently there are around 33 local reinsurance companies with good financial performance that is partially attributed to their increasing capital base, successful and responsible practitioners. However, the growth in the number of African reinsurance is slow due to modest economic activity, huge capital requirements, scarcity of hard currency, low investment returns, limited local capacity, outward flow of premises, and shortage of skilled local man power. The legal and regularly requirements are also not sound in many African countries.
iii. Developing countries like Ethiopia can derive a number of advantages by setting up local reinsurance companies. This includes:
- Increasing risk retention locally and reducing foreign dependency thereby saving foreign currency outflow and improve the balance of payment.
- Promoting growth of underwriting capacity and development of the local insurance markets.
- Providing essential technical knowledge to the insurers.
- Creating awareness and facilities information exchange.
- Creating job opportunities.
- Participating in various investment and financial markets.
- Providing adequate and affordable reinsurance cover to local insurance companies and helping in setting up new insurance companies.
- Contributing to the proper development and mobilizing of financial resources.

In order to gain the potential benefits, setting up and proper operation of local reinsurance companies require- proactive regularly frame work and strong supervisory body, effective enterprise risk management and corporate governance, improved ICT, actuarial/statistical capabilities and R &D, strong industry bodies, customer awareness, skilled man power and stability of the operating environment and adequate capital.
Reviewing the existing conditions in Ethiopia via-a-vis the requirements, both opportunities and challenges are there in setting up and operating local reinsurance company in the country.

5.2. RECOMMENDATIONS

If Ethiopia is to set up and operate local reinsurance company, the following recommendations are suggested.
i. Arrange /organize forums where the stakeholders can discuss on the issue. This can help to digest the potential benefits and costs, understand their positions and improves awareness.
ii. Improve the legal environment in relation to reinsurance. Specifically, addressing issues such as the requirements for reinsurance arrangements, roles of the industry players, compulsory reinsurance, licensing, capital adequacy, corporate governance and human resource requisites.

iii. Clearly identify the national objectives for setting local reinsurance company and continuously evaluate its performance.
iv. Use the local reinsurance company as a sole reinsurance provider for the local insurance companies and sole agent through which to conduct retrocession transaction abroad.
v. Strengthen the capacity of the supervisory body with finance and skilled man power.
vi. Use joint state-private ownership structure to facilitate the availability of capital and participation of the private sector.
vii. Demand support from international organizations and regional reinsurance companies.
viii. Create partnership and collaboration with other countries and learn from their experience.
ix. Enhance ICT and better flow and exchange of information and develop database.
x. Promote leadership, managerial and technical skills for developing the human resource requirement. This can be achieved through:

- Creating link with higher educational institutions
- Developing corporate universities
- Attracting skilled man power from abroad

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PROBLEMS OF SUGAR COOPERATIVES IN MAHARASHTRA

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AKURDI

ABSTRACT

Maharashtra has been known as pioneer of cooperative movement. Especially sugar cooperatives in the state have prominent place in socio-economic development of the state. This Industry is the backbone of the rural economy of state. Therefore cooperative sugar industry is deep rooted and grown in the state. In 1945 Late Padmashree Vithalrao Vikhe Patil pioneered the first successful Co-operative Sugar Factory in the country at Pravaranagar in Ahmednagar District of Maharashtra which was commissioned in 1951. Sugar cooperatives in Maharashtra are facing many problems. In Maharashtra 40% of state sugar mills are sick. & only 10% are getting profits. Moreover, with the advent of new economic era, cut throat competition, awareness of farmers coupled with their movements and changing global environment are threatening the very survival of the industry.

KEYWORDS

Co-operative sugar Industry.

INTRODUCTION

India is second largest sugar producing nation in the world, while it is only seventh largest exporter of sugar. Maharashtra has a remarkable history and tradition of cooperative sugar industry. The state has been known as pioneer of cooperative movement. Especially sugar cooperatives in the state have prominent place in socio-economic development of the state. This Industry is the backbone of the rural economy of state. Maharashtra under tropical belt and has adequate irrigation facilities and suitable climate for sugarcane. Therefore cooperative sugar industry is deep rooted and grown in the state. In 1945 Late Padmashree Vithalrao Vikhe Patil pioneered the first successful Co-operative Sugar Factory in the country at Pravaranagar in Ahmednagar District of Maharashtra which was commissioned in 1951.

REVIEW OF LITERATURE

At present, the state has 202 registered sugar factories out of which 195 are functioning including 165 factories from cooperative sector. Out of these cooperative sugar factories in the Maharashtra, only 123 have taken its crushing season. Almost 40% sugar cooperatives in the state are in trouble and 71 sugar cooperatives in the state are declared as sick. 18 sugar cooperatives are already liquidated; 27 are handed over to private management. It will not be improper if we say that the state sugar industry is on death bed. It has been striving hard for its very existence. It is begging for the government aid for its survival. Sickness of Sugar Cooperatives, In fact those four committees (Gulabrao, Shivajirao, Godbole and Rane committees) have been appointed by the government of Maharashtra since 1980 to examine the problem of sickness of sugar co-operatives is itself indicative of the fact that the government acknowledges the gravity of the problem.

STATEMENT OF PROBLEM

Sugar cooperatives in Maharashtra are facing many problems. In Maharashtra 40% of state sugar mills are sick. & only 10% are getting profits. Moreover, with the advent of new economic era, cut throat competition, awareness of farmers coupled with their movements and changing global environment are threatening the very survival of the industry.

OBJECTIVES AND METHODOLOGY

The main intension of this research paper is to find out the challenges before sugar cooperatives in Maharashtra. In our study we will try to suggest some practical suggestions for solve these problems.

HYPOTHESIS

The challenges faced by the sugar industry are of two types namely, one is self generated and the other is emerging from the new economic policy.

RESULT & DISCUSSION

SHORTAGE & FLUCTUATIONS IN THE SUGARCANE PRODUCTIONS

Maharashtra is being known as top producer of sugarcane and sugar, Availability of sugarcane is normally depends upon area under cultivation, climate and irrigation facilities and crop diseases. The availability of sugarcane in the state is not enough. The installed capacity of the state is over 72 lakh metric tons but the average sugarcane production in the state for the last 10 years is not more than 50 lakh tons. As a result in the season when cane production is fallen, 40% of the installed sugar factories could not start crushing season and if they start, they could not run for more than 100 days. The fluctuations in the sugarcane productions are show in the graph. The average sugarcane yield in Maharashtra has fallen to below the national average.

SUGAR PRICE PROBLEMS

The production of sugar has increased manifold over the period of time, while consumption of sugar is increasing at a steady pace of 4% to 5% p.a. It does not match the increase in production. As a result, after bumper production, the price of sugar falls rapidly and significantly. Sometimes price of sugarcane as raw material is higher than price of sugar. The impact of the price crash will ultimately be felt by sugarcane farmers. As the factories run into losses payment to farmers delayed automatically. Consequently cane planting goes down and crop pattern changes.

CORRUPTED MANAGEMENT- CORRUPTION

The working of the sugar cooperatives is dominated by few large farmers who use cooperatives as a tool to serve their personal interest. Instead of safeguarding economic interest of small farmers, they are protecting their personal political and financial interest through the corrupt practices. Thirty-four cooperative sugar factories in the state have suffered losses to the tune of Rs 1,173.90 crore as on March 31, 2010 the losses have been recorded in a report prepared by the Comptroller and Auditor General of India The report has blamed factories for mismanagement and unproductive expenditure that has resulted in financial irregularities.

LACK OF PROFESSIONAL MANAGEMENT

The mismanagement in sugar cooperatives is exhibited in form of unskilled and untrained workforce, vested political interest, absence of modern management tools and techniques, lack of foresightedness, absence of quick decision making process, delayed and vested decisions, high authority and low accountability etc.

Due to these circumstances private professional managements are either taking over the sick sugar cooperatives on lease or purchasing them in the course of liquidation.

SHORT MARGIN

Short margin is another problem that relates to price crash. In Maharashtra all sugar cooperatives collect sugarcane from cane growers, crush it and produce sugar. Whatever sugar produced is hypothecated to District Cooperative Bank and loan is obtained. From the loan amount availed cane growers' payment is made. In price crash situation cane price paid to cane growers and processing cost per ton exceeds loan obtained per bag of sugar. Many sugar cooperatives are suffering from the short margin and are resorting to over-drawl from banks. At least 33 out of 111 cooperative mills participating in the ongoing crushing season are short of margins on advances.

CYCLES IN PRODUCTION

The sugar industry is well-known for decades for its cycles of surpluses and shortages, typically every five to seven years. Higher sugarcane and sugar production results in a fall in sugar prices and nonpayment of dues to farmers. This compels the farmers to switch to other crops thereby causing a shortage of sugarcane, resulting in steep increase in sugarcane prices and extraordinary profits. Taking into account the prevalent higher prices sugarcane, farmers then switch back to sugarcane. Normally two or three year surplus follows by two or three year's shortage the most important reason responsible for cyclicity in sugarcane and sugar production was not bad weather but extreme delay in the payment of the cane price to the farmers. The delayed payment was causing a big shrinkage of area under sugarcane cultivation.

NEED OF MODERNIZATION

Most of the sugar cooperatives in the state are as old as 35 to 40 years. Over the period of time lot of technological changes and diversification have taken place. Most of the players in the industry have not maintained, modernized or expanded their plants. But a few have changed with the times and have pursued an agenda for reform. They have realized that the by-products of sugarcane - such as molasses, bagasse and press-mud can yield profits too. New diversified technology and low cost plant and process techniques have been invented in sugar industry. But to adopt technological diversification old plants need to be modernized. For modernization huge amount of capital is required. Most of the sugar cooperatives in the state are engrossed with the financial problems and crises. They do not raise money for modernization because these sugar factories do not have any internal financial resource generating mechanism. Lack of modernization affects crushing capacity, recovery, molasses, total losses of sugar in process, fuel efficiency, stoppage etc.

HIGH INTEREST BURDEN

Cooperative sugar industry in the state is highly working-capital intensive. Basically this industry is seasonal in nature. A 2500 TCD sugar factory expected to run 160 days in a year commencing in the month of October whereas sugar sales happen throughout the year. Average interest cost per quintal of sugar produced for last five years is Rs.111.30 which is significant. The rate of interest for obtaining loan from District Cooperative Bank or State Cooperative Bank is around 13% to 14% p.a. which is relatively high and the factories are bound to take loan from these banks.

THREAT OF PRIVATIZATION

Sugar cooperatives in Maharashtra have been facing emerging challenge of Privatization. The number of operating sugar cooperatives in the state are decreasing day by day. The private players are acquiring the sick units and running it successfully. Therefore leasing out sick cooperatives to private players is emerging as a remedy for its survival. But if this situation is not changed the day is not far when sugar cooperatives in the state will vanish.

In the process of decontrolling industry is de-licensed on 11th August, 1999. Before de-licensing the cooperative sector has clean sweep in the state. Before de-licensing it was limited to four only but till the year 2010-11 forty three private factories are in operation in the state. Formation of another 92 factories is expected in the forthcoming 5 years. The private sector is forged ahead not only in forming new units but they are acquiring sick cooperative sugar factories in the state. Thirteen cooperative sugar factories are already liquidated, thirty five are in the process of liquidation and twenty seven are leased out to either private management or well managed cooperatives. Around 40% sugar cooperatives in the state are declared as sick.

UNSOUND EXPORT POLICY

The exports of sugar were governed by Sugar Export Promotion Act, 1958. According to the Act government could use 20% of country's total production for sale abroad. Later on in the process of decontrolling the provision was eliminated. India is second largest sugar producing nation in the world, while it is only seventh largest exporter of the commodity. The Government decimalized the exports in 1997 allowing private parties to export sugar. The Government has also put the sugar imports on Open General Licensing (OGL) allowing the private parties to import sugar. The imported sugar has been subjected to a custom duty of 20% from Jan.1999. From 2001 export of sugar can now be undertaken by the various sugar factories after obtaining Export Release Order from the directorate of sugar under the Ministry of Consumer Affairs, Food and Public Distribution. In spite of that Maharashtra as well as national sugar industry is not able to exploit export potential because it produces plantation white sugar which is produced through double sulphitation process. This sugar is not much in demand in the global market. Refined sugar is much in demanded globally and it requires phosphor flotation process. Most of our sugar cooperatives are not equipped to make refined sugar. Maharashtra Government also announces export subsidy apart from Central Government, but it came at the time when global market had crashed, causing losses to sugar factories and farmers. In short import or export of sugar is mainly resorted to when there is a mismatch in domestic sugar production. Moreover from June 2006 onwards Central Government banned sugar export. As a result, domestic sugar rates have fallen drastically and most of the sugar cooperatives could not pay even Statutory Minimum Price (SMP) to farmers.

SLUGGISH PACE OF DE-CONTROLLING

Sugar industry decontrolling decision has been put on hold for a long time. At present it is under partial decontrol mode because of which the industry has flourished. Recently, the union cabinet decided to constitute an expert group to look into the ways and means to total decontrol of sugar industry. The Government had announced complete decontrol of the commodity by March 2003, but the decision was deferred to October 2005. Though Government had taken some positive and concrete steps towards decontrol, like de-licensing industry, reducing and modifying levy system, releasing restrictions on sugar export etc. still restrictions on the commodity continue. The decontrolled environment is likely to help sugar industry to record a more robust growth.

LEVY SYSTEM

Sugar falls under the Essential Commodities Act, 1955 and hence the government is permitted to impose a levy quota, that is, procure a certain per cent of the sugar at a subsidized price to be sold via the Public Distribution System (PDS) at prices lower than the "free market" price within India. The objective of this compulsory procurement is to supply sugar to the lower strata of society at a subsidized price. supplying 26 lakh tons for the PDS at a discounted price caused an annual loss of Rs 3000 crore to the sugar industry. This affected the earning of the sugar mills that, in turn, affected payments to the cane farmers. It also affected the price of the balance 90% sugar sold in the open market. Unfortunately since 2003-04 Government has not been revised rates of levy sugar. After surrendering 10% of output as levy the remaining 90% is sold by sugar factories in restricted marketing environment. The Government releases what is called monthly free sale quota to factories to be sold within stipulated time frame. Levy system and free sale quota system are believed to be restricting growth of sugar industry.

Apart from the main problems discussed above the other challenges faced by the sugar cooperatives in the Maharashtra state are: decreasing yield of sugar cane, higher cane price, competition from Gur and Khandsari industry, inter-factory competition for cane supply continues, rigid regulations burden of various taxes (like purchase tax, income tax, excise duty) problems of cane cutters labor, high production cost, are affecting the growth of sugar cooperatives.

RECOMMENDATION & SUGGESTION

To revive the state cooperative sugar industry from these challenges and following remedies are suggested.

- Every sugar cooperative should undertake production of byproducts i.e. cogeneration, ethanol, distilleries etc. to reduce cost of production and generate more revenue.

- Government should purchase levy sugar through open market according to central or state Government policy, then it should be distributed through Public Distribution System (PDS) at concessional rate. There has to be an immediate withdrawal of ban on sugar export and allied by- products also. Whenever necessary and removal of restriction on sugar stock.
- The government should allow use of 20% ethanol along with petrol in vehicles. It will help in boosting molasses market prices and it will save the precious foreign currency for imported oil.
- To avoid Short margin, government should determine steady pricing policy for certain period up to 5 years. It will reduce the problem of price crash. Price policy for by products should also be determined. There should be withdrawal of dual pricing policy (levy system) and pre determined import and export policy for a period of 5 years. Process of de-controlling should be taken on board immediately.
- Professional management techniques like cost control, purchase procedure, fund raising, branding, research and development; training should be used by all sugar cooperatives. Every factory should use Employee Resource Planning (ERP) technique.
- Micro level cane cultivation and harvesting techniques should be used to estimate proper sugar cane availability. Mechanization of harvesting is necessary. Corporatization of sugar cooperatives. Atomization of process and use computerization.
- There is a need to levy on import raw sugar more than 50%. & there should be a ban on sale of refined sugar in the country.
- Purchase tax on sugarcane which at present is at 3% on cane price should be removed because factory collects sugarcane from its members.

CONCLUSION

Maharashtra is known as sugar bowl of India. It contributes around 40% of national sugar production. Cooperative sector is dominant in its sugar industry. The state sugar industry has a turnover of Rs.25,000 crores. It has been playing significant role in overall socio-economic development of the state for the past six decades. It has become a movement and contributed significantly to the industrial development of the state. The hallmark of the industry is the involvement of large numbers of small and marginal farmers regardless the size of their holding. But in the recent past this one time champion industry is faced with various grave problems like obsolete technology, short margin, policy hurdles, entry of private players, non availability of sugarcane, financial crisis, corruption and so on.

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ANALYSIS OF ASSET QUALITY OF PRIVATE SECTOR INDIAN BANKS

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ABSTRACT

In the present study, an attempt is made to analyze the asset quality of selected private sector Indian banks. First section includes a brief review of some of the earlier studies. Second section covers the scope, objectives, hypothesis and research methodology. In third section, an attempt is made to analyze the asset quality of selected banks namely ICICI Banking Corporation Ltd (ICICI), Indusind Bank Ltd (Indusind), AXIS Bank Ltd (AXIS) and HDFC Bank Ltd (HDFC) in India by using CAMEL Model ratios for a period of eleven years i.e. from 2000-01 to 2010-11. Fourth section covers the conclusion and limitations of the study. To achieve the objectives of the study, the use is made of secondary data collected mainly from Report on Trends and Progress of Banking in India, Performance Highlights of Private Banks in India, various journals such RBI Bulletin, IBA Bulletin, etc. To test the statistical significance of the results, one-way ANOVA technique has been used. The results of the study reveal that there is a significant difference in the ratio of net NPAs to total assets, net NPAs to net advances and total investments to total assets in the selected banks; therefore, null hypothesis is rejected, which signifies the significant difference in the asset quality of the selected banks during the period under study.

KEYWORDS

Capital Adequacy, Net NPAs to Net Advances, Investment to Total Assets, Net NPAs to Total Assets.

INTRODUCTION

After the set back of early nineties when the Government of India had to pledge the gold to acquire foreign currency to meet the severe problem of balance of payment temporarily, the Government planned to liberalize the Indian economy and open its door to the foreigners to speed up the development process as a long-term solution for the ailing economy. The economic liberalization move, which was initiated in 1991 when the new government assumed office, has touched all the spheres of national activity. Perhaps one area where the deregulatory policies had the maximum impact was the banking sector. Until 1991, the banking in India was largely traditional. The bankers were prudent and cautious people who seldom took risks and were content with the normal banking activities i.e. accepting of deposits and lending against them. Labeled as "Agents of Social Change", their outlook was rigidly controlled by the policies of the Government, which were centered more on the alleviation of poverty and the upliftment of the downtrodden. The 1969 and 1980's nationalization of banks, bringing private banks under the state control, had the objective of realizing this government dream. Even as late as 1991-92, the profitability was a forbidden word in banking business. The banks were established to fulfill social objectives and their performance was evaluated on their 'task fulfillment' initiatives. Lending to the priority sectors, opening of rural branches, achievements in the implementation of Government sponsored schemes and adherence to the policies and programmes of the Government were the parameters considered for judging the performance of a bank. Indian banking system has made commendable progress in extending its geographical spread and functional reach. The nationalization of banks helped in increasing the number of branches, volume of deposits and ensured wider dispersal of the advances. Despite impressive quantitative achievements in resource mobilization and in extending the credit reach, some deficiencies have, over the years, crept into the system such as decline in the productivity and efficiency of the system, erosion of the profitability of the system, directed lending played a critical role in depressing the profits, the directed investments in the form of SLR and CRR hindered income earning capability and potentials, portfolio quality suffered due to political and administrative interference in credit decision-making, increase in cost structure due to technological backwardness, average ratio of capital funds to RWAs remained low which created problems in international operations and the system remained de-linked from sound international banking practices. Realizing all these ill effects, the efforts were made to bring reforms in the financial system of the country. The seed of the reforms in India were sown by the Narasimham Committee appointed by the RBI under the chairmanship of M. Narasimham, the former Governor of RBI, to examine the aspects relating to the structure, organization, functions and procedures of the financial system and suggest remedial measures. The Committee submitted its reports in November 1991 and thus, began a new chapter in Indian banking. The Reserve Bank of India acts as a centralized body monitoring any discrepancies and shortcoming in the system. It is the foremost monitoring body in the Indian financial sector. It is generally accepted that greater financial system depth, stability and soundness contribute to economic growth. But beyond that, for growth to be truly inclusive requires broadening and deepening the reach of banking by improving earning quality of banking sector. A wider distribution and access of financial services helps both consumers and producers raise their welfare and productivity. Such access is especially powerful for the poor as it provides them opportunities to build savings, make investments, avail credit, and more important, insure themselves against income shocks and emergencies. Though the Indian financial system has made impressive strides in resource mobilization, geographical and functional reach, financial viability, profitability and competitiveness, vast segments of the population, especially the underprivileged sections of the society, have still no access to formal banking services. The Reserve Bank is therefore considering the proposal for providing licenses to a limited number of new banks. A larger number of banks would foster greater competition, and thereby reduce costs, and improve the quality of service. More importantly, it would promote financial inclusion and ultimately support inclusive economic growth, which is a key focus of public policy. The success in the global scenario can be attained only if banks maintain competitive edged in their asset quality.

Induced by the forgoing revelations, an attempt is made to analyze the asset quality of selected private Indian sector banks, which is divided into four sections. First section includes a brief review of some of the earlier studies. Second section covers the scope, objectives, hypotheses and research methodology. In third section, an attempt is made to analyze the asset quality of selected private sector Indian banks. Fourth section covers the conclusion and limitations of the study.

LITERATURE REVIEW

The articles published on different facets of Indian banking reforms are restrictive in nature and have been found wanting in terms of the assessment of the impact of the reforms on the banking sector. Reddy and Yuvaraja (2001) were of the view that the adoption of international capital adequacy standards, deregulation of interest rates and entry of private and foreign banks underlined that the speed and sequencing of the financial sector reforms should be as per the requirements of the Indian economy. Rao (2002) concluded that the international regulations are forcing the Indian banks to adopt better operational strategies and upgrade the skills. The system requires new technologies, well-guarded risk and credit appraisal system, treasury management, product diversification, internal control, external regulation as well as skilled human resources to achieve the international excellence and to face the global challenges. Muniappan (2003) focused on two areas - firstly, challenges faced by the Indian banks and secondly, the management of these challenges. Every aspect of the banking industry, be it profitability, NPA management, customer service, risk management, HRD etc., has to undergo the process of transformation of aligning with the international best practices. He concluded that the future of Indian banking system needs a long-term strategy, which should cover areas like structural aspects, business strategies, prudential control systems, integration of markets, technology issues, credit delivery mechanism and information sharing, etc. Ghosh and Das (2005) highlighted the ways how market forces may motivate banks to select high capital adequacy ratios as a means of lowering their borrowing costs. If the effect of competition among banks is strong, then it may overcome the tendency for bank capitalization. If systemic effects are strong, regulation is required. Empirical tests for the Indian public sector banks during the 1990s demonstrated that better capitalized banks experienced lower borrowing costs. Sharma and Nikadio (2007) presented an analytical review of the capital adequacy regime of the banking sector in India and concluded that in the regime of Basel I, Indian banking system performed reasonably well, with an average CRAR of about 12 per cent, which was higher than the internationally accepted level of 8 per cent as well as India's own minimum regulatory requirement of 9 per cent. Ghosh and Ghosh (2011) emphasized on management of non-performing assets in the perspective of the public sector banks in India under strict asset classification norms, use of latest technological platform, recovery procedures and other bank specific indicators in the context of stringent regulatory framework of the Reserve Bank of India and concluded that the reduction of non-performing assets is necessary for improving the profitability of banks and to comply with the capital adequacy norms as per the Basel Accord(s). Thiagarajan, Ayyappan and Ramachandran (2011) analyzed the role of market discipline on the behaviour of commercial banks with respect to their capital adequacy and concluded that the commercial banks are well capitalized and the ratio is well over the regulatory minimum requirement. The private sector banks show a higher percentage of Tier-I capital over the public sector banks. However the public sector banks show a higher level of Tier-II capital. The study also indicated that the Non-Performing Assets influenced the cost of deposits for both public and private sector banks in a significant manner. The return on equity had a significant positive influence on the cost of deposits for private sector banks. The public sector banks can reduce the cost of deposits by increasing their Tier-I capital.

SCOPE, OBJECTIVES, HYPOTHESES AND METHODOLOGY

SCOPE OF THE STUDY

This study covers four private sector Indian banks namely ICICI Banking Corporation Ltd (ICICI), Indusind Bank Ltd (Indusind), AXIS Bank Ltd (AXIS) and HDFC Bank Ltd (HDFC).

OBJECTIVES OF THE STUDY

The present study aims to analyze the present position of asset quality of selected private sector Indian banks.

RESEARCH HYPOTHESIS

H01: There is no significant difference in the net NPAs to total assets ratio of the selected private sector Indian banks.
H02: There is no significant difference in the net NPAs to net advances ratio of the selected private sector Indian banks.
H03: There is no significant difference in the total investments to total assets ratio of the selected private sector Indian banks.

RESEARCH METHODOLOGY

To achieve the objectives of the study, the use is made of secondary data for a period of eleven years i.e. from 2000-01 to 2010-11, collected mainly from various sources like Report on Trends and Progress of Banking in India, Performance Highlights of Private Sector Indian Banks, various journals such as RBI Bulletin, IBA Bulletin, ICFAI Journal of Bank Management. To test the statistical significance of the results, one-way ANOVA technique has been used to arrive at the conclusions.

ANALYSIS OF ASSET QUALITY

The quality of assets is an important parameter to gauge the strength of bank. The prime motto behind measuring the assets quality is to ascertain the component of net NPAs as percentage to total assets/net advances. This indicates what types of advances the bank has made to generate interest income. Thus, assets quality indicates the type of the debtors the bank is having.

3.1 NET NPAs TO TOTAL ASSETS

This ratio indicates the efficiency of the bank in assessing credit risk and, to an extent, recovering the debts. This ratio is arrived at by dividing the net NPAs by total assets. Total assets are considered net of revaluation reserves. Lower the ratio better is the performance of the bank.

TABLE 1: NET NPAs TO TOTAL ASSETS

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	0.00	2.39	1.59	0.12
2001-2002	0.00	3.39	1.23	0.14
2002-2003	0.00	2.30	0.83	0.14
2003-2004	1.14	1.41	0.46	0.07
2004-2005	0.90	1.56	0.57	0.12
2005-2006	0.42	1.11	0.44	0.21
2006-2007	0.58	1.31	0.36	0.22
2007-2008	1.04	0.32	0.98	1.19
2008-2009	1.20	0.65	0.22	0.34
2009-2010	1.06	0.29	0.23	0.18
2010-2011	0.59	0.16	0.17	0.11
ANOVA Value	F-5.86	P-value-0.002		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table-1, the ratio of net NPAs to total assets ranges from 0.00 to 1.20 in case of ICICI, from 0.16 to 3.39 in case of Indusind, from 0.17 to 1.59 in case of AXIS and from 0.07 to 1.19 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is a significant difference in the ratio of net NPAs to total assets in the selected banks; therefore, null hypothesis is rejected.

3.2 NET NPAs TO NET ADVANCES

It is the most standard measure of assets quality. In this ratio, net NPAs are measured as a percentage of net advances. Net NPAs are gross NPAs net of provisions on NPAs.

TABLE 2 - NET NPAs TO NET ADVANCES

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	2.19	5.25	3.43	0.45
2001-2002	5.48	6.59	2.74	0.5
2002-2003	5.21	4.25	2.30	0.37
2003-2004	2.21	2.72	1.29	0.16
2004-2005	1.65	2.71	1.39	0.24
2005-2006	0.72	2.09	0.98	0.44
2006-2007	1.02	2.47	0.72	0.43
2007-2008	1.55	2.27	0.42	0.47
2008-2009	2.09	1.14	0.40	0.63
2009-2010	2.12	0.50	0.40	0.31
2010-2011	1.11	0.28	0.29	0.19
ANOVA Value	F- 6.61	P-value- 0.001		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table-2, the ratio of net NPAs to net advances ranges from 0.72 to 5.48 in case of ICICI, from 0.28 to 6.59 in case of Indusind, from 0.29 to 3.43 in case AXIS and from 0.16 to 0.63 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is a significant difference in the ratio of net NPAs to net advances in the selected banks; therefore, null hypothesis is rejected.

3.3 TOTAL INVESTMENTS TO TOTAL ASSETS RATIO

It indicates the extent of deployment of assets in investment as against advances. This ratio is used as a tool to measure the percentage of total assets locked up in investments, which by conventional definition, does not form a part of the core income of a bank. A higher level of investment means lack of credit off-take in the economy. This ratio is calculated by dividing the total investments by total assets of a bank. A higher ratio means that the bank has conservatively kept a high cushion of investments to guard against NPAs. However, this affects its profitability adversely.

TABLE 3: TOTAL INVESTMENTS TO TOTAL ASSETS

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	39.05	26.73	36.80	42.57
2001-2002	34.04	22.94	44.04	48.36
2002-2003	33.20	25.60	39.98	44.00
2003-2004	34.13	26.33	32.27	45.52
2004-2005	30.11	26.05	37.82	37.62
2005-2006	28.43	30.70	43.29	38.63
2006-2007	26.48	28.15	36.72	33.50
2007-2008	27.88	28.50	30.76	37.09
2008-2009	27.17	29.27	31.36	32.09
2009-2010	33.27	29.41	30.99	26.35
2010-2011	33.15	29.69	29.66	25.57
ANOVA Value	F-8.35	P-value-0.00		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table-3, the ratio of total investments to total assets ranges from 26.48 to 39.05 in case of ICICI, from 22.94 to 30.70 in case of Indusind, from 29.66 to 44.04 in case of AXIS and from 25.57 to 48.36 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is a significant difference in the ratio of total investments to total assets in the selected banks; therefore, null hypothesis is rejected.

CONCLUSON AND LIMITATIONS

To sum up, there is significant difference in the ratio of net NPAs to total assets, net NPAs to net advances and total investments to total assets in the selected banks; therefore, null hypothesis is rejected, which signifies the significant difference in the asset quality of the selected banks. The results obtained from the present study will be helpful to the policy makers, depositors, investors and other stakeholders to take decisions about the asset quality of the selected private sector banks in India. As the present study covers the analysis of four private sector banks for a period of eleven years only, therefore the results drawn cannot be applied to the banking sector as whole.

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ORGANIZATIONAL COMMITMENT OF MANAGERS OF PUBLIC SECTOR BANKS IN INDIA: AN EMPIRICAL STUDY

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ABSTRACT

The paper makes a detailed investigation into the affective, continuance and normative organizational commitment of bank managers in relation to personal and role-related variables. The study is based on a sample of 334 managers working in ten public sector banks located in the state of Punjab (north India). The data were checked for reliability using Cronbach alpha. Exploratory factor analysis was performed to validate the factor structure of Meyer, Allen and Smith.'s (1993) Organizational Commitment Scale. Pearson's Product Moment Correlation, t-test and Analysis of Variance were carried out for analysis. Results of the study revealed that among personal variables, age had positive relation with both affective and normative commitment, but the relationship was stronger for normative commitment than affective commitment. Educational qualification of the respondents was another personal characteristic that had been related to continuance organizational commitment only. No significant difference has been found in affective, continuance, and normative commitment between married and unmarried, and male and female managers. In terms of role-related factors, neither managerial scale nor positional tenure had any affect on the organizational commitment of bank managers but there was significant difference in the organizational commitment of branch managers and non-branch managers. The findings of the study have positive and useful implications for HR systems in public sector banks in an era of extensive globalization and privatization.

KEYWORDS

Organizational Commitment, Affective Commitment, Continuance Commitment, Normative Commitment, Public Sector Banks.

1. INTRODUCTION

Organizational Commitment is viewed as an attitude of attachment to the organization, which has been shown to be positively related with certain outcome variables like organizational turnover, attendance at work, job performance, employee well-being, and organizational citizenship behaviour (Meyer and Allen, 1991; Porter et al, 1974; Reichers, 1985; Riketta, 2002). Because low job performance, high turnover, and absenteeism are costly to the organizations, organizational commitment is a desirable quality that needs to be fostered in employees.

Public sector banks in India have been created by four bouts of nationalization. These banks together make up the largest category in the Indian banking system. There are currently 27 public sector banks in India. However, the 1991Government policy of tectonic economic liberalisation, coupled with metamorphic liberalised policy in financial sector in synchronization with Narasimham Committee recommendations have brought cataclysmic structural reforms in Indian economic system (Srivastava and Nigam, 2009). These reforms have led to complete over haul of Indian economy and its financial sector. Regulated market has been replaced by liberalized market, over administered banking industry has been granted greater degree of operational autonomy, entry barriers to the banking sector have been lifted resulting into entry of new players (domestic and foreign). All these forces of change are posing a challenge to the existence of established public sector banks. These banks are enduring enormous pressures to change the way they do business in order to remain competitive. These changes impinge most vitally upon the behaviour of the personnel, both in their individual self and in relation to others inside and outside the bank. It is through such behaviours that the banks' efforts to translate business into concrete action are evident. An important ingredient for the success of a bank in the competitive globalized environment is, therefore, the guarantee of organizational behaviour that makes the new goals and objectives attainable. Committed human resource is necessary to bring radical changes in the public sector banks to enable them to face challenging competitive situations. It is in this perspective that the investigation of the level and antecedents of organizational commitment of managers of public sector banks in India assumes importance and hence the study was initiated.

Given the complexity of managerial role contexts, the paper incorporates personal and role-related variables in relation to affective, continuance, and normative organizational commitment of bank managers. Once the relationship between antecedents and organizational commitment of bank managers is established, the paper attempts to find out which and how the different dimensions of organizational commitment can be strengthened.

2. LITERATURE REVIEW

There is little consensus concerning the definition of the concept of organizational commitment or its measurement. Most researchers conceive of commitment as involving some form of psychological bond between people and the organization. Organizational commitment has been researched in terms of a single and a multidimensional perspective. The most prominent single-dimensional approach to organizational commitment is the attitudinal approach of Porter et al., 1974. Porter et al. (1974: p 604) define commitment as a 'strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a definite desire to maintain organizational membership.' This desire to maintain affiliation to the organization is caused by different factors which Meyer and Allen (1991) describe as multi-dimensional organizational commitment.

Meyer and Allen (1984) initially proposed that a distinction be made between affective and continuance commitment, with 'affective commitment' denoting an emotional attachment to, identification with, and involvement in the organization and 'continuance commitment' based on Becker (I960) "side-bet" theory, denoting the perceived costs associated with leaving the organization. The third dimension normative commitment based on the work of Weiner (1982) was defined as the employees' feelings of obligation to remain with the organization. Weiner (1982: p421) sees commitment as the 'totality of internal normative pressure to act in a way that meets organizational goals and interests.' According to their model, employees can experience varying degrees of all three forms of commitment simultaneously. Each component develops as the result of different experiences and has different implications for on-the–job behavior.

The literature search indicates that organizational commitment is linked to various antecedents ranging from personal, structural, role related variables, and organizational characteristics. Buchanan (1976) in his study determined that organizational experience has greater impact on a manager's organizational commitment. Mcgrath (1976) pointed that various aspects of organizational roles could influence an individual's behaviour in the organization. Stevens et al. (1978) and to some extent, Morris and Sherman (1981) found role related factors to be very important predictors of commitment. Luthans et al. (1987) showed that demographics, such as age, education, and tenure, had a significant impact on organizational commitment. Bycio et al. (1995) found two types of factors as antecedents of organizational commitment, factors attributed to the individual, and factors attributed to the work task.

According to Meyer and Allen (1997), affective commitment is developed through work experience like job challenge, degree of autonomy, the variety of skills used by the employee, knowing the role that the employee plays in his or her company, and also the relationships between the employee and his or her co-workers and supervisor. Continuance commitment is developed by assessing the perceived transferability of the employee's skills and education to other organizations, and the individual's perception of his job opportunities outside the current organization. Normative commitment develops as the result of socialization experiences that emphasize the appropriateness of remaining loyal to one's employer that create within the employees a sense of obligation to reciprocate.

Despite these differences in conceptualization and the increasing consensus that organizational commitment is a multi-dimensional construct, much of the empirical research that has explored antecedents or determinants of employee commitment have predominantly focused on affective/ psychological commitment (Buchanan, 1974; Cook and Wall, 1980; Dunhum et al., 1994; Gaertner and Nollen 1989). The reason for greater emphasis on affective commitment has been mostly due to the evidence that it has been found to have the strongest and the most consistent relationship with desirable outcomes. However, it is also possible that the interest in affective commitment and albeit to a lesser extent, a calculative view of commitment is a function of the fact that much of the research has been conducted in the individualistic north American context, where attitudes and cost benefit calculations, rather than norms, are the primary determinant of social behaviour (Triandis, 1995). Meyer and Allen (1997) have proposed that normative commitment may be a better predictor of job outcomes in collectivistic contexts which emphasize strong social ties and obligations. So the overall function of commitment cannot be fully understood, if we do not use a multidimensional perspective.

The present study attempts to make a detailed investigation into the affective, continuance, and normative organizational commitment of bank managers, with the hope that the results of the study will provide useful inputs to the banking administration to design appropriate recruitment, selection and development policies to attract and retain talent in public sector banks.

3. DATABASE AND RESEARCH METHODOLOGY

3.1 SAMPLE DESCRIPTION

Data collection of a total of 334 subjects, who participated in the study, was undertaken from April to September 2009. The survey was administered individually on site on one to one basis. The subjects included managerial staff working in different branches and administrative offices of ten public sector banks located in the state of Punjab. By studying the demographic profile of the respondents from table 1, it is clear that the sample represented managers from junior management (scale I), middle management (scale II and III), and senior management (scale IV). 36 percent of the respondents were heading branches as branch manager. 86 percent of the respondents were above 35 years of age. Only five percent of the total sample consisted of women managers, which clearly indicates that managerial positions in these banks are primarily occupied by men. Most of the respondents were married. Graduates composed 62 percent of the total sample.

TABLE 1: SAMPLE PROFILE

Demographics	Frequency	Per cent
Age(in years)	48	14.37
≤ 35	286	85.63
> 35		
Gender	316	94.61
Male	18	5.39
Female		
Marital status	315	94.31
Married	19	5.69
Unmarried		
Educational level	208	62.27
Graduate	87	26.05
Post-graduate (non-MBA)	39	11.68
MBA		
Managerial grade	147	44.01
Scale I	117	35.03
Scale II	56	16.77
Scale III	14	04.19
Scale IV		
Position occupied	120	35.93
Branch manager	214	64.07
Non-branch manager		

3.2 RESEARCH INSTRUMENT

Organizational Commitment Scale (Meyer et al., 1993) was used to measure affective, continuance, and normative organizational commitment. The scale comprises of 18-items: Responses to each item were made on a 7-point scale with six items for each of the three factors - Affective, Continuance, and Normative Organisational Commitment. anchors labeled (1=strongly disagree, and 7=strongly agree). The psychometric properties of the instrument have been validated in number of studies. Median reliabilities for the affective, continuance, and normative commitment scales, reported by the authors are 0.85, 0.79, and 0.73, respectively (Meyer and Allen, 1997). Three items in 'Affective Commitment Scale' contain negative statements which were reversed scored. One item in 'Normative Commitment Scale' has negative statement which was reversed scored. The scores for the six items in each scale provide a total and a mean score for each one of the scales indicates the level of affective, continuance, and normative organizational commitment.

3.3 HYPOTHESES DEVELOPMENT

3.3.1 Level of Organizational Commitment

The public sector bank is the entity which provides many of the economically based side-bets described by Becker (1960), especially job security, pension etc. Role and exchange theory advanced by Becker and supported by Hrebriniak and Alluto (1972), and Rusbult and Farrel (1983) contend that commitment is an exchange and accrual phenomenon, dependent on accumulation of side-bets or investments in the employing organization, and the employees' perception of the ratio of inducements to investments. Therefore, the level of organizational commitment should be expected to be high. On the contrary, Bourantas and Pepalexandris (1992) have reported that employees in public sector had lower levels of organizational commitment due to large gap between perceived and desired culture. Zeffane (1994) found that employees at service industries have lower levels of organizational commitment due to increased job opportunities elsewhere. Though the arguments for low or high level of commitment are equivocal, yet considering the demographic profile of respondents, it is hypothesized that:

H1: Level of affective, continuance, and normative organizational commitment of managers of public sector banks is high.

3.3.2 Personal Variables and Organizational Commitment

The personal variables to be examined in this study are: age, gender, marital status, and educational level.

Age

Organizational commitment and age have been found to be positively related (Glisson and Durick, 1988; Kushman, 1992; Luthans et al., 1987; Mathieu and Zajac, 1990; Meyer and Allen 1984; Meyer and Smith, 2000; Sharma and Singh, 1991; Sommer et al., 1996; Stevens et al., 1978). Age has also been found to be positively correlated with calculated or continuance commitment because older employees view their past years of service to the organization as an investment and have the psychological barrier that it would be more difficult for them to shift from one job to another (Hackett et al., 1994; Hrebiniak and Alutto, 1972; Meyer et al., 1993). Meta-analysis by Meyer et al.(2002) reported that age correlated more strongly with continuance commitment in studies conducted outside North America (r = .20 vs.12). The reverse was true for the correlations with normative commitment, where age correlated less strongly outside North America (r = 0.07 vs.0.15). Many studies have not confirmed the relationship of age with organizational commitment (Camilleri, 2002; Chugtai and Zafar, 2006; Kwon and Banks, 2004).

Gender

Gender as a topic in organizational commitment literature has been approached from both the gender model and the job model. The gender approach to the study of women and organizational commitment subscribe to the basic belief that, 'women accept family roles as chief source of their identity and fulfillment, leading to a different orientation to work from men, for whom work is paramount' (Loscocco, 1990, p. 155). In contrast, proponents of the job model argue that there are no differences in the work attitudes of women and men and that work attitudes of both sexes develop in similar ways (Loscocco, 1990).

Aranya et al. (1986) conducted a study to test the commitment level of women in a male-dominated profession of chartered accountancy, and concluded that female accountants demonstrated less organizational commitment than male accountants. A review of 14 studies involving gender and organizational commitment covering 7,420 subjects by Mathieu and Zajac suggested that women tend to be more committed to organizations than men, although the statistical relationship is not strong (Mathieu and Zajac 1990). On the other hand, a meta-analysis of studies of the relationship between gender and organizational commitment done by Aven et al. (1993) negated the argument that there are gender differences with regard to commitment. They concluded that similar commitment can be won from both males and females when organizations treat all employees fairly. Using Allen and Meyer's (1993) Continuance Commitment Scale, Wahn (1998) found that women reported higher levels of continuance commitment than men.

Marital Status

Marital Status has emerged as a consistent predictor of organizational commitment. Findings reported by Hrebiniak and Alutto (1972), John and Taylor (1999) indicated that married people were more committed to their current organization than their unmarried counterparts because they have more family responsibilities and need more stability and security in their jobs.

Education

Level of education has been found to have a negative relationship with organizational commitment because people with low level of educations generally have more difficulty changing jobs and consequently show greater commitment to their organization. This inverse relationship may, also result from the fact that more educated individuals have higher expectations than the organizations may be able to meet. Highly educated employees have more job opportunities waiting for them. Hence, they tend to be less committed and therefore tend to change from one organization to another in order to advance at a faster pace (Glisson and Durick, 1988; Mowday et al., 1982; O'Reilly and Cadwell, 1981; Steers, 1977). Meta-analytical study by Mathieu and Zajac, 1990 showed that the magnitude of the relationship between education and commitment was significantly stronger (i.e. more negative) for attitudinal as compared to calculative commitment.

Based on the preceding evidence, the following specific hypotheses are formulated;

H2: Older managers have higher affective, continuance, and normative organizational commitment than younger managers.

H 3: Women managers score higher on continuance commitment and lesser on affective and normative commitment than men.

H4: Married managers score higher on all dimensions of organizational commitment.

H5: More educated managers have lower affective, continuance, and normative organizational commitment than lesser educated managers.

3.3.3 Role-related Variables and Organizational Commitment

Role–related variables included in this study are position occupied in the organizational hierarchy, positional tenure, and managerial grade. Role variables include more dynamic aspects of the job situation that may make staying with a given organization more or less attractive at a given point in time. Higher position occupied in managerial hierarchy, higher managerial grade may tend to promote commitment, while too much time in any one position may be perceived as career stagnation and have an adverse effect on commitment (Stevens et al., 1978).

Position Occupied in the Organizational Hierarchy

Managers who have attained a high position in the organizational hierarchy tend to view it as an investment, and hence tend to be more committed to the current organization. It is also contended that once an employee reaches a high position, the opportunities available in alternative organizations are reduced, and it becomes difficult for the employee to obtain a higher position or accept an equal or lower post in another organization. Moreover, higher positions are perceived as a reward from the organization which enhance the employees' identification with the organization (Sheldon, 1971), thus lead to higher level of commitment to the organization.

Position Tenure

Mathieu and Zajac (1990) have found positional tenure to be more positively related to attitudinal commitment. On the contrary, too much time in any one position may be perceived as career stagnation by the employee and may have an adverse effect on his continuance commitment. It may also affect the employee's obligation to reciprocate.

Managerial Scale

Position grade has been shown to have positive relationship to continuance commitment because of the sunk costs involved with leaving the organization. Moreover, it also has the effect on affective and normative commitment due to better job satisfaction.

In the light of preceding arguments, the following specific hypotheses are formulated;

H6: Branch managers will score higher on affective, continuance, and normative organizational commitment than non- branch managers.

H7: Longer the positional tenure, lesser will be the affective, continuance, and normative organizational commitment.

H8: Higher the managerial scale, higher will be the affective, continuance, and normative organizational commitment.

3.4 CLASSIFICATION OF VARIABLES

The sample was divided into two groups on the basis of age, those over 35 (coded 2) and under 35 years of age (coded 1). Gender was coded men (1) and women (2). Marital status was coded single (1) and married (2). Educational qualification was coded as graduates (1), PG-non MBA (2), and PG-MBA (3). A separate category was created for MBAs because they have more job opportunities than simple post-graduates. Positional tenure represents the number of years respondents have been working on the same position. Seven years have been taken as the cut off point for positional tenure because it normally takes 5-7 years to move from one position to another as per the internal promotion policy of these banks.

3.5 STATISTICAL TECHNIQUES

To test the internal consistency reliability of the organizational commitment scale, Cronbach alpha was calculated. Exploratory factor analysis choosing Principle Component Analysis with Varimax rotation was performed to validate the factor structure of organizational commitment construct. Descriptive statistics were employed to ascertain the level of affective, continuance, and normative organizational commitment of the respondents. Pearson's correlation coefficient has been calculated to study the pattern of correlation between selected variables. T-test and one-way analysis of variance (ANOVA) was carried out to compare means between groups of categorical variables. In case one-way analysis of variance (ANOVA) resulted in the rejection of null hypothesis of equal means, Turkey's Honestly Significant Difference of multiple comparisons (post-hoc) has been employed to determine the precise nature of differentiation between groups (Hair et al., 2005). SPSS (15.01) version has been used for data processing.

4. RESULTS AND ANALYSIS

Internal consistency for the construct in this study was checked by calculating Cronbach alpha. The alpha coefficients showed values 0.86 for affective commitment, 0.70 for continuance commitment, and 0.79 for normative commitment scale. However, alpha in case of continuance commitment scale could improve to 0.79 by deleting one item from it. So to get the refined scale, the item 'if I had not put so much of myself into this bank, I might consider working elsewhere' was deleted. Thus, reliability coefficients for organizational commitment scale exceed 0.06 criterions which, according to Nunnally and Bersnstein (1994) is an acceptable level of reliability for social sciences.

TABLE 2: ORGANIZATIONAL COMMITMENT CONSTRUCT: PRINCIPAL COMPONENT FACTOR ANALYSIS WITH VARIMAX ROTATION

Items	Factor 1	Factor 2	Factor 3
Affective Commitment			
AC1	**.799**	.274	.021
AC2	**.767**	.165	.084
AC3	**.847**	.118	.020
AC4	**.846**	.206	-.048
AC5	**.747**	.220	.019
AC6	**.777**	.242	.047
Normative Commitment			
NC1	.258	**.597**	.114
NC2	.091	**.605**	.259
NC3	.109	**.832**	-.044
NC4	.262	**.668**	.052
NC5	.174	**.747**	-.103
NC6	.301	**.526**	.102
Continuance Commitment			
CC2	.025	.073	**.731**
CC3	.089	.082	**.766**
CC4	.068	.096	**.791**
CC5	-.035	-.015	**.699**
CC6	-.017	.030	**.692**
Eigen Value	5.47	2.77	1.68
Percentage of Variance Explained	32.22	16.31	9.88

Factor analysis (table 2) was performed to validate the factor structure of organizational commitment construct. Principle component analysis with varimax rotation indicated 3-factor solution which accounted for 58.41 per cent variance in organizational commitment. A minimum factor loading of 0.30 (Nunally, 1978) was used as a yardstick for considering an item to load on a particular factor. As may be observed from table 2, there was minimum problem with double loading of factors which clearly demonstrate the dimensions as being distinct and separate.

TABLE 3: CORRELATION MATRIX

Variables	1	2	3	4	5	6	7	8	9	10
1. AC	(.89)									
2. NC	.51**	(.79)								
3. CC	.07	.15**	(.79)							
4. Age	.21**	.34**	-.02							
5. Gender	-.07	.01	-.01	-.24**						
6. Marital status	.01	.06	.04	.45**	-.13*					
7. Education	-.01	-.08	-.13*	-.05	.08	-.03				
8. Position tenure	.03	-.01	-.02	.40**	-.07	.16**	.09			
9. Managerial grade	-.07	-.06	-.09	.25**	-.12*	.11*	.09	-.00		
10. Position occupied	.15**	.00	.085	.16**	-.12*	.15**	-.00	-.01	.39*	

** p< 0.01, * p<0.05

Figures in parentheses denote Cronbach alpha

AC- Affective Commitment, CC- Continuance Commitment,

NC- Normative Commitment

Table 3 presents the pattern of correlations among affective commitment, continuance commitment, normative commitment, and other variables in the study. Affective commitment scale has strong positive correlation with normative commitment (r=0.51, p<.01) and weak positive but non significant relationship with continuance commitment. Meyer et al., (2002) in their meta-analysis, reported substantial corrected correlation (r= .63) between affective and normative commitment. Though the correlation between affective and normative commitment scales is high, yet both are separate and distinguishable constructs as has been indicated by factor analysis (table 2). It allows for the possibility that factors that contribute to strong affective commitment also contribute, albeit less strongly, to a feeling of obligation to reciprocate (Meyer et al., 2002). Small correlation coefficient between normative and continuance commitment (r = 0.15, p<0.01) is an unusual finding as normative and continuance organizational commitment are typically negatively or not related (Meyer and Allen, 1997), whereas the high correlation between affective and normative organizational commitment has been observed in many studies (Meyer and Allen 1997).

Age is highly correlated with continuance commitment with (r = 0.34, p<0.01) and less strongly to affective commitment (r = 0.21, p<0.01) but it bears no relationship to normative commitment. Educational level of the respondents bears significant negative relationship (r = -0.13, p<0.05) to continuance commitment only. Gender and marital status have not been found to affect any of the dimensions of organizational commitment. Position occupied by the manager in the organizational hierarchy has significant positive but weak(r= 0.15 p<0.01) relationship with affective commitment. Size of the bank shows significant positive though weak correlation with continuance(r = 0.15, p<0.01), and normative commitment(r = 0.17, p<0.01) but not with affective commitment.

TABLE 4: DESCRIPTIVE STATISTICS

Variables	Mean	Std. Deviation
Affective commitment	5.14	1.12
Normative commitment	5.24	1.04
Continuance commitment	5.25	1.27
Age	46.64	9.11
Gender	1.05	0.22
Marital status	1.95	0.22
Educational level	1.49	0.69
Positional tenure	7.33	7.42
Managerial grade	1.80	0.84
Position occupied	1.36	0.48

Table 4 presents descriptive statistics (mean and standard deviations) of study variables. Descriptive statistics indicate that level of continuance and normative commitment is fairly high with (Mean= 5.25, SD=1.27) and (Mean= 5.24, SD=1.04) the score on affective commitment (Mean=5.14, SD=1.12) is lesser than normative commitment or continuance commitment. Thus, hypothesis 1 is supported.

Table 5 sets out the statistical analysis of hypothesis 2, 3, 4 and 5.

TABLE 5: PERSONAL VARIABLES AND ORGANIZATIONAL COMMITMENT

Variable	N	Affective Commitment			Normative Commitment			Continuance Commitment		
		$\bar{X}$	SD	t	$\bar{X}$	SD	t	$\bar{X}$	SD	t
Age										
≤ 35 years	48	4.63	1.27		4.43	1.12		5.18	1.30	
> 35 years	285	5.23	1.07	-3.05^{**}	5.38	0.96	-5.55^{***}	5.26	1.28	-.41
Gender										
Male	315	5.16	1.11		5.24	1.04		5.25	1.28	
Female	19	4.81	1.32	1.27	5.28	1.02	-0.15	5.24	1.18	.01
Marital Status										
Married	317	5.15	1.13		5.26	1.04		5.26	1.27	
Unmarried	17	5.07	1.09	-0.27	4.94	1.08	-1.23	5.02	1.41	.75
Education										
Graduates	208	5.10	1.15		5.32	1.07		5.40	1.18	
PG-non MBA	87	5.34	1.02	F 2.44	5.12	0.98	F 1.39	5.00	1.40	F 3.75^{*}
MBA	38	4.90	1.15		5.12	1.02		5.01	1.36	

** p <.01, * p<.05

The sample was divided into two groups on the basis of age, those over 35, and under or equal to 35 years of age. T-test of sample showed that, at a 1% significance level, older group (those over 35) and younger group (≤ 35 years) differed significantly in terms of affective and normative commitment (t=-3.05, p<.01) and (t=-3.05, p<.01), respectively. Thus, hypothesis 2 is partially supported.

Hypothesis 3 that females tend to have a higher degree of organizational commitment is rejected for all the dimensions of organizational commitment. The two tail significance test shows no significant difference between gender classes. Similarly no significant difference in organizational commitment has been found between married and unmarried managers, causing rejection of hypothesis 4.

In order to determine whether levels of affective, continuance and normative commitment differed across different educational categories, one-way ANOVA was undertaken. Table 5 presents the descriptive statistics for affective, continuance, and normative organizational commitment across graduates, MBAs, and other post graduate managers. Examination of the results of the analysis indicates that there was significant difference in continuance organizational commitment across educational categories with F ratio (3.75, p<.5).Thus, hypothesis (5) was partially supported in the current study. Although one-way analysis of variance (ANOVA) resulted in the rejection of null hypothesis of equal means for the continuance organizational commitment, this did not indicate where exactly the differences between the groups lie. To determine the precise nature of the differentiation between groups, Turkey's Honestly Significant Difference test was undertaken as a post-hoc measure to determine the precise nature of the differentiation between groups.

TABLE 5b: TURKEY'S HONESTLY SIGNIFICANT DIFFERENCE TEST OF MULTIPLE COMPARISONS IN RESPECT OF CONTINUANCE ORGANIZATIONAL COMMITMENT ACCORDING TO EDUCATIONAL QUALIFICATION

(I) Group	(J) Group	Mean Difference (I-J)
1. Graduates	2 Post–graduates (non-MBA)	.39*
	3 MBA	.38
2. Post-graduates (non- MBA)	1 Graduates	-.39*
	3 MBA	-.01

* The mean difference is significant at the .05 level.

Pair-wise comparison (presented in Table 5b) indicated that managers who were graduates with (Mean = 5.60, SD= 1.19) were significantly more committed (Mean = 5.40, SD= 1.18) to the bank on continuance dimension of organizational commitment than those who were simple post-graduates with (Mean= 5.00, SD=1.40).However, there is no significant difference in the continuance commitment of managers who are graduates and managers with MBA qualification. Similarly, no significant difference has been found in the continuance commitment of managers who are simple post-graduates or managers with MBA qualification. So hypothesis 5 is partially supported.

TABLE 6: ROLE-RELATED FACTORS AND ORGANIZATIONAL COMMITMENT

Variable	N	Affective Commitment			Normative Commitment			Continuance Commitment		
		$\bar{X}$	SD	t	$\bar{X}$	SD	t	$\bar{X}$	SD	t
Position Occupied										
B. M.	120	5.36	1.18	-2.68^{**}	5.25	1.12	-0.05	5.40	1.12	1.56
Non-B.M	214	5.02	1.07		5.24	0.99		5.17	1.35	
Positional Tenure										
Up to 7 years	203	5.18	1.06	0.87	5.31	0.99	1.63	5.30	1.28	0.86
> 7 years	131	5.07	1.20		5.12	1.10		5.17	1.28	
Managerial Grade										
Scale I	147	5.19	0.99		5.32	0.95		5.36	1.22	
Scale II	117	5.21	1.17		5.25	1.04		5.21	1.31	
Scale III	56	4.80	1.32	F 2.07	4.95	1.23	F2.23	5.15	1.35	F1.21
Scale IV	12	5.27	1.05		5.61	1.07		4.91	1.26	

B. M. - Branch manager

In order to test hypotheses 6 and 7, t- test was applied to compare means between the groups. Table 6 shows statistically significant difference in affective commitment of branch managers (Mean= 5.36, SD=1.18) and non branch managers (Mean= 5.02, SD=1.07). Branch managers score higher on affective commitment dimension than non-branch managers, may be due to the organizational or managerial prerogatives that are attached to an attained organizational office or position. Hypothesis 6 is partially supported.

No significant difference in affective, continuance, or normative organizational commitment has been on the basis of positional tenure of managers. Hence, hypothesis 7 is rejected.

Analysis of variance was applied to test the significance of difference in affective, continuance and normative commitment of managers categorized on the basis of managerial scale they were getting. F-ratio for all the dimensions of organizational commitment is non-significant. The hypothesis 8 is, thus rejected.

5. DISCUSSION AND CONCLUSION

This study set out to explore the organizational commitment of managers of public sector banks in India. Organizational commitment was viewed as a multidimensional concept, and had been measured by Meyer et al.'s (1993) Organizational Commitment Scale. It was hypothesized that there would be significant difference in affective, continuance, and normative commitment of bank managers based on personal factors. Results of the study showed that older managers felt both a stronger obligation, and a stronger need to stay within the employing bank than younger employees. The study indicated that the mindset of the older employees was different from those of younger employees. Though age had positive relation with both affective and normative commitment, yet the relationship was stronger for normative commitment than affective commitment. Older employees were more likely to adapt to norms and procedures of the organization and make themselves comfortable in their job. They felt stronger need to reciprocate than their younger colleagues. Results are consistent with the findings of Allen and Meyer, 1993 that age has positive relation with affective and normative commitment. No significant difference has been found in the need to stay within the employing bank between older and young managers. The findings are inconsistent with the results of (Hackett et al., 1994; Meyer et al., 1993; Meyer et al., 2002) that age is positively correlated to continuance commitment. The findings do not support the Meyer and Allen (1984) argument that younger employees might have more commitment because they are aware of the fact that with less work experience, they often have fewer job opportunities elsewhere. As they get more experience, however, alternate employment opportunities may increase, thus decreasing the magnitude of one important cost of leaving, that of having no job.

No significant difference has been found in affective, continuance, and normative commitment between married and unmarried, and male and female managers. Educational qualification of the respondents was another personal characteristic that had been related to continuance organizational commitment only. Pair-wise comparison indicated that managers who were graduates were significantly more committed to the bank on continuance dimension of organizational commitment than those who were simple post-graduates. However, there was no significant difference in the necessity to stay of managers who were graduates and managers with MBA qualification. Similarly, no significant difference had been found in the continuance commitment of managers who were post-graduates with or without MBA qualification. Though it was hypothesized that managers with MBA degree will score lower on continuance dimension of organizational commitment because they have more job opportunities in private banks, yet no support has been found for this hypothesis. Reason for this can be the job security which the employees of public sector banks enjoy.

In terms of role-related factors, neither managerial scale nor positional tenure had any affect on the organizational commitment of bank managers but there was significant difference in the organizational commitment of branch managers and non-branch managers. This finding clearly suggests that autonomy and prerogatives in decision making which a manager enjoys being head of the branch are considered more important than simply getting higher scale.

The findings of the study assume importance for the top management of these banks to unpack and then repack those HR policies which foster and optimize the level of organizational commitment among younger employees. Reinforcing the younger managers' sense of self worth and providing a supportive environment may tend to be more effective strategy for ingraining a strong sense of organizational commitment among young managers. This finding has significant implication for the top management of these banks to formulate appropriate promotion and development policies which satisfy the need for autonomy and decision making of these managers.To achieve goals of globalization and counteract the competition from private banks, it is necessary to consider many areas not only high technological issues but also satisfied and committed employees who become a reckoning force for the success of these banks.

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A PENTAGON PERFORMANCE SCENARIO OF SUGAR SECTOR IN INDIA

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ABSTRACT
Sugarcane is cultivated in 127 countries in the world. Sugar industry is the second largest organised agro based industry in India. India ranks first with regard to the sugarcane cultivation area followed by Brazil. India is the second largest sugar producer in the world after Brazil, having a share of over 15 percent of the world's sugar production. So far no research was undertaken to make an analytical study of key factors at national level. The key factors like Crushing Capacity of Sugar Mills, Quantum of Cane Crushed, Quantum of Sugar Produced, Rate of Sugar Recovery and Quantum of Molasses Production of entire Indian sugar sector were studied, analysed and compared in this research work. This research is mainly focused on number of sugar mills fall under various slabs of key factors.

KEYWORDS
Crushing, Mills, Molasses, Sugar, Recovery.

INTRODUCTION
After textile industry, sugar industry is the second largest organized agro based industry in India. Reference of sugar and its products are available in Vedas and epics (the oldest written scripts available in India), indicating that the sugar was known to Hindus earlier than to any other race. ***Ikshu*** the term of sugarcane was found in ***Atharva Veda,*** which shows that the Aryans knew the sugar plant. In olden days, the forms of sugar products such as ***Khanda*** (Solid *jaggery*) and ***Sarkara*** (sugar) were used as medicinal compound.

HISTORICAL BACKGROUND
History has shown ample evidences of colonial rulers who had put their maximum efforts to acquire and control the production and distribution of sweetness. The East Indian Company started its venture by setting up of sugar mills at Surat, Arangaon and Machlipatanam in 1640. In 1906 there were 8 sugar mills with a total manpower of 1205 laborers. In 1921, the number of sugar mills increased to 16 and gave employment opportunities to 3348 workers. During 1935-36 there were 137 sugar mills in India and in a decade (1945-46) number shot up to 172 working sugar mills in India.

GLOBAL SUGAR SCENARIO
Sugarcane is cultivated in 127 countries in the world. Most of them are situated in between 35^{o}S and 35^{o}N of the Equator with altitudes ranging from sea level above 700 metres. The major sugar producers are Brazil, Argentina, Peru and Mexico. The highest sugar recovery recorded in Australia. In Asia, the major sugarcane producing countries are India, Indonesia, Philippine and China. During 1994 to 2003 the world sugar production increased by 25 percent. Some of the western countries produce beet sugar. The ratio between cane sugar and beet sugar is 76:24.

INDIAN SUGAR SCENARIO
India is the second largest sugar producer in the world after Brazil, having a share of over 15 percent of the world's sugar production and so far as the area under sugarcane cultivation is concerned, India stands first. In India, sugarcane is cultivated in 4.076 million hectors of land and today, India is not only self-sufficient but also capable to export to the tune of more than 0.81 million MT per annum to more than 38 countries. The countries like Pakistan, Bangladesh and Sri-Lanka are bulk our buyers. Normally, the crushing season beings in Indian from October to May and season prolongs for on an average 120 to 150 days.

There were 553 registered sugar mills in the country but many of them already lost their entity (as on 30th September 2003), unfortunately 496 mills are functioning. The Co-operative sugar sector was looking after 296 factories, 166 mills were in the hands of private people and the rest 34 sugar companies were in the public sector. There were 143 mills in India's sugar bowl, Maharashtra state followed by Uttar Pradesh, 129 mills. The sugar sector generated employment for 40 million farmers in the fields and 0.5 million in factories. Today, Indian farmers are capable to produce a mass quantum of more than 300 million MT of sugarcane per year.

REVIEW OF LITERATURE
In order to support the research process and to understand the research gaps in the chosen research problems, several research articles and sugar India year books were reviewed.

i) ***D.K. Pant*** *et al* (2005), examined various process and also made an attempt to explain the efficient manner of By-products utilization.

ii) ***Ram Vichar Sinha*** (1998) studied the problems of cane marketing and transport, utilization of By-products and policies on sugar economy.

iii) ***S. Pruthi*** (1995) studied the history of sugar, sugar making in ancient and medieval India, during British period and after independence till 1992.

NEED/IMPORTANCE OF THE STUDY
It is observed that all referred studies emphasised either a particular problem of a sugar mill or comparative studies in nature. So far no research was undertaken to make an analytical study of key factors at national level. The key factors like Crushing Capacity of Sugar Mills, Quantum of Cane Crushed, Quantum of Sugars Produced, Rate of Sugar Recovery and Quantum of Molasses Production of entire Indian sugar sector with reference to number of factories agglomerated at different slabs were studied, analysed and compared in this research work.

STATEMENT OF THE PROBLEM
Agriculture has continued to be the backbone of Indian economy and it contributes about 29 percent to GDP. The co-operative sugar sector has accounted a lion's share in terms of the total number of sugar factories as well as the quantum of sugar production in India. The annual sugarcane price paid to the cultivators by the sugar mills amounts to Rs.135,000 millions per year. The annual turnover of the Sugar Sector amounts to Rs. 250,000 millions. The Central Excise Department gets an income of Rs.15,000 millions and the State Governments receive Rs. 10,000 million in the form of various cess. Looking at the significance importance the sugar sector it is the need of the hour is to study the performances of key factors by taking into considering entire India with reference to their concentration at different points.

OBJECTIVES
i) To analyse the Crushing Capacity of Sugar Factories in India.

ii) To study the Quantum of Cane Crushed during the study period.
iii) To study the Quantum of Sugar Produced during the study period.
iv) To analyse the Rate of Sugar Recovery in India.
v) To analyse the Quantum of Molasses Production.

RESEARCH METHODOLOGY

The study is based on **secondary data** published in "SUGAR INDIA" yearbooks of 2005, 2009 and 2011 and Co-operative Sugar Journals; covers performances of five different areas in three sugar seasons in India. The quantum of data includes three years statistical records of 544 factories in **five areas *viz.,* crushing capacity, cane crushed, sugar production, sugar recovery and molasses production.** The sample size covers all 544 sugar mills (cent percent) of entire India during the study period (three financial years 2007-08, 2008-09 and 2009-10), which includes Co-operative factories, Private and Public sector sugar companies. Tabulation analysis is used as tool.

LIMITATIONS OF STUDY

i) Study base on the data published in various sugar yearbooks and sugar journals. The conclusion drown also entirely depends upon the data published in the books and journals.
ii) The conclusion derived from the findings may not be applicable in any other years since the performance of sugar factory may differ from year to year.

RESULTS AND DISCUSSION

I) CRUSHING CAPACITY OF SUGAR MILLS IN INDIA

Crushing Capacity of a sugar factory plays a very important role in the jurisdiction where it is established. The capacity is decided based on the quantity availability of sugarcane at present and in future within the area specified for the sugar factory. In India, the crushing capacity of sugar mills varies from 500 Metrics Ton Per Day (MTPD) to 18,000 MTPD. The available data have been classified into 54 slabs which are based on convenient MTPD capacity installed by the promoters in their respective areas. The tabulated data exposed the following pictures.
(i) The installed crushing capacity of Indian sugar mills observed to have varied from 500 MTPD to 18,000 MTPD.
(ii) Many factories observed to have increased their crushing capacity during the study period from 2007 to 2009 and none of them reduced their crushing capacity.
(iii) About 25 present (165 Mills) of the factories have installed 2,500 MTPD, about 10 percent (44 Mills) have are venturing with 3,500 MTPD capacity, 5 percent (24 Mills) have installed 4,000 MTPD, 9 percent of them (40 Mills) observed to have installed 5,000 MTPD capacity and the rest fall under other slabs.
(iv) Mills who have installed over and above 10,000 MTPD were either in private sector or were public limited companies and none of them in cooperative sector.
(v) The companies who have significantly larger crushing capacity are Bajaj Hindustan Ltd., 12,000 MTPD (Central UP), Balarampur Chini Mills Ltd., 15,000 MTPD (East UP), Bajaj Hindustan Sugar & Industries Ltd., 16,000 MTPD (East UP), Triveni Enginering & Industries Ltd., (West UP) and Renuka Sugar Ltd., Karnataka.
(vi) The mills which have less than 1,250 MTPD capacities were observed to have not performed well because of the increased cost of production due to small scale operation.

II) QUANTUM OF CANE CRUSHED

In India, the quantum of cane supply depends upon three major factors: **(a) Monsoon Factors** - the destiny of farmers and agro-based industries purely depends upon the mercy of monsoon in India. The sugarcane crop depends upon timely and sufficient rainfall, required amount of moisture and absence of the pests and diseases; **(b) Price of Substitutes** - in India, *Gur* and *Khandsari* units are still major source of sweeteners especially in rural India. About 60 to 65 percent of sugarcane produced in the country is utilised for sugar manufacturing, about 21 to 28 percent is utilised for the manufacturing of *Gur* and *Khandsari* and the balance of 11 to 12 percent goes to feeding, chewing, seeding and other uses; and **(c) Statutory Minimum Price** - the Statutory Minimum Price (SMP) is the price fixed by the Central Government below that no sugar factory is allowed to buy sugarcane from the cane growers. Every year the Central Government announces SMP (based on minimum 8.5 percent recovery rate) for sugarcane by notification in the month of September or October, which is to be essentially paid to the sugarcane growers by the sugar mills.
The quantum of cane crushed by the Indian sugar factories have been classified into 39 convenient widths viz., less than 59,999 MT; 60,000 MT to 1,00,000 MT [Lac Metric Ton (LMT)], 1 LMT LMT to1,59,000 LMT; and so on till 19.59 LMT. The tabulated analysis told the following truths.
(i) On an average data indicates that in 2007-08, larger number of the factories observed to have crushed less than 59,000 MT. It may be because of failure of sugarcane production during 2007-08 and later on (2008-09), the situation observed to have improved in quantity crushed indicated bumper crop season and again a fall in 2009-10.
(ii) About 140 mills observed to have sugarcane crushed less than 1.59 LMT during 2009-10.
(iii) Up to 7.59 LMT one can see double digit factories and later on a few factories observed to have crushed more than 7.59 LMT but very surprisingly shifting in crushing quantity is observed varying from year to year, which is an impact of good rain in a particular state or states.
(iv) Following are the new companies, which have crushed more than 15 LMT viz., The Ugar Sugar Karkhana Ltd., Karnataka [>15.6 LMT]; Balrampur Chini Mills Ltd., UP [>16.2 LMT]; Shree Khenvata Sahakari Chand Udyog Mandily Ltd., Gujarat [>16.6 LMT]; Haryana Saraswati Sugar Mills Ltd., [>17 LMT] and Godavari Bio-refinery Ltd., Karnataka [>17.6 LMT]
(v) One company Shree Khedavati Sahakari Khan Udyog Mandily Ltd., South Gujarat observed to have crushed more than 19 LMT during 2007-08 and 2009-10 but could not achieve the target in 2008 [>16.6 LMT].

III) QUANTUM OF SUGAR PRODUCED

Every sugar mill proudly says its performance in terms of white crystallised sugar production. This parameter of performance is accepted universally, however, production performance of any sugar factory totally depends upon the other two variables *viz*., quantum of sugarcane crushed and recovery rate.
In order to analyse the white crystal sugar production performance of the mills during the study period, the data relating to the sugar production have been put in conveniently made 44 slabs *viz.*, less than 0.59 (Lac Quintals) LQS to 0.60 to 1.00 LQS and so on up to 21.60 to 22.00 LQS. The consolidated data analysis revealed the following facts.
(i) The trends of sugarcane production are directly and proportionately move with sugar production since both are interdependent.
(ii) The impact of good and bad rain were clearly visible in the form of bumper and average production of sugar, as stated in the sugarcane production i.e. low production in 2007-09 and an average production in 2009-10.
(iii) Larger number of factories (average) fall under the categories of less than 0.59 LQS, in between 0.69 to 1.00 LQS and 1.01 to 01.59 LQS which indicate larger number of sugar factories in India smaller in size.
(iv) Quantum of production of sugar by the factories significantly varied from one year to another and also observed that the number of factories agglomerated under a particulars slab during the study period shows very large differences.
(v) The factories, which achieved the production target of 13.00 LQS during the 2009-10, could not do best during 2007-08 and 2008-09.
(vi) Major factories, which achieved the target above 17.00 LQS of sugar production were Bannari Ammar Sugar Ltd., Karantaka (2007-08); Sahakari Khand Udyog Mandli Ltd.,Gujarat (2008-07); the Godavari; Bio-refineries Ltd., Gujarat (2009-10); Sheer Khedut Sahakari Khand Udyog Mandli Ltd.,Gujarat (2007-08) and the Godavari Bio-refineries Ltd., (2007-08) Karnataka.

IV) RATE OF SUGAR RECOVERY

Rate of recovery is another important parameter indicates the degree of production performance. The rate of recovery is nothing but the percentage of sugar content extracted from sugarcane. The sugar content in cane differs from region to region and from time to time. The sugar content in sugarcane does not have any correlation with the yield per hectare. High degree of sugar contents fetches a high rate of white crystal sugar return. The input of sugarcane and output of sugar production is measured in term of percentage i.e. **Rate of Recovery**.

The degree of sugar contents in sugarcane depends upon the quality of soil, sugarcane variety and seed, impact of monsoon, pesticides and fertilisers used and cropping pattern. The rate of recovery depends upon percentage of sugar content in cane and also depends upon the efficiency of men and machines in the factory.

No sugar factory can extract cent percent sugar content from sugarcane. A small amount of sugar content goes as normal process loss. After making numerous researches in the sugar extraction methods and processes, the researchers fixed up an allowable maximum normal loss. If any sugar unit maintains its normal loss within the allowable normal losses, such sugar mills are considered as highly efficient mills. The rate of normal loss indicates the degree of efficiency of men and machines in sugar mills.

It is noticed that there is a loss of sugar at all stages right from harvesting to final product, which is a serious economic problem of sugar industry. It is also observed that the overall loss of sugar contents from the point of pre-harvest to till the point of bagging is estimated in between 5 percent to 35 percent.

The quantum of loss depends upon the degree of geographical and technical factors affecting the sugarcane cultivation, transportation and production processes. The **sugar losses** in the sugarcane process have been classified into **(a) Known Losses (Bagasse loss, Filter cake loss and Molasses loss)** and (b) **Unknown Losses or Undetermined Losses,** which cannot be determined directly.

If a factory wants to get higher recovery rate, the material manager must see that the cane must reach the factory premises within eight hours after cutting from the fields. If it is not possible within specified period, the cane juices get converted into fructose rather than sugar and get mixed with molasses.

In order to find out how many mills agglomerated in a particular range, the rate of recovery slabs have been fixed from less than 7.00 to 7.50 and so on by keeping a width of 0.50 percent.

As it is stated, in India Average Recovery Rate (ARR) varies in between 9.50 to 10.00 percent. India achieved a record recovery of 10.48 percent during 1930-31 otherwise most of the time the recovery rate was in between 9.00 to 10.00 percent. With this background, the tabulated data have been analysed and found the following facts.

(i) On an average about 8 factories have shown very poor recovery (Less than 7.00 %) during the study period. It may be due to poor quality of sugarcane, delay in crushing.

(ii) An increasing trend in number of factories is observed from 2009-08 to 2009-10 towards the 11.50 percent recovery.

(iii) About 10 percent of factories fallen under the category of 8.10 to 8.50 percent recovery; about 15 percent of factories fallen under 8.15 to 9.00 percent and about 20 percent of the mills fallen under 9.10 to 9.50 percent category.

(iv) About 15 percent each of the mills fallen under 9.15 to 10.00 percent and 10.10 to 10.50 percent category and just 10 percent each of the mills observed to have fallen under 10.51 to 11.00 percent category; rest above 11.00 percent.

(v) As many as 23 mills have crossed the remarkable recovery rate of 12.51 percent during 2007-08 as compared to 7 mills in 2008-09 and 8 mills in 2009-10.

(vi) About 150 factories observed to have crossed healthy bench mark of 10.00 percent recovery rate during 2009-10.

V) QUANTUM OF MOLASSES PRODUCTION

The by-products of the sugar industries are Bagasses (36%-35%) molasses (4%-5%), press mud (2%-4%) leaves and tops (25%-35%) and boiler ash (0.3%). The cost of sugar continues to be high due to the neglect of the profitable utilisation of the by-products. If the by-products are used the cost of production of the sugar may go down by about 20 percent. The development of sugarcane by-products industries and their ancillaries may push up the profitability of the sugar industry.

The countries like Australia, Brazil, Cuba, Philippines, South Africa and Taiwan have developed numerous industries utilising the by-products. Some of these countries produce alcohol as main product and sugar as by product.

In India, only the factories having 3,500 MT and above capacity, convert their molasses in to sprit, since it is commercially viable to invest in sprit production plants. The bagasses are used to produce electricity. About 50 percent of units produce electricity to fulfill mills requirement when they are in operation.

Molasses is one of the by-products comes out in the form of semi-liquid used to prepare alcohol / ethanol / spirit. Many sugar factories, which have installed 3,500 MTPD and more, get large amount of molasses and have installed ethanol distillation units. The inefficient material management also leads to the production of larger amount of molasses rather than sugar. These units produce spirit product soon after the sugar production season, and keep their labour force in action. Otherwise generally, sugar seasons, get over in between 90-160 days in a year.

In order to find out how many mills agglomerated in a particular range, the ranges of quantum of molasses production have been classified into 18 slabs from less than 0.59 Lac Quintals (LQS), to 0.60 LQS and so on by keeping a width of 0.50 LQS. The analytical study revealed the following facts.

(i) Number of units observed to have increased from 2007-08 to 2008-09 and 2008-09 to 2009-10. An upward trend is clearly visible due to the increase in cane yield year to year.

(ii) More than 50 percent of the factories observed to have produced less than 3.00 Lac Quintals (LQS) of molasses per season.

(iii) The factories which accumulated more than 2.00 LQS molasses have installed distillation units in their factory premises instead of selling molasses to outsiders, who have spirit production units.

FINDINGS

I. CRUSHING CAPACITY

(i) Increasing of crushing capacity from lower level to higher level is observed during study period and not vice versa.

(ii) Many (25%) factories observed to have opted 2,500 MTPD crushing capacity and 10 percent each have installed 3,500 MTPD and 5,000 MTPD.

(iii) Most of the factories who have crushing capacity over and above 10,000 MTPD were either of private sector mills or of public sector mills.

(iv) Crushing capacity depends upon the cane availability within the jurisdiction of the factories.

II. CANE CRUSHED

(i) Larger number of sugar factories observed to have crushed less than 0.60 LMT during 2007-08, which was due to cane crop failure because of rain failure in that year.

(ii) Indian sugar production is fully depends upon the quality and quantity of rainfall except irrigated areas, which is also depends upon rain fall.

(iii) Constant supply of sugarcane irrespective of good or bad rain fall observed in some sugar factories, because of well irrigation. Hence, tube well irrigation also plays a major role in sugar production in India.

(iv) Factories who have crushing capacity over and above 15 LMT observed to have taken care of regular supply of sugarcane by providing irrigation facility, educating farmers and providing required basic materials and tools such as seeds, fertilizer, guidance, etc.

III. SUGAR PRODUCTION

(i) Sugar factories in India do not get sugarcane supply constantly; supply purely depends upon rain and irrigation pattern, which has direct impact on sugar production.

(ii) Cane supply and sugar production have got direct and proportional relationship and slightly affected by the *gur* production and *gur* price.

(iii) Quantum of production observed to have varied from year to year and factory to factory even though every factory has got Jurisdiction of 25 km of cane supply and farmer members.

(iv) Larger number of factories observed to have produced sugar in between 1.00 LQS tO 4.59 LQS.

IV. SUGAR RECOVERY

(i) All India Sugar Recovery Rate observed to have varied from 2.50 percent to 14.00 percent.

(ii) All India Average Recovery Rate fall in between 9.00 to 10.00 percent.

(iii) Factories who have record of less than 7.50 percent are neither able to continue nor able to recover their cost of production; become sick and led to many problems specially payments to farmers.

(iv) Many of the factories who have achieved the target rate of recovery over and above 11.00 percent observed to have not paid proportionately to their farmers as stated in the many research reports.

(v) Indian Average Recovery Rate is lower as compared to Brazil and other advanced countries.

(vi) Though all India Average Recovery Rate is lower as compared to other countries, India exceeds in quantum of production of sugar as compared to sugar bowl of the world - Brazil.

V. MOLASSES PRODUCTION

(i) Increasing trend of number of factories falling under same range is observed in case of molasses production as in the case of cane and sugar production.

(ii) Production of molasses depends upon the other factors *viz.,* amount of sugarcane crushed by the factory and gap between the cane cutting time and the cane crushed time.

(iii) Delay in crushing time leads to more amount of molasses production and lesser quantum of sugar production due to conversion of glucose into fructose due to delay in process.

(iv) Sugar factories who produced more than 2 LQS of molasses have installed their own distilleries, and these units are able to provide employment to their workers throughout the year rather than closing down soon after the season.

RECOMMENDATIONS/SUGGESTIONS

(i) The factories which are having crushing capacity less than 1,000 MTPD and below are advised to enhance their capacity to gain the benefits of large scale operation.

CONCLUSIONS

Indian sugar sector largely depends upon monsoon; politically influenced sugarcane price fixing system; moods of the farmers and mills administrators. The degree of success of Indian sugar sector is depending on joint venture of said stake holders.

SCOPE FOR FURTHER RESEARCH

All six problems and segments can be analysed in detail by interested research scholars in future.

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JOB SATISFACTION OF EMPLOYEES – AN EMPIRICAL ANALYSIS

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ABSTRACT
Job satisfaction is one of the crucial but controversial issues in Indian psychology and behavioral management in organization. In job satisfaction is the result of employee's perception of how well their job provides those things, which are viewed as important. It is generally recognized in the organizational behavior field that job satisfaction is the most important and frequent studied attitude. Many management experts have expressed it in their own way, but have hardly arrived at a conclusion. In this study is concerned with knowing the satisfaction level of the job workers of ITC limited. The objectives of the study are: (i) To measure the satisfaction levels of employees on various factors and give suggestions to improve them, (ii) To find out whether the experience have an effect on job factors, (iii) To find out significance difference among Age and Gender groups with respect to job factors. The sample size was 250 employees drawn from different departments based on Primary data with "Random Sampling" and "Convenience Sampling" method was adopted in the selection of sample respondents were the employees working in the ITC company limited located in Mettupalayam. After the collection of data through the questionnaire, while the data are analyzed with the helps of tools are Chi-square Analysis, Likert -Scaling Analysis, ANOVA. In this study the results of Hypothesis Testing is found that whether the significant difference among respondents of various experience groups, Age groups and Gender groups with respect to job factors.

KEYWORDS
Job satisfaction, employee perception, organizational behaviour.

INTRODUCTION
Job satisfaction is one of the crucial but controversial issues in Indian psychology and behavioral management in organization. it ultimately decides the extent of employee motivation through the development of organizational climate or environment. employee's attitudes are important to human resource management because they affect organizational behavior. The more widely recognized job satisfaction focuses on employee's attitudes towards the job.

Job satisfaction is the result of employee's perception of how well their Job provides those things, which are viewed as important. It is generally recognized in the organizational behavior field that job satisfaction is the most important and frequent studied attitude. It is important to mention that an individual may hold different attitudes towards various aspects of the job. There are three important dimensions to job satisfaction. They are:

First, Job satisfaction being an emotional response to a job cannot be seen. As such, it can only be inferred.

Second, Job satisfaction is often determined by how satisfactorily outcomes meet or exceed one's expectations.

Third, Job satisfaction represents an employee's attitudes towards five specific dimensions of the job: pay, the work itself, promotion opportunities, supervision and co-workers.

The study also helps the organization to gain knowledge about the extent of satisfaction of the employee respondents. From this study, the problems and expectations of the employees regarding their job can be known. Management needs Job satisfaction information in order to make sound decision; the management can gain from the methods available. A typical approach to a job satisfaction survey also known as morale, attitude or quality-of work life.

OBJECTIVES OF THE STUDY
(i) To measure the satisfaction levels of employees on various factors and give suggestions to improve them, (ii) To find out whether the experience have an effect on job factors, (iii) To find out significance difference among Age and Gender groups with respect to job factors.

RESEARCH METHODLOGY
The sample size was 250 employees drawn from different departments based on Primary data with "Random Sampling" and "Convenience Sampling" method was adopted in the selection of sample respondents were the employees working in the ITC company limited located in Mettupalayam. After the collection of data through the questionnaire, while the data are analyzed with the help of tools are Simple percentage, Chi-square Analysis, Likert -Scaling Analysis, ANOVA.

In this study the results of **Hypothesis Testing** is found that whether the significant difference among respondents of various experience groups, Age groups and Gender groups with respect to job factors.

I. LEVELS OF SATISFACTION
The level of satisfaction of the respondents deals with various job factors. They are discussed below. (i) Basis of working hours, (ii) Happy environment of work place, (iii) Lighting and other arrangements, (iv) Heavy work load, (v) Safety measure, (vi) Cordial relationship with the supervisor, (vii) supervisor not partial, (vii) consideration of ideas, (ix) co-workers support, (x) Relationship with the employees, (xi) Refreshment facilities, (xii) provision of amenities, (xiii) parking facilities, (xiv) first-aid facilities, (xv) welfare facilities, (xvi) Emolument paid, (xvii) promotion, good salary at par with other organization, (xviii) provision of allowances, (xix) motivational attitude of supervisors, (xx) motivation of supervisors to increase efficiency , (xxi) communication process, (xxii) work assignments, (xxiii) love towards their job and to work, (xxiv) meaning full work life, (xxv) attaining organizational goals, (xxvi) adequate opportunity, (xxvii) Overall Job satisfaction. These job factors are measured by percentage analysis and Likert scaling analysis.

PERCENTAGE ANALYSIS

The respondents were given the five option (SA- strongly agree, A- Agree, N- Neither agree nor disagree, DA-Disagree and SDA- Strongly Disagree). Totally there are Twenty Eight job factors are measured the results of the percentage analysis are:

- Majority of the respondent (64.8 percent) were strongly agree with their convenient working hours.
- Majority of the respondent (49.6 percent) were Agree that they are Happy environment of work place,
- Majority of the respondent (53.6 percent) were satisfied with Lighting and other arrangements,
- Majority of the respondent (86.4 percent) were agree that they have Heavy work load
- Majority of the respondent (100 percent) were satisfied with the Safety measure,
- Majority of the respondent (53.2 percent) were agree that the Cordial relationship with the supervisor.
- Majority of the respondent (44.8 percent) agreed that supervisor is not partial,
- Majority of the respondent (36.4 percent) neither agreed that supervisor considered their ideas while taking decisions.
- Majority of the respondent (49.6 percent) were satisfied with the refreshment facilities.
- Majority of the respondent (64.8 percent) were satisfied with the support from the co-workers support.
- Majority of the respondent (52 percent) strongly agrees that their lunch and rest room provided were good.
- Most of the respondent (58.4 percent) were parking facilities.
- 56 percent of the respondents were satisfied with first-aid facilities.
- Most of the respondent (59.6 percent) satisfied with the amount paid for the work.
- Majority of the respondent (35.6 percent) neither agreed nor disagreed with the changes of promotion.
- Majority of the respondent (50 percent) neither agreed nor disagreed with the allowances provided by the company.
- Majority of the respondent (58 percent) agreed that their boss motivate to achieve organizational goals.
- Most of the respondents (62 percent) agreed the communication is good with in this organization.
- Majority of the respondents (55.6 percent) agreed that they love their job and to work in this organization.
- Majority of the respondent (57.2 percent) agreed that they have adequate opportunity to use their ability.
- Most of the respondent (59.2 percent) was overall satisfied with their job.

LIKERT SCALING TECHNIQUE

Likert scaling technique has been applied to find out the extent relationship of job satisfaction with the following factors. (a) Working environment and nature of work, (b) Relationship with supervisors and colleagues, (c) Welfare facilities, (d) Pay and promotion, (e) Communication and motivation, (f) job factors.

(a) WORKING ENVIRONMENT AND NATURE OF WORK:

The Working environment and nature of work comprises of following sub factors namely (i) Working hours are convenient for me (ii) I'm happy with my work place (iii) the lighting and other arrangements in the office are satisfactory. (iv) I feel I have too much work to do (v) I'm satisfied with the safety measures provided by my company.

TABLE 1: ANALYSIS OF DATA RELATING TO THE JOB SATISFACTION DIMENSION OF THE RESPONDENTS IN RELATIONSHIP WITH WORKING ENVIRONMENT AND NATURE OF WORK

S.No	Particulars	Strongly Agree (5)			Agree (4)			Neither agree nor disagree (3)			Disagree (2)			Strongly Disagree (1)			Total			Rank
		NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	
1	Working hours are convenient for me	58	290	23.2	162	648	64.8	30	90	12.0	-	-	-	-	-	-	250	1028	100	5
2	I'm happy with my work place	87	435	34.8	124	496	49.6	39	117	15.6	-	-	-	-	-	-	250	1048	100	4
3	The lighting and other arrangements in the office are satisfactory	116	580	46.4	134	536	53.6	-	-	-	-	-	-	-	-	-	250	1116	100	2
4	I feel I have too much work to do	108	540	43.2	108	432	43.2	31	93	12.4	3	6	1.2	-	-	-	250	1071	100	3
5	I'm satisfied with the safety measures provided by my company	125	625	50.0	125	500	50.0	-	-	-	-	-	-	-	-	-	250	1125	100	1

Sources: Computed

Among the factors grouped above, the respondents ranked the factor safety measures as first as its score stood at 1125 followed by the lighting and other arrangements as second (1116) through the respondents satisfied with the convenience of working hours, but it ranked as a last one but not lease one (1028).

(b) RELATIONSHIP WITH SUPERVISORS AND COLLEAGUES

The Relationship with Supervisors and Colleagues comprises of following sub factors namely (i) My relationship with my supervisor is cordial (ii) My supervisor is not partial (iii) My supervisor considers my ideas too while making decision (iv) I'm satisfied with the support from my co-workers (v) People here have concern for one another and tend to help each other.

TABLE 2: ANALYSIS OF DATA RELATING TO THE JOB SATISFACTION DIMENSION OF THE RESPONDENTS IN RELATIONSHIP WITH SUPERVISORS AND COLLEAGUES

S.No	Particulars	Strongly Agree (5)			Agree (4)			Neither agree nor disagree (3)			Disagree (2)			Strongly Disagree (1)			Total			Rank
		NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	
1	My relationship with my supervisor is cordial	60	300	24.0	133	532	53.2	49	147	19.6	8	16	3.2	-	-	-	250	995	100	3
2	My supervisor is not partial	40	200	16	112	448	44.8	75	225	30.0	23	46	-	-	-	-	250	919	100	4
3	My supervisor considers my ideas too while making decision	7	35	2.8	73	292	29.2	91	273	36.4	42	84	-	37	37	-	250	721	100	5
4	I'm satisfied with the support from my co-workers	57	285	22.8	162	648	64.8	64.8	194.4	-	-	0	-	-	-	-	250	1127.4	100	2
5	People here have concern for one another and tend to help each other.	84	420	33.6	138	552	55.2	55.2	165.6	-	-	0	-	-	-	-	250	1137.6	100	1

Sources: computed

Among the factors grouped above, the respondents ranked the factor that employee have concern for one another and tend to help each other as first as it score stood at 1056 followed by satisfied support from the co-workers as second (1026). Though the respondents were satisfied with the consideration of ideas by the supervisor, but it ranked as a last one but not least (721)

(c) Welfare Facilities

The Welfare Facilities comprises of following sub factors namely (i) I'm satisfied with my welfare facilities (ii) We are provided with good rest room and lunch room (iii) The parking facilities provided for our vehicles are satisfactory (iv) I'm satisfied with the first aid facilities and (v)I'm satisfied with the loan facilities and other personal welfare benefits offered by the company.

TABLE 3: ANALYSIS OF DATA RELATING TO THE JOB SATISFACTION DIMENSION OF THE RESPONDENTS IN RELATIONSHIP WITH REGARD WELFARE FACILITIES

S.No	Particulars	Strongly Agree (5)			Agree (4)			Neither agree nor disagree (3)			Disagree (2)			Strongly Disagree (1)			Total			Rank
		NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	
1	I'm satisfied with my welfare facilities	112	560	44.8	124	496	49.6	14	42	5.6	-	0	-	-	-	-	250	1098	100	3
2	We are provided with good rest room and lunch room	130	650	52	120	480	48	-	0	-	-	0	-	-	-	-	250	1130	100	1
3	The parking facilities provided for our vehicles are satisfactory	93	465	37.2	146	584	58.4	11	33	4.4	-	0	-	-	-	-	250	1082	100	4
4	I'm satisfied with the first aid facilities	110	550	44	140	560	56	-	0	-	-	0	-	-	-	-	250	1110	100	2
5	I'm satisfied with the loan facilities and other personal welfare benefits offered by the company	25	125	-	90	360	36	84	252	33.6	36	72	14.4	15	15	6.0	250	824	100	5

Source: Computed

Among the factors grouped above, the respondents ranked the factor good rest and lunch room facilities as first as it score stood at 1130 followed by first aid facilities as second (1110). The respondents ranked the loan facilities and other personal welfare benefits offered by the company as last one (824).

(d) PAY AND PROMOTION

The pay and promotion which comprises of various sub factors namely (i) I feel I'm being paid a fair amount for the work I do. (ii) I'm satisfied with the chances of promotion (iii) the salaries we receive are good as other organizations pay to their employees (iv) I'm satisfied with the allowances provided by the organization.

TABLE 4: ANALYSIS OF DATA RELATING TO THE JOB SATISFACTION DIMENSION OF THE RESPONDENTS IN RELATIONSHIP WITH PAY AND PROMOTION

S.No	Particulars	Strongly Agree (5)			Agree (4)			Neither agree nor disagree (3)			Disagree (2)			Strongly Disagree (1)			Total			Rank
		NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	
1	I feel I'm being paid a fair amount for the work I do.	12	60	-	149	596	59.6	75	225	30	14	28	5.6	-	-	-	250	909	100	1
2	I'm satisfied with the chances of promotion	19	95	-	64	256	25.6	89	267	35.6	66	132	26.4	12	12	4.8	250	762	100	4
3	the salaries we receive are good as other organizations pay to their employees	28	140	-	700	2800	280	117	351	46.8	24	48	9.6	11	11	4.4	250	830	100	3
4	I'm satisfied with the allowances provided by the organization	43	215	-	78	312	31.2	119	357	47.6	10	20	4	-	-	-	250	904	100	2

Source: compute

Among the factors grouped above, the factor I feel I'm being paid a fair amount for the work I do as ranked first as it score stood at 909 followed by allowances provided by the organization as second (904). though the employees were satisfied with the chances of promotion. but it ranked as last one and not lease (762).

(e) COMMUNICATION AND MOTIVATION

Communication and motivation comprises of various sub factors namely (i) I feel that my boss motivate them to achieve the organizational goal (ii) My supervisor motivates me to increase my efficiency at times when I'm not productive (iii) Communication seems good with in this organization (iv) Work assignments are explained clearly.

TABLE 5: ANALYSIS OF DATA RELATING TO THE JOB SATISFACTION DIMENSION OF THE RESPONDENTS IN RELATIONSHIP WITH REGARD COMMUNICATION AND MOTIVATION

S.No	Particulars	Strongly Agree (5)			Agree (4)			Neither agree nor disagree (3)			Disagree (2)			Strongly Disagree (1)			Total			Rank
		NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	
1	I feel that my boss motivate them to achieve the organizational goal	49	245	19.6	145	580	58	48	144	19.2	8	16	3.2	-	-	-	250	985	100	4
2	My supervisor motivates me to increase my efficiency at times when I'm not productive	49	245	19.6	156	624	62.4	45	135	18.0	-	-	-	-	-	-	250	1004	100	3
3	Communication seems good with in this organization	61	305	24.4	155	620	62	34	102	13.6	-	-	-	-	-	-	250	1027	100	1
4	Work assignments are explained clearly	58	290	23.2	148	592	59.2	36	108	14.4	8	16	3.2	-	-	-	250	1006	100	2
	Total																250		100	

Source: compute

Among the factors grouped above, the respondents ranked the factor good communication flow as the first as it score stood at 1027 followed by clear explanation of work assignments as second (1006). though the respondents were satisfied that their boos motivate to achieve their organizational goal, but it is ranked as a last one (985).

(F) JOB FACTORS

The job factors consist of various sub factors namely (i) I love my job and to work in this organization (ii) My work life is meaningful (iii) I consider that my work is valuable in attaining my organization goals (iv) I have adequate opportunity to use my ability (v) Overall, I'm satisfied with my job.

TABLE 6: ANALYSIS OF DATA RELATING TO THE JOB SATISFACTION DIMENSION OF THE RESPONDENTS WITH RESECT TO JOB FACTOR

S.No	Particulars	Strongly Agree (5)			Agree (4)			Neither agree nor disagree (3)			Disagree (2)			Strongly Disagree (1)			Total			Rank
		NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	NOR	S.V	%	
1	I love my job and to work in this organization	65	325	26	139	556	55.6	46	138	18.4		-	-	-	-	-	250	1019	100	2
2	My work life is meaningful	43	215	17.2	122	488	48.8	77	231	30.8	8	16	3.2	-	-	-	250	950	100	4
3	I consider that my work is valuable in attaining my organization goals	35	175	14.0	119	476	47.6	96	288	38.4	-	-	-	-	-	-	250	939	100	5
4	I have adequate opportunity to use my ability	60	300	24	143	572	57.2	47	141	18.8	-	-	-	--	-	-	250	1013	100	3
5	Overall, I'm satisfied with my job	78	390	31.2	148	592	59.2	14	42	5.6	10	20	-	-	-	-	250	1044	100	1

Source: compute

Among the factors grouped above, the respondents ranked the factor overall satisfaction in the job as first as it score stood at 1044 followed by factor love towards their job and work as second (1019). though the respondents were somewhat satisfied that their work is valuable in attaining my organizational goal but it is ranked as a last one (939).

II. RELATIONSHIP BETWEEN THE EXPERIENCES OF EMPLOYEES WITH VARIOUS JOB FACTORS

ANOVA test has been applied to find out the relationship between the experiences of employees with the following job factors, are (i) Environment and nature of work (ii) Relationship with supervisors and colleagues (iii) Welfare facilities (iv) Pay and promotion (v) Communication and motivation (vi) Job factors.

TEST OF HYPOTHESIS

H0 : There is no significant difference among respondents worked experience of employees with the various job factors

H1 : There is significant difference among respondents worked experience of employees with the various job factors.

TABLE 7: RESULT OF ANOVA TESTING

Job Factors		Sum of Squares	df	Mean Square	F	Sig.
Environment and nature of work	Between Groups	92	3	30.667	110.324	.000
	Within Groups	365.16	246	1.484		
	Total	457.16	249			
Relationship with supervisors and colleagues	Between Groups	117.602	3	39.2	73.635	.000
	Within Groups	622.71	246	2.531		
	Total	740.312	249			
Welfare facilities	Between Groups	76.983	3	25.662	70.253	.000
	Within Groups	475.801	246	1.934		
	Total	552.784	249			
Pay and promotion	Between Groups	221.963	3	73.988	145.142	.000
	Within Groups	464.637	246	1.888		
	Total	686.6	249			
Communication and motivation	Between Groups	117.37	3	39.122	120.263	.000
	Within Groups	322.609	246	1.311		
	Total	439.976	249			
Job factors	Between Groups	150.952	3	50.318	142.186	.000
	Within Groups	447.3	246	1.819		
	Total	598.252	249			

Source: compute

The above table shows the details about the Environment and nature of work, Shows that the calculated 'f' value is 110.324. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there is significant difference among respondents of work experience with respect to environment and nature of work.

The second table shows the details about the Relationship with supervisors and colleagues, shows that the calculated 'f' value is 73.635. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there as significant difference among respondents of work experience with respect to Relationship with supervisors and colleagues.

The third table shows the details about the Welfare facilities, shows that the calculated 'f' value is 70.253. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there is significant difference among respondents of work experience with respect to Welfare facilities.

The Forth table shows the details about the Pay and promotion shows that the calculated 'f' value is 145.142. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there is significant difference among respondents of work experience with respect to Pay and promotion

The Fifth table shows the details about the Communication and motivation shows that the calculated 'f' value is 120.263. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there is significant difference among respondents of work experience with respect to Communication and motivation

The Sixth table shows the details about the Job factors shows that the calculated 'f' value is 142.186. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there is significant difference among respondents of work experience with respect to Job factors.

III. RELATIONSHIP BETWEEN THE AGE AND GENDER OF EMPLOYEES WITH VARIOUS JOB FACTORS

H0 : There is no significant difference among respondents Age and Gender with the overall factors.

H1 : There is significant difference among respondents Age and Gender with the overall factors.

TABLE: 8 RESULT OF ANOVA TESTING

Job Factors		Sum of Squares	df	Mean Square	F	Sig.
AGE	Between Groups	138.792	3	46.263	130.739	.000
	Within Groups	459.46	246	1.868		
	Total	598.252	249			
GENDER	Between Groups	22.298	1	22.298	53.164	.601
	Within Groups	575.954	248	2.322		
	Total	598.252	249			

Source: compute

The above table shows the details about the Age, Shows that the calculated 'f' value is 130.739. Since the significant difference is less than 0.01, the null hypothesis rejected at 1 percent age. Hence there is significant difference among Age respondents with respect of job factors.

The second table shows the details about the Gender with the overall factors, shows that the calculated 'f' value is 5.3.164. Since the significant difference is greater than 0.01, the null hypothesis is accepted at 1 percent age. Hence there is no significant difference among Gender respondents with respect of job factors.

SUGGESTION

- The company has to provide more number of adequate opportunities in order to further increase the ability of the employees which results in job satisfaction.
- The company has to provide more personal welfare facilities and loan facilities in order to increase job satisfaction of the employees.
- The parking facilities, first-aid facilities and rest and lunch room facilities should be improved to make the employees to get higher hob satisfaction.
- The company should improve its monetary benefits provided to its employees.
- Promotion chances for the talented employees should be increased.

CONCLUSION

Machines might replace man that cannot do so entirely. This applies generally to all area of work, but mainly so in connection with job satisfaction. The head shall work at best, if only the heart is happy and satisfied.

In the present scenario, the existences of an organization maintain its profitability is a rare one. Such an organization is put to the best use by the effective utilization of human factor. Job satisfaction is a related factor. Nothing can increase efficiency and productivity of humans like job satisfaction. This is the strong influence, made based on the analysis made with the group of employees at ITC Limited.

I am sure this would apply to general employees at all cadres and all levels. Hence I conclude saying job satisfaction is vital factor.

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COTTONSEED UTILIZATION PATTERN AND AVAILABILITY OF COTTONSEED FOR PROCESSING

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ABSTRACT

Cottonseed, a by-product of cotton, is considered as 'Golden Goose' since it is a valuable source of linters, hulls, cake, extraction and edible oil. In India, cottonseed is generally utilized for sowing purpose, for direct feeding to the cattle and for processing in small and large mills. Barring a trivial provision for sowing and direct feeding, about 86 percent of cottonseed is available for processing. A detrimental practice of feeding whole cottonseed and another orthodox practice of feeding undecorticated oilcake to the cattle were prevalent in stray cases of some north Indian states. Virtually it loses precious cottonseed by-products. At this juncture, a modest attempt is made in this paper to divulge cottonseed utilization pattern and availability of marketable surplus after retaining the seed for sowing and direct consumption. A concise analysis on cottonseed availability for processing and washed oil production is encompassed in this paper.

KEYWORDS

Cattlefeed, detrimental practice, direct consumption, national loss, sowing purpose.

INTRODUCTION

People called cotton as 'White Gold' (Savanam and Bhaskara, 2010a). It is the most important natural fibre which provides venerable foreign exchange to meet the balance of payments and facilitates a number of employment opportunities to the society at large (Savanam and Bhaskara, 2010b). The area of cotton cultivation in India is about 9.5 Mha (Savanam *et al*, 2010).

Cottonseed, a by-product of cotton, is produced in as many as nine states in India (Sethi and Dharmarajulu, 1957). It is a valuable source of edible oil, cake, linters and hulls (Dantwala, 1947). The whole cottonseed contains 15-20 percent oil and about 30-38 percent of kernel, depending on the quality of seed and the species (Savanam and Bhaskara, 2011b). Some 6 to 8 percent of cottonseed is needed for sowing purposes and another 8 to 10 percent as feed for working cattle, milk cows or buffaloes. A very small quantity is crushed locally by village ghanis and the oil is used for lighting, and for lubrication of cart wheels. The remaining seed finds its way to large and small mills for crushing (Achaya and Murti, 1974).

The average annual production of cottonseed is about 7.82 million tonnes (Mt) during the past decade. Estimates of production of oilseeds and other agricultural produce are approximate. Especially in case of cottonseed, the production figures are arrived at on the basis that a uniform ginning ratio of one-third lint to two-thirds seed exists, which does not hold good for all varieties or even for the same variety of cotton in different localities and years (Achaya and Murti, 1974). Usually, cottonseed production is estimated on the basis of the production estimate of cotton made by the Cotton Advisory Board (CAB). Cottonseed processing season generally commences in the month of November and ends in the following month of October. Thus, an overview on production of cotton and cottonseed and the availability of cottonseed for processing after making provision for sowing and feeding to cattle and washed cottonseed oil obtained in the processing industry inevitable.

COTTONSEED UTILIZATION PATTERN

In India, cottonseed is generally utilized for the following purposes:

1. Feeding whole cottonseed to the cattle
2. Sowing purpose
3. Processing for obtaining oil as well as by-products like linters, hulls, cottonseed cake and cottonseed extraction.

Although no empirical studies on pattern of cottonseed utilization have been carried out so far, it is estimated that about 1.2 to 1.4 Mt of cottonseed still utilized as a cattlefeed and/or for sowing purpose. It also recorded that small quantity of cottonseed has exported occasionally.

FEEDING WHOLE COTTONSEED TO THE CATTLE: A DETRIMENTAL PRACTICE

Research carried out at the National Dairy Research Institute (NDRI), Indian Council of Agricultural Research (ICAR), Karnal reveals that it is not beneficial to feed cottonseed whole to the cattle. The feed nutrient utilization was found to be the best when cattle are fed with decorticated oilcake (DOC). Oil content in the cottonseed is virtually not of much use to the cattle. Feeding whole cottonseed directly to the cattle is an age old practice followed in India although its utility has not been established scientifically**.** It is myth that oil content in the cottonseed raise milk yield or fat percentage in the milk. Oil is generally required for generation of energy. Cattle themselves generate this energy during rumination. The ruminants have a specialized digestive system with compound four compartment stomach. The energy is generated while cattle carry on rumination of the fibrous portion of the feed. Therefore, feeding cottonseed directly to the cattle as such virtually amounts to wasting major portion of the oil content and also about 4 to 5 percent linters (quality cellulose material) which has significant commercial value and strategic importance in the defence production. Fortunately, the quantity of cottonseed utilized for direct feeding to cattle in India has substantially come down since majority of the cotton area is now under Bt (*bacillus thuringiensis)* cotton which minimizes the requirement of cottonseed for sowing purpose. However, it understood that the practice of feeding cottonseed by soaking cottonseed overnight in water and then feeding to the cattle is still prevalent in stray cases in Haryana, Uttar Pradesh, and Punjab etc.

FEEDING UD CAKE TO THE CATTLE: A NATIONAL LOSS

Feeding UD cake to the cattle is another orthodox practice in India. About 95 percent of the cottonseed available for processing is simply crushed through traditional mechanical means (Mansingka, M.P., 1970). The oilcake obtained by this traditional (crude) method is called as undecorticated oilcake (UD cake). It has no market abroad, and the Indian production of this commodity is presumably utilized within the country as cattlefeed. UD cake contains about 7 percent oil which is virtually not required by the cattle and considered as waste. There is an estimated loss of cottonseed oil around 0.6 Mt to 0. 7 Mt every year on account of this practice (Savanam and Bhaskara, 2011a). Therefore, it is considered as a serious national loss.

The fixation of prices for oilcakes in Indian trade is not yet rationalized on the basis of protein content, and UD cake fetches a price, in relation to that of DOC which is not in keeping with their levels of protein. In fact, in the current domestic price structure, it is economically more advantageous to the processor to make UD cake than DOC.

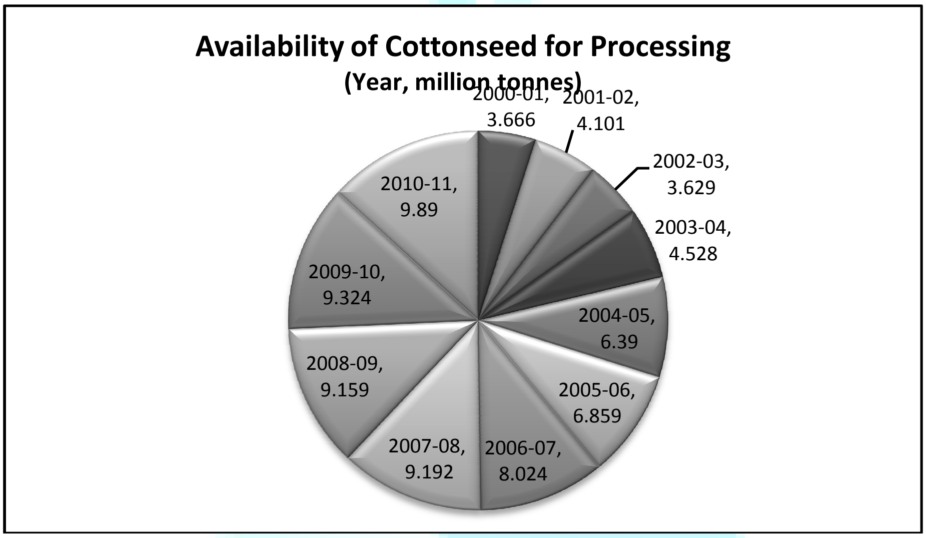
A CONCISE ANALYSIS ON AVAILABILITY OF COTTONSEED

TABLE 1: AVAILABILITY OF COTTONSEED FOR PROCESSING AND ESTIMATED PRODUCTION OF WASHED COTTONSEED OIL

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Cotton production (million bales) (bale – 170 kg each)	14.000	15.800	13.600	17.700	24.300	24.100	28.000	31.500	29.150	29.500	31.200
Cottonseed production (million tonnes) (@333 kg/bale)	4.666	5.211	4.490	5.891	8.092	8.025	9.325	10.490	9.657	9.824	10.390
Retained for Sowing & Direct Consumption (million tonnes)	1.000	1.110	0.859	1.366	1.701	1.166	1.301	1.300	0.500	0.500	0.500
Marketable surplus available for processing (million tonnes)	3.666	4.101	3.631	4.525	6.391	6.859	8.024	9.190	9.157	9.324	9.890
Production of washed cottonseed oil (million tonnes)	0.366	0.413	0.363	0.453	0.639	0.754	0.883	1.213	1.113	1.200	1.247

Source: All India Cottonseed Crushers' Association Annual Reports, Mumbai

FIGURE 1: AVAILABILITY OF COTTONSEED FOR PROCESSING



As per the data in table 1, 4.666 Mt of cottonseed was produced in the year 2000-01. Of which 21.43 percent (1 Mt) was retained for sowing purpose and for direct feeding to the cattle. Thus, the availability of cottonseed for traditional and scientific processing was 78.57 percent (3.666 Mt). Through these two processing means 0.366 Mt washed cottonseed oil was produced during the year.

Cottonseed production has recorded at 5.211 Mt in the year 2001-02, a rise of 11.68 percent as compared to the previous year. Out of this, 21.30 percent retained for sowing and feeding to the cattle. After deducting this provision 4.101 Mt cottonseed was available for processing industry, 11.86 percent rise against previous year. Washed oil production has increased to 0.413 Mt from 0.366 Mt in previous year, a net increase of 0.047 Mt.

The slump in production of cotton due to unfavorable weather conditions and inadequate rains in 2002-03 led reduction in cottonseed production and recorded at 4.490 Mt. After withholding provision of 0.859 Mt for sowing and direct consumption, cottonseed available for processing endured at 3.631 Mt, the lowest in the past ten years. A shortage of 11.46 percent as compared to previous year was really a matter of concern. Production of cottonseed washed oil too suffered severely during the year and recorded at 0.363 Mt, down 0.050 Mt to previous year.

Due to large size of cotton crop in the initial year of Bt cotton, cottonseed production recouped in 2003-04 and recorded at 5.891 Mt, a substantial rise of 31.2 percent from previous year. After the provision for sowing and direct consumption, marketable surplus available for processing has risen to 4.525 Mt, high 24.62 percent. Similarly, cottonseed washed oil produced in the country also recorded higher at 0.453 Mt, 24.79 percent more than previous year.

Due to rise in cotton acreage under hybrids & Bt cotton and productivity, cottonseed production has reached a record level of 8.092 Mt in the year 2004-05. A substantial 37.36 percent growth from previous year was a matter of rejoice. Besides, cottonseed retained for sowing and direct consumption to the cattle has also mounted to 1.701 Mt, all time high. However, a record level of marketable surplus 6.391 Mt was available to processing industry. This significant 41.23 percent rise from previous year astonished processing industry. Similarly, a proportionate increase in cottonseed oil production also recorded at 0.639 Mt as compared to 0.453 Mt in previous year, a rise of 41.05 percent.

Because of shrinkage in area under cultivation due to unexpected heavy unseasonal rains in the year 2005-06, cottonseed production has plummeted slightly to 8.025 Mt from 8.092 Mt in previous year. Utilization of conventional cottonseed for sowing and direct consumption to the cattle started diminishing and recorded at 1.166 Mt, a net down 0.535 Mt. This led increase in marketable surplus for processing and figured at 6.859 Mt. Cottonseed oil production too enriched to 0.754 Mt from 0.639 Mt in past year.

Owing to surge in cottonseed production in the country marketable surplus available for processing industry has amplified to 8.024 Mt in the year 2006-07 from 6.859 Mt in the previous year, a rise of 16.98 percent. Contrary, cottonseed retained for sowing and direct consumption to the cattle has tumbled to 1.301 Mt from 1.166 Mt in preceding year. Production of cottonseed oil during the year has recorded high at 0.883 Mt from 0.754 Mt in earlier year, a net rise 0.129 Mt.

Wide-spread realization of Bt cotton throughout cotton growing area in the country has rocked cottonseed production to a noteworthy level at 10.490 Mt in the year 2007-08. This all-time high production made comfort to improve marketable surplus to 9.190 Mt from 8.024 Mt in preceding year, a rise of 14.53 percent. Provision for sowing and direct consumption remained constant as is previous year. First time in cottonseed history, washed oil production has crossed 1 Mt landmark and recorded at 1.213 Mt, a rise of 37.37 percent from previous year.

In 2008-09, there was a plunge in cottonseed production due to the erratic rains and severe drought conditions prevailed almost throughout the country. Cottonseed production has recorded at 9.657 Mt as compared to 10.490 Mt in 2007-08. Cottonseed retained for sowing and direct consumption has considerably minimized to 0.500 Mt because of Bt technology realization in farm community. As a whole, huge quantity of 9.657 Mt cottonseed was made available to the processing industry. Besides, washed cottonseed oil production has slipped down to 1.113 Mt from 1.213 Mt in previous year.

The upsurge in cotton area sown in spite of unfavorable weather conditions led marginal increase in cottonseed production in 2009-10 and recorded at 9.824 Mt as against 9.657 Mt in past year, a trivial rise of 1.72 percent. Provision for sowing and direct consumption remained stable. After subtracting this provision, marketable surplus available for processing recorded at 9.324 Mt as compared to 9.157 Mt in previous year, a net increase 0.167 Mt. A slight increase in washed cottonseed oil also registered during the year and logged at 1.200 Mt.

Despite unseasonal rains and extreme cold waves, cotton production in the year 2010-11 has surged to 31.200 million bales (170 kg each bale). This boosted cottonseed production to a record level of 10.390 Mt. It is quite evident that cottonseed production has crossed 10 Mt milestone second time in the span of four years. This is a matter of exult. Cottonseed retained for sowing and direct feeding remains unchanged for third consecutive year. In addition, marketable surplus has proliferated to a substantial level of 9.890 Mt, all time high. Likewise, washed cottonseed oil production too reached its heights to 1.247 Mt from 1.200 Mt, a net rise of 0.047 Mt.

COTTONSEED DOES NOT FIND ITS DUE IMPORTANCE

Cottonseed does not appear to have acquired its due importance amongst oilseeds grown in India in spite of the fact that its production crossed twice 10 Mt milestones in the years 2007-08 and 2010-11, a record amongst oilseeds. As per the estimate of the Central Organization for Oil Industry and Trade (COOIT) production of cottonseed is the largest of oilseeds, contributing almost 30 percent of the total oilseed produced in the country during 2009-10. However, cottonseed does not receive due attention as in case of other oil seeds like soyabean, castor, groundnut etc. due mainly to the fact that cottonseed is not grown exclusively for production of oil. The principal product is lint, a textile fibre with worldwide demand, thereby shadowing cottonseed despite the fact that cottonseed forms 2/3rd portion of the seed cotton and lint forms only 1/3rd portion.

CONCLUSION

Cottonseed production is confronted volatility in year-on-year during the past decade. On an average, about 14 percent of cottonseed produced in India is being utilized for sowing purpose and for direct feeding to the cattle. Remaining 86 percent marketable surplus is available for processing in small and large mills. Feeding whole cottonseed is a harmful practice that prevalent in stray cases of some north Indian states. Virtually it loses valuable cottonseed by-products, such as linters, hulls, cake, extraction and precious oil. Feeding UD cake to the cattle is another age-old practice which is considered as huge national loss since the cake contains 7 percent appreciated oil. It is myth that oil content in the cottonseed raise milk yield or fat percentage in the milk but the utility has not been patronized scientifically. Therefore, these conventional practices have to be eliminated by educating the people who affianced therein. Besides, the compound cattlefeed manufacturers are bound to use large percentage of cottonseed extraction in formulation of their compound cattlefeed to save the enormous recurring national loss.

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NATURE AND EXTENT OF AGRICULTURAL TENANCY IN ANDHRA PRADESH - A CASE STUDY IN TWO VILLAGES

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ABSTRACT

Land distribution and tenancy are the crucial aspects of the agrarian structure of the Indian Economy. The issue of tenant farmers is a serious but neglected problem in Indian agriculture. Their agreements with land owners have no legal sanction. The Government has not maintaining revenue records of tenancy farming in majority states including Andhra Pradesh. As a result, they are exposed to several problems. Recently, the Government of Andhra Pradesh has been identifying the Agricultural tenants and issuing Loan Eligibility Cards to them to get all the benefits on par with other farmers. Let us hope that the problems of tenants will be addressed in coming days. This study attempts to examine the "Nature, terms and conditions of agricultural tenancy both in tribal and plains area in the backward district of Andhra Pradesh.

KEYWORDS

Absentee Landlords, Agency area, Tenancy relations.

INTRODUCTION

Land distribution and tenancy are the crucial aspects of the agrarian structure of the Indian Economy. The agricultural tenancy has evolved out of different modes of production. In feudalism and pre-capitalism, tenancy is linked with the labour service, through the operation of extra - economic coercion. In capitalist mode of production, the tenancy depends on the market i.e. demand for leasing-in and supply for leasing-out. In labour surplus and land scarce development economies, the demand for leasing in arises mainly from the lack of employment opportunities outside agriculture.

In 1953-54, when the land ceiling measure was not yet on the agenda of land reform, the total tenant holdings have the share of 32.61 percent in the total operational holdings; and the leased - in area share assumes 18.60 percent in the total operated area. Just after the impending ceiling measure was indicated (in 1959 Nagpur AICC), lot of evictions of tenants took place and as a result, 1960-61 data shows a sharp decline in shares of both the total tenant holdings and leased - in area, as they assume 18.52 percent and 9.15 percent respectively. Both the shares decrease upto 1981-82 and by 1991-92 they rise and assume 14.11 percent and 9.57 percent respectively.

The shares of total tenant holdings and total leased in area of A.P. in India show an increasing trend. The share of tenant holdings rises from 5.77 percent in 1953-54 to 9.78 percent in 1991-92 and the share of leased in area goes up from 7.20 percent in 1953-54 to 8.51 percent in 1991-92.

The issue of tenant farmers is a serious but neglected problem in Indian agriculture. Their agreements with land owners have no legal sanction. The Government has not maintaining revenue records of tenancy farming in majority states including Andhra Pradesh. As a result, they are exposed to several problems. In Andhra Pradesh nearly half of the 1.20 crore farmers are tenant farmers. About 60 – 80 percent of farming in the rice grown areas of East Godavari, West Godavari, Krishna, Guntur and Karimnagar districts is being done by tenant farmers. This phenomenon holds good for all agriculturally developed states. As per NSSO, 2003 (quoted in the Hindu Business Line, 2011). The area under informal tenancy in the country varies between 15 – 35 percent of the total farm area. About 36 per cent of the total rural households leasing land are landless labourers and 47.5 per cent have land below 0.5 hectares.

AP LICENSED CULTIVATORS ACT – 2011

During 2011 the Government of Andhra Pradesh enacted AP Licensed Cultivators Act – 2011 to safe guard the interests of the Agricultural tenants. The Government identified the tenants at the village level and issued 'Loan Eligibility Cards' to them. This card enables the tenant, farmer to get loan from the Nationalised Banks / Cooperative Societies and seeds on subsidy it the lease-out land owner does not claim loan or subsidized seeds for himself on particular land. Apart from these benefits, the tenant farmer is eligible to claim crop insurance at the time of crop failure. However, tenant farmer name will not be included in the 'Pass Book' (contains details of land owner) issued by the Revenue Department. In reality, it is found that the land owners are now changing the tenants every year and also enhanced land rents. With the frequent changes, now the tenants are not able to get loans or seeds in consecutive basis. Further, it is also found that the land owners are not leasing their land to a tenant farmer who has a Loan Eligibility Card, instead, they prefer a tenant farmer who has no eligibility card. In the interview with land owners, it is noticed that they entertain a doubt that this process may endanger their basic title on their land itself in the long run.

Now, the agriculture in A.P is in strange situation. The original land owners don't do the cultivation. These land owners are seeking other lucrative professions in the towns. At the same time they are reluctant to lease-out their lands to the tenant farmers. The fear is that in the course of time because of electoral polity compulsions, a situation may arise when their vary basis right on their lands may be in danger. As a result of this peculiar situation there is a possibility of vast tracts of land falling vacant unproductively, with many problems in its train.

REVIEW OF LITERATURE

A number of studies based on sample surveys have been conducted in India. The studies have examined various aspects of tenancy relations, such as, magnitude, type relative efficiency of different land tenure systems and so on. The studies in eastern Indian states during the seventies concluded that tenancy, in particular share tenancy, in conjunction with the exploitative inter linkages in credit and labour markets acts as a formidable barrier in the introduction of new agriculture technology (Bhadhuri, 1973; Prasad, 1973, 1974). Recent studies for these states have, however, reported qualitative changes in tenancy relations (Chadha and Bhaumik, 1992; Swain, 1999). Likewise, studies in agriculturally developed states / regions like Punjab, Haryana and Western Uttar Pradesh, have brought out increasing incidence of self-cultivation, emergence of fixed rent tenancy, participation of medium and large households in the lease market as lessees, etc (Singh, 1989; Bhall, 1983; Srivastava, 1989; Siddiqui, 1999). A few studies pertaining to other aspects of tenancy, such as; Tenancy Reforms (Appu, P.S. 1975), Variations in forms and extent of tenancy over period of time (Bardhan, Pranab, 1970), Tenancy and mode of production (Chakravarthy, Aparanjita, 1981), Economic effects o tenancy (Dwivedi and Ahowk Rudra, 1973), Mgnitude of Agricultural Tenancy (Narain, Dharam and Joshi, 1969) trends in Agricultural tenancy (Sanyal, SK, 1972), Structural and Tenurial Aspects (Sharma, PS, 1965) pattern of land distribution and Tenancy in A.P (Venkateswarlu A, 2004) and Trends and causes of Tenancy in A.P (Vijaya Kumar and Prasada Rao 1979) were conducted. Against this background, the present study made an attempt to examine the nature and the extent of Agricultural tenancy in two villages of Khammam District, where, more than half of the mandals are under scheduled agency area and it is highly tribal concentrated district of Andhra Pradesh.

IMPORTANCE OF THE STUDY

The study is significant in the sense that apart from the continuous changes in the land holding pattern, there is also the problem of absentee land lords in rural India. This problem is compounded by the natural calamities and Government apathy and the seamy market economy. The tenancy in agriculture is a serious problem which is known to all. But enough attention on concerted efforts has not been made by the authorities concerned. Despite several measures have been initiated to provide security to tenant's redistribution of land and fixation of fair rents, informal tenancy has continued to exist even to day. The overall magnitude of the problem demands serious attention.

STATEMENT OF THE PROBLEM

The planning commission estimated that the area under informal tenancy in the country varies between 15 percent and 35 percent of the total farm area. And nearly 80 percent of the total rural households leasing land are landless agricultural labourers and marginal farmers. This study attempts to examine the "Nature, terms and conditions of agricultural tenancy both in tribal and plains area in the backward district of Andhra Pradesh.

OBJECTIVES

1. To examine the nature, terms and conditions of tenant farmers in select study area.
2. Compare the terms and conditions of tenancy prevailed in the Tribal and Non-tribal areas of the study area.
3. To suggest measures for improving conditions of Tenant farmers

RESEARCH METHODOLOGY

The objective of the study is to make a comparison of land rents and terms and conditions of Agricultural tenancy in two villages. Multi stage sampling technique has been followed in selecting the sample. In first stage two mandals i.e. Mudigonda from the plains area and Kamepally from the agency area have been chosen. From each mandal, one village has been selected at random. The villages selected are, 'A' of Mudigonda Mandal and 'N' of Kamepally mandal. In this study, a cross section of data from a sample of 22 tenants has been collected and the findings are based on the primary data. Out of 45 tenant farmers in these two villages nearly 50 percent of i.e. 22 tenant respondents have been chosen. The respondents were administered a structured questionnaire to collect the data. The data was collected during February - March, 2011.

BRIEF PROFILE OF KHAMMAM DISTRICT

As per Census, 2001 the total population of the district is 25,78,927. The scheduled tribe population is 6,82,617, which accounts for 26.47 percent of the district. It is highly tribal concentrated district in the state and stood first rank in Scheduled Tribe Population. About 43 percent of the total Geographical area of the district is under forest cover. The district divided into 46 mandals, out of these, 29 mandal (63 percent) are fully in ST Sub-plan area and out of 1242 Revenue villages, 894 (72 percent) are scheduled villages.

RESULTS AND DISCUSSION

GROWTH OF AGRICULTURAL TENANCY IN SAMPLE VILLAGES

i) **Village 'A' Gramapanchayat** (Plains area):

Village A of Mudigonda mandal is 20 KM away from the District head quarters of Khammam. This village has nearly 400 house holds with 2000 population of different caste categories such as Kamma (FC), Chakali (BC), and Madiga (SC). Kammas are the major conventional farming community. The category - wise land holdings reveal that 8 house holds have more than 20 acres of land, 15 have land of 10-15 acres each and 20 families 5-10 acres each. The rest are in the range of 0-5 acres. The number of tenants in different caste categories is 25.

The major source of irrigation is open wells apart from the NSP canal and a small tank. Major crops grown in this village are chilli, cotton, redgram and paddy since it is an irrigated dry area. Earlier, jowar, redgram, ground nut, green gram were grown, apart from chilli in a very few acres.

During 80's most of the cultivable dry land was converted into paddy fields (wet land) with the assured irrigation from the Nagarjuna Sagar Project. As the lands in this village are at the tailend of NSP, the paddy fields gradually turned again into dry lands due to inadequate irrigation by the end of the eighties. Consequently, the farmers were forced to cultivate dry crops like groundnut, sunflower, red gram and maize.

In the mid 90s, most of the farmers showed interest in growing commercial crops like chilli and cotton, because of encouraging yields and lucrative prices especially for chilli which touched Rs.5-6 thousand per quintal. The farmers especially in the range of 0-5 acres have been growing cotton as a major crop, since it assured a certain amount of income during the peak season of investment (Sept, Dec). These incomes are invested on other commercial crops like chilli.

NATURE AND CAUSES OF TENANCY

In mid 90's, commercial crops were introduced on a large scale resulting in requirement of more and more labourers both permanent and casual. The non-availability of adequate number of labourers compelled the big farmers to lease out a chunk of their lands. At the same time, small and marginal farmers who meet their labour requirements from their own family came forward to cultivate more land on lease. The investment on permanent labour comes to Rs.20-25 thousand per year. This equals nearly 40 percent of the total agricultural income of the family. Moreover, the dearth of the local daily wage labour is forcing the farmers to engage the labour from distant areas and also provide them food and shelter in the peak seasons. Added to this more and more money is spent on chemical fertilizers and pesticides to sustain the yeilds and to curb the pests, which effect the commercial crops. The aforesaid factors accelerated the expenditures to unpredictable levels. Thus, own farming has become non-viable and the farmers prefer to lease out their lands.

Besides leasing out, the farmers also prefer alternatives like mango orchards and other fruit bearing gardens which assure certain regular income with little labour requirement.

For the last 7 or 8 years there has been an increase in the number of farmers offering to lease out their land. The major reason for this is the first priority of big, and marginal farmers to bear their children's education. They prefer to live in towns for that. The younger generation of big farmer families have no emotional attachment to the land and they evince little interest in farming. On the other hand, the traditional occupations are failing to cater to the needs of the family and they are also being looked down upon. These therefore looking forward to agriculture with an intention to improve their social prestige and income. The marginal farmers and landless labourers have also started coming forward to leasing - in. Their readiness prompted a hike in the rent offered by them. This inturn resulted in more number of farmers offering to lease - out.

ii) **Village 'N' (**Agency area):

The village N, chosen for study is 25 KM far from the district head quarters is populated with Lambada tribes. The category-wise land holdings show that there are 4 farmers owning more than 20 acres each, one in the category of 10-20 acres, 20 of 5-10 acres each, 25 holding 2.5 - 5.0 acres each and 100 families of 0-2.5 acres each. Out of 600 acres only 140 acres of land is irrigated by small kuntas, wells and streams and the rest are unirrigated. Cotton, Chilli, paddy, redgram, black gram and green gram are grown. The practice of leasing in and leasing out has been in vogue for the last 7 years.

The tenants of this Thanda lease in the lands owned by the Reddys (The earstwhile Jagirdhars) of near by village which is at a distance of 2 KM. These land owners have leased - out a considerable portiion of their land holdings because they are unable to manage them due to migration of their younger generation to cities. They go to cities for education, which is a pathway for a bright future. It is found that a few small farmers of SC community and one ST Farmer have also opted to lease - out their lands.

FINDINGS OF THE FIELD STUDY

The caste-wise distribution of sample respondents in village A (table-1) shows that nearly 60 percent (7) belong to B.C. Community (Chakali, Gowda), followd by O.C.(Kamma, 17 per cent) and SC (madiga, 17 per cent) and only one respondent belongs to ST. (Lambadi) community.In another sample village N all the 10 tenant respondents are ST's (Lambadas).

The age-wise educational status of sample respondents (table-2) of A village are in the age group of 25-45, a majority of the sample respondents (84 per cent) in this village are illiterates and only 2 have primary education. In village N all the tribal tenant respondents are illiterates. It is noticed that most of the respondents children are school going, though their parents do not have any formal education in both plain and tribal villages.

TABLE-1: CASTE-WISE DISTRIBUTION OF SAMPLE TENANTS

Village	OC	BC	SC	ST	Total
A	2 (16.66)	7 (58.33)	2 (16.66)	1 (8.35)	12 (100)
N	-	-	-	10 (100)	10 (100)
	2	**7**	**2**	**11**	**22**

Source: Village Records

TABLE-2: AGE-WISE EDUCATIONAL STATUS OF SAMPLE TENANT RESPONDENTS

Age	Village N				Village A			
	I	P	S	Total	I	P	S	Total
Below 25	-	-	-	-	-	-	-	-
25-35	-	-	-	-	6	2	-	8 (66.66)
35-45	5	-	-	5	3	-	-	3 (25.00)
> 45	5	-	-	5	1	-	-	1 (8.34)
	10	**-**	**-**	**10**	**10**	**2**	**-**	**12 (100)**

Source: field Study

I-Illiterate; P-Primary; S-Secondary

The size of the family of respondents (table-3) in village A shows that 50 percent of them have 4 members each and 35 percent have 7 members, including the dependants. There is no difference in the family size irrespective of different caste categories. In village N, 40 percent of respondents have 5 members as their family size followed by 30 percent of families with 4 members and only one respondent family has eight members. The average size of the family is calculated at 4 in both the villages. The average family labour involved in agricultural operations is 3 per tenant family.

TABLE-3: SIZE OF THE FAMILY

Family size	Village A					Village N
	OC	BC	SC	ST	Total	ST
Three				1 (8.33)	1 (8.33)	2 (16.66)
Four	2 (16.66)	2 (16.66)	2 (16.66)	-	6 (50.00)	3 (25.00)
Five		1 (8.33)		-	1 (8.33)	4 (33.33)
Above Six		3 (25.00)	1 (8.33)	-	4 (33.33)	1 (8.33)
Total	**2 (16.66)**	**6 (50.00)**	**3 (25.00)**	**1 (8.33)**	**12 (100.00)**	**10 (100.00)**

Source: Field Study

TABLE-4: LAND PARTICULARS (OWN LAND)

In acres	Village A					Village N	
	OC	BC	SC	ST	Total	ST	Total
0-0.5	-	4	1	1	6 (50.00)	3	3 (30.00)
0.5-1.00	-	1	1	-	2 (16.66)	1	1 (10.00)
1.00-2.00	-	2	-	-	2 (16.66)	4	4 (40.00)
2.00-3.00	1	-	-	-	1 (8.33)	2	2 (20.00)
3.00-4.00	1	-	-	-	1 (8.33)	-	-
4.00-5.00	-	-	-	-	-	-	-
Above 5.00	-	-	-	-	-	-	-
Total	**2 (16.66)**	**7 (58.33)**	**2 (16.66)**	**1 (8.33)**	**12 (100)**	**10 (100)**	**10 (100)**

Source: Field Study

The land owned by the sample tenants (table-4) revealed that around 50 percent of respondents of village A have 0.5 acre of land of their own. Another 34 percent have 0.5 to 2.00 acres and the remaining 16 percent have 2-4 acres each. In village N 40 percent have 1-2 acres followed by 30 percent with 0.5 acres and ony two respondents have 3-4 acres each of their own. On the whole, it can be said that, most of the tenants are marginal farmers.

TABLE-5: LEASED IN LAND PARTICULARS

In acres	Village A					Village N	
	OC	BC	SC	ST	Total	ST	Total
1.00	-	-	-	-	-	-	-
2.00	-	1	-	1	2 (16.66)	3	3 (30.00)
3.00	1	2	-	-	3 (25.00)	4	4 (40.00)
4.00	1	1	1	-	3 (25.00)	1	1 (10.00)
5.00	-	1	1	-	2 (16.66)	2	2 (20.00)
6.00	-	1	-	-	1 (8.33)	-	-
7.00	-	-	-	-	-	-	-
8.00	-	1	-	-	1 (8.33)	-	-
Above 8.00	-	-	-	-	-	-	-
Total	**2 (16.66)**	**7 (58.33)**	**2 (16.66)**	**1 (8.33)**	**12 (100)**	**10 (100)**	**10 (100)**

Source: Field Study

The distribution of land leased (table-5) in village A in reveals that 50 percent of respondents (6) have leased in 3-4 acres, 2 respondents have leased-in 2 acres and 2 another five acres each. In remaining two respondents are cultivating more than 8 acres on lease and another respondent with 6 acres. In Village N, 70 percent (7) of the respondent families have a leased holding of 2-3 acres each followed by 2 families with 5 acres and one with 4 acres.

The annual income of the tenants from leased land (table 6a & 6b) shows that 4 respondents have generated an income of more than Rs.30,000 from a holding of 5-8 acres. Three respondents have earned between Rs.20,000 to 30,000 each from a holding of 2-3 acres each whereas two respondents earn the same income from a holding of 3-5 acres each. The rest of the respondents have earned an income in the range of Rs.5000 to 20000 each on a holding of 1-2 acres each.

TABLE-6 (a): ANNUAL INCOME OF TENANTS FROM LEASED IN LANDS (VILLAGE-A)

Income Range (Rs.)	No. of Tenants & Leased land in acres					
	1	1-2	2-3	3-5	5-8	Total
Less than 5000	-	-	-	-	-	-
5000 - 10000	-	1	-	-	-	1
10000 – 20000	-	1	-	-	-	1
20000 – 30000	-	-	3	2	-	5
Above 30,000	-	-	-	1	4	5
Total	**-**	**2**	**3**	**3**	**4**	**12**

Source: Field Study

TABLE-6 (b): ANNUAL INCOME OF TENANTS FROM LEASED IN LANDS (VILLAGE-N)

Income Range (Rs.)	No. of Tenants & Leased land in acres					
	1	1-2	2-3	4-5	5-8	Total
Less than 5000	-	-	-	-	-	-
5000 - 10000	-	3	-	-	-	3
10000 – 20000	-	-	3	-	-	3
20000 – 30000	-		1	-	-	1
Above 30,000	-	-	-	3	-	3
Total	**-**	**3**	**4**	**3**	**-**	**10**

Source: Field Study

In Village N, 3 respondents have generated more than Rs,30,000 each from a holding of 4-5 acres 3 respondents in the category of 1-2 acres have generated Rs.5-10 thousand another 3 who had 2-3 acres generated Rs.10-20 thousand income. Only one respondent who has generated Rs.20-30 thousand on 2-3 acres. It is found that the average income per acre generated by the tenants on their leased in lands is not uniform for all crops.

The income generation more from chilli crop than for cotton. The average income of a tenant who grows chilli crop is around Rs.16000/- per acre. But in the case of cotton it is Rs.10,000/-. The income generation from these crops in the tribal village is less than that in a plain village (Rs.13,000 and Rs.7000/- for chilli and cotton respectively)

TABLE-7: YIELD PER ACRE (RANGE) IN QUINTALS

	Yield in Village A	Yield in Village N
Chilli	8-00	6-15
Cotton	3-10	3-8
Paddy	10-15	10-20
Redgram	1-3	1-2

Source: Field Study

The data of **crop-wise yield per acre** (table-7) indicates that the yield of chilli is in the range of 8-20 quintals in village A and 6-12 quintals in village N. Cotton is the range of 3-10 quintals in village A and 3-7 qunitals in village N. In the case of paddy it is 10-15 and 10-20 qunintals in village A and village N respectively. The last and the least crop redgram is between 1-3 qunitals in village A and 1-2 quintals in Village N respectively. It can be concluded from the above analysis that all the crops except paddy, have yeilded more in village A than in village N and this may be due to fertile lands, private sources of irrigation and relatively better access to the credit facilites.

The information pertaining to rent payments (table 8(a) & 8(b)) revealed the 75 percent of the payments are in cash in Village A, where as, all the rent payments are in cash in Village N. In village A 3 respondents have adopted the crop sharing mode. Fixed crop system like in Paddy crop is not seen in either of the villages. Out of 12 respondents in village A, only 3 have written agreements with regard to the terms and conditions of leasing-in, the rest have only oral arrangements. In another sample village, 80 percent of the respondents have written agreements. In village N a strong and interesting **mode of rent payment** is being followed. Instead of collecting the rents, the owner borrows a certain amount of money from the tenants in advance. Here, the lending of money by the tenants is an indirect condition for leasing-in. Once the payment is done neither the owner pays the interest nor the tenant the rent. The rent is waived off against the interest (which is normally understood to be 3 percent per month) on the amount borrowed by the owner. There are instances where the lease has been continued in this manner for the last seven years. The common agreement is that the tenants' claim on the land is terminated as and when the amount borrowed by the owner is paid off.

TABLE-8 (a): TYPES OF RENT PARTICULARS

	No.of Tenants	
	Village A	Village N
Cash	9 (75.00)	10 (100)
Sharing Crop	3 (25.00)	-
Fixed crop	-	-
Total	12 (100)	10 (100)

Source: *Field Study*

TABLE 8 (b): RENT AGREEMENTS

	No.of Tenants	
	Village A	Village N
Written	3	8
Oral	9	2
Total	**12**	**10**

Source: *Field Study*

All the lease agreements are executed on the paper, and they pay a lumpsum amount in advance. As per the possesing of written agreements, the study has revealed that there is a variation between the two villages. In plain areas, generally, the land owners keep the documents with them. But in the agency area, it is the tenants who keep the documents.

In the plain areas, in case of share corpping leases, the tenants are under the obligation to share the burden of investments on agricultural operations on par with the owners. For this, the tenants generally borrow from the owners at the rate of 2 percent interest per month. When the owner is unable to lend the tenants' share, the tenants struggle to pool up their finances from different sources.

The farmers and tenants cultivating commercial crops have to spend nearly one third of their total investment on pesticides alone. This makes them purchase the pesticides on credit basis. This credit purchases curtails the purchasers' choice regarding the brands and the prices. They ultimately depend on the sellers' mercy. The sellers usually charge an interest of 18-24 percent per annum on the credit bills. Further, the farmers have to rely on this single shop (nearest to the village) for credit and the inability of the seller to provide the required pesticides in time leads to disastrous effect on the crop.

CHANGE OF LAND OWNER

For various reasons, the tenants often change the owners in plain area. In this village, out of 12 respondents, 6 (50 percent) changed their land owners once in five years and only one respondent changed the owner twice in six years. Hike in rents and competition for the land among the tenants are the reasons for changing the owners. No cases of eviction of tenants on pretext were found in the present study.

In some instances, when the owner improves the infrastructure like wells and electric motor, the rents are hiked as the post improvement effect. The existing tenants who can't afford the enhanced rents go for the other lands on lesser rents. The change of owner becomes inevitable. Sometime the tenants may find more promising lands with better amenities like fertility, road connectivity and irrigation. In some cases, it is also found that a decline in the quality of human relations between the owner and the tenant also prompts a change in the tenancy. The default rental payments also force a change. In general, tenants prefer to make regular payments of rentals, inspite of low yielding, and unremunerative prices. They do so to continue undisturbed relations with the owners. They often borrow loans at the rate of 24 percent interest exclusively for the payment of rent.

CONCLUSION

On the whole, the study reveals a gradual increase in the number of tenants in both plains and agency areas. In plain areas middle and small farmers apart from big farmers offer to lease out part of their lands due to scarcity of permanent and daily wage labourers. The demand for lease in and the supply of lease out are high. A note worthy phenomenon is increase in the number of under reported and off the record tenants even in the areas dominated by the leftist parties and organisations. In plain areas rent payments are mostly in cash along with the share cropping. In the wet land areas the rent of the single crop (Kharif) land holdings is paid in the fixed produce mode ranging from 4.5 to 7.5 quintals for acre. For the land that is suitable for two crops the fixed produce rental is between 7.5 to 9.0 quintals per acre. Among the commercial crops chilli is being cultivated to some extent under 50 percent share cropping system. In agency area almost all the land rents are paid in cash. The significant feature is the owners facilitate their tenants, especially the Lambada Tribes to cultivate their lands without paying rents every year by borrowing lumpsum amounts in advance. The borrowers (owners) treat the interest payable on their loans as rent due from the tenants. The level of awareness of tenancy act is higher in the agency area (where 1/70 act is in force) than in plain area. The moral ethics of the tenants prevent them from the legal possession of the land and deprivation of the virtual owners. Hence, they are against, making any claim on the ownership of the land by recording their names in revenue records as tenants. The main reason behind acceleration of rents in both plain and agency area is the growing demand of the tenants especially from the lower strata of the population. The system of unrecorded tenancy being an age-old and a prevalent and growing practice to date. Recently, the Government of Andhra Pradesh has been identifying the Agricultural tenants and issuing Loan Eligibility Cards to them to get all the benefits on par with other farmers. Let us hope that the problems of tenants will be addressed in coming days.

LIMITATIONS

1. The study was confined to two select villages and the results may be generalized for the whole of Andhra Pradesh
2. Though the respondents were ready to provide all the necessary information required for the study, they were some times reluctant to reveal their relationships with their land owners because of fear.

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A STUDY ON SELF HELP GROUPS – BANK LINKAGE PROGRAMME IN INDIA

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ABSTRACT

Self Help Groups (SHGs) play the vital role for promoting the rural development in India. SHG has given more opportunities for women to empower themselves. Both the 'market' and the 'State' have failed to safeguard the interests of the poor especially women. Before introduction of the Bank linkage programme, there was a slow progress in the formation of SHGs in India. The NGO's and other partners like Co-operative Banks, RRBs and Farmer clubs faced lot of challenges and problems to form SHGs in the rural areas. They were hesitating to take this new venture .But at present; there is a tremendous growth in the formation of SHGs at everywhere. Every one is taking initiatives to form this one .The SHG – Bank Linkage Programme was started as an Action Research Project in 1989 which was the offshoot of a NABARD initiative during 1987. The SHG - Bank Linkage Programme is a major plan of the strategy for delivering financial services to the poor in a sustainable manner. The search for such alternatives started with internal introspection regarding the innovations which the poor had been traditionally making, to meet their financial services needs. 52 percent of the SHGs linked through the commercial banks and 60 percent of the bank loan disbursed by it as on 31st March 2012 and only 21 percent of the groups linked and 10 percent of the loan disbursed through Co-operative banks.

KEYWORDS

Self Help Groups Bank Linkage Programme, Non - Government Organizations.

INTRODUCTION

Self Help Groups (SHGs) play the vital role for promoting the rural development in India. SHG has given more opportunities for women to empower themselves. Both the 'market' and the 'State' have failed to safeguard the interests of the poor especially women. In recent years, the civil society organizations such as Non - Government Organizations (NGOs), Self-Help Groups (SHGs), Mutual Organizations and such other Voluntary Organizations have emerged as important links between the poor and the formal system.

SELF HELP GROUP

SHG is a group of rural poor who volunteer to organize themselves in a group. Group may consist of 10 to 20 members. The members of group to be from Below Poverty Line (BPL) family, however maximum of 20% and in exceptional case 30% of the group members can be from families marginally above poverty line.

SHG –BANK LINKAGE

SHGs meet the smaller consumptions and emerging needs of its members from own savings and common fund. As the capacity of the group and quantum of credit also went up, SHG linked with the formal rural banking system in India comprising of public and private sector commercial banks, Regional Rural Banks and Co-operative banks. The SHG – Bank Linkage Programme was started as an Action Research Project in 1989 which was the offshoot of a NABARD initiative during 1987.

GROWTH AND DEVELOPMENT

The Self Help Groups and micro-credit organizations have a long history. In Vietnam, Tontines or Hui with 10-15 members involved in financial activities in cash or in kind have been in existence for generations (Abiad, 1995). In Indonesia, Credit Unions, Fishermen Groups, Village Based Bank like institutions, Irrigation Groups etc. have been in existence since long (Koch and Soetjipto, 1993). In Bangladesh, the success story of Grameen Bank is well known (Pitt and Khandker, 1998 and Pitt et. al, 2003). Other countries like Thailand, Nepal, Srilanka and India have also experienced the role of SHGs in uplifting the socio- economic conditions of rural poor, particularly women.

The SHG - Bank Linkage Programme is a major plan of the strategy for delivering financial services to the poor in a sustainable manner. The search for such alternatives started with internal introspection regarding the innovations which the poor had been traditionally making, to meet their financial services needs. It was observed that the poor tended to come together in a variety of informal ways for pooling their savings and dispensing small and unsecured loans at varying costs to group members on the basis of need

The experiences of these early efforts led to the approval of a pilot project by NABARD in 1992. The pilot project was designed as a partnership model between three agencies, viz., the SHGs, banks and NGOs. This was coupled with a commitment by NABARD to provide refinance and promotional support to banks for the SHG - Bank Linkage Programme.

REVIEW OF LITERATURE

Mahendra Varman P, in his paper titled, "Impact of Self-Help Groups on Formal Banking Habits", makes a modest attempt to examine whether there is any, association between the growth of SHGs and the increase in female bank deposit accounts and whether SHGs have a tendency to influence account holding in formal banks. In the process, the paper tries to trace the socio-economic factors that determine deposit and credit account holdings in formal banks among individuals and households. The analysis also reveals that being a member in SHGs and more importantly having leadership experience in SHGs greatly influences the bank account holding. Leadership experience in SHGs would also improve an individual's banking habits.

Dwarakanath H.D, analysed the characteristics and growth of self-helpgroups in Andhra Pradesh and found that the SHGs using the loan facilities from the cooperative credit banks, commercial banks, Mahila bank and Maheswaran banks, have produced more than 50 varieties of products. Among them, the brass items, hosiery, candles, carpets, coir items and pickles are important products. In addition to the author says that the women groups started to educate their own group members and also they realised the importance and significance of literacy whereas a lot of enthusiasm has been generated and the SHGs had a greater vision in empowerment of rural women and for overall human development. Moreover, the SHG members proved the way to the power of decision making to the women in their family, and also create a mass on socioeconomic and political condition in this district.

M.S. Jairath, analysed the growth and development of SHGs in Rajasthan taking two categories, viz, resource poor tribal and resource better of non-tribal. It was arrived that the average membership, rate of interest, size of borrowings were higher in the former, but the average amount of saving was higher with the latter. The ratio between group saving and lending stood at 1:2.40 and 1:2.86 respectively of former and latter. It was suggested to expand activities of SHG both horizontally and vertically to bring credit deepening and widening to address hitherto neglected areas.

T. Hanumantha Rao, has made study on "Self-Help Groups, Role of the Andhra Pradesh Grameen Vikas Bank," It is often believed that poor people do not or cannot save money and despite their needs being very small, have to depend on moneylenders. However, it has been observed that the poor can save; maybe small amounts and a concerted effort must be made to help them do so in a systematic way. Their meagre savings can be kept in a safe place and used in the time of need. Towards this end, the Andhra Pradesh Grameen Vikas Bank (APGVB) has provided broad interventionist schemes like Palamitra, Suvidha Vikas, and so on, to help make a difference in the lives of women SHG members in rural areas. The present article tries to explain the role of the APGVB in linking with SHGs and the impact created by its initiatives.

SIGNIFICANCE OF THE STUDY

Self Help Groups promote the rural development in India. It has given opportunities for women to empower themselves.SHGs play a major role in transforming rural economy. The bank linkage programme and micro finance help the rural poor to improve their standard of living and fulfills their credit needs .It is a new innovation in the field of rural development to finance the rural poor and also to satisfy their credit needs. The global movement has been launched towards the improvement of women in rural areas. Several government schemes introduced to suit the needs of the poor and to help the women to meet their economic objectives.

STATEMENT OF THE PROBLEM

The SHGs and micro credit organizations have a long history. In Bangladesh the success story of Grameen bank is well known. Other countries like Thailand, Nepal, Srilanka and India have also empowered. The role of SHG is uplifting socio economic conditions of rural poor particularly women. The self help Group aims at providing awareness among the poor about the ongoing development programmes.The poor should know how best to use existing government programmes.The RBI advises the commercial banks to participate actively in the linkage programme.

Before introduction of the Bank linkage programme, there was a slow progress in the formation of SHGs in India. The NGO's and other partners like Co-operative Banks, RRBs and Farmer clubs faced lot of challenges and problems to form SHGs in the rural areas. They were hesitating to take this new venture .But at present; there is a tremendous growth in the formation of SHGs at everywhere. Every one is taking initiatives to form this one .Why there is a changes? With all these considerations in mind we will seek a further understanding of the factors at work in India in our present study.

OBJECTIVES OF THE STUDY

The following important objectives of the study

1. To study the Self Help Groups savings with banks in India.
2. To find out loans disbursed to Self Help Groups during the last 3 years.
3. To study the loans outstanding against Self Help Groups.
4. To know the agency wise bank linkage programme in India

METHODOLOGY OF THE STUDY

Given the specific objectives, the study aims at an analysis of the SHG-Bank linkage programme as a major plan of the strategy for delivering financial services to the poor in a sustainable manner in India to make the study more comprehensive the secondary data were collected.

RESULTS AND DISCUSSION

The following tables explain the overall progress under SHG Bank Linkage for last 3 years

TABLE 1: SHGs SAVINGS WITH BANKS AS ON 31ST MARCH (Amount Rs. in Crore/Numbers in Lakh)

Particulars	2009-10		2010-11		2011-12	
	No. of SHGs	Amount	No. of SHGs	Amount	No. of SHGs	Amount
Total SHGs	69.53	6198.71	74.62	7016.30	79.60	6551.41
Of which SGSY Groups	16.94	1292.62	20.23	1817.12	21.23	1395.25
% of SGSY Groups to Total	24.4	20.9	27.1	25.9	26.7	21.3
All women SHGs	53.10	4498.66	60.98	5298.65	62.99	5104.33
% of women groups	76.4	72.6	81.7	75.5	79.1	77.9

Source: NABARD

The above table explains the SHGs savings with banks as on 31st March. Under the SHG-Bank linkage programme, over 103 million rural households have now access to regular savings through 7.96 million SHGs linked to banks. About 27% of these SHGs are savings linked through the SGSY programme – the rural poverty alleviation programme of the Government of India where predominantly households below the poverty line are admitted as members.

The number of saving linked SHGs now stands at 7.96 million with a membership of over 103 million poor households. While bulk of these savings is used for internal lending within the Group (over 70%), the balance is maintained in the savings accounts with the financing banks. Over 79% of SHGs linked to banks are exclusive women groups, which is one of the most distinguishing features of microFinance sector in the country.

TABLE 2: LOANS DISBURSED TO SHGs DURING THE YEARS (Amount Rs. in Crore/Numbers in Lakh)

Particulars	2009-10		2010-11		2011-12	
	No. of SHGs	Amount	No. of SHGs	Amount	No. of SHGs	Amount
Total SHGs	15.87	14453.3	11.96	14547.7	11.48	16534.8
Of which SGSY Groups	2.67	2198	2.41	2480.37	2.10	2643.56
% of SGSY Groups to Total	16.9	15.2	20.1	17.0	18.3	16.0
All women SHGs	12.94	12429.4	10.17	12622.3	9.23	14132.0
% of women groups	81.6	86	85	86.8	80.4	85.5

Source: NABARD

The above table explains loans disbursed to SHGs during the last years. While the quantum of fresh loans issued to SHGs by banks rose by 13.7% during the year to ₹16535 crore (to 11.48 lakh SHGs) as against ₹ 14543 crore disbursed last year (to 11.96 lakh SHGs), the number of SHGs obtaining fresh loans from banks during the year declined by 4%. What causes more concern is the fact that the number has been declining during the last 3 years, though the rate of decline has come down from nearly 24% last year to 4% this year. Among the financing banks, Commercial Banks and RRBs extended loan of ₹1.65 lakh on an average per SHG while cooperative Banks lent ₹0.65 lakh only per SHG. While Commercial Banks accounted for 63% of the savings balance of SHGs, their share in fresh lending to SHGs was only 60% whereas RRBs with a Savings share of only 20% accounted for 30% of the fresh loans issued during the year. This is suggestive of cautious attitude of the Commercial Banks in lending for SHGs as compared to RRBs.

TABLE NO 3: LOANS OUTSTANDING AGAINST SHGs AS ON 31ST MARCH (Amount Rs. in Crore/Numbers in Lakh)

Particulars	2009-10		2010-11		2011-12	
	No. of SHGs	Amount	No. of SHGs	Amount	No. of SHGs	Amount
Total SHGs	48.51	28038.3	47.87	31221.2	43.54	36340
Of which SGSY Groups	12.45	6251.08	12.86	7829.39	12.16	8054.83
% of SGSY Groups to Total	25.7	22.3	26.9	25.1	27.9	22.2
All women SHGs	38.98	23030.4	29.84	26123.8	36.49	30465.3
% of women groups	80.3	82.1	83.2	83.7	83.8	83.8

Source: NABARD

The above table explains loans outstanding against SHGs as on 31st March. The number of SHGs having loans outstanding against them from banks declined by 9% during the year to 43.54 lakh as against 47.87 lakh last year although the quantum of loans outstanding increased to ₹36340 crore (16.4% increase over last year). Partly the decline can be attributed to the continued decline in the number of SHGs being extended fresh loans by banks over the last 3 years.

TABLE NO 4: AGENCY- WISE SHG BANK LINKAGE PROGRAMME: CUMULATIVE PROGRESS AS ON 31 MARCH 2012

Agency	SHGs Credit linked	Percentage	Bank loan disbursed (in Crores)	Percentage
Commercial Banks	600807	52	994204.49	60
RRBs	304809	27	502605.15	30
Cooperative Banks	242262	21	156667.23	10
Total	1147878	100	1653476.87	100

Source: NABARD

The above table explains the cumulative progress of the agency wise SHG Bank linkage programme.52 percent of the SHG s linked through the commercial banks and 60 percent of the bank loan disbursed by it as on 31st March 2012 and only 21 percent of the groups linked and 10 percent of the loan disbursed through Co-operative banks.

FINDINGS OF THE STUDY

1. Initially there was a slow progress in the programme up to 1999 as only 32,995 groups were credit linked during the period 1992 to 1999.
2. Through this study after the Bank linkage programme there is more number of SHGs formed by different partners.
3. The commercial banks are the major partner to link the SHGs i.e., 52 percent.
4. By the Regional Rural Banks 27 percent of the SHGs linked.
5. The women status has improved through these SHGs.

CONCLUSION

The SHG Bank linkage programme is one of the successful programmes in India. Many agencies and partners are supported to form SHGs in Rural areas through this programme. The Swarnajayanthi Gram Swarozgar Yojana (SGSY) also supporting to form the SHGs in India. Like Bangladesh our country is spreading the micro credit to develop the rural women through SHGs. Presently the concept SHGs applied in urban areas also. Hence SHG Bank linkage programme is very much essential for our country.

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FACTORS INFLUENCING ATTRITION

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ABSTRACT

The pressures in the free economy, breakdown of trade barriers, fierce competition and globalization are making enormous demands on today's corporation to compete in every domain. The biggest challenge being faced by entrepreneurs, leaders and managers in these turbulent and uncertain times is to retain the talented employees and reduce attrition rate. In this era of cut throat competition, top management, HR managers are worried about employees leaving their organizations. Not only is it costly to lose trained employees but their replacements are not easy to come by, so management and HR strives hard to keep retention policies. Demand of the hour is to retain employees who urge for continuous improvement. To understand the factors influencing attrition the present study has been undertaken on 100 employees of service and manufacturing industries. This paper reports that majorly six factors are responsible for attrition in service and manufacturing industries to retail organizational effectiveness of Indore region.

KEYWORDS

Attrition, Competition, Globalization, Organizational Effectiveness, Retention.

INTRODUCTION

India is an emerging economy which has witnessed unprecedented levels of economic expansion, alongside China, Russia, Mexico and Brazil. India is a cost effective and labor intensive economy, and has benefited manufacturing and service industries. The rapidly expanding socio-economic infrastructure has proved to be of great use in supporting the growth of service industry. According to Indian statistical data the IT & IT enabled service industries in India has recorded a growth rate of 22.4% in the last fiscal year. The total revenue from this sector was valued at 2.46 trillion Indian rupees in the fiscal year 2007. Out of this figure, the domestic IT market in India accounted for 900 billion rupees. Though, India depends heavily on its services sector for growth, the manufacturing sector also plays a significant role in the Indian economy, contributing nearly 16 per cent to the GDP (in 2006-07). Manufacturing sector in India records a 9% growth in the years from 2004 to 2008 and record growth of 12.3% in the year 2006-07. The reasons for this growth is by increasing presence of multinationals, scaling up of operations by domestic companies and an ever expanding domestic market (Federation of Indian Chambers of Commerce and Industry).

The pressure of competition from the environment and the evolution of the new Multi National firms in Indian market put up the soft issues like culture and people, and this requires the strategic human resource management. The fight for best talent and the need to hold the human resource capital became one of the strategic parameters for every company to sustain. Human beings are the most important asset for any organization and failure to retain talent can eventually lead to its downfall. Escalating attrition rates weigh heavily on the minds of almost every HR manager in the today's world of competition. Attrition is an all-pervasive problem; undoubtedly, depleting human capital affects every sector and each department in an organization.

THE ATTRITION WARFARE

As Indian economy has joined the global world of business, more opportunities are growing in terms of jobs. This leads to rising level of employee turnover. The instant gains in salary package are mainly responsible for the job hopping and thereby enhancing attrition rate. The services sector is facing the maximum heat of high attrition rate. According to Assocham (The Association Chambers of Commerce & Industry of India, 2008) Business Barometer Survey conducted on 'Attrition Problem in a Growing Economy', if the attrition rate goes to 40% in the services sector, it can be termed as alarming for the further growth. The similar case can happen if the attrition rate goes to 20% in manufacturing sector.

Better attrition management and the 2008-2009 global economic slow down have helped reduce the figure to 24-30%, but this still has a significant impact on costs and quality according to a report by global consulting firm the Hay Group (2009). According to The Economic Times (2010) report, the average attrition rate in 2010 was 10% across Indian companies by 30% rise in salary, a rate that rise to 25% in 2011-12 with improved salaries. Another survey by India Today (2007) revealed that the problem of attrition is most acute with employees in 26 – 30 age groups with working experience of 2 – 4 years. The study also mentioned that males are more likely to change jobs than their female counterparts.

WHY DO PEOPLE LEAVE JOB?

There are various factors that affect an individual's decision to leave a job. While an employee's leaving the job is considered attrition by one organization, it is looked at as talent acquisition by the new organization and to the individual it means a career move, economic growth and improved quality of life closeness to family etc. Hence, what is a problem for one may be an opportunity for another?

There are various reasons why people leave their current job. These reasons may vary from individual to individual and when data are collected from a large number of individuals leaving or who have left an organization, some consistencies may be observed-providing more insights as to why people leave in large numbers. If these are controllable-one attempts to control. If these are not within the control of the organization, the organization should prepare itself for managing attrition. In today's contemporary scenario, when an individual leaves the job, it causes a lot of disturbances in the organization. If it is a small organization the disturbance is even greater. Hence it is important to understand and manage attrition. There can be various reasons for people leaving their current jobs.

WHO IS RESPONSIBLE FOR ATTRITION?

Losing trained employees is not as costly as to find their proper replacement and trained them. Increasing attrition rates became one of the major problems for HR Heads in service and manufacturing Industries. The answer for this question "Who is responsible for attrition" is relatively difficult so for better understanding Weiss (2007), an HR consultant explored in an extensive interviews with HR directors of 30 companies. The poll was titled 'Who will be responsible for attrition? Participants have to choose an option responsible for attrition. The results revealed that 08.03% of individuals leave due to their own reasons "Employee", 38.15% of the individuals leave due to their 'Supervisor or Line Manager' and majority of them leave (53.82%) due to Compensation and Job Profile. The results of the poll are very interesting and can provide deep insights into why attrition happens and what may help solve it. Only 8% HR professionals felt that employees leave organizations on their own. Except in a few cases such as personal reasons, family issues, location preference, company brand and peer relationships, employees are not self-motivated to leave the company they are working in. A large majority of HR professionals polled that immediate managers are a bigger reason for attrition. Meeting employees' expectations is a difficult task, and most managers cannot do it effectively and consistently. 'Satisfying employee needs' often gets lower priority in a manager's quadrant of activities. Further managers do not have appropriate tools to manage employee related tasks consequently leads to further dissatisfaction. HR Managers voted unanimously that 'Compensation and Job Profile' are the primary cause of attrition. With a war for talent, disparity in the compensation packages is bound to occur and a mis-matched job profile increases the likelihood of an exit.

REVIEW OF LITERATURE

An organization's human resources are frequently described as its most valuable assets (Coulsan-Thomas, 1993) and most companies plays a high priority on retaining trained and productive workers (Anderson, 2005). Employee's performance affects the quality of customer service (Taylor and Bain, 2003) and high turnover in an organization. This result in financial loss associated with training costs, recruiting cost, and low productivity during the time it takes new workers to complete the learning curve (Atchley, 1996). High attrition rates, regionally or nationally also give rise to wage inflation, as salary levels spiral upward in an attempt to retain existing staff and attract new ones (Economist Intelligence unit , 2007). Some factors create conditions that influence an employee to withdraw from the work situation called as push factors. Internal to the job, such factors evolve as a result of unhappiness, or employee mismatch, with job requirements, interpersonal relationships, or organizational values (Capelli and Hamori, 2006). Such factors most commonly include perceived interference with work family lifestyle balance, poor relationship with co- workers, superiors and subordinates, work stressors, perceived inequity in remuneration or work assignments(Anderson, 2005).

The relationship between work stressors and turn-over intention has been studied extensively in a range of occupational settings (Udo et al., 1997). Conflicting demands and organizational constraints, role ambiguity, and conflict with managers, teams and customers, lead to job stress among client interfacing employees (Wetzels et. al., 1999). Unmanageable workloads and inadequate resources, as well as other job related factors increase the amount of stress at work (Price, 2001). Immediate supervisors and co-workers form the social support pillars for employee of an organization. Having an unsatisfactory relationship with supervisors or wit peers negatively impacts individuals' performance and satisfaction and push them to resign from their workplace (Price, 2001). While pull factors are external conditions that attract employees away from their work, usually to another job or, career or employer. Such factors most commonly include offers of better compensation, more interesting work, and better opportunity for promotion. Attitudes toward the money influence the turnover intentions (Tang et. al., 2000). Taylor and Bain (2003) suggested that an attractive compensation package offered by competitive firms helped lure employee to move from their current employment.

The promise of interesting work makes a job seem more worthwhile and binds individuals to new organizations (Cohen and Prusak, 2001). The convergence of various industries, multinational corporations, and local businesses has resulted in a 'flattened world' (Friedman, 2006) and has encouraged the improvisation of new forms of business operations. These new ways of doing business - virtual business, free or less restricted labor mobility and global positioning opportunities – attract employees by giving them greater opportunity to engage in interesting work. An opportunity for promotion and career development elsewhere also encourages staff to leave their current employment (Iverson and Deery, 2007).

IMPORTANCE OF THE STUDY

The move from an industrially-based economy to knowledge or information-based one in the 21st Century demands a top-notch knowledge management system and employee retention programs to secure a competitive edge. The success of an industry largely depends on recruiting and retaining workers with the right combinations of skills, but is threatened by high rates of attrition and job hopping. Thus, it is very necessary to determine the factors that are responsible for higher attrition rate, so that effective retention strategies can be developed to attract and retain best talents. Manufacturing & Service industries are gaining fast pace in India as they both contribute a considerable amount of share in Indian GDP. These two sectors are facing the strong heat of attrition which is adversely affecting Indian Economy. Therefore, to identify the major factors of attrition in these sectors the present research has been taken in Indore region.

STATEMENT OF THE PROBLEM

Based on review of literature and past studies, the following Hypotheses were formulated for this study through empirical investigation.

Problem 1: There is no significant difference of attrition on service and manufacturing Industries.

OBJECTIVES OF THE STUDY

Attrition has been the key issue for HR managers as it deteriorates organizational effectiveness thus has been the center of attraction for researchers and practitioners. So, it is proposed to carry out a factorial analysis which assesses the factors affecting the attrition rate. The study endeavors to fulfill the following objectives:

- To study the factors affecting the attrition rate in service and manufacturing sector.
- To open up new vistas of research and develop a base for application of the findings in terms of implications of the study.

HYPOTHESIS

H_{01}: There is significant difference of attrition on Service and Manufacturing Industries in terms of Autonomy.
H_{02}: There is significant difference of attrition on Service and Manufacturing Industries in terms of Personal Factor.
H_{03}: There is significant difference of attrition on Service and Manufacturing Industries in terms of Career Planning and Development.
H_{04}: There is significant difference of attrition on Service and Manufacturing Industries in terms of Interpersonal Relation.
H_{05}: There is significant difference of attrition on Service and Manufacturing Industries in terms of Performance Appraisal System.
H_{06}: There is significant difference of attrition on Service and Manufacturing Industries in Quality of Work Life.

RESEARCH METHODOLOGY

THE STUDY

The study undertaken was exploratory in nature that has provided insights into factors affecting employee's attrition intention. For this empirical research work, 'Survey' method had been chosen to systematically gather information from employee in a manufacturing industry and service industry.

THE SAMPLE

The present research was conducted on a sample of 100 employees, 50 from manufacturing and 50 from service industry of Indore. The respondents were selected on a convenience sampling basis.

THE TOOLS

FOR DATA COLLECTION

The research was carried out through survey method. A well structured, close ended and well designed questionnaire was utilized to get clear idea of respondents' perception. The respondents were asked to respond on 'Likert Scale' (Five Point Scale) ranging from "Strongly Disagree" to "Strongly Agree". Cronbach's Alpha Test (Cronbach, 1951) was applied to check reliability before the questionnaire was administered for the final survey. An Alpha Coefficient of 0.70 is considered to be good reliability estimate of the instrument. In the present study, the Alpha Coefficient Value is found to be 0.75.

THE TOOLS FOR DATA ANALYSIS

The analysis of collected data was carried out using MS Excel and Statistical Package for Social Science (SPSS 12.0).The final scale was subjected to principle component method of factor analysis using varimax rotation.

RESULT AND DISCUSSIONS

Factors Affecting Attrition Rate

The study was administered on 100 respondents and the scores obtained were subjected to factor analysis and six factors were identified. These are- *Autonomy, Personal Factors, Career*

Planning and Development, Interpersonal Relations, Performance Appraisal System and Quality of Work Life.

AUTONOMY: This was measured by items 15, 1 and 9. These items are " I would plan to leave this organization, if organizational values and individual values do not match (Factor Load: 0.797)"; "I would plan to leave this organization, if I have less independence, autonomy in making decisions (Factor Load: 0.712)"; "I would plan to leave this organization, if I feel that my work life balance getting disturbed (Factor Load: 0.620)". The total factor load was found to be **2.129.** Autonomy is very important contributing factor. According to Zasshi (2003) promoting job autonomy increase job control and give a more clarified roles and responsibilities which ultimately provide a more mutually supportive system to work.

Significant difference was found in service and manufacturing Industry in terms of Autonomy as Ztab (1.96) < Zcal (2.04) at 5% level of significance, thus null hypothesis **H01: Stands Rejected.** The mean of Service Industry (3.513) is greater than mean of Manufacturing Industry (2.671). This indicated that Service Industry provides more autonomy to their employees in terms of their independent decisions and proper work life balance.

PERSONAL FACTORS: This factor ranks fourth amongst all the factors. This was measured by items 11 & 10. Which are "I would plan to leave organization, if I find job has become very stressful (Factor Load: 0.834)"; "I would plan to leave this organization due to parental and family mobility. (Factor Load: 0.632); the total factor load was found to be **1.466**. Personal factors like health problems, family issues, children education and social status contribute in turnover intentions (Shah. et.al. 2010). Turnover intentions or job hopping are affected by personal factors in both Manufacturing and Service Industry. Here, employees attrition rate is high not because they have better opportunity outside but they are not either having same management styles or their personality are entirely different (Debrah,1994) with respect to their supervisors. This ultimately leads to conflict and occupational stress. Masahudu (2008) has identified another important variables "employers' geographic location" that may determine turnover. The closeness of employees to their families and significant others may be a reason to look elsewhere for opportunities or stay with their current employers. For instance, two families living and working across two time zones may decide to look for opportunities closer to each other.

No significant difference was found in service and manufacturing industries in terms of '*Personal Factors*' as Ztab (1.96) > Zcal (1.623) at 5% level of significance, thus alternate hypothesis H02**: Stands Accepted.**

CAREER AND PLANNING DEVELOPMENT: The items identified are 4 & 2. The importance of this factor stands at fifth position among all the other factors. These are "I would plan to leave this organization, if organization has not done career planning for me (Factor Load: 0.757); "I would plan to move to another organization, if my role is not clear to me (factor Load: 0.653)". The total factor load is found to be **1.41.** Career planning determine the skills, interest and values which enhances self responsibility and matches individual value with organizational value which increases organizational efficiency and job satisfaction (Lee, 2002), because of this rate of attrition will also go down. Ketter (2006) identified that lack of growth opportunities within the organization as the main reason for the employee attrition. Employee development programs helped individuals get ahead in their careers by using the organization as the platform and hence reduce employee turnover.

Significant difference was found in service and manufacturing Industry in terms of Proper career planning and development as Ztab (1.96) < Zcal (2.275) at 5% level of significance, thus alternate hypothesis **H03: Stands Rejected.** Employees in Manufacturing sector (Mean = 3.7) are having more clear roles and career planning for their future than in Service Industry (Mean = 2.79). Attrition survey by Business Today (2011) revealed that employee turnover rates are approx. 45% due to lack of career planning in service (IT & ITES) industries. Thus, service industries are having a very smaller share in terms of career planning and development.

INTERPERSONAL RELATIONS: This was measured by the items 14, 13, 12 & 8. The total factor load of this factor is **1.551** and hence making it third highest factor amongst all the other factors. The elements are "I would plan to move to another organization, if I could not work with my subordinate (Factor Load: 0.772)"; "I would plan to move to another organization, if I feel my peer group is not cooperative (Factor Load: 0.661)"; "I would plan to move to another organization, if I could not work with my supervisor (Factor Load: 0.540); "I would plan to leave this organization, if I found a job elsewhere that offered more interesting challenging work and enhance my learning (Factor Load: 0.422)";

Interpersonal relationship strengthening employment commitment, reduce turnover (Mohammad et.al. 2006). It is widely accepted that employee relationship with each other builds strong attitudes which strengthen the linkage between an employee and an organization. Interpersonal relationship builds a strong organizational commitment which enhances emotional attachment to the organization and reduces employee turnover (Ongori, 2007).

No significant difference was found in service and manufacturing industries in terms of '*Interpersonal Relations'* as Ztab (1.96) > Zcal (0.263) at 5% level of significance, thus alternate hypothesis **H04: Stands Accepted.**

PERFORMANCE APPRAISAL SYSTEM: This was measured by item 5 & 6. These are "I would plan to move to another organization, if I feel that Job doesn't fit to my personality (Factor Load: 0.848)"; "I would plan to move to another organization, if Performance Appraisal system is biased (Factor Load: 0.708)". The total factor load is to be **1.556**, making it second highest factor amongst all. Fair appraisals system can builds a strong commitment on the part in both manufacturing and service industry, and can therefore build a strong reciprocal commitment on the part of workers. Lawler (1990) opined that the key issue of attrition reflected by the amount of total compensation relative to levels offered by other organizations. He also suggested that organizations that have fair appraisals systems have lower turnover rates and larger numbers of individuals applying to work for them.

No significant difference was found in service and manufacturing industries in terms of 'Performance Appraisal' as Ztab (1.96) > Zcal (1.605) at 5% level of significance, thus alternate hypothesis **H05: Stands Accepted.**

QUALITY OF WORK LIFE: This is measured by items 7 & 3. These are "I would plan to move to another organization, if it offered me a better compensation package and promotion (Factor Load: 0.791)"; "I would plan to leave this organization, if I feel that quality of work life is poor (Factor Load: 0.669)**.** The total load is to be **0.122** which is the last rank amongst the entire factor. According to Loquercio (2006) it is relatively rare for people to leave jobs in which they are happy and the quality of work life is good, even when offered higher pay elsewhere. Most staff has a preference for stability. The Job satisfaction is more if the elements that are relevant to an individual's quality of work life include the task, the physical work environment, social environment, supportive administration are in the very well versed in the organization, Which according to Kraut. R.E. decreases Attrition.

Significant difference was found in service and manufacturing Industry in terms of quality of work life as Zcal (2.418) > Ztab (1.96) at 5% level of significance, thus alternate hypothesis **H06: Stands Rejected.** The Service Industry has lack of Quality of Work Life (Mean = 2.71) than Manufacturing Industry (Mean = 3.82). It was identified that employees have more positive attitudes about the Manufacturing Organization and their productivity increases as they focus strongly on providing a work environment conducive to satisfy individual needs.

FINDINGS

By determining the factors for intention to turnover among well educated professionals in an organization, this research helped to advance the understanding of what today employees seeking from their organization. Therefore in an effort to address high rates of staff attrition and job hopping among employees, the organization should be committed to provide fair compensation packages and at the same time, be more proactive in developing creative and innovative retention strategies to attract and retain the best and brightest employees. The organization should note that management flexibility, socially-connected workplaces and consideration for the emotional needs of workers are effective in reducing staff turnover. All in all, lowered rates of employee attrition will positively impact on an organization growth and the sustainability of regional and national economic development initiative.

However, the present study has limitations of limited geographical area of investigation, hence may not be true representative of the whole population of the country. So, before generalization, there is a need to conduct an in-depth study covering broader geographical area. However, the findings may be helpful in improving organizational efficiency and effectiveness through designing and implementing appropriate employee retention programs for all employees in service and manufacturing industries.

CONCLUSION

The pressures in the free economy, breakdown of trade barriers and globalization are making enormous demands on today's corporation to compete in every domain. The biggest challenge being faced by entrepreneurs, leaders and managers in these turbulent and uncertain times is to retain the talented employees and reduce attrition rate. In this era of cut throat competition, top management, HR managers are worried about employees leaving their organizations. Not only is it costly to lose trained employees but their replacements are not easy to come by, so the management and HR strives hard to keep attrition at the minimum. In the present study five factors viz. **Autonomy, Personal Factors, Career Planning and Development, Interpersonal Relations, Performance Appraisal System and Quality of Work Life** were identified that influence the employee turnover intentions. A supportive work conditions and good supervisory-peer-subordinate relationship is valuable for employees to perform their jobs better and to reduce stress. A well designed and implemented performance appraisal system will foster better teamwork environment and positive attitude towards work. Also opportunities to develop and advance in their careers and offering international assignment will increase employees interest in their jobs.

However out of the whole five factors, the factor Work Stressor is having maximum influence on the employee's turnover intentions with highest total factor load (2.81). It is found by the study that if the employees will get less autonomy in decision making, if their roles are not clear to them, if there is a poor quality of work life in the organization, if their work-family balance is getting disturbed, if there is a mismatch of employees values with those of organizational values, they would plan to leave the organization.

SCOPE FOR FUTURE RESEARCH

This study raises several issues for future research. First, Further future research should aim to clarify the mechanisms though which attrition factors affect cognitive processes involved in decision to leave. Second, there is a need to study whether attrition occurring in large firms differs in causality from that taking place in smaller companies. Finally, the impact of specific approaches to attrition intervention also requires investigation, so that the most effective strategy for talent management can be identified.

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ANNEXURE

ANNEXURE 1: ROTATED COMPONENT MATRIX

	Component					
	1	2	3	4	5	6
VAR00015	**.797**	-.067	.138	.085	.113	-.042
VAR00001	**.712**	-.090	.090	.200	.196	.091
VAR00009	**.620**	.550	-.103	-.149	-.118	-.035
VAR00011	-.125	**.834**	-.148	.277	-.034	-.068
VAR00010	.041	**.632**	.476	.078	-.057	.090
VAR00004	-.057	-.077	**.757**	.111	-.020	-.018
VAR00002	.376	.153	**.653**	.071	.045	.110
VAR00014	.110	.196	.282	**.772**	.024	-.171
VAR00013	.350	.046	-.002	**.661**	.072	.296
VAR00012	-.211	.447	.093	**.540**	.323	.311
VAR00008	.074	.414	.315	**-.422**	.414	.054
VAR00005	.038	.097	-.006	.204	**.848**	.000
VAR00006	.332	-.313	-.028	-.117	**.708**	.024
VAR00007	.255	-.043	.320	.035	.161	**.791**
VAR00003	.321	-.064	.409	-.061	.212	**-.669**

ANNEXURE 2: COMPARATIVE ANALYSIS

Factors	Name of the factors	Items	Factor Loads
F1	Autonomy	15, 01, 09	2.129
F2	Personal factors	11, 10	1.466
F3	Career Planning and Development	04, 02	1.41
F4	Interpersonal relations	14, 13, 12, 08	1.551
F5	Performance Appraisals system	05, 06	1.556
F6	Quality of work life	07, 03	0.122

ANNEXURE 3: COMPARATIVE ANALYSIS

FACTORS	HYPOTHESIS	SERVICE		MANUFACTURING		Z VALUE	REJECTED/ NOT REJECTED
		Mean	S.D.	Mean	S.D.	$\lvert Z \rvert$	
Autonomy	H_{O1}	3.513	0.981	2.671	1.254	2.04	**Rejected**
Personal factors	H_{O2}	3.22	1.115	2.97	1.04	1.623	Accepted
Career Planning and Development	H_{O3}	2.79	1.249	3.7	0.91	2.275	**Rejected**
Interpersonal relations	H_{O4}	3.015	1.209	2.9	1.181	0.263	Accepted
Performance Appraisals system	H_{O5}	4.05	0.850	3.48	1.086	1.605	Accepted
Quality of work life	H_{O6}	2.71	1.485	3.82	0.978	2.418	**Rejected**

Z_{table}=1.96 at 5% level of significance

ANNEXURE-4: RELIABILITY TEST

Reliability Statistics

Cronbach's Alpha	N of Items
.750	15

ANNEXURE-5: QUESTIONNAIRE

Dear Sir / Madam,

We are approaching you with this questionnaire to know your perception about the **"Factors Affecting Attrition Rate in an Organization"**. The information provided by you would be kept confidential and will be used for academic purpose only. Kindly tick your choice against each statement.

Thanking You,
Rishu Roy
Arpita Shrivastava

Name (Optional): ________________________ Designation: ________________

Service/Manufacturing Industry: ____________________Department: ____________________

S.No.	Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	I would plan to leave this organization, if I have less independence, autonomy in making decisions.					
2	I would plan to move to another organization, if my role is not clear to me.					
3	I would plan to leave this organization, if I feel that quality of work life is poor.					
4	I would plan to leave this organization, if organization has not done career planning for me.					
5	I would plan to move to another organization, if I feel that Job doesn't fit to my personality.					
6	I would plan to move to another organization, if Performance Appraisal system is biased.					
7	I would plan to move to another organization, if it offered me a better compensation package and promotion.					
8	I would plan to leave this organization, if I found a job elsewhere that offered more interesting challenging work and enhance my learning.					
9	I would plan to leave this organization, if I feel that my work life balance getting disturbed.					
10	I would plan to leave this organization due to parental and family mobility.					
11	I would plan to leave organization, if I find job has become very stressful.					
12	I would plan to move to another organization, if I could not work with my supervisor.					
13	I would plan to move to another organization, if I feel my peer group is not cooperative					
14	I would plan to move to another organization, if I could not work with my subordinate.					
15	I would plan to leave this organization, if organizational values and individual values do not match.					

REGULATORY FRAMEWORK FOR MANAGING THE MICRO FINANCE IN INDIA PARTICULARLY IN MEGHALAYA

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ABSTRACT

The Government regulations play an important role in managing the microfinance. Government continuously issues notifications which direct financial institutions including banks to finance the cottage sector accordingly and this process involves a proper system which takes the role of many apex institutions like RBI, SIDBI & NABARD, the Ministry of; finance, small scale industries, social welfare, empowered group of ministers, planning commission, finance commission and various committees & commissions set up for the special purposes. Besides the small business units and microfinance institutions are also made responsible to maintain fairness in accounts which is being evaluated by the credit rating system. In order to carry out the research we collected the data from various institutions which are actively regulating & supervising the flow of microfinance in MEGHALAYA and the information is represented in a more organised & simplified manner. From the information that we have it is realised that the Government Regulations, RBI, SIDBI & NABARD, Planning Commission, various state / central government sponsored schemes & policies together manage the microfinance, they opened the number of ways for different categories of people to have the financial access through various organisations and schemes suitable to their income status and working requirements. The various regulations were formulated time after time to facilitate the flow of microfinance and maintaining fairness of accounts and the process of microfinance through the solutions like; credit guarantee, credit rating, capital adequacy requirements by NBCs-MFIs, minimum loan qualifying eligibility, maximum indebt-ness at a time etc. etc.

KEYWORDS
credit rating, finance commission, Government regulations, managing the microfinance, microfinance institutions, NABARD, planning commission, RBI and SIDBI.

INTRODUCTION

The microfinance is managed through Government regulations under various programs & schemes, proper supervision and in a specific way where all the formalities such as; the type of applicants, amount of finance, type of finance, percentage of interest rate, subsidy rate, time period, agencies/parties involved, counselling & training, capital adequacy of MFIs, credit risk sharing, crediting rating, formalities for the cluster projects, terms for the loan securing and sale of loan portfolios by MFIs to banks, etc. are stated in the clear words. In the business it is managed by using the various financial techniques involving managerial skills such as; financial analysis, working capital management, capital structure decisions and project appraisals. The Government continuously assess the working information of different programs by setting up the special committees, commissions and through other field surveys and the recommendations drawn there become the new regulations and under its purview various programs get flipped along with establishment of new schemes. Then financial targets for these programs are fixed by planning commission which are later determined by finance commission to make the availability of finance with different categories of people through the Microfinance services being carried out by various organisations under different programs and through the schemes concerned therein.

REVIEW OF LITERATURE

Managing the microfinance in appropriate way was addressed by researches and some important studies related to this topic are reviewed below.
A substantial number of employed and underemployed belongs the village and small industries group, setting up of small scale and village industries will provide employment to them in occupations in which they have been traditionally trained and for which they posses equipments. The committee realizes the necessity of introducing better techniques in the village industry, so that they can keep pace with the progressively expanding economy and do not become unsuitable tomorrow (The Village and Small scale Industries Committee Report (1955), popularly known as KARVE Committee Report). Despite numerous policy measures during the past 4 decades, Indian small scale units have remained mostly tiny, technologically backward and tacking in competitive strength. Not with standing their lack of competitive strength, SSI units in India could survive due to product and geographical market segmentation and policy protection (TENDULKAR et. al. 1997). The Bank must assess the risk of the applicant, there must be at least Seven classes; the first class represents the non-defaulted applications and the last one represents only the defaulted applicants, the classes in between have monotonically increasing risk profiles. Banks and financial institutions can apply the cut off values used by the rating agencies such as Fitch, S&P and moody's (Based Accord-II) ("OZGE SEZG' IN" 2001). Formation of SHGs under various models according to the financial needs of the consumer and financing availability & working approaches of Banks & NGOs in the region (SUMARBIN UMDOR 2006). NBFCs need to obtain investment grade rating from a credit rating institution to accept the savings deposits (GHATE, 2007). Directions for the Business units that their accounting or Financial reports should meet the accounting Rules, Income tax rules, Companies Act, Insurance act, Articles of association, Memorandum of association, Banking rules, rules related the debentures, deposits and equity (Dr. JAGWANT SINGH – 2009). Launch of draft micro financial sector (Regulation and Development) Bill, 2007 to promote & regulate MFOS (Micro Finance Organizations) in Societies, trusts and cooperatives (SAVITA SHANKAR 2009) The various financial institutions such as industrial finance corporation of India (IFCI), industrial credit and investment corporation of India (ICICI), industrial development bank of India (IDBI), small industries development bank of India (SIDBI), specialized financial institutions, NSIC, and SFCs have established investment information and credit rating agency IICRA) (Dr. SAWALIA BIHARI VERMA 2010) to assess the probability of risk in the customers business.

STATEMENT OF THE PROBLEM

The various policy measures related the finance are usually discussed separately with mere a few or almost no relations with management concepts. The management of finance is incomplete if all regulations, credit criteria of various financial institutions, new policy & committee recommendations, accounting techniques & responsibilities etc. are not taken collectively. To search about all these issues related with its role in managing microfinance is an important opportunity to bring them together in the organized manner to represent a complete structure of financial management.

RESEARCH METHODOLOGY

SOURCE OF DATA

The data was collected from both primary and secondary sources. For the primary collection of data important departments such as SIDBI, NABARD, DICs, State Financial Corporation (SFC), Finance department, banks, National Board for Micro, Small and Medium Enterprises, Small Industries Development organizations (SIDO), accounts department, income tax department etc. were personally visited and for secondary data the information was collected from official websites of these departments and from other sources like reports from Government notifications, NGOs, research papers, books, TV news, websites and internet search for various questions.

PILOT STUDY

Appropriate questionnaire was prepared to proceed on the research work in a systematic and organized manner with maximum reliability & accuracy. The following studies were useful to set up the questionnaire based on the some critical issues which were important to get addressed through the new research:

1. Small Industry cluster development Program (SICDP) 2003, for Small Industrial clusters. (JAWAHAR SIRCAR)
2. CGAP (2002): micro finance Consensus guidelines.
3. Basel II Accord and probability of default estimation: "OZGE SEZG'IN"
4. Micro credit ratings international ltd. (2005) a study of the regulatory environment and its implications for legal form by microfinance institutions in India.

SAMPLING DESIGN

The selection of sample is based on non random convenient method where the important departments and institutions were selected for receiving the information which represented the whole system of regulations and innovative techniques required to manage the microfinance in a more appropriate way.

METHOD OF DATA COLLECTION

A structured interview schedule was prepared by the researcher and used for collecting data from the officials of SIDBI, NABARD, DICs, State Financial Corporation (SFC), Finance department, banks, National Board for Micro, Small and Medium Enterprises, Small Industries Development organizations (SIDO), accounts department, income tax department etc.

ROLE OF RBI

The reserve Bank of India (RBI) plays a vital role in managing the flow of micro credit from Banks & MFIs to needy persons & entrepreneurs. It continuously evaluates the performance of banks & MFIs, issues situation & time requiring guidelines for micro financing the small business units in all states of India. The important Initiatives which RBI has taken in this regard are:

1. The lending to the SSI sector to be 40 percent and 32 percent of net bank credit in the case of domestic and foreign banks respectively.
2. It urged banks to strengthen their Know Your Customer (KYC) procedures.
3. It permitted banks to appoint Business correspondents (BCs) which will take a number of activities, such as, disbursal of small value credits, collection of small value deposits, sale of microfinance, pension etc.
4. It permitted NBFCS & BCs to issue mobile phone based payment Instruments.
5. It recommended that the exemption limit for abstention of collateral security/third party guarantee be raised from Rs. 25,000 to Rs. 1 Lakh, it was further raised from Rs. 1 lakh to Rs. 5 Lakh for the tiny sector.
6. A qualifying asset (applicant) must fulfill the criteria like; to rural household with annual income of not more than INR 60, 000 (US$1,350)/ In case of urban or semi-urban borrower, household income must be INR 120,000 (US$2,700) or less, Households total indebtedness at any given time should not exceed INR 50,000, Aggregate amount of loan for income generating purposes must be at least 75 percent of total advances etc. etc. to maintain the Capital Adequacy Requirements of NBFC-MFIs.

OTHER REGULATIONS

There are various other regulations which have came into being time after time to regulate the financial services. The important regulations are; RASHTRIYA MAHILA KOSH (RMK); to provide both financial and non financial support to MFIs, Microfinance development and equity fund**;** to obtain foreign equity investment, MFI Bank Partnership model; to allow the MFI loans to be remained on the bank's balance sheet and share the credit risk up to specified level with the banks, to maintain the Capital Adequacy Requirements of NBFC-MFIs, RANGARAJAN committee on Financial Inclusion (2008); the MF-NBFCs to be permitted to offer thrift credit, micro -insurance and remittance products up to specified amounts, Credit Guarantee Scheme**;** to ensure better flow of credit to micro and small enterprises by minimizing the risk perception of banks/financial institutions in lending without collateral security, assisting the MSE with obtaining performance cum credit rating which would help them in improving performance and also accessing bank credit on better terms, Cluster Development Program**;** to form the clusters of small and microenterprises for getting the additional big financial support of projects being undertaken by them, help the MFIs to get their accounting work done by banks through the sale of loan portfolios, Securitization; Securing the MFI loans by banks through issuance of pass through certificates (PTCs) on rating basis, enable the scheduled commercial banks to compensate through Rural Infrastructure Development Fund (RIDF) scheme their failure of achieving the priority sector lending targets etc. etc.

MECHANISM FOR MICROFINANCE

Micro-credit programs are run primarily by NABARD in the field of agriculture and SIDBI in the field of Industry, Service and Business (ISB). The Microfinance scheme of both these Institutions is operating through the network of MFIs/NGOs. The microfinance Scheme of SIDBI & NABARD in the state is managed by a Committee under the chairmanship of Additional Secretary & Development Commissioner (MSME). The other members of the Committee are Additional Development Commissioner & EA, Director (IFW), Chairman-cum- Managing Director (SIDBI) and Director (EA).The Committee is reviewing the progress made under the scheme, approve the adjustment of security provided by the Government of India and interest accrued thereon in case of non-recovery of loan by SIDBI, approve further rotation of funds provided by the Government of India and other related matters.

Government has launched a revised scheme under the Micro Finance Program of SIDBI in 2003-04, government of India provides funds for Micro-finance program to SIDBI under a 'Portfolio Risk Funds' (PRF), which is used for security deposit requirement of the loan amount from the MFIs / NGOs. At present, SIDBI takes fixed deposit equal to 10 percent of the loan amount. Under the PRF, the share of MFIs, /NGOs, is 2.5 percent of the loan amount (i.e. 25 percent of security deposit and balance 7.5 percent (i.e. 75 percent of security deposit) is adjusted from the funds provided by the order to harmonies divergence in the concept as well as contend of cluster development programs, an Empowered Group of Ministers (EGoM) has been constituted very recently under the Chairmanship of the External Affairs Minister. Minister of SSI has been nominated for servicing of the EGoM.

DRAFT MICRO FINANCIAL SECTOR (REGULATION AND DEVELOPMENT) BILL, 2007

The draft bill was introduced in the Indian parliament to promote and regulate MFOS (Micro Finance Organizations). The definition of MFOS specifically included societies, trusts and cooperatives. The Bill designates NABARD as the regulator for the sector. Microfinance services are defined to include credit, life insurance, general insurance and pension services while Micro credit has been defined as loans.

Though NBFCs, which cover the major part of the outstanding loan portfolio by the microfinance channel, are regulated by Reserve Bank of India, other MFIs like societies, trusts, Section-25 companies and cooperative societies fall outside the purview of RBI's regulation. The Micro Finance Institutions (Development and regulation) Bill, 2011 is a major step in the microfinance sector. The proposed bill clarifies all doubts pertaining to regulation of the MFIs by appointing RBI as the sole regulator for all MFIs.

MAINTENANCE OF ACCOUNT

Account is an important part of business. Proper account maintenance is necessary to keep systematic records of all transactions, to ascertain the net effects of the organization, to know the financial position of the business and to provide information to interested parties. It is very unfortunate that the small scale and cottage industries in the state do not maintain any proper account. Survey finds that more than 70 percent of the SSI units do not keep any systematic record of their daily transaction. They simply write down their transactions in register. Around 30 percent of the SSI units maintain their account but that's also not scientific. Only 12 SSI units (10 percent) have computer and accountant to maintain their account scientifically.

The Induction of credit rating system has encouraged the small business units to perform responsibly and maintain good accounting records for the better management of micro credit access from banks. Under the cluster development program for the financial assistance to the cluster projects, both the financial Institutions and the Government seek the performance report of the project costs and its operation. For this purpose they make the use of various appraising techniques and financial analysis of the cluster project.

Now, it is clear that the regulations are playing an important role in managing the microfinance they direct the role to be played by every organisation and opened the number of ways for different categories of people to have the financial access through various organisations and schemes suitable to their income status and working requirements. The various regulations were formulated time after time to facilitate the flow of microfinance and maintaining fairness of accounts and the process of microfinance through the solutions like; credit guarantee, credit rating, capital adequacy requirements by NBCs-MFIs, minimum loan qualifying eligibility, maximum indebt-ness at a time, financial inclusion support, cluster developments, securitization to MFI loans, dispensing loans on no dues certificate, formulating banking codes for MSE customers, export credit subvention, issuance of no frills account and general credit cards, utilizing the service of NGOs & MFIs by commercial banks, know your customer (KYC) regime, launching of credit information system, incubational support for new ventures, UID ADHAAR, portfolio risk fund mechanism for SIDBI & NABARD, Draft Micro Financial Sector (Regulation and Development) Bill etc. etc.

The small scale and cottage industries in the state do not maintain any proper account but the induction of credit rating system and the cluster development program for the financial assistance has encouraged the small business units to perform responsibly.

ROLE OF PLANNING COMMISSION IN MANAGING THE FINANCE FOR VILLAGE AND SMALL INDUSTRIES OF MEGHALAYA

The planning Commission draws the five year economic plans based on the situation needing reforms for the development of various economic elements such as employment, GDP, Industrialization etc. of the state. Besides agriculture, the village and small Industries have a great contribution towards the economic development of the state, the employment of the MEGHALIAN people to a good extent is dependent on this sector as the state is having a few number of large & medium enterprises. During the eleventh plan period (2007-12), the Department has been able to create employment to 10,863 unemployed youths from 2,752 registered micro and small enterprises in various parts of state.

The projected eleventh plan outlay for the village & small industries is Rs. 4900.00 lakhs. The actual expenditure up to 2012-11 is Rs. 2085.18 lakhs. The approved outlay for 2011-12 is Rs. 800.00 lakhs which is expected to be utilized in full. The tentative outlay for 2012-13 is Rs. 1520.00 lakhs.

PLANNED OUTLAYS ARE EXPENDED THROUGH SCHEMES

All these outlays are expended in planed manner through various state / central Government sponsored schemes & policies, Such as, package scheme of Incentives for small scale business (in Meghalaya) 1997, entrepreneurship Development programs (By EDI), employment generation program (Prime minister's employment generation program), Meghalaya self employment scheme, gram SWARAZGAR YAJANA, GRAM ODYOG ROZGAR YOJANA (By KHADI village Industry), grants in aid to trainees and the other financial schemes related to specific art such as craft development finance scheme, Handloom, Handicraft and sericulture development finance schemes.

Financing of the Eleventh plan (2007-2012) of Meghalaya would depend on different sources of funding, viz. state's own resources, central assistance, external assistance through the government of India, contribution of public sector Enterprises, contribution of local bodies etc.

ACHIEVEMENTS DURING THE ELEVENTH PLAN PERIOD 2007-12

1. The planning commission has been able to provide financial assistance of Rs. 13,77,43,194 to 2,296 micro and small enterprises under '' the package scheme of incentives 1997''.
2. It trained about 1,056 persons in the trades like cane & Bamboo wood crafts and other artistic work under '' master craftsman Training scheme.''
3. It organized 136 awareness and EDP programs in the state with 2,925 local youth attended the programs.
4. It established 286 small Business units creating an employment for 1,606 people, under '' prime minister's employment Generation program".
5. It distributed machineries, tools and equipments to 657 passed out trainees in different activities like; Tailoring, embroidery, Knitting, carpentry, steel fabrication etc. Under "Grants-in- aid to passed out trainees program''
6. It formed 7 (seven) Handloom clusters in different parts of the state under '' Integrated Handloom Development scheme (IHDS) '' of the Ministry of textiles. The amount of Rs. 240.00 lakhs is proposed for 2012-13.

FINDINGS OF THE STUDY

1. It was observed that Government Regulations, RBI, SIDBI & NABARD, Planning Commission and various state/central government sponsored schemes & policies together manage the microfinance.
2. It was observed that the Government and the RBI regulations like; credit guarantee, credit rating, capital adequacy requirements by NBCs-MFIs, minimum loan qualifying eligibility, maximum indebting at a time, financial inclusion support, cluster developments, securitization to MFI loans, dispensing loans on no dues certificate, formulating banking codes for MSE customers, export credit subvention, issuance of no frills account and general credit cards, utilizing the service of NGOs & MFIs by commercial banks, know your customer (KYC) regime, launching of credit information system, incubational support for new ventures, UID ADHAAR, Draft Micro Financial Sector (Regulation and Development) Bill, 2007 etc. etc. has directed the role to be played more fairly by every organisation and opened the number of ways for different categories of people to have the financial access through various organisations and schemes suitable to their income status and working capital requirements.
3. It was observed that the micro & small business cluster development program in the Meghalaya is an essential way to finance the small entrepreneurs altogether because of the topographical barriers which hinder MFIs & Banks in delivering their services to all parts/ areas.
4. It was observed that around 30 percent of the SSI units maintain their account but that's also not scientific. Only 12 SSI units (10 percent) have computer and accountant to maintain their account scientifically.
5. It was observed that the Induction of credit rating system has encouraged the small business units to perform responsibly and maintain good accounting records for the better management of micro credit access from banks.
6. It was found that for the hard intervention assistance to the cluster project, both the financial Institutions and the Government seek the performance report of the project costs and its operation. For this purpose they make the use of various appraising techniques and financial analysis of the cluster project.
7. It was found that the planning commission has projected eleventh plan outlay of Rs. 490.00 million for the village & small industries of Meghalaya which is being utilized through the various schemes like; package scheme of Incentives for small scale business (in Meghalaya) 1997, entrepreneurship Development programs (By EDI), employment generation program (Prime minister's employment generation program), Meghalaya self employment scheme, GRAM SWARAZGAR YAJANA, GRAM ODYOG ROZGAR YOJANA (By KHADI village Industry), grants in aid to trainees and the other financial schemes related to specific art such as craft development finance scheme, Handloom, Handicraft and sericulture development finance schemes.

CONCLUSION

Government Regulations, RBI, SIDBI & NABARD, Planning Commission, various state / central government sponsored schemes & policies together manage the microfinance. The planning commission has projected eleventh plan outlay of Rs. 4900.00 lakhs for the village & small industries of Meghalaya which is being utilized through the various schemes like; package scheme of Incentives for small scale business (in Meghalaya) 1997, entrepreneurship Development programs (By EDI), employment generation program (Prime minister's employment generation program), Meghalaya self employment scheme, gram SWARAZGAR YAJANA, GRAM ODYOG ROZGAR YOJANA (By KHADI village Industry), grants in aid to trainees and the other financial schemes related to specific art such as craft development finance scheme, Handloom, Handicraft and sericulture development finance schemes. The Government and the RBI regulations like; credit guarantee, credit rating, capital adequacy requirements by NBCs-MFIs, minimum loan qualifying eligibility, maximum indebt-ness at a time, financial inclusion support, cluster developments, securitization to MFI loans, dispensing loans on no dues certificate, formulating banking codes for MSE customers, export credit subvention, issuance of no frills account and general credit cards, utilizing the service of NGOs & MFIs by commercial banks, know your customer (KYC) regime, launching of credit information system, incubational support for new ventures, UID ADHAAR, Draft Micro Financial Sector (Regulation and Development) Bill, 2007 etc. etc. has directed the role to be played more fairly by every organisation and opened the number of ways for different categories of people to have the financial access through various organisations and schemes suitable to their income status and working capital requirements.

SUGGESTION FOR THE POLICY MAKERS

There is need of innovations in managing the today microfinance as per the national average standard of living and per capita income of the people. To let the poor to catch up these targets there is need of adequate flow of finance quiet enough to fulfil their all business and daily life requirements which is possible by creating the over plus in previous credit limits prescribed under different schemes. They do not need only finance but also help in properly managing it and for this purpose the account centres should be opened in every village to continuously assess the working capital information from all business units and issue the valuable suggestions for controlling the use of finance in the business.

FUTHER RESREACH DIRECTION

1. Role of microfinance management in executing the sector specific cottage level projects with maximum possible but sustainable exploitation of resources for improving the production and employment.
2. The role of microfinance in rehabilitation of the people under emergency projects of district councils and disaster management department for disaster and non disaster emergency welfare issues.
3. The impact of loan defaulting on hammering the economic progress of microfinance by various organizations and the action of law thereon to control the situation.
4. The impact of various financial tools & formulas, the accounting standards & policies and the legal obligations of companies act, income tax rules etc. on the utilization of microfinance in a more appropriate way in various MFIs, NGOs & SHGs.
5. The impact of financial reports from small business of the state on the public finance planning related the taxes and subsidies for the cottage sector.

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EFFICIENCY MEASUREMENT OF INDIAN PUBLIC AND PRIVATE SECTOR BANKS IN THE CONTEXT OF DOWNGRADED RATINGS

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ABSTRACT

The present paper is an endeavor to measure the technical efficiency, overall technical efficiency and scale efficiency of selected public and private sector banks in India, through the application of Data Envelopment Analysis (DEA). A sample of 16 banks (8 each from public sector and private sector) was selected containing 7 banks (5 public sector and 2 private sector banks downgraded recently from 'stable' to 'negative' by the world fame, 'Fitch Rating Agency'), for assessing the justification of decision made by the agency. The study found that SBI, Bank of Baroda, ICICI Bank and Axis Bank were having no such problem which may result into the downgrading of their ratings, though, the PNB, Canara Bank, IDBI Bank and 4 other private banks stood short of their claims of efficiency, which needs to be addressed immediately in the interest of the nation, in general, and banking sector in particular.

KEYWORDS
Banking Sector, Credit Rating Agency, Data Envelopment Analysis (DEA), DMUs (Decision Making Units), Technical Efficiency.

INTRODUCTION

The Indian economy saw the dawn of reforms in 1991 with the adoption of the policy of liberalisation, privatisation and globalisation (LPG) to put the troublesome economy on the path of progress with the help of world class technology and management coupled with the foreign capital. The economy gained momentum and achieved a growth rate of up to 9.6 per cent (2006-07) in GDP by surpassing the traditional Hindu Rate of Growth; and again tanked to 5.3 per cent growth in GDP (the lowest in 9 years) for the quarter ending on 31st March 2012. Since, a strong banking system is must for the sustainable and regular growth of the economy, by circulating the financial resources optimally in between various segments, hence, it was also upgraded accordingly during the reform period to meet out the desired economic goals and, consequently, new banking laws and regulations were framed and implemented, besides the adoption of banking reforms on the recommendations of the Committee on Financial System (CFS), also known as Narsimham Committee, in 1992 and 1997 in the form of Basel Agreement I and II, respectively. But all of a sudden, recession in US economy broke out in the last quarter of 2007 which engulfed the world economy into it, holistically; and, the US banking system was the worst hit sector. BRIC economies came out of it successfully. Then, Euro-debt-crisis appeared, adding significantly to the problem of recession, and hurting badly the ailing economies. The Asian Development Bank echoed the sentiment by lowering the economic growth rate in developing Asian countries (including India and Thailand) from 6.9 per cent to 6.6 per cent for 2012. The austerity measures in Europe and the lethargic pace of growth in US have adversely affected the growth in the exports of many economies including China (World's factory) which is an important driver of Asian economic particular. The Central Bank of South Korea lowered its key base rate from 3.25 per cent to 3 per cent and surprised the economists globally; global environment was cited as the main reason behind the move. The Central Bank of Japan also trimmed its outlook for growth and China, dominating the region showed signs of slowdown through its data release. The news of downgrading the ratings of 12 Indian banks and financial institutions due to their high exposure to domestic counterparties and holdings of domestic sovereign debt came from Fitch (Credit Rating Agency) at a time when whole world was watching towards Indian economy with great hopes and aspirations in the form of rescuer. Besides that, Rating Agency Moody's downgraded 15 of the world's biggest banks, including Morgan Stanley, due to their diminishing profitability, growth prospects and difficult operating conditions; and 28 banks (including Banko Standard of Spain, 4th biggest economy of Europe), due to their exposure towards Real Estate. The country's twin deficits for 2011/12 –the fiscal deficit at 5.9 per cent and the current account deficit at 3.8 per cent of GDP, persistent inflation, historical fall in rupee against US dollar, soaring fuel prices and, the political paralysis, induced the world fame Times Magazine of US to declare Dr. Manmohan Singh, the Prime Minister of India, as 'underachiever' and adding fuel to the fire. In the backdrop of happening of such unexpected and undesired events, the authors took up the study to measure the efficiency of Indian banks (public and private sector banks excluding foreign banks) to assess the justification of the decisions of the Credit Rating Agencies regarding downgrading the rating of the banks from stable to negative.

REVIEW OF LITERATURE

S.No.	Year	Author & Study	Methodology Used	Major Findings	Variables Used in the Study
1.	2011	**Farhan Akhtar, Muhammad et.al.** "Performance Efficiency of commercial Banks of Pakistan: Non-Parametric technique Data Envelopment Analysis (DEA)"	Data Envelopment Analysis (DEA), Banxia frontier Analyst	The study found 6 banks relatively efficient when the efficiency was measured in terms of 'constant returns to scale' and 8 banks when the efficiency was measured in terms of 'variable returns to scale'.	**Outputs:** Operating Income, Net-interest income **Inputs:** Operating expenses, advances and Capital.
2.	2011	**San, Ong Tze et. al.** "A comparison on Efficiency of Domestic and Foreign Banks in Malaysia: A DEA Approach"	Data envelopment analysis (DEA), Tobit Model	The study revealed that domestic banks were more managerially efficient than foreign banks in controlling their costs. **Tobit Model** suggested that PTE of banks was mainly affected by capital strength, loan quality, expenses and asset size.	**Outputs:** Total Loans, Total Investments **Inputs:** Total Deposits, Fixed Assets

3.	2011	**Rajan S.S** "Efficiency and Productivity Growth in Indian Banking"	Data Envelopment Analysis (DEA), The (PSS) Semi-Parametric Estimation (SPE)	It was found that public sector banks and State Bank of India and its Associates were more efficient than domestic private banks and foreign banks. However, foreign banks were more efficient than domestic private banks due to their specialised activities.	**Outputs:** Loans, Investments **Inputs:** Deposits & Borrowings, Number of employees, Capital
4.	2010	**Nigmonov, Asror** "Bank Performance and Efficiency in Uzbekistan"	Data Envelopment Analysis	The results showed that the overall efficiency levels of banks on an average decreased and it was mainly due to technical inefficiency.	**Outputs:** Total credits –Reserve for possible loan losses Total non-interest income, Other non-interest income **Inputs:** Operational expenses, Fixed assets, Total Deposits
5.	2010	**Frimpong, Joseph Magnus** "Investigating Efficiency of Ghana Banks: A Non-Parametric Approach"	Data Envelopment Analysis (DEA), Efficiency-Profitability matrix, Intermediation Model Input-Output Specification.	It was found that only 4 banks (out of 22) were efficient. The 18 ineffici-ent banks had efficiencies ranging from 33 per cent to 89 per cent. Domestic private sectors banks were more efficient group of banks in Ghana with average efficiency level of 87per cent.	**Outputs:** Advances (i.e. bills purchased and discounted, credits, overdrafts, loans) and Investment. **Inputs**: Deposits and Total expenditure
6.	2009	**Das, Abhiman, and Saibal, Ghosh** "Financial Deregulation and Profit Efficiency: A Non-Parametric Analysis of Indian Banks"	Data Envelopment Analysis (DEA)	The study revealed that liberalisation had not brought any significant changes among various types of Indian banks in context of technical and cost efficiency, but their profit and revenue efficiencies were significantly different.	**Outputs**: Loan Assets, Other Incomes and Investments **Inputs**: Physical capital, Labour, Loanable funds and Equity
7.	2008	**Ketkar,Kusum w. and Ketkar,Suhas** "Performance and Profitability of Indian Banks in the Post Liberalisation Period"	Data Envelopment Analysis (DEA), Fixed affects multiple regression models.	It was concluded through the study that Foreign banks working in India were more efficient followed by new private banks; while, the efficiency scores of all the banks increased over the reform period, and the nationalised banks registered the highest gains.	**Specification 1:** **Outputs:** Loans, Non-interest income, Deposits **Inputs:** No. of branches, Equity, Total operating expenses. **Specification 2:** **Outputs:** Loans, on-interest income. **Inputs:** No. of bank branches, Equity, Total operating expenses, Deposits
8.	2008	**Khankhoje, Dilip and Sathye,Milind** "Efficiency of Rural Banks: The case in India"	Data Envelopment Analysis (DEA) Model.	The study exposed that efficiency of rural banks improved significantly and showed positive results after the restructuring process adopted by the Government of India.	**Outputs:** Interest Income, non-Interest income. **Inputs:** Interest expenses, non-Interest expenses.
9.	2008	**Gupta, Omparaksh K. et. al.** "Dynamics of Productive Efficiency of Indian Banks"	Data Envelopment Analysis (DEA) Model, TOBIT Regression.	It was found through the study that SBI and its Associates had the highest efficiency among private and other nationalised banks and, the productive efficiency of the banks was positively impacted by the capital adequacy ratio.	**Outputs:** Interest Income, Fee based Income (commission, brokerage etc.) and Investment Income. **Inputs:** Interest expenses, Operating expenses
10.	2006	**Angelidis, Dimitrios** "Efficiency in the Italian Banking Industry: Data Envelopment Analysis and Neural Networks	Data Envelopment Analysis, Neural Networks, Malmquist productivity index,	The empirical results, though, confirmed that total productivity of Italian banking institutions increased at the rate of 3.5 per cent during the period under study, but DEA and Neural Networks exposed contradictory results at several points regarding the performance of banks.	**Outputs:** Total other earning assets, Total customer loans and Total deposits. **Inputs:** Personnel expenses, other operating expenses and total fixed assets
11.	2005	**Abhiman et. al.** "Liberalisation, Ownership And Efficiency in Indian Banking"	Data Envelopment Analysis (DEA) and Spearman Rank Correlations	The study revealed that the State Bank and its Associates scored much higher than all other groups, in terms of profit efficiency.	**Outputs:** investments, performing loan assets and other non-interest fee based incomes **Inputs:** Borrowed funds (deposits and other Borrowings), number of employees, fixed assets and equity.
12.	2001	**Vujcic, Boris, and Igor Jemric** "Efficiency of Banks in Transition- A DEA Approach"	Data envelopment analysis (DEA)	The study found that the Foreign banks were most efficient banks and the new banks performed better than the old banks. The significant cause of inefficiency among state owned and old banks vs. foreign banks and new ones was the number of employees and the fixed assets. The banks with more technical efficiency were also having less non-performing assets.	**Operational Approach** **Outputs:** Interest and Related Revenue, Non-interest Revenue **Inputs:** Interest and Related Cost, Commission for services and related cost, labour and Capital related administrative cost. **Intermediation Approach** **Outputs:** Total Loans Extended, Short-term securities. **Inputs:** Fixed assets and Software, Number of Employees, deposits

On the basis of the analysis of review of literature, it is clear that no study, so far has been conducted on the topic of 'Efficiency Measurement of Indian Public and Private Sector Banks in the context of Downgraded Ratings'; though, several studies have already been conducted on the measurement of efficiency of various types of banks operating in India and abroad by various researchers. Since, the global economy is passing through a phase of great tides, where all sorts of uncertainties are prevailing in the disturbed economic environment, therefore, in such a situation, only right direction and good health of the organisations clubbed with goodwill can help in taking out the global economy from the whirlpool of gloomy clouds. The Indian economy, with its strong banking system, has been performing nicely throughout the period of recession which started from US in 2008, but recently, several world fame rating agencies like Fitch, Standard and Poor and Moody's etc., have pointed out towards the ill health of several Indian organisations, including banks, and hence, hurt the economic sentiments of the nation. But, the government of India and the officials holding key positions in these organisations denied such charges. Hence, the researchers took up the study to confirm the claims and the counters in this regards.

OBJECTIVES OF THE STUDY

1) To measure 'technical', 'overall technical' and 'scale efficiency' of the sampled Indian banks with the help of DEA;
2) To study the slacks in outputs and inputs hampering the efficiency of the sampled banks; and
3) To make viable suggestions on the bases of findings of the study.

RESEARCH METHODOLOGY

SAMPLE OF THE STUDY

All banks (Public Sector, Private Sector and Foreign banks) operating in India, constitute the universe of the study. All public and private sector banks operating in India form the population of the study, out of which 16 banks (8 Public and 8 Private sectors) have been selected as the sample of the study, on the basis of purposive sampling technique. The sample specifically includes 7 banks- SBI, PNB, Canara Bank, Bank of Baroda, IDBI Ltd. ,ICICI and Axis Bank (5 Public and 2 Private sector banks) which have been downgraded by Fitch Rating Agency from 'stable' to 'negative', to draw the inferences.

DATA COLLECTION

The present study is purely based on secondary data. The data for the study were related to the total 16 banks (8 public and 8 private sector banks) including the banks (5 public and 2 private sector banks) downgraded by **Fitch Ratings,** the Global Credit Rating Agency. The Data (latest) for the purpose of analysis have been extracted from the website of the Reserve Bank of India for the financial year 2010-11.

STATISTICAL TOOL: DATA ENVELOPMENT ANALYSIS (DEA)

DEA is a non-parametric technique, developed by **Charnes, Cooper and Rhodes (1978)**, based on the principle of linear programming to construct a non-parametric piecewise frontier over the data to examine how a particular decision-making unit (DMU) – like a bank (in this study) – operates relatively to other DMUs in the sample, and assesses the efficiency of production units (in present study, the public and private banks) in comparison to a set of similar units operating in the same business environment. Efficiency=output / input and is used when there is only one output and one input, but if multiple number of outputs and inputs are involved in the study, DEA solves this problem by developing an efficiency frontier from weighted output and input. Data Envelopment Analysis (DEA) allows relative efficiency measures to be determined.
A common measure of relative efficiency is

$$\text{Efficiency} = \frac{\text{Weighted sum of outputs}}{\text{Weighted sum of Inputs}}$$

The efficiency desired for each unit is on a scale of 0-1 whereas '0' denotes an extremely inefficient unit and a score of '1' represents perfect efficient unit. Efficiency scores are relative, and, are derived by comparing the units in the data set for analysis. According to Charnes, Coopper and Rhods, "100% efficiency is obtained for a unit only when:

a) None of its outputs can be increased without either;
i) Increasing one or more of its inputs, or
ii) Decreasing sum of its other outputs.
b) None of its inputs can be decreased without either;
i) Decreasing some of its outputs, or
ii) Increasing sum of its other inputs."

The linear programming technique (DEA) also provides a set of targeted inputs and outputs for the inefficient units. For each inefficient unit, there are targeted units that would attain an efficiency score of '1' with the same set of inputs and outputs. These units are called as the peer units and their values of inputs and outputs serve as the targeted values for the inefficient units. The targeted values of the inputs and the outputs form the basis for the potential improvements of the inefficient units. The potential improvements for the inefficient units can be calculated as:

$$\frac{(\text{Targeted Value} - \text{Actual Value}) \times 100}{\text{Actual Value}}$$

INPUT-OUTPUT SELECTION FOR DEA ANALYSIS

There is a considerable disagreement among researchers about what constitute inputs and outputs of banking industry (**Sathye, 2002).** Through the literature, two approaches the 'production approach' and 'intermediation approach' are exposed. The production approach (pioneered by **Benston, 1965)** treats banks as the service providers to customers, and the 'intermediation approach' considers banks as intermediaries using deposits with other inputs such as labour and capital to produce outputs like loans. Hence, the intermediation approach views deposits as an input. The 'intermediation approach' and 'production approach' are best suited for analysing bank level efficiency and branch level efficiency, respectively (**Berger and Humphrey 1997)**. Therefore, we have selected intermediation approach for selecting input and output variables for the present study. The input and output variables for the present study are as follows:
Inputs: 'Deposits' and 'Interest expended' and, **Outputs:** '**Advances', 'Investment' and 'Interest Income'.**

RESULTS AND DISCUSSION

Through the application of non-parametric technique (DEA)[2] on data collected for 16 banks (both public and private sector banks including 7 banks downgraded by **Fitch**) comparative efficiency scores for various banks were obtained through **Table 1.**

The overall technical efficiency of a bank is the product of pure technical efficiency and scale efficiency. It is evident from the above table that the PTE (Pure Technical Efficiency) of the largest public sector bank (SBI) is perfect i.e. 1; but its SE (Scale Efficiency) is 0.969 which is below the mean efficiency score (0.974) of all the sampled banks taken together, and hence generating benefits less than the cost incurred for widening its scale operations. That is why its OTE (Overall Technical Efficiency) is also imperfect (0.969). Though, the bank is operating at an overall technical efficiency score of more than the average of public and private sampled banks, but is operating under a situation of diminishing returns to scale, hence, should curtail its scale of operations to treat the inefficiency and to attain status of a perfect bank. As the efficiency level of the bank is very high, albeit not perfect, hence, no cause of concern seems to be there. The Bank of

[2] This Study used the software (DEAP) developed by Coelli (1996) to calculate the efficiency score.

Baroda is the only public sector bank having attained perfect efficiency level (1 score) in all the three fronts (OTE, PTE,& SE) and is the most efficient bank among all public sector banks under study, but surprisingly has no peers (perhaps because of its small size among public sector banks). How the threats can be issued for such a robust performance!

Canara Bank's PTE (0.890) and OTE (0.869) are operating below the average of sampled banks (0.938 and 0.914 respectively), only its SE (0.977) is better than the average of all sampled banks (0.974). The bank is suffering more due to its policies and decisions (PTE), than the problem of excessive scales, that is why, its OTE is also low. The bank has no peer count and hence, no takers or followers of its policies.

The Punjab National Bank, the lead bank of Northern India, is operating with a pure technical efficiency of 0.982, scale efficiency of 0.984, and overall technical efficiency of 0.966, in comparison to 0.938, 0.974 and 0.914, the mean efficiency scores respectively, for all sampled banks under study. The data signifies that the bank is operating with good efficiency scores, but is lacking in all the three fronts of efficiencies and there is a scope of improvement. The results show that the bank is operating with excessive scales, hence, its efficiency is adversely affected, therefore, a shrinking in its scale operations is the need of the hour, to surge its efficiency. The bank has no peer counts.

Vijaya bank is the least performer bank, not only among the sampled public sector banks, with lowest scores of OTE (0.795) and PTE (0.807), but also among all banks under study, exposing the weak policies of the bank; but is the only sampled public sector bank, showing increasing returns to scale, and hence, its operations need to be enhanced for the better performance. The bank escaped the downgrading even with its low performance and having no peers again. Syndicate bank, the last sampled public sector bank, showed a performance better than the average of all sampled banks under study taken together, with OTE (0.944), PTE (0.958) and SE (0.986), but working in a situation of decreasing returns to scale, capable of performing well subject to the contraction in its scale. The IDBI, UCO and Vijaya Banks are suffering from inefficiencies. Syndicate Bank is the 4th best performer after BOB, SBI and PNB out of 8 public sector sampled banks. It is clear from **Table 1** that 7 public sector banks are not operating up to the mark and are facing efficiency problems. Vijaya Bank is an exception to other 6 banks, as it is facing the problem of lack of proper scale, hence, requires to expend its scale by opening more branches or attracting more customers with same number of branches to increase its efficiency; all other 6 banks are suffering from the larger scales and hence, all of them are required to curtail their scales to be at an optimum level of efficiencies.

The analytical table is the proof of the fact that four private sector banks (ICICI, Axis Bank, Kotak Mahindra and HDFC), are operating with perfect efficiencies with a score of 1 each. Private sector banks are better performing in comparison to their counter parts (public sector banks). Remaining 4 private sector banks are facing problems of inefficiencies which can be solved only by increasing their scale of operations. Kotak Mahindra Banks is having the maximum number of peers followed by HDFC and SBI. The PTE of IndusInd Bank and Yes Bank was only 0.862 and 0.836 respectively as against the average (0.938) off all sampled banks under study. The low score of PTE puts them in the category of low performing banks. The position of these two banks is weaker in case of overall technical efficiency with scores of 0.804 and 0.821 respectively as against the mean score of 0.914.The Federal Bank is also an inefficient bank, though performing better than IndusInd and Yes Bank, and hence, need an orientation in its policies.

TABLE 1: EFFICIENCY SCORES OF SAMPLED BANKS

S. No.	Bank Name	OTE	PTE	SE	RTS	Peer Count
1	State Bank of India	**0.969**	**1.000**	**0.969**	**drs**	**4**
2	Punjab National Bank	**0.966**	**0.982**	**0.984**	**drs**	**0**
3	Canara Bank	**0.869**	**0.890**	**0.977**	**drs**	**0**
4	Bank of Baroda	**1.000**	**1.000**	**1.000**		**0**
5	IDBI Bank Ltd.	**0.868**	**0.905**	**0.959**	**drs**	**0**
6	UCO Bank	0.820	0.830	0.988	drs	0
7	Vijaya Bank	0.795	0.807	0.984	irs	0
8	Syndicate Bank	0.944	0.958	0.986	drs	0
9	ICICI Bank	**1.000**	**1.000**	**1.000**		**1**
10	Axis Bank	**1.000**	**1.000**	**1.000**		**1**
11	Kotak Mahindra Bank	1.000	1.000	1.000		9
12	HDFC Bank	1.000	1.000	1.000		7
13	Federal Bank	0.877	0.944	0.929	irs	0
14	IndusInd Bank	0.804	0.862	0.932	irs	0
15	Yes Bank	0.821	0.836	0.982	irs	0
16	ING Vysya Bank	0.899	1.000	0.899	irs	3
	Mean Efficiency	0.914	0.938	0.974		

Source: Authors' Calculations and bold figures denote the performance of the downgraded banks.

TABLE – 2: ACTUAL AND TARGET VALUES OF INPUTS AND OUTPUTS (all amounts are in crore rupees)

		Output						**Input**			
S. No.	**Bank Name**	**Advances Actual**	**Advances Target**	**Investment Actual**	**Investment Target**	**Interest Income Actual**	**Interest Income Target**	**Interest Expended Actual**	**Interest Expended Target**	**Deposits Actual**	**Deposits Target**
1	**State Bank of India**	756719	756719	295601	295601	81394	81394	48868	48868	933933	933933
2	**Punjab National Bank**	242107	242107	77724	**101564.379**	26986	**28253.615**	15179	**14899.915**	312899	**307145.95**
3	**Canara Bank**	212467	212467	83700	**88238.676**	23064	**24184.177**	15241	**13557.086**	293973	**261493.168**
4	**Bank of Baroda**	228676	228676	71261	71261	21886	21886	13084	13084	305439	305439
5	**IDBI Bank Ltd.**	157098	157098	68269	**97432.182**	18601	**19107.243**	14272	**12235.828**	180486	**163385.763**
6	**UCO Bank**	99071	99071	42927	**44862.745**	11371	**12183.89**	7526	**6248.959**	145278	**120626.659**
7	**Vijaya Bank**	48719	48719	25139	25139	5844	**6612.255**	3897	**3146.134**	73248	**55892.822**
8	**Syndicate Bank**	106782	106782	35068	**47732.823**	11451	**12962.609**	7068	**6768.612**	135596	**129852.386**
9	**ICICI Bank**	216366	216366	134686	134686	25974	25974	16957	16957	225602	225602
10	**Axis Bank**	142408	142408	71992	71992	15155	15155	8592	8592	189238	189238
11	**Kotak Mahindra Bank**	29329	29329	17121	17121	4304	4304	2058	2058	29261	29261
12	**HDFC Bank**	159983	159983	70929	70929	19928	19928	9385	9385	208586	208586
13	**Federal Bank**	31953	31953	14538	**15913.547**	4052	4052	2305	**2175.288**	43015	**38240.209**
14	**IndusInd Bank**	26166	**27016.243**	13551	**14657.613**	3589	**3653.827**	2213	**1908.581**	34365	**29637.777**
15	**Yes Bank**	34364	34364	18829	18829	4042	**4815.699**	2795	**2335.588**	45939	**37030.88**
16	**ING Vysya Bank**	23602	23602	11021	11021	2694	2694	1688	1688	30194	30194

Source: Actual Amounts have been taken from RBI Website, and Targeted Amounts have been calculated by the Authors, and the bold figures indicate the slacks in the performance sampled banks.

It was further found through **Table 2** that the desired amount of outputs was not attained by the banks with the inputs and hence, slacks were noticed. Surprisingly, no slacks were noticed in any output or input in case of SBI and hence, can safely be said that, absolutely there is no problem with the bank as far as the ratings of the Fitch agency are concerned. A little bit problems in efficiency are due to the policies of Government of India to expand the operations of the bank to attain the targets of financial inclusions and upliftment of the poor. It is clear from the **Table 2** that PNB was unable to generate the required amount of 'investment', given the amount of inputs; the actual amount of investment made by bank was Rs. 77724 crores only as against the targeted amount of Rs. 1,01,564.379 crores as per the analysis, which is significantly low. A down performance was also observed in 'interest income', though the difference is not as big as in case of 'investment'. The bank was able to balance the amount of 'advances' only in the form of output. Under performance was also noticed in both the inputs of the bank, and it is indicated that the bank must have introduced both inputs- 'interest expended' and 'deposits' as Rs. 14,899.915 and Rs. 307145.95 crores as against the actual amounts of Rs. 15179 and Rs. 312899 crores respectively, to be at the perfect level of efficiency and hence, a negative performance was observed. Canara bank, IDBI bank, UCO bank and Syndicate bank, followed the suit with Rs. 88238.67, Rs. 97432.182, Rs. 44862.745, Rs. 47732.823 crores targeted amount of 'investment' as against the actual amount of Rs. 83,700, Rs. 68269, Rs. 42927 and Rs. 35068 crores, respectively. Vijaya bank showed no slack in output. On the other hand, the bank employed 'interest expended' as actual input Rs. 15,241, Rs. 14,222, Rs. 7526, Rs. 7068 crores against a low targeted of Rs. 13557.086, Rs. 12235.828, Rs. 6248.959 and Rs. 6768.612 crores, respectively. Similarly slacks were also noticed in case of 'deposits' for the banks. Vijaya bank also joined the fleet of slacks in inputs with other public sector banks towards the downgraded rating. The Bank of Baroda, albeit, a small bank in comparison to grand SBI; performed nicely and no slacks in any input/output were observed.

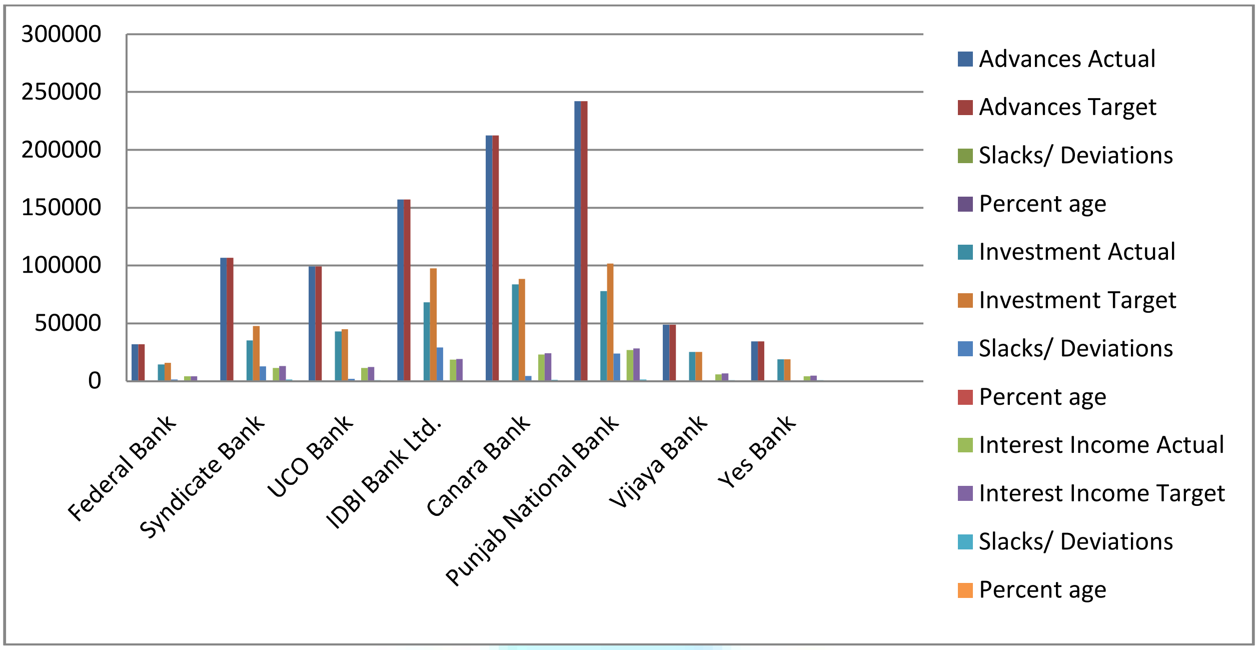
Contrary to the public sector banks, the sampled private sector banks, particularly, the ICICI bank and Axis bank (which were downgraded by Fitch agency) showed wonderful results without any slacks, except the Federal, IndusInd and Yes bank which showed an underperformance in utilisation of the inputs, to generate the output in line with their counterpart public sector banks. The results of ICICI and Axis bank, through **Table 2,** definitely defy the charges levied on them by the rating agency, with the help of their robust performance. The IndusInd is the only bank (among all sampled banks) showing performance below targets in case of each output and input, though the amounts of slacks are not so big as in case of public sector banks particularly. The 'investment' of Federal bank was Rs.14538 crores as against the targeted amount of Rs. 15913.547 crores. The 'interest expended' and 'deposits' were in excess, in the form of inputs, with Rs. 2305 and Rs.43015 crores as against the targeted amount of Rs. 2175.288 and Rs. 38240.209 crores respectively, hurting the efficiency of the bank. The Yes bank was also in the same tracks with Federal bank showing almost the same results except an extra slack in 'investment' of the later. The ING Vysya bank confirmed its solidarity with the top performer banks under study with its par excellence performance having no deviation in any output and input. On the other hand, significant slacks were observed in the output of 'investment' and 'interest income' in case of PNB, IDBI and Syndicate Bank, which cause a serious challenge before the management of the banks and hence, they should not ignore the downgrading by the credit rating agencies. Among private sector banks, IndusInd Bank is in problem due to not being capable of generating targeted amount of all three outputs. Federal Bank and Yes Bank are only other private sector banks having little problem in the output of 'investment' and 'interest income' respectively. Hence, it can safely be concluded that Indian private sector banks are performing efficiently and the credit rating assessments do not suit their performances. Only IDBI (interest expended) and Vijaya Bank (deposits) have input slack problems, otherwise all other banks have perfectly deployed their inputs. As far as the private sector banks are concerned, again Federal Bank and Vijaya Bank are having problem in input installation (deposits only) otherwise other banks are efficient enough to handle their inputs.

A bank-wise statement was prepared [**Table 3(a)]** to see the slacks in outputs and the per cent slacks to the actual outputs (taking them as the base). IndusInd is the only bank among all sampled banks under study which is showing slacks in each of the three outputs. It is clear from **Table 3(a)** that the actual 'advances' of the bank are Rs.26166 crores against a target of Rs.27016.243 crores showing a deficiency of 3.25 per cent in target achievement. No other bank having slacks in outputs is deficient in 'advances'**.** As far as the slacks in 2nd output (Investment) are concerned, IDBI bank tops the list with 42.72 per cent deficiency, followed by Syndicate Bank (36.12 per cent) and PNB (30.67 per cent). Vijaya Bank and Yes Bank have no deviations between their actual and targeted performance. The IndusInd Bank, Federal Bank, Canara Bank and UCO Bank showed insignificant deviations in comparison to IDBI, Syndicate and PNB.

TABLE 3 (a): BANK-WISE SLACKS IN OUTPUTS (Amount in Rs. Crore)

		Output I				Output II				Output III			
S.No	Bank Name	Advances Actual	Advances Target	Slacks/ Deviations	Percent age	Investment Actual	Investment Target	Slacks/ Deviations	Percent age	Interest Income Actual	Interest Income Target	Slacks/ Deviations	Percent age
1	**IndusInd Bank**	26166	27016.24	850.243	3.25	13551	14657.613	1106.613	8.17	3589	3653.83	64.827	1.81
2	**Federal Bank**	31953	31953	0	0	14538	15913.547	1375.547	9.46	4052	4052	0	0
3	**Syndicate Bank**	106782	106782	0	0	35068	47732.823	12664.823	36.12	11451	12962.6	1511.609	13.20
4	**UCO Bank**	99071	99071	0	0	42927	44862.745	1935.745	4.51	11371	12183.9	812.89	7.15
5	**IDBI Bank Ltd.**	157098	157098	0	0	68269	97432.182	29163.182	42.72	18601	19107.2	506.243	2.72
6	**Canara Bank**	212467	212467	0	0	83700	88238.676	4538.676	5.42	23064	24184.2	1120.177	4.86
7	**PNB**	242107	242107	0	0	77724	101564.38	23840.379	30.67	26986	28253.6	1267.615	4.70
8	**Vijaya Bank**	48719	48719	0	0	25139	25139	0	0	5844	6612.26	768.255	13.15
9	**Yes Bank**	34364	34364	0	0	18829	18829	0	0	4042	4815.7	773.699	19.14

FIGURE 1: BANK-WISE SLACKS IN OUTPUTS



Federal Bank showed no deviations in output III (Interest Income) and contrary to this, Yes Bank showed the highest deviation of 19.14 per cent followed by Vijaya Bank (13.15 per cent), Syndicate Bank (13.20 per cent) and UCO Bank (7.15 per cent). The deviations shown by remaining four banks are smaller in percentage. The position regarding the variations in outputs of the banks can be visualised and understood easily with the help of Figure 1 also. From the above discussion, it is suggested that the IDBI Bank, Syndicate Bank and PNB should take immediate steps to eliminate the deviations in 'investment' output; Yes Bank, Vijaya Bank, Syndicate Bank and UCO Bank should strive to optimise output III (interest income); and the IndusInd Bank is required to make planning and policies to bring out a change capable of correcting the variations (-ve) in all the three outputs under study, so as to make it a competitive bank.

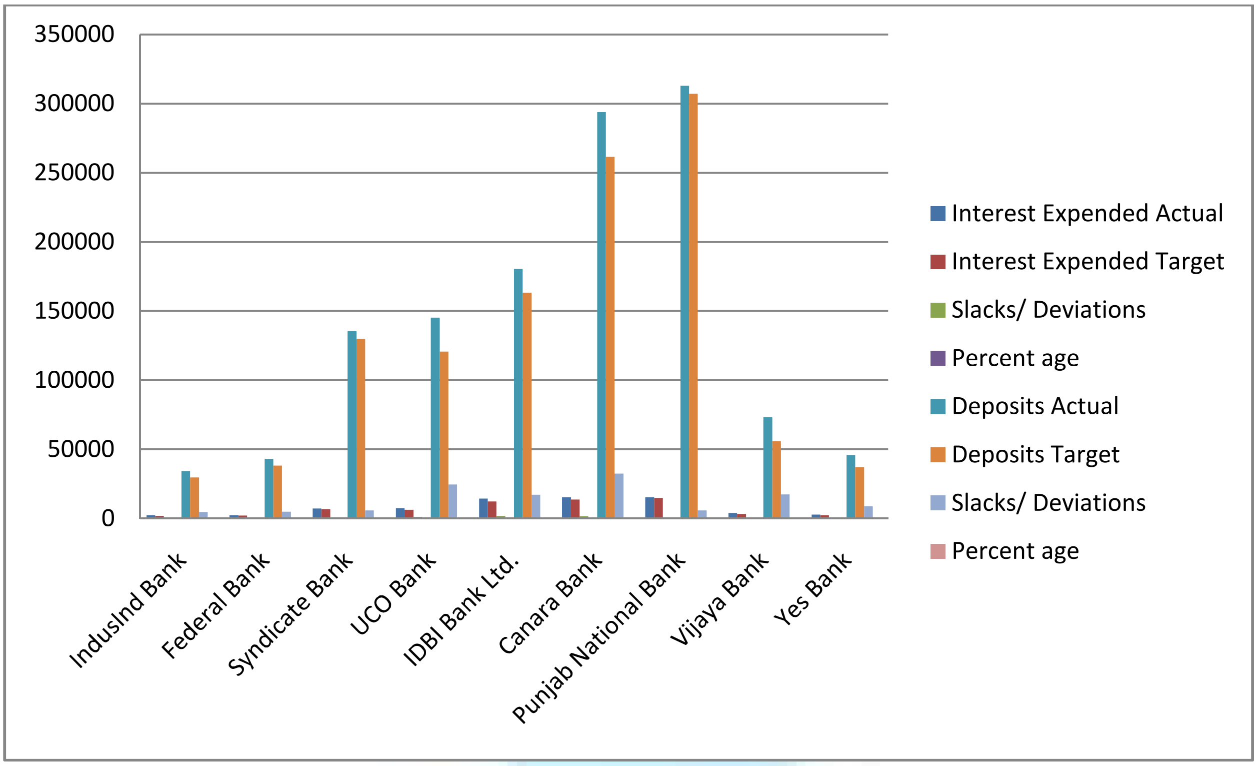
Since, the inputs are the generators of outputs, therefore, it is essential to make a proper selection and utilisation of them. 'Interest expanded' and 'deposits' are the inputs of the banks under study. It was observed through **Table 3(b)** that Vijaya Bank noticed the highest gap in input I (interest expanded) of 19.27 per cent, followed by UCO Bank (16.97 per cent), Yes Bank (16.44 per cent), IDBI Bank Ltd.(14.27 per cent), IndusInd Bank (13.76 per cent) and Canara Bank (11.05 per cent) respectively. The lowest gap of 1.84 per cent was observed in case of PNB for input I, followed by Syndicate Bank (4.24 per cent) and Federal Bank (5.63 per cent). Punjab National Bank (Rs.14899.915 crores), Canara Bank (Rs.13557.086 crores) and IDBI Bank (Rs.12235.828 crores) were the trouble-most banks in absolute amount of slacks.

TABLE 3 (b): BANK-WISE SLACKS IN INPUTS (Amount in Rs. Crore)

		Input I				Input II			
S. No	**Bank Name**	**Interest Expended Actual**	**Interest Expended Target**	**Slacks/ Deviations**	**Percent age**	**Deposits Actual**	**Deposits Target**	**Slacks/ Deviations**	**Percent age**
1	**IndusInd Bank**	2213	1908.581	304.419	13.76	34365	29637.78	4727.223	13.76
2	**Federal Bank**	2305	2175.288	129.712	5.63	43015	38240.21	4774.791	11.10
3	**Syndicate Bank**	7068	6768.612	299.388	4.24	135596	129852.4	5743.614	4.24
4	**UCO Bank**	7526	6248.959	1277.041	16.97	145278	120626.7	24651.341	16.97
5	**IDBI Bank Ltd.**	14272	12235.828	2036.172	14.27	180486	163385.8	17100.237	9.47
6	**Canara Bank**	15241	13557.086	1683.914	11.05	293973	261493.2	32479.832	11.05
7	**PNB**	15179	14899.915	279.085	1.84	312899	307146	5753.05	1.84
8	**Vijaya Bank**	3897	3146.134	750.866	19.27	73248	55892.82	17355.178	23.69
9	**Yes Bank**	2795	2335.588	459.412	16.44	45939	37030.88	8908.12	19.39

Source: Authors' Calculations

FIGURE 2: BANK-WISE SLACKS IN INPUTS



Similarly, Vijaya Bank, with highest variation of 23.69 per cent in input II topped the list of defaulters, followed by Yes Bank (19.39 per cent), UCO Bank (16.97 per cent), IndusInd Bank (13.76 per cent), Federal Bank (11.10 per cent), Canara Bank (11.05 per cent) and IDBI Bank (9.47 per cent). Again, PNB is the bank with least variations (1.84 per cent only) followed by Syndicate Bank (4.24 per cent). The Canara Bank (Rs.32479.832 crores) followed by UCO Bank (Rs.24651.341 crores) and Vijaya Bank (Rs.17355.178 crores) are the most disturbed banks as far as input II and the absolute figures of slacks are concerned. The position regarding the inputs' variations can easily be analysed with the help of figure 2. Therefore, it is suggested from the analysis made that the banks having high variations in inputs should take immediate measures to control them, and to bring the banks back on the path of progress by attaining perfect efficiency level.

CONCLUSION AND SUGGESTIONS

It was found through the study that SBI, Bank of Baroda, ICICI Bank and the HDFC Bank, which were downgraded by 'Fitch Rating Agency', are performing with perfect efficiency levels at OTE, PTE and SE front (SBI missed the perfection limit of OTE and SE by 3.1 per cent). The PNB is also performing with very high levels (more than 96 per cent) of efficiencies, where there can be no risk; but definitely, Canara, UCO and Vijaya Bank, are underperformers (performing below the mean score of sampled banks at all the three levels of efficiency measurement) and hence, attracted the warning. The efficiency of banks depends on the judicious use of inputs to generate outputs, but some serious slacks were observed in inputs- 'interest expanded' and 'deposits' in case of Vijaya Bank, Yes Bank, UCO Bank, Canara Bank and IndusInd Bank; similarly some serious variations in outputs of 'investment' and 'interest income' were noticed in case of Syndicate Bank, IDBI, PNB, Vijaya Bank and Yes Bank which ultimately led to inefficiency of the banks under study. Hence, the banks are required to rationalise their disturbed permutations and combinations of inputs and outputs highlighted through the study to attain a position of equilibrium. The smaller private sector banks, like Federal Bank, IndusInd Bank, Yes Bank and ING Vyasa Bank, though, are facing problem of low efficiencies which do not seem to be serious enough, as they are performing at a level of more than 80 per cent of efficiency. The Indian banking system has a sound base in the form of deposits with Central Government and RBI (about 24 per cent – 28 per cent in the form of SLR (Statutory Liquidity Ratio) and 4.75 per cent as CRR (Cash Reserve Ratio), the practice which is not generally followed throughout the globe. That is why, the statement made by financial services secretary D. K. Mittal, 'The Indian Banking Sector is safe, sound, strong and ready to face any global crisis and the rating agencies have no business to say that the Indian financial institutions are in bad shape', stands justified on the basis of the results derived from the analysis.

On the basis of above discussion, it is suggested that the Indian banking system needs an improvement in general, and the public sector banks in particular, as there is a scope of increasing overall, technical and scale efficiency of the banks. The public sector banks should curtail their scale while private sector banks should enhance their scale for better efficiencies. Hence, it can safely be concluded that the Indian Banking system is passing through a serious phase with good economic health and performance.

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COGNITIVE STYLES AND MULTI-MEDIA LEARNING: A QUASI-EXPERIMENTAL APPROACH

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ABSTRACT

This paper describes an investigation into the relationship between users' cognitive styles and their performance on a multi-media application. The application was used to present information in form of picture and words by using VICS and ECSA-WA tests. The investigator looked at the preference, correlation and differences between Verbal-Imagery and Wholist-Analytic dimensions of cognitive styles in the areas of application of multi-media presented either as text or as picture. Initially, it is found that all the participants little prefer the imagery and analytic dimensions for learning. Further, significant correlation is found in Verbal-Imagery (in pre and post-test sessions) and Wholist-Analytic (in post-test session) dimensions of cognitive styles among participants. And it is also found that there is a significant difference through paired t-test statistic between users towards verbal (p=.003, df=9) and imagery (p=.036, df=9) dimensions of cognitive styles during pre and post-test sessions. Further, it is also found that there no significance difference towards VI and WA dimensions of cognitive styles in pre-test and post-test sessions of multi-media learning software due to different genders and ages of the participants but it emerged due to multi-media learning.

KEYWORDS

Cognitive, Learning, Multi-media, Quasi-experimental, Ratio, VICS and ECSA-WA.

INTRODUCTION

Cognitive style is seen as an individual's preferred and habitual approach to organizing and representing information. They concluded that the various style labels could be grouped into two principal dimensions; the Wholist-Analytic (WA) and the Verbal-Imagery (VI), which may be summarised as: (i) The Wholist-Analytic dimension of whether an individual tends to organize information in wholes or parts; and (ii) The Verbal-Imagery dimension of whether an individual is inclined to represent information during thinking verbally or in mental pictures (Riding and Rayner, 2005). The two basic dimensions may be assessed by using the computer-presented Cognitive Styles Analysis test (CSA-test). It directly assesses both ends of the Wholist-Analytic and Verbal-Imagery dimensions, and comprises three subtests. The first assesses the Verbal-Imagery dimension by presenting verbal statements one at a time to be judged true or false. Half of the statements contain information about conceptual categories while the rest describe the appearance of items. Half of the statements of each type are true. It is assumed that imagers respond more quickly to the appearance statements, because the objects can be readily represented as mental pictures and the information for the comparison can be obtained directly and rapidly from these images. In the case of the conceptual category items, it is assumed that verbalisers have a shorter response time because the semantic conceptual category membership is verbally abstract in nature and cannot be represented in visual form. The computer records the response time to each statement and calculates the Verbal-Imagery Ratio. A low ratio corresponds to a Verbaliser and a high ratio to an Imager, with the intermediate position being described as Bimodal. It may be noted that in this approach individuals have to read both the verbal and the imagery items so that reading ability and reading speed are controlled. The second two subtests assess the Wholist-Analytic dimension. The first of these presents items containing pairs of complex geometrical figures which the individual is required to judge either the same or different. Since this task involves judgments about the overall similarity of the two figures, it is assumed that a relatively fast response to this task is possible by wholists. The second presents items each comprising a simple geometrical shape (e.g., a square or a triangle) and a complex geometrical figure, and the individual is asked to indicate whether or not the simple shape is contained in the complex one by pressing one of the two marked response keys. This task requires a degree of dis-embedding of the simple shape within the complex geometrical figure in order to establish that it is the same as the stimulus simple shape displayed, and it is assumed that Analytics are relatively quicker at this. Again the computer records the latency of the responses, and calculates the Wholist-Analytic Ratio. A low ratio corresponds to a Wholist and a high ratio to an Analytic. Ratios between these positions are labelled Intermediate. Each of the cognitive style dimensions is a continuum, and labels are only attached to ranges on a dimension for descriptive convenience. The dimensions are independent of one another, in as much as position on one dimension does not influence position on the other. Hence, the present paper will focus on aspects particularly relevant to cognitive styles and learning performance of students towards multi-media.

REVIEW OF LITERATURE

Smith, Eugene Sadler and Riding, Richard (1999) investigated the relationship between learners' cognitive styles and their instructional preferences by taking a sample of 240 business studies students at University of Plymouth, UK. They assessed the subjects cognitive by using the Cognitive Styles Analysis (WA and VI dimensions of style) and their instructional preferences by using an instructional preferences inventory consisted of three sub-inventories (instructional method, instructional media and assessment method). They found that most of the subjects favoured dependent methods, print based media and informal assessment methods. They also found that there is a significant impact of WA style on collaborative method preference like role play, group discussions and business games and non-print based media preference like overhead transparencies, slides and videos. Further, authors also found an interaction of the two dimensions of style and gender in their effect on informal assessment method preferences such as individual and group assignments and multiple choice and short answer type questions.

Davies and Graff (2006) explored the influence of a reflective–impulsive approach on wholist and analytic processing, by counterbalancing presentation of the embedded figures and matching figures subtests of Riding's cognitive styles analysis (CSA) among 193 participants. They revealed that the wholist–analytic ratio is extremely sensitive to the order in which each subtest was presented. They noticed the higher ratios for the matching figures subtest as they were presented first but lower ratios for embedded figures subtest when they were presented first. Therefore, they concluded significant interaction between the presentation order of the subtests and individual differences in reflective–impulsive style. According to them, reflective individuals were found significantly more analytic than the impulsive individuals when the matching figures subtest was presented first and were marginally but not significantly more wholist when presentation order was reversed.

Massa and Mayer (2006) studied 52 college students recruited from the Psychology Subject Pool at the University of California, Santa Barbara, with 26 students serving in the pictorial group and 26 in the text group by using four cognitive style measures (Verbal-Visual Learning Style Rating, Verbalizer-Visualizer Questionnaire, Santa Barbara Learning Style Questionnaire, and the Learning Scenario Questionnaire), the three learning preference measures (Multimedia Learning Preference Questionnaire, Multimedia Learning Preference Test Choice Scale, and Multimedia Learning Preference Test Preference Scale), and the three general achievement measures (SAT-Math, SAT-Verbal, and the vocabulary test). They found that the cognitive style factor was significantly correlated with the learning preference factor, and with the spatial ability factor whereas, only the learning preference factor correlated significantly with the cognitive style factor.

Barker, *et al.* (1999) investigated the relationship between a users' cognitive style and their performance on a multimedia application. The application was designed to present information in users' preferred and non-preferred cognitive style. They considered the difference in performance between Verbalisers, Bimodals and Imagers in areas of the application that presented information either as text and narrative or as a succession of images. And the ivetigators found that there is no significant difference between users in supported and non-supported areas of the application, although the differences were approaching significance ($p=0.067$). But, after exclusion of Bimodals, a significant difference was found ($p<0.01$) by the researchers. They also found that verbalisers and imagers liked most to select a presentation in a matched cognitive style and the potential for the individual configuration of multi-media.

Debasri (2011) tried to find out whether Cognitive Style has any determining effect on creativity by taking a sample of 567 Students (300 boys and 267 girls) of class VII and VIII of secondary schools in Kolkata by using three standardized tests and oneself-made information schedule. The scholar found that there is a positive and significant correlation between creativity and cognitive style.

After reviewing the above said literature and considering the future directions of **Mayer and Massa (2003)** it becomes pertinent to determine relationship among cognitive ability, cognitive style, and learning preference of individual differences alongwith verbal, imagery, wholist and analytic dimensions with multimedia learning. Further, it is also important to establish that the measures of ability and preference are correlated with measures of learning outcome through multimedia sessions.

OBJECTIVES AND METHODOLOGY

The present study restricted itself for learning preference to individual differences along the Verbal-Imagery and Wholist-Analytic dimensions of cognitive style within a multimedia learning environment.

OBJECTIVES

The objectives of the study are to: (i) know the preference of participants towards Verbal-Imagery and Wholist-Analytic dimensions of cognitive styles during multi-media learning; and (ii) to synthesis the relationship between Verbal-Imagery and Wholist-Analytic dimensions of cognitive styles with multi-media learning.

HYPOTHESIS

The study attempts to validate the results through following hypothesis:

H_1: There is no significant correlation between verbal and imagery dimensions of cognitive styles during pre-test and post-test sessions among the participants.

H_2: There is no significant correlation between wholist and analytic dimensions of cognitive styles during pre-test and post-test sessions among the participants.

H_3: There is no significant correlation between the pre-test and post-test scores on verbal dimension of cognitive styles among the participants.

H_4: There is no significant correlation between the pre-test and post-test scores on imagery dimension of cognitive styles among the participants.

H_5: There is no significant correlation between the pre-test and post-test scores on wholist dimension of cognitive styles among the participants.

H_6: There is no significant correlation between the pre-test and post-test scores on analytic dimension of cognitive styles among the participants.

H_7: There is no significant difference among the participants towards pre-test and post-test scores for between and within verbal-imagery dimension of cognitive styles.

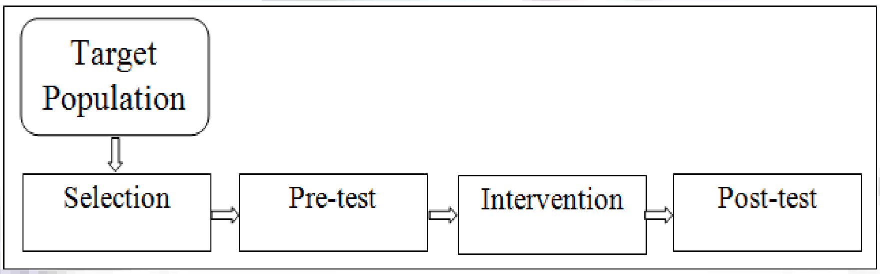
H_8: There is no significant difference among the participants towards pre-test and post-test scores for between and within wholist-analytic dimension of cognitive styles.

H_9: There no significance difference towards verbal-imagery and wholist-analytic dimensions of cognitive styles in pre-test and post-test sessions due to different genders and ages of the participants.

RESEARCH DESIGN AND SAMPLING PLAN

The present study is quasi-experimental study in nature. In this study an evaluation is done to determine whether a program (VICS and Extended CSA-WA software) or intervention (Multi-media learning with picture and word) has the intended effect on a study's participants in terms of Verbal-Imagery and Wholist-Analytic dimensions of cognitive styles. In the study 'pre-post test design without a control group' is used. Being the pre-post test design the data is collected from 10 elementary school students' level of performance before the intervention took place (*i.e.* pre) and after the intervention took place (*i.e.* post). The study design looked at one group of individuals who receive the intervention, which was called the treatment group because, the pre-post test design allowed to make inferences on the effect of intervention by looking at the differences in the pre-test and post-test results. On the basis of these results the relationship between cognitive styles and multi-media learning is established (Exhibit 1).

EXHIBIT 1: PRE-POST TEST DESIGN WITHOUT A CONTROL GROUP



To select a sample of 10 students from the elementary schools the convenience as well as purposive sampling were used. To execute the sampling plan Verbal Imaginary Cognitive Styles Test (VICS) and the Extended Cognitive Styles Analysis Wholistic-Analytic (CSA-WA) and Foot-in Door Strategy' (FIDS) for face to face interaction with students was done.

DATA COLLECTION

To know the background information of the participants in the study, or information about prior interventions they have received; the data was collected through well structured questionnaire including demographic and other details of the participants. Further, the Verbal Imaginary Cognitive Styles Test (VICS) and the Extended Cognitive Styles Analysis Wholistic-Analytic (CSA-WA) were conducted in a relaxed and distraction-free room and participants were assessed individually by the researcher. No information about how the tests actually measure styles was given prior to conduct the test (pre-test). Strictly after a gap of one-week post-test outcomes were collected from the participants of treatment group. Finally, the researcher collected outcome data in quantitative nature in order to be able to analyze it. The quantitative data include test scores, observations (how many times each participant complete the tests), data on how users interacted with software, and survey responses. Qualitative data was also collected from the participant through personal interviews so that the said information could explain the quantitative results.

DATA ANALYSIS AND INTERPRETATION

After collecting the data in forms of qualitative and quantitative in nature, the data was analysed and interpreted accordingly. Most of them calculation were made with the help of the computerized packages namely Statistical Package for Social Sciences (SPSS 16.0 version) and Microsoft Excel 2007. Interpretation of data was based on rigorous exercise aiming at the achievement of the objectives of the study and findings of the existing studies. The statistical tools and techniques used in the present study are Mean, Median, S. D., Maxima, Minima, correlation coefficient and *t*-test and ANOVA were used to validate the results or to test the hypothesis.

VALIDITY AND RELIABILITY

In order to strengthen internal validity, the present study tend to focus on specific population *i.e.* effect of VICS and CSA-WA tests on elementary school students' learning scores in Sirsa City. To assess the internal consistency or homogeneity among items available in the research instrument, Cronbach's alpha coefficient was applied. The coefficient varies from 0 to 1 and a value of 0.6 or less generally indicates unsatisfactory internal consistency reliability. In the present study, the Cronbach's alpha coefficient scores were calculated for Verbal-Imagery and Wholist-Analytic dimensions of cognitive styles and the reliability scores for most of dimensions indicated that the scores collected from these tests were reliable and suitable for further analysis (Table 1).

TABLE 1: RELIABILITY SCORES FOR DIFFERENT DIMENSIONS OF THE COGNITIVE STYLES

Description	Items	Cronbach's alpha
Pre-Mean and Post-Mean Scores for Verbal Dimension	2	0.924
Pre-Mean and Post-Mean Scores for Imagery Dimension	2	0.856
Pre-Mean and Post-Mean Scores for Wholist Dimension	2	0.608
Pre-Mean and Post-Mean Scores for Analytic Dimension	2	0.449
Pre-Median and Post-Median Scores for Verbal Dimension	2	0.682
Pre-Median and Post-Median Scores for Imagery Dimension	2	0.812
Pre-Median and Post-Median Scores for Wholist Dimension	2	0.669
Pre-Median and Post-Median Scores for Analytic Dimension	2	0.457

Source: Survey through VICS and ECSA-WA (Data processed through SPSS 16.0 version).

RESULTS AND DISCUSSIONS

Table 2 depicts the ratios calculated by the VICS and Extended CSA-WA test during pre-test and post-test sessions of it.

TABLE 2: PRE-TEST AND POST-TEST VERBAL-IMAGERYAND WHOLIST-ANALYTIC RATIOS

Pre-test-V/I Ratio	Post-test-V/I Ratio	Pre-test-W/A Ratio	Post-test-W/A Ratio
0.802	0.809	1.443	0.963
1.127	1.146	1.082	1.063
1.680	1.362	1.877	2.088
0.959	0.988	0.883	0.910
0.696	0.723	1.231	1.135
0.796	0.771	1.195	0.897
1.195	1.162	1.092	0.985
1.055	0.992	0.726	0.929
1.179	1.667	1.762	0.823
1.335	1.571	0.844	1.199

Source: Survey through VICS and ECSA-WA.

TABLE 3: DESCRIPTIVE STATISTICS FOR DIFFERENT DIMENSIONS OF THE COGNITIVE STYLES

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Verbal-Imagery Ratio	10	.70	1.68	1.0824	.29266
Post-Test Verbal-Imagery Ratio	10	.72	1.67	1.1191	.32889
Pre-Test Wholist-Analytic Ratio	10	.73	1.88	1.2135	.38150
Post-Test Wholist-Analytic Ratio	10	.82	2.09	1.0992	.36573

Source: Survey through VICS and ECSA-WA (Data processed through SPSS 16.0 version).

Table 3 depicts that the mean values for Verbal-Imagery ratios of the 10 participants during the pre-test are 1.08 (S.D.=0.29) and post-test are 1.12 (S.D.=0.32), respectively which goes to the closer to 1, therefore, it may be concluded that the participants have a little tendency to prefer the imagery dimension of cognitive styles.

Further, the table also analyse that the mean values for Wholist-Analytic ratios for pre-test are 1.21 (S.D.=0.38) and for post-test are 1.09 (S.D.=0.37), respectively which lies between 1 and 1.25. Hence, it may be concluded that the participants have little preference towards analytic dimension of the cognitive style during the multi-media learning.

TABLE 4: PAIRED SAMPLES CORRELATIONS FOR DIFFERENT DIMENSIONS OF THE COGNITIVE STYLES

		N	Correlation	Sig.
Pair 1	Pre-Mean V RT & Pre-Mean I RT	10	.644	.045*
Pair 2	Post-Mean V RT & Post-Mean I RT	10	.636	.048*
Pair 3	Pre-Mean W RT & Pre-Mean A RT	10	.488	.152
Pair 4	Post-Mean W RT & Post-Mean A RT	10	.747	.013*
Pair 1	Pre-Mean V RT & Post-Mean V RT	10	.887	.001*
Pair 2	Pre-Mean I RT & Post-Mean I RT	10	.806	.005*
Pair 3	Pre-Mean W RT & Post-Mean W RT	10	.457	.184
Pair 4	Pre-Mean A RT & Post-Mean A RT	10	.289	.417

Notation used: V=Verbal, I=Imagery, W=Wholist, A=Analytic and RT=Response Time.
*significant correlation at 0.05 level.

Source: Survey through VICS and ECSA-WA (Data processed through SPSS 16.0 version).

Table 4 is prepared on the basis of mean scores achieved by the 10 participants during pre-test session and post-test session of multi-media learning software and then correlation coefficients are calculated. And it is found that there is significant correlation among participants towards verbal-imagery dimensions of cognitive styles during pre-test and post-test sessions and rejects the null hypothesis that there is no significant correlation between verbal and imagery dimensions of cognitive styles during pre-test and post-test sessions among the participants………………………………………H_1.

On the other hand, there is no significant correlation between wholist-analytic dimensions among the participants during pre-test session by accepting the null hypothesis that there is no significant correlation between wholist and analytic dimensions of cognitive styles during pre-test session among the participants. But, it is found significant in the post-test session of the multi-media learning software by rejecting the null hypothesis that there is no significant correlation between wholist and analytic dimensions of cognitive styles during post-test session among the participants. ……………………….H_2.

Moreover, it is also found that there is a significant correlation towards the verbal and imagery dimensions individually in the pre-test and post-test sessions of multi-media learning software and rejected the null hypotheses that there is no significant correlation between the pre-test and post-test scores on verbal as well as imagery dimensions of cognitive styles among the participants…………………………………………………H_{3-4}.

Whereas, there is no significant correlation between wholist and analytic dimensions individually among the participants during pre and post test sessions of the software by accepting the null hypotheses that there is no significant correlation between the pre-test and post-test scores on wholist as well as analytic dimension of cognitive styles among the participants………………………………………………………………..H_{5-6}.

TABLE 5: PAIRED SAMPLES TEST FOR DIFFERENT DIMENSIONS OF THE COGNITIVE STYLES

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-Mean V RT – Pre-Mean I RT	.17370	.93328	.29513	-.49393	.84133	.589	9	.571
Pair 2	Post-Mean V RT – Post-Mean I RT	-.01790	.70457	.22281	-.52192	.48612	-.080	9	.938
Pair 3	Pre-Mean W RT – Pre-Mean A RT	.39590	.57550	.18199	-.01579	.80759	2.175	9	.058
Pair 4	Post-Mean W RT – Post-Mean A RT	.22400	.48670	.15391	-.12416	.57216	1.455	9	.180
Pair 1	Pre-Mean V RT – Post-Mean V RT	.68780	.54496	.17233	.29796	1.07764	3.991	9	.003*
Pair 2	Pre-Mean I RT – Post-Mean I RT	.49620	.63856	.20193	.03940	.95300	2.457	9	.036*
Pair 3	Pre-Mean W RT – Post-Mean W RT	.24860	.67256	.21268	-.23252	.72972	1.169	9	.272
Pair 4	Pre-Mean A RT – Post-Mean A RT	.07670	.72875	.23045	-.44462	.59802	.333	9	.747

*significant correlation at 0.05 level.

Source: Survey through VICS and ECSA-WA (Data processed through SPSS 16.0 version).

Table 5 depicts that there is no significant difference among the participants within the verbal-imagery and wholist-analytic dimensions of cognitive styles in pre-test and post-test sessions of multi-media learning software. But, the significant difference is found towards the verbal (p=.003, df=9) and imagery (p=.036, df=9) dimensions individually in the pre-test and post-test sessions of multi-media learning software and rejects the null hypothesis that there is no significant difference among the participants towards pre-test and post-test scores on verbal-imagery dimension of cognitive styles………………H_7.

On the other side, there is no significant difference among the participant towards the preferences of wholist and analytic dimensions individually during pre and post sessions of the multi-media learning software and accepts the null hypothesis that there is no significant difference among the participants towards pre-test and post-test scores on wholist-analytic dimension of cognitive styles……………………………………..H_8.

TABLE 6: GENDER-WISE ANOVA VALUES FOR DIFFERENT DIMENSIONS OF THE COGNITIVE STYLES

		Sum of Squares	df	Mean Square	F	Sig.
Pre-Mean V RT	Between Groups	1.051	1	1.051	.778	.403
	Within Groups	10.803	8	1.350		
	Total	11.854	9			
Pre-Mean I RT	Between Groups	.585	1	.585	.497	.501
	Within Groups	9.419	8	1.177		
	Total	10.004	9			
Pre-Mean W RT	Between Groups	.419	1	.419	1.564	.246
	Within Groups	2.143	8	.268		
	Total	2.562	9			
Pre-Mean A RT	Between Groups	.941	1	.941	3.295	.107
	Within Groups	2.285	8	.286		
	Total	3.227	9			
Post-Mean V RT	Between Groups	1.171	1	1.171	1.558	.247
	Within Groups	6.011	8	.751		
	Total	7.181	9			
Post-Mean I RT	Between Groups	.410	1	.410	.787	.401
	Within Groups	4.165	8	.521		
	Total	4.574	9			
Post-Mean W RT	Between Groups	.068	1	.068	.119	.739
	Within Groups	4.602	8	.575		
	Total	4.670	9			
Post-Mean A RT	Between Groups	.001	1	.001	.002	.966
	Within Groups	3.497	8	.437		
	Total	3.497	9			

Source: Survey through VICS and ECSA-WA (Data processed through SPSS 16.0 version).

TABLE 7: AGE-WISE ANOVA VALUES FOR DIFFERENT DIMENSIONS OF THE COGNITIVE STYLES

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Pre-Mean V RT	Between Groups	6.339	5	1.268	.920	.548
	Within Groups	5.514	4	1.379		
	Total	11.854	9			
Pre-Mean I RT	Between Groups	4.073	5	.815	.549	.737
	Within Groups	5.931	4	1.483		
	Total	10.004	9			
Pre-Mean W RT	Between Groups	1.479	5	.296	1.093	.479
	Within Groups	1.083	4	.271		
	Total	2.562	9			
Pre-Mean A RT	Between Groups	1.753	5	.351	.952	.534
	Within Groups	1.473	4	.368		
	Total	3.227	9			
Post-Mean V RT	Between Groups	3.946	5	.789	.976	.524
	Within Groups	3.235	4	.809		
	Total	7.181	9			
Post-Mean I RT	Between Groups	.988	5	.198	.220	.936
	Within Groups	3.586	4	.897		
	Total	4.574	9			
Post-Mean W RT	Between Groups	2.229	5	.446	.731	.637
	Within Groups	2.441	4	.610		
	Total	4.670	9			
Post-Mean A RT	Between Groups	.583	5	.117	.160	.965
	Within Groups	2.915	4	.729		
	Total	3.497	9			

Source: Survey through VICS and ECSA-WA (Data processed through SPSS 16.0 version).

Table 6 and 7 depict that there is no significant difference among the participants towards verbal-imagery and wholist-analytic dimensions of cognitive styles in pre-test and post-test sessions of multi-media learning software in terms gender and age of participants. which also supports most of the results derived from *t*-test and accepts the null hypothesis that there no significance difference towards verbal-imagery and wholist-analytic dimensions of cognitive styles in pre-test and post-test sessions of multi-media learning software due to different genders and ages of the participants..........................H_9.

Therefore, it may be concluded that the significance difference in pre-test and post-test session in verbal (p=.003, df=9) and imagery (p=.036, df=9) dimensions of cognitive styles emerged due to multi-media learning among the participants.

CONCLUSIONS AND RECOMMENDATIONS

In total, it may be concluded that the students at elementary level in the schools prefer to learn by images with an analytic approach through multi-media pedagogies. Therefore, it may be recommended that the contents for multi-media learning be prepared by using pictures and they should be inserted in an analytic way not in wholist way. However, it is pertinent to mention that to get the deep knowledge of the subject or course verbal and wholist dimensions of cognitive style may also be used in the broad spectrum. Consequently, students may boost their knowledge and can build the understanding towards contents, object, things, etc.

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ROLE OF CREATIVE MANAGEMENT AND LEADERSHIP IN ENTREPRENEURSHIP DEVELOPMENT

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ABSTRACT
Management of creativity is both critical and crucial for the success of a corporate. The 21st century's corporate world is in great need of managerial competencies adequately augmented by leadership skills in equal measures. To achieve excellence in the field of creativity, role perception of the managers occupies a very important place. The managers have to simultaneously perform three major types of roles- as architect, as network builder and as a juggler. As an architect a manager uses strategy, structure, competency and culture to build a robust organisation to get today's work and tomorrow's innovation accomplished. As a network builder and politician, managers build cliques and coalitions in the service of innovation and creativity. Creativity in management and leadership may bring significant sea change in the entrepreneurship. The need of hour is to design and implement appropriate strategies to make optimum use of the resources for entrepreneurship development. . This paper will throw light on the contribution of creative management to entrepreneurship theory and also presents a review of leadership and its role in the success of entrepreneurship. The present paper studies the entrepreneurial issues, connection between creative management and entrepreneurship, creative leadership and entrepreneurship and patterns of inspiring creative leadership. The purpose of studying the relationship is to identify the ways that businesses use to create value, directly and indirectly for the benefit of the firm and for the benefit of the customers which may enhance and sharpen the entrepreneurship.

KEYWORDS
Entrepreneurship, Creativity, Leadership, Management, Role perception, Relationship, issues.

JEL CLASSIFICATION
L26, O31, M1, M21.

INTRODUCTION
Entrepreneurship is the propensity of mind to take calculated risks with confidence to achieve a pre-determined business or industrial objective. In substance, it is the risk-taking ability of the individual, broadly coupled with correct decision-making. The capacity to take risk independently and individually with a view to making profits and seizing and opportunity to make more earnings in the market-oriented economy is the dominant characteristic of modern entrepreneurship. Entrepreneurship is a process undertaken by an entrepreneur to augment his business interests. It is an exercise involving innovation and creativity that will go towards establishing his/her enterprise.. Managers are the leaders of industries. They lead their people to the ultimate destiny-success or failure. This is equally applicable to creativity management also. Pretorius, Millard and Kruger (2005) maintain that "creativity is clearly part and parcel of the entrepreneurial skills required to successfully start a venture" Entrepreneurs and their start-ups are considered to be "important agents of innovation" These entrepreneurs generate, develop and implement new ideas for their start-ups, foster a climate that is conducive to creativity and innovation, provide top-down support for creativity and innovation in their organizations, and offer innovative products and services through innovative methods of production and delivery. A change in the economy has been identified recently, moving from knowledge based activities to creativity, innovation, entrepreneurship and imagination (van den Broeck et al. 2008; Oke et al. 2009). Increasing globalization and technology effects have resulted in more business opportunities but the marketplace has also become more crowded and competition has increased (McMullan and Shepherd 2006). Creativity enables the entrepreneur to act on these opportunities in ways which can result in competitive advantage for the organization. It can provide the basis for innovation and business growth, as well as impacting positively on society generally (Bilton 2007). Drazin, Glynn and Kazanjian (1999) suggested that multi-level theorizing about creativity in organizations would benefit from a sense-making perspective. Woodman, Sawyer and Griffin (1993) also proposed a conceptual framework at the organizational level. At the level of the team, there has been a growth of interest in the creative manager as team leader or facilitator.

ENTREPRENEURAL ISSUES
Entrepreneurship is a composite skill, the resultant of a mix of many qualities and traits-these include tangible factors as imagination, readiness to take risks, ability to bring together and put to use other factors of production, capital, labour, land as also intangible factors such as the ability to mobilize scientific and technological advances. One of the qualities of entrepreneurship is the ability to discover an investment opportunity and to organize an enterprise, thereby contributing to real economic growth. It involves taking of risks and making the necessary investments under conditions of uncertainty and innovating, planning, and taking decisions so as to increase production in agriculture, business industry etc. Some issues felt to be relevant in this connection have been narrated after grouping them in certain broad categories

MANAGERIAL AND LEADERSHIP ISSUES
Management and leadership are important for the success of the entrepreneurship; but both may involve different types of outlook, skills, and behaviours. Good managers should strive to be good leaders and good leaders, need management skills to be effective. Leaders will have a vision of what can be achieved and then communicate this to others and evolve strategies for realizing the vision. Managers must utilized the scarces resources in a very optimum way to produce the best results. A manager must also be a leader to achieve optimum results. Leadership development is a never-ending process that involves multiple levels of the organization. Ultimately, the best approach to managerial leadership development is to focus on the organization's leadership requirements in the decade ahead rather than simply on those of today.

WORK ENVIRONMENT ISSUES
Work environment plays a very crucial role in the creative endeavor of people. Open, supportive and co-operative environment is conducive to free talking, sharing of knowledge, mutual trust and confidence building which in turn help creativity and innovation as people do not feel shy to express their ideas because they know that they will not be criticized even if their ideas are proved to be wrong or are otherwise not acceptable. Lee et al. (2004) note that entrepreneurial

activity not only requires both a supportive and productive business climate but that it also needs an environment where creativity and innovation can flourish. Having a strong and diverse knowledge base, well developed business and social networks and an ability to identify opportunities also contribute to successful entrepreneurial behaviour (Harryson 2008; Ko and Butler 2007; Kijkuit and van den Ende 2007; Rosa et al. 2008)

INCENTIVE AND PUBLICITY ISSUES

Creative ideas should be rewarded adequately. This reward or compensation system may be monetary and non-monetary type. Monetary rewards include promotion to the higher post, granting advance increments, monetary incentives etc. Under non-monetary category medals, prizes, some form of recognition such as certificate of merit, letter of appreciation etc. are very common. Articles published in the in-house journal, some reputed science magazines, news bulletin etc. and announcement of achievement in specially organized meetings, cultural functions etc. add to the recognition of creative work.

TRAINING AND DEVELOPMENT ISSUES

Creativity starts with the recruitment process. But only recruiting knowledgeable and innovative people is not enough. Proper training and development programmes should be organised on a regular basis to update then knowledge base to cope up with the requirements of the fast changing world. So as a policy, employees Knowledge and skills should be enhanced through continuous learning opportunities to increase their awareness, improve their performance and supplement creative capabilities.

COMMUNICATION ISSUES

An adequate and suitable system of communication should be developed and put into use throughout the whole organisation so that people can communicate with one an other freely and conveniently. Creativity management and its success, depends to a large extent on the effectiveness of the communication system in vogue. How effectively employees understand one another, how far and how fast they know what is happening in the organisation, how they can response to any act of priority, how best they can express their views and ideas and other similar issues are associated with the communication system. So it can be safety concluded that without a good communication system, many creative might be nipped in the bud.

CONNECTION BETWEEN CREATIVE LEADERSHIP AND ENTREPRENEURSHIP

The term Leadership is used to refer to the style and behaviour of leaders for providing direction, influencing people, obtaining their commitment and mobilizing their talent and energies to achieve organisational goals leadership is one of the most complex phenomena. Leadership was also described as a holistic and change-oriented process. It depends equally or perhaps more, on the inner motivation, values, beliefs, attitudes, insight, knowledge, skills and outlook of key persons in the organization whose intentions, ambitions and vision provide the driving force and direction to the organization. The main problem is to identify the specific leadership- factor shortcomings in the prospective entrepreneurs. An entrepreneur often has to make decisions which are influenced by the organisation's resources, but decisions are also often made irrespective of the resources available via the process of intuition. The entrepreneur must demonstrate strong leadership by shaping business strategy and motivating employees via creative thinking (Darling et al. 2007; de Jong and Den Hartog 2007.. Several studies show that there are significant relationships between leadership and entrepreneurship. Soriano and Martinez (2007) state that leadership, especially participative leadership, has significant influences toward entrepreneurship establishment. Neck, Manz, and Godwin (1999) also find that the application of effective leadership principals will increase the courage to be an entrepreneur. In essence, the management leadership exerted through successful contemporary entrepreneurship can generally be thought of as leading, through direct involvement, a process that creates value for organizational stakeholders by bringing together a unique innovation and package of resources to respond to a recognized opportunity. In fulfilling this process, entrepreneurs function within a paradigm of three dimensions: innovativeness, risk-taking, and proactiveness (Morris et al., 2004).

PATTERNS OF INSPIRING CREATIVE LEADERSHIP

PROACTIVE AND POSITIVE MINDSET

The leaders of most of the outstanding organisations demonstrated a proactive approach rather than a reactive approach in dealing with the environment. Another distinct characteristics of such leaders was their tre & optimistic outlook. They seldom companied about Govt. policies & environmental constraints, instead they found imaginative ways of dealing with the situation within the legal framework. Brij Mohan Lal Munjal the founder of Hero Cycles and chairman of Hero Honda described how he refused to take Govt. Quota of imported part for cycles & decided to manufacture the parts & develop his own vendor. We could clearly see the pattern in the description of the mindset of the leaders of the Reliance, Wipro, Infosys, Satyam, NTPC, Hero- Honda & Several others. The attitude of leadership in these companies, were similar to the and window approach i.e. they looked in the mirror when they failed to examine the reasons within themselves for their failure & to learn from it.

PASSION AND AMBITION

Passion stood out as one of the most striking characteristic in the success of outstanding organisations views of business leaders confirm that nothing great was ever achieved without passion. Rajinder Singh former Chairman and Managing Director of National thermal power Corporation One of the highest rated public sector organisations in the country expressed a view .He said ", The most imp factor in my opinion is C E O and the passion he has for organisational purpose. It is like junoon an obsession.Successors to Dhirubhai Ambani his 2 Sons- Mukesh, Anil Ambani equally known for their ambition, dynamism & success as corporate leaders. Acc. to them," the first thing that drives business is growth. The 2nd thing that drives business is competitiveness.

URGE FOR SUPREMACY

Leaders seemed to be driven by a deep urge for supremacy in the industry & markets. They set for themselves & the organisation, highly challenging goals. They persuaded of inspired the members of organisation to achieve goals.

WINNING PARDIGM

The leadership in the outstanding companies was distinctively oriented to building competencies for competitiveness and was driven by a winning paradigm i.e. the will and determination to win in tough competition and succeed against all odds. These points are best illustrated in the business philosophy and approach of the leadership of Ranbaxy.

MISSION AND VISION

The concepts of purpose, vision, missions are to help to top mgt & leadership to develop charity, focus and selectivity in defining nature and scope of their business and to evolve a distinctive character and identity for their organisation.

CONNECTION BETWEEN CREATIVE MANAGEMENT AND ENTREPRENEURSHIP

Creative management is the study and practice of management, drawing on the theories of creative processes and their application at individual, group, organizational and cultural levels. The creative manager re-invents his or her corporate self and the organization. That is why we propose to treat creative companies and creative managers as products and outcomes of creative management. Ward (2004) investigates the relationship between cognition, creativity and entrepreneurship, remarking that successful ideas occur as the result of a balance between the new and the familiar in order to ensure that radical ideas are not rejected. Entrepreneurship is concerned with novelty in business, new business ideas and reality of achieving positive returns in market and in existing and new business models. Creativity is concerned with concerns the creation of novelty and value. Research into both entrepreneurship and creativity has followed similar trajectories in terms of the focus of the processes used. Both entrepreneurship and creativity benefit from the depth of the knowledge or expertise and both are not limited by this existing knowledge, and often challenge and extend previous expertise in developing new ideas, processes and application. Stein (1974) claimed that creative ability and entrepreneurial ability are separate constructs but this is now disputed. (Gilad 1984)Early creativity research concentrated on scientific interpretations, the impact of technology and artistic creation and any connection with entrepreneurship was confined to the application of the end product of a creative act. Entrepreneurship is viewed as a major contributor to economic growth and employment creation while understanding how creativity impacts on the process is also crucial (Baumol 2002).

CASE STUDIES SUPPORTING CREATIVITY MANAGEMENT, LEADERSHIP AND ENTREPRENEURSHIP

THE HONDA EXAMPLE

Honda, a popular Japanese motor maker both in North America and in China, has also always been widely recognized as a creative company. Soichiro Honda, the founder of Honda Motor, liked to say that for success it was necessary to be an insatiable challenger of established beliefs. Richard Pascale presented the company to illustrate how organizational success may be attributed to creativity and innovation, in this instance flowing from the values of the corporate founder (Pascale & Athos, 1982). Pascale considered the success was due to emergent strategy, demonstrating a culture of flexibility, imagination and organizational learning. The original intention was to conquer American markets with large motor cycles. The plan was rapidly revised, on evidence that Americans were showing great and unprompted interest in the scooter-type vehicles used by the expeditionary team. This was to result in the successful design and launch of the Supercub vehicle.

THE AMUL EXAMPLE

Started in 1946 with the objective of preventing farmers from corrupt middlemen, Amul is still striving to provide the maximum benefits for the farmers through its innovative methods. Amul has already spurred the White revolution of India, which has made India the largest producer of milk and milk products in the world. Adding to its cooperative union, supply chain practices, innovative products and ICT usage, the latest in the row is their Amul preferred outlets (APOs). They are aimed at effectively facing the shift that is currently happening in the food retail in India and the effect of the same against the milk producers. Amul has already succeeded in establishing several thousands of APOs at their preliminary strategic locations throughout the country within a short period of time. And now they are aiming to take these APOs to the neighborhood of each and every customer before 2020, thus paving way for the second white revolution in the country.

CONCLUSION

Successful managerial leadership is neither a magic nor a matter of chance, but a deliberate acquisition. The 21st century's corporate world is in great need of managerial competencies adequately augmented by leadership skills in equal measures. Neither of the skills in isolation is likely to yield any +ve results. Hence Managerial Leadership holds the key for success because good leaders guide, bad leaders misguide. Bad leaders look for followers, good leaders look for more followers because bad leader feel insecure whereas good leaders have an anchor which gives them poise and confidence with humility. A leader has to lead with his head and his heart put together. Managerial leader needs to start as humble commoner so as to be approachable to his subordinates all the time. This proximity makes him a friend for his teammates. To conclude leadership has become a sheer necessity more so in view of emotional maturity component attached to it. The need for real leaders who can inspire, motivate, develop and take others along is increasing day by day and as such a manager has no choice but to wear both the hats. The style of leadership followed by the managers should encourage their sub-ordinates to contribute their best so that creativity gets supported and not killed. The behaviour of managers should be constructive enough. They should believe in demonstrating things by doing them themselves so that their subordinates can learn by watching them. Managers should be flexible, encourage risk taking and stand by their people as fact finders and not as faultfinders. So leadership is all about "getting things alone with a balanced state of heart and mind." Creativity in management and leadership may bring significant sea change in the entrepreneurship. The need of hour is to design and implement appropriate strategies to make optimum use of the resources for entrepreneurship development. The survival and growth of the business would largely depend upon the innovative and creative strategies in the competitive globalized business environment. Yet the overlap between entrepreneurial leaders and traditional managers is much larger than is often assumed. Creative, innovative individuals may possess copious ideas, but it takes leadership and business discipline to turn them into successful ventures. Further analysis is required to address the role of creative managers at individual, group, organizational and cultural levels.

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POSITIONING INDIA IN THE GLOBAL ECONOMY: AN OVERVIEW

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ABSTRACT
The financial reforms in India in 1991 have not only given way to the plethora of new opportunities but have also brought new challenges and responsibilities. It means that the global economy can no longer be viewed from a spectator's standpoint. This paper is the recognition of the fact that whatever happens in the globe has large implications for India. In addition, the rise and fall of India's growth rate has also an impact on global growth and thus, India is required to take this responsibility seriously. This paper also examines the state of the global economy and India's position therein. It analyses the current global slowdown and euro zone crisis, and its meaning for India and the policy challenges that these international matters give rise to on domestic soil.

KEYWORDS
GDP, Euro Crisis, Manufacturing Value Added, Foreign Exchange.

INTRODUCTION
The Indian markets are swaying to the ripple effect of developments across the globe. The domestic economy, growth and inflation numbers are struggling to cope with the consequences of terrorism, political, social and economic crisis of nations miles away. A slump in domestic industrial growth, unaddressed agricultural woes, rising interest rates and escalating fuel costs have compounded the global factors. A series of scandals emerging from under the carpet have diluted the faith of foreign investors. After the American subprime crisis, the Euro zone crisis is the next big cause of concern for global economies. The current Euro zone crisis threatens to impact economies of nations even with a robust domestic growth. The severe debt crisis in Euro zone nations could spill over, affecting the financial health of developed economies and impeding the economic recovery of developing nations like India. The continuing problems in the euro zone will further dampen global markets and adversely affect India's own economic growth.

LITERATURE REVIEW
In the recent past, there have been dramatic transformations in the international perceptions about the Indian economy. The growing global interests in India and the perceptions of the global community towards India are reflected through the numerous reports published by international financial institutions and private corporate entities alike. These reports vindicate India's growing economic potential as it integrates into the global economy. Mr. Raghuram Rajan, Economic Counsellor and Director of the Research Department of the International Monetary Fund highlighted, "The stars are well aligned for India to become a hub of globalization". The McKinsey Quarterly in a Report titled 'A richer future for India' says, "India's competitive intensity could give it a better position than China to serve as a global low-cost auto-manufacturing base". Rakshit **(**2009) dwells on the idea that there were palpable signs of the Indian economy losing steam long before the outbreak of the global crisis. But there is little doubt that the global meltdown has seriously aggravated the problem and made the task of reversing the domestic downturn much more difficult.

Several studies have put forwards that economic and trade liberalization has not succeeded in bringing far-reaching changes in the commodity structure of Indian foreign trade, which strongly reflects the pre-reforms strategy. The inward-oriented and heavy industrialization strategy followed by India for quite a long time has resulted in a large and diverse industrial sector. Over time this sector has accumulated impressive technological capabilities, but these were accompanied by widespread technical lags and inefficiencies due to inadequate access to new technologies and capital goods, restricted inward investment, controls on the growth of large private domestic firms *(Lall, 1999; Tendulkar, 2000)*. Changes occurred after 1992 with the free up of trade. Trade liberalization had a stimulating effect mainly in the immediate post reform period. Manufactured exports accelerated and the share of traditional exports like textile tended to decline whereas new sectors emerged, such as chemical and pharmaceutical products, engineering products (linked to outsourcing strategy of firms from industrial countries). However, the export structure is not diversified and is still dominated by simple and undifferentiated products with low levels of skill and simple technologies, and for which India's competitive advantage lies in cheap labour. Due to this specialization, India exports mainly products for which international demand is growing slowly *(Srinivisan, 2001)*. Fernandes and Ignatius (2006) assert that India will be able to sustain these growth rates in the long run. First, there has been a shift in the structure of the Indian economy, with the share of agriculture declining to 19.9% in 2005-06 and a corresponding increase in the shares of industry and services. Second, the industry sector has moved up to a higher share of 26.1% in 2005-06. According to a recent paper by Professor T N Srinivasan, in terms of Gross National Income at purchasing power parity exchange rates, India stands at the fourth place, after the US and China and just below Japan. India's share of global GDP in PPP terms was 5.9% in 2005, the fourth highest in the world. Singh. S (2010) says that the crisis confronted India with daunting macroeconomic challenges like a contraction in trade, a net outflow of foreign capital, fall in stock market, a large reduction in foreign reserves, slowdown in domestic demand, slowdown in exports, sudden fall in growth rate and rise in unemployment. The government of India has been highly proactive in managing this ongoing crisis with a slew of monetary and fiscal measures to stabilize the financial sector, ensure adequate liquidity and stimulate domestic demand. As a result of this combining with many several structural factors that have come to India's aid, India's economic slowdown unexpectedly eased in the first quarter of 2009. A close coordination and integration between government of India, financial institutions and organizations is needed to deal with the crisis and restore the growth momentum.

NEED OF THE STUDY
India has emerged as the fourth largest economy globally with a high growth rate and has also improved its global ranking in terms of per capita income. Falling growth, rising inflation, deprecation of rupee, rising current account deficit, foreign funds outflow, political instability are the buzzword that hallmark the Indian economy now a days. Nevertheless, India has a diverse set of factors, domestic as well as external that could drive growth well into the future. India is already too much a part of the global economy and polity; developments in the world undoubtedly affect India deeply and what India does affects the world. There is, therefore, a need to analyse the state of the global economy and India's position therein. The study is also significant because it identifies the current economic slowdown across the globe, its meaning for India.

STATEMENT OF THE PROBLEM
With the increasing integration of the Indian economy and its financial markets with rest of the world, there is recognition that the country's macroeconomic position does change because of these international developments which in turn affects its overall position in the world economy. The paper identifies all these indicators and examines the implications of changing configuration of India in the world economy.

OBJECTIVES

1. To assess the state of the global economy and India's position therein
2. To analyze the current global slowdown and euro zone crisis and its meaning for India
3. To examine the change in the configuration of the world economy and its implication on Indian economy

HYPOTHESIS

The rise and fall of global growth rate has an impact on India and vice versa.

RESEARCH METHODOLOGY

Though most estimates in this paper are based on secondary data, databases have also been created for the Gross Domestic Product, Manufacturing Value Added, Revenue, Expenditure, Balance, and Debt as Percentage of GDP, Current Account Balance and Foreign Exchange Reserves across the nations for various decades. Besides, in order to present the statistics of the key variables of interest viz. the growth in Gross Domestic Product, Share and Growth in World GDP, Manufacturing Value Added as percentage of World MVA.

FINDINGS AND RESULT

1. STATE OF THE GLOBAL ECONOMY

The global economic scenario is quite evident though not very welcoming. The developments over the last year in major economies of the world have not been encouraging. There is recession in Europe, anaemic growth is at best in the United States, and there is a sharp slowdown in China and in most emerging-market economies. Asian economies are exposed to China. Latin America is exposed to lower commodity prices (as both China and the advanced economies slow). Central and Eastern Europe are exposed to the euro zone. In addition, turmoil in the Middle East is causing serious economic risks – both there and elsewhere – as geopolitical risk remains high and thus high oil prices will constrain global growth.At this point, a euro zone recession is certain. While its depth and length cannot be predicted, a continued credit crunch, sovereign-debt problems, lack of competitiveness, and fiscal austerity imply a serious downturn. . There is an apprehension that the process of global economic recovery that began after the financial crisis of the 2008 is beginning to stall and the sovereign debt crisis in the euro zone area may persist for a while. The US – growth has been quite sluggish since 2010 facing considerable downside risks from the euro zone crisis. The US economy has shown some improvement but economic growth remains slow despite extensive use of both fiscal and monetary policy tools.

TABLE 1: GROWTH OF GDP

	World	Advanced Economies	US	Eurozone	Emerging Economies	B	R	I#	C	S
2010	5.2	3.2	3.0	1.8	7.3	7.5	4.0	9.9	10.4	2.9
2011	3.8	1.6	1.8	1.5	6.1	2.9	4.1	7.4	9.2	3.1
2012 (P)	3.3	1.2	1.8	-0.5	5.4	3.0	3.3	7.0	8.2	2.5

Source: Organization for Economic Cooperation and Development (OECD) Principal Global indicators and IMF WEO.

Notes: P Projection from IMF World Economic outlook January 2012 update.
na: not available. Growth rates may not necessarily correspond to country sources.
B,R,I,C,S stand for the separate countries of the BRICS grouping, i.e. Brazil, Russia, India, China, and South Africa.
Aggregations for World and Advanced Economies use purchasing power parity weights.
India's GDP growth is in terms of factor cost whereas for other countries it is in terms of market prices.

The global economy is expected to grow by 3.3 per cent in 2012 compared to 3.8 per cent in 2011 as per the International Monetary Fund's (IMF) January 2012 update of the World Economic Outlook (WEO). Gross domestic product (GDP) growth in advanced economies declined to 1.6 per cent in 2011 compared to 3.2 per cent in 2010 and is expected to be even lower at 1.2 per cent in 2012. Growth in emerging economies slowed to 6.2 per cent in 2011 compared to 7.3 per cent in 2010 and is projected to be 5.4 per cent in 2012. Volatility in capital flows resulting from the spillover effects of monetary policy choices and other uncertainties in the advanced financial markets further impacted exchange rates and made the task of macroeconomic management difficult in many emerging economies. The US economy seems to have revived somewhat and is projected to maintain its growth rate at 1.8 per cent for 2012. The euro zone is expected to contract by 0.5 per cent in 2012. (Table 1)

In the short run, many multiple shocks emanating from various sources, economic, social, and geopolitical hit the global economy. The lower global growth forecast by the IMF for most countries in 2012 reflects the repeated bouts of uncertainty arising from these diverse sets of factors. Nevertheless, India is projected to be the second-fastest-growing major economy (7 per cent) after China (8.2 per cent) as per the IMF. In the medium term, challenges for the global economy continue to emanate from the way the euro zone crisis is addressed. The high deficits and debts in Japan and the United States and slow growth in high-income countries in general, have not been resolved. The looming risk to the global outlook is also because of the geopolitical tensions centred on Iran that could disrupt oil supply, result in a sharp increase in oil prices, and even disrupt supply routes.

TABLE 2: SHARE IN WORLD GDP

	Advanced Economies	US	Eurozone	B	R	I	C	S
1980	76.2	26.0	NA	1.5	NA	1.7	1.9	0.8
1990	79.7	26.1	NA	2.3	NA	1.5	1.8	0.5
2000	79.7	30.9	19.4	2.0	0.8	1.5	3.7	0.4
2005	76.1	27.7	22.3	2.0	1.7	1.8	5.0	0.5
2010	65.8	23.1	19.3	3.3	2.4	2.6	9.3	0.6
1980	69.0	24.6	NA	3.9	NA	2.5	2.2	1.0
1990	69.2	24.7	NA	3.3	NA	3.2	3.9	0.9
2000	62.8	23.5	18.3	2.9	2.7	3.7	7.1	0.7
2005	58.6	22.3	16.5	2.8	3.0	4.3	9.5	0.7
2010	52.1	19.5	14.6	2.9	3.0	5.5	13.6	0.7

Source: IMF, WEO database.

Note: PPP is purchasing power parit

While the current crisis is important for anticipating outcomes in the short to medium term, the current global situation is also a manifestation of certain long-term developments and changes in the relative positions of the major economies that have now perhaps reached certain critical proportions.

2. CHANGING CONFIGURATION OF THE GLOBAL ECONOMY

The global crisis, uneven trade recovery, shares of major economies in global GDP, manufacturing, and trade suggest that there has been a marked change in the contour of the world economy, especially over the last decade. The latest development also reinforces the ongoing shift in balance in the world economy, featuring the changing distribution of exports by destination, marked by the rising importance of trade among developing countries. While developing countries as a whole have become the key driving force behind global trade dynamics in the 2000s, performance varies considerably between regions and countries. Commodity price developments since 2002 came along with sizeable changes to terms of trade. Over the last 20 years sustained growth of a number of large emerging economies, especially the BRICS economies, has resulted in an increase in their share in the global GDP (Table 2). As a consequence, the value addition in the world economy has been moving away from advanced countries towards what have been termed emerging economies. The decline in share is particularly marked in the case of the EU. The shift towards Asia has been significant and, within Asia, away from Japan to China and India. The fivefold increase in share of China in the global GDP has placed it as the second largest economy in the world. The increase in share of India, though less dramatic, is nevertheless of an order that places her as the fourth largest economy in PPP terms (Table 2).

3. CHANGING POSITION OF INDIA IN THE GLOBAL ECONOMY

As far as India is concerned, it has achieved faster growth from the 1980s. Not only was this growth higher compared to its own past, it was also much faster than that achieved by a large number of countries. Between 1980 and 2010, India achieved a growth of 6.2 per cent, while the world as a whole registered a growth rate of 3.3 per cent. As a result, India's share in global GDP, (measured in terms of constant 2005 PPP international dollars) more than doubled from 2.5 per cent in 1980 to 5.5 per cent in 2010 (Figure 1). Consequently, India's rank in per capita GDP showed an improvement from 117 in 1990 to 101 in 2000 and further to 94 in 2009, out of 131 countries for which comparable data are available for all points in time (Table 3).

4. INDIA'S SHARE IN WORLD MERCHANDISE EXPORTS

India's share in world trade has gone up significantly since 1980. According to the latest information published in the World Trade Statistics by the World Trade Organisation (WTO), India's share in total world trade (which includes trade in both merchandise and services sector) has gone up from 0.4 per cent to 1.1% in 2004 -- i.e., the initial year of the Foreign Trade Policy (2004-09) – to 1.5% in 2010.

FIGURE 1: INDIA'S SHARE IN GLOBAL GDP (CONSTANT 2005 PPP INTERNATIONAL DOLLAR)

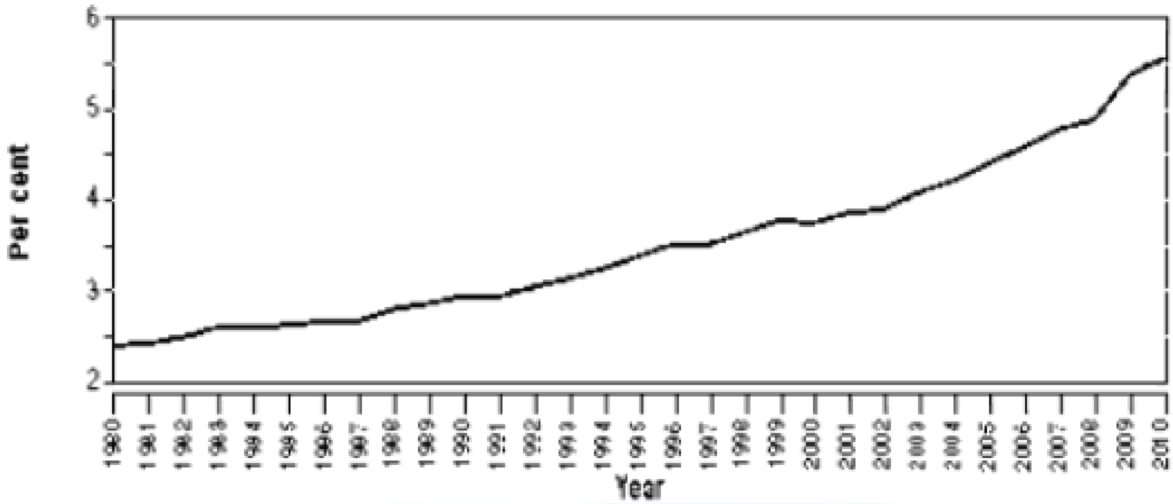


TABLE 3: MANUFACTURING VALUE ADDED AS PERCENTAGE OF WORLD MVA (TOP 15 IN 2009)

S.No.	Country	2000	2009
1	Unites States	25.6	18.7
2	China	6.7	18.1
3	Japan	18.0	10.1
4	Germany	6.8	6.4
5	Italy	3.6	3.5
6	France	3.3	2.8
7	UK	4.0	2.4
8	Russian Fedration	NA	1.7
9	Brazil	1.7	2.4
10	Korea, Rep	2.3	2.3
11	Spain	1.7	1.9
12	Mexico	1.9	1.6
13	Canada (for 2007)	2.3	2.0
14	India	1.1	2.1
15	Indonesia	0.8	1.6

Source: World Bank database.

Notes: MVA is manufacturing value added in terms of current US dollar

Exports during May 2012 were valued at US $ 25681.38 million (Rs. 139895.48 crore) which was 4.16 per cent lower in Dollar terms (16.26 per cent higher in Rupee terms) than the level of US $ 26796.54 million (Rs. 120328.54 crore) during May 2011. Cumulative value of exports for the period April-May 2012 -13 was US $ 50136.76 million (Rs 266603.94 crore) as against US $ 50486.91 million (Rs 225442.71 crore) registering a negative growth of 0.69 per cent in Dollar terms and growth of 18.26 per cent in Rupee terms over the same period last year. Yet India's share remains miniscule and it ranks 19th in the global order of exporting countries (Table 4).

TABLE 4: SHARE IN WORLD MERCHANDISE EXPORTS (%)

Year	Advanced Economies	US	Euro Zone	B	R	I	C	S
1980	66.3	11.1	30.8	1.0	-	0.4	0.9	1.3
1990	72.4	11.3	35.2	0.9	-	0.5	1.8	0.7
2000	65.7	12.1	29.7	0.9	1.6	0.7	3.9	0.5
2005	60.4	8.6	30.3	1.1	2.3	0.9	7.3	0.5
2010	54.2	8.4	26.4	1.3	2.6	1.5	10.4	0.6

Source: United Nations Conference on Trade and Development (UNCTAD)

5. SHARE IN WORLD SERVICE EXPORTS

India's share in the world export of services was quite small at 0.7 percent in 1980. The share fluctuated in the range of 0.53 percent to 0.89 percent right until 1998. In 1999, for the very first time India's share in the total world exports touched 1 percent. This period falls under the Ninth Five-Year Plan (1997-2002) which commenced on April 1, 1997. India's services trade has recorded an even higher growth performance resulting in an increase in the share in world services trade from 2% in 2004 to 2.7% in 2006. Even in service exports, the high-income countries have witnessed a declining share but they continue to account for an overwhelming 79 per cent of global service exports. While India, by virtue of its information technology (IT) industry, has seen its share of service exports rise to 3.3 per cent in 2010, China has moved in from behind and now accounts for 4.5 per cent (Table 5).

TABLE 5: SHARE IN WORLD SERVICE EXPORTS (%)

Year	Advanced Economies	US	Euro Zone	B	R	I	C	S
1980	86.9	11.7	41.6	0.4	NA	0.7	0.0	0.6
1990	87.8	17.0	39.7	0.4	NA	0.5	0.7	0.4
2000	84.8	18.4	31.0	0.6	0.2	1.1	2.0	0.3
2010	78.8	14.3	30.5	0.8	0.6	3.3	4.5	0.4

Source: World Bank Database

6. PUBLIC DEBT AND DEFICITS

While demographic changes are incremental, the cumulative change in demographic structure has started to impinge on the fiscal capacity of many developed economies, particularly in Europe. With an increase in share of retirees, existing social compacts in many developed countries have come under strain as their capacity to service public debt has diminished and private debt has risen. The recourse to automatic stabilizers during the financial crisis has stretched their fiscal capacity as public debt in relation to GDP has reached close to or exceeded the benchmark of 100 per cent of GDP and, in case of Japan, touched a whopping 220 per cent of GDP. An interesting point to note is that as compared to most of the major economies, expenditure of the general government in India is much lower as is the case in respect of revenue (Table 6).

TABLE 6: GENERAL GOVERNMENT: REVENUE, EXPENDITURE, BALANCE, AND DEBT AS PERCENTAGE OF GDP - 2010

	Advanced Economies	US	Euro Zone	B	R	I	C	S
Revenue	35.9	30.9	44.6	37.5	35.0	17.6	20.4	27.0
Expenditure	43.3	41.3	50.6	40.4	38.5	26.0	2.7	32.0
Balance	-7.6	-10.5	-6.3	-2.8	-3.5	-8.9	-2.3	-5.1
Debt	100.0	94.4	85.8	66.8	11.7	64.1	33.8	33.8

Source: IMF, WEO Database, September 2011/ Fiscal Monitor Update 12 January.

Note: AE is Advanced Economies and EA is Euro Area.

7. CURRENT ACCOUNT BALANCES AND RESERVES

In response to a series of financial crises, especially after the East Asian crisis of 1997, many emerging and developing economies adopted new strategies for managing their external economy. These involved greater reliance on exports (resulting in current account surpluses) and the accumulation of foreign exchange reserves, in part to check currency appreciation and as self-insurance against capital flow reversals.

FIGURE 2: CURRENT ACCOUNT BALANCE (2010)

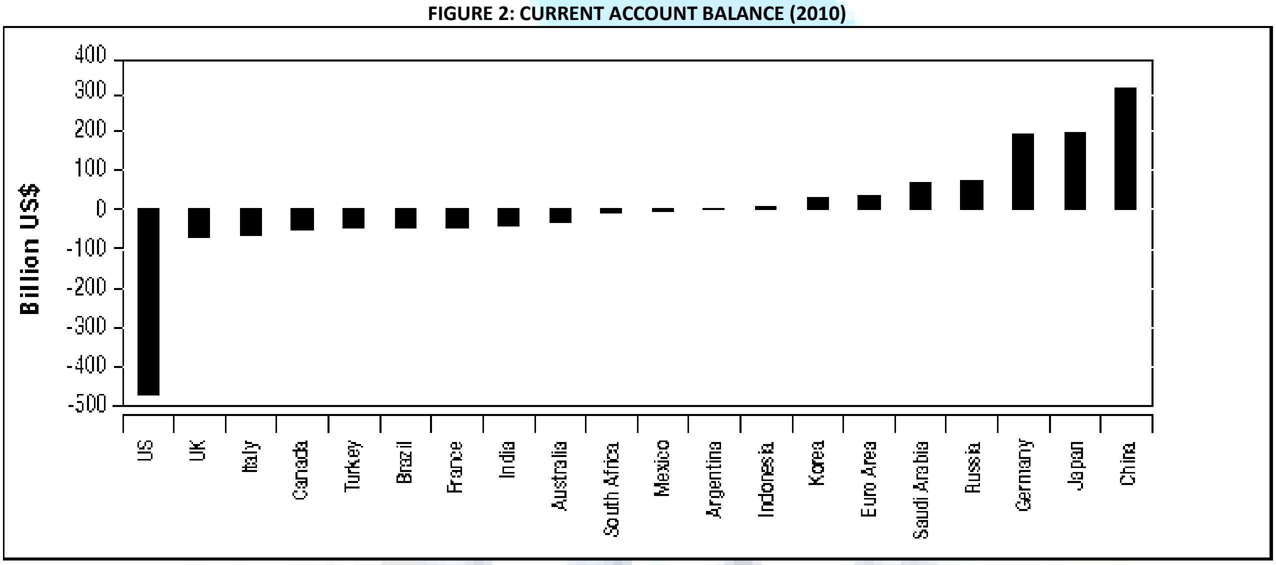
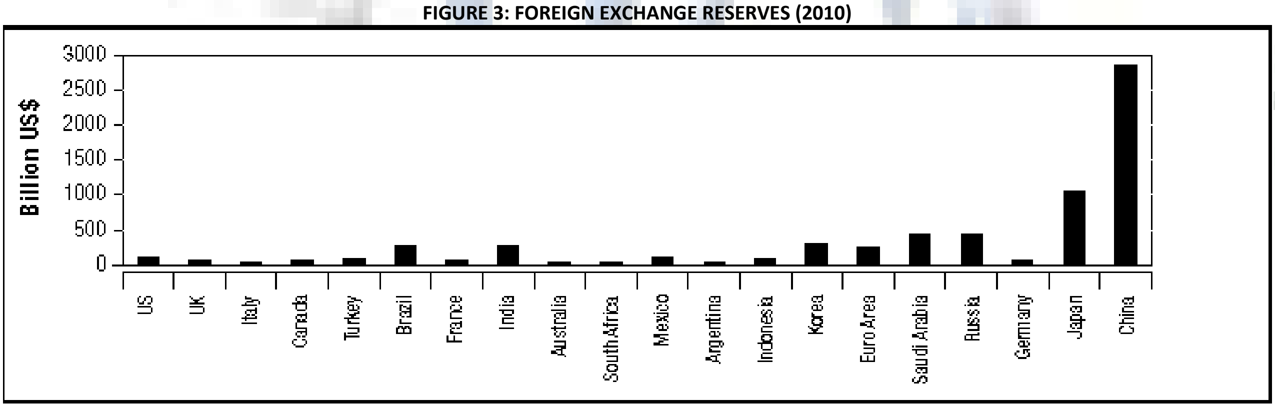


FIGURE 3: FOREIGN EXCHANGE RESERVES (2010)



These strategies led to a shift from being net importers of financial capital to net exporters. As reserves were invested in developed economies, it led to a contradictory phenomenon of capital flowing from emerging countries to capital-rich countries (especially the US). In an accounting sense, this was equated to high saving rates in the emerging market economies (EMEs), especially China. The position of current account balances and reserves for the major G-20 economies is shown in Figures 2 and 3 India, in this regard, is somewhat of an outlier as even while holding substantial reserves, it has essentially had a structural current account deficit and is therefore not a contributor to global imbalances in the foregoing sense.

CONCLUSION

India has emerged as a large and systemically important economy on the global stage. Indian economy has been hurt by the global financial recession, but India is still in better position with quick recovery and for future growth than many of the other economies of the world. Given its size and its profile in the global economy, India will inevitably need to play an active role at global level, not just in debates about how to resolve the continuing crisis and prevent the recurrence of similar crises in the future, but in influencing the rules for the global economy on overarching macroeconomic issues such as trade, capital flows, financial regulation, climate change, and governance of global financial institutions. India, even while carefully responding to the immediate economic challenges emanating from domestic and global sources, will also have to craft and calibrate its policies keeping both outcomes in view.

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AGRICULTURE FARMERS AND FINANCIAL INCLUSION WITH SPECIAL REFERENCE TO BAGALKOT DCC BANK IN KARNATAKA STATE

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BAGALKOT

ABSTRACT

Agriculture is the primary sector of the Indian economy and providing more than 55 per cent of the employment to the growing population directly and indirectly, contributing around 14 per cent of share to the national income. It also earning foreign exchange to the tune of more than US dollar 300 billion. However, its growth when compared to other sector is volatile and the present year performance of agriculture is too poor due to the lack of better rain fall received. The agriculture farming community is hard hit by many reasons including finance. The finance is the life blood of the farmer's. Most of the farming communities living in rural areas are poor. They do not have any access to the banks. The access of the poor farmers to the banking services is important for the alleviation of the rural poverty. Their access to the banking services will contribute a lot to the growth and development of the Indian economy. However, many studies reveal that 30 per cent of the bank branches operate in the rural areas that house 72.2 per cent of the country's population. Further rural India accounts for just 9 per cent of total deposits, 7 per cent of total credit, 12 per cent of life insurance and 6 per cent of non-life business in India. Therefore, therefore is a need to study on agriculture farmers and financial inclusion at the micro level with special reference to the Bagalkot DCC Bank including 6 talukas level branches in the district, The present study is focused on financial inclusion of different types of farmers by the Bagalkot DCC Bank . The study is mainly based on secondary data and used simple percentage and average method. The study covers the period from 2010 to 2012 to assess the financial advancement of the different banks.

KEYWORDS
farmers, BAGALKOT DCC bank.

INTRODUCTION

The Government of Indian has a long history to expand financial inclusion to begin with a major step started since 1969 for Nationalization of the major private sector players in India, the RRBs were established in 1975 by GOI to provide financial support to weaker section of the society in India. Financial inclusion is the delivery of financial or banking facilities to all people in a fair, transparent and equitable manner at an affordable cost. According to Leeladhar (2006), financial inclusion means "The delivery of banking services at an affordable cost to the vast sections of the disadvantaged and low income groups". Usha Thorat (2006) has defined the term as "Provision of affordable financial services viz., access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who tend to be excluded". It is a mantra that envisages bringing everyone irrespective of financial status into the banking fold. The main objective of financial inclusion is to extend the scope of activities of the organized financial system to include within its ambit the disadvantaged community. Financial inclusion helps to bring the excluded groups to finance. It yields uniform economic development, both spatially and temporally, and ushers in greater economic and social equity. It aims at reducing poverty and brings greater equity in the country. No-frills account encourages the savings habit of the masses. It helps bring a large section of the underprivileged people into the banking net. It encourages bringing un-banked customers into financial mainstream. Hence, this will accelerate the economic development of the country. It is identified that the financially excluded sections are Marginal farmers, Landless laborers' Oral lessees, urban slum dwellers, Migrants, Self-employed and unorganized sector enterprises, Ethnic minorities and socially excluded groups, Senior citizens and women. Nationalization of Banks in India marked a paradigm shift in the focus of banking as it was intended to shift the focus from class banking to mass banking. The rationale for implementing cooperative and Regional Rural Banks were also to take the banking services to poor people and different types of farmers. Only 37.2 per cent of bank branches are located in rural areas, but 40 per cent of the population has bank accounts leaving the majority 60 per cent without access to formal banking channels. Out of over 6 lakh villages in the country, hardly 30000 villages have bank branches 51.4 per cent of farm households out of 203 million households have no access to any source of credit –formal or informal 73 per cent of farm households have no access to formal sources of credit. Hence, in order to examine the financial inclusion for agricultural development at the ground level, the farming communities of Bagalkot district through cooperative banks have been taken up for the study.

METHODOLOGY

The entire discussion of the paper has been made on the basis of secondary sources. The different sources secondary data like books, journals, related websites and annual reports of the DCC Bank have been consulted in this regard. Bagalkot district DCC Bank was selected purposively for the present study, as the Bagalkot district is one of the agriculturally backward districts in North-Karnataka. Within the district, Bagalkot, Badami, Hungund, Jamakandi, Mudhole and Bilagi taluka co-operative Banks have been also selected to examine the financial inclusion of excluded in the related region. The data covered the period from 2010 to 2012

OBJECTIVES OF THE STUDY

The main objectives of the study are as follows:

1. To study the growth of agriculture and other sector in India.
2. To study the sources of agriculture credits by different financial institutions
3. To examine the loans and advances by the Bagalkot DCC Bank to the farmers
4. To analyze the branch wise agriculture MT loans by different branches in Bagalkot district.
5. To know the main findings of the study.

ANALYSIS AND INTERPRETATION

GROWTH OF AGRICULTURE AND OTHER SECTORS

Developing countries like India still have dominance of agriculture in their economy in terms of revenue generation as well as manpower employment. About 60 per cent of population engage in Agriculture in India contributes 14 per cent of GDP whereas the developed countries get only 2 to 3 per cent of their GDP from agriculture. About 10 per cent of the national exports originate in this sector it shows clearly that economic growth and development of India is closely tied to the development of agriculture. The agriculture sector, as such has been growing at a relatively low rate in comparison to other sector of the economy. The table 1 shows the sector wise growth rate of economy.

TABLE 1: GROWTH RATE OF DIFFERENT SECTORS (PER CENT)

Annual Rates	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Agriculture	5.1	4.2	5.8	-0.1	0.4	6.6	3.0
Industry	9.7	12.2	9.7	4.4	8.0	7.9	7.1
Services	11.0	10.1	10.3	10.1	10.1	9.4	10.0
Non-Agriculture	10.5	10.8	10.1	8.2	9.4	8.9	9.0

Source: Economic Survey 2010-11

The growth of industry, service and non-agriculture has been constant over the years, in contrast to this; agriculture sector is more volatile and returned to the negative in 2008-09.Low growth in agriculture indicates the necessitates financial inclusion of the excluded vast farming community in India.

CREDIT TO AGRICULTURE

Credit plays a vital role for the development of agriculture. It generates low income or surplus due to increasing cost of inputs and implements. Indian agriculture is a way of sustenance not a surplus yielding work. Credit is beneficiary for all types of small, medium farmers, SC / ST farmers, women farmers and minorities' farmers. However it is inevitable for small and marginal farmers which constitute 78 per cent of the total farmers. Small farmers having holding less than 2 hectares and marginal farmers having holding less than 1 hectares. Economy of Indian farmer is dualistic where existence of two different segments. One is developed, which makes use of modern technique of production and have a few problems regarding bank finance. The other is subsistence which makes use of primitive methods of production and has lot of problems in financing agriculture credit. Agricultural credit needs short term, medium term and long term. Short term needs varies between 3 months to 15 months it is seasonal and for purchasing of seeds, fertilizers, pesticides and payment of wages and operational expenses.

TABLE 2: SOURCES OF AGRICULTURE CREDITS BY DIFFERENT FINANCIAL INSTITUTION (PER CENT)

Source	1951-52	1961-62	1970-71	1971-82	1991-92	2002-03	210-11
Government	3.3	2.6	3.6	4	6.1	3	4
Cooperative Societies	3.1	15.5	22.7	28.6	21.6	26	24.9
Commercial banks	0.9	0.6	4.0	28	33.7	27	43.1
Money lenders	90.9	67.4	68.4	38.8	32.7	41	21.9
Others	1.8	13.9	1.3	0.6	5.9	3	6.1
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Report of the all India rural credit review committee 1969, RBI bulletin and NSSO, May 2011, Economic Survey 2010-11

This type of need is mostly required by all farmers. Medium term needs varies between 15 months to 5 years for the purchase of cattle, small agricultural implements, repairs and constructional wells, Sheep rearing, Miltch Cattle, purchasing pipeline ,Tractor, poultry etc. Long term needs are required for the permanent improvement on lands ,digging tube wells, purchase of larger agricultural implements and machinery like tractor, harvesters etc and repayment of old debts . The period of such credit extends beyond 5 years. The details of agriculture credits by different Financial Institution are given in table 2.

PROFILE OF THE BAGALKOT DISTRICT

During 1997 the new Bagalkot district has come into existence, The bifurcated Bagalkot district consists of six C.D. blocks namely Badami, Bagalkot, Bilagi, Hunugund, Jamakhandi and Mudhol. The district is located in the northern part of Karnataka. The most elevated portion of the district lies between 450 to 800 meters above the sea level extends over an area of 6593 sq. kms. The district is bounded by Bijapur district towards north, Gadag district towards south, Raichur district towards east, Koppal district towards south east and Belgaum district towards west. Historically it is the home land of great chalukya dynasty.

LOANS AND ADVANCES BY THE BAGALKOT DCC BANK TO THE FARMERS

Credit flow to agriculture particularly to the small and medium farmers increased manifold over the time. DCC Bank Bagalkot provides the credit to the different purposes for different farmers. The loans and advances to the SF/MF increased from Rs 22346.19 lakhs to Rs 36669.87 lakhs over the period from 2010 to 2012. Hence, the No. of farmers included was increased from 90686 to 99114 over the year. Of the total, financially included No. of SC farmers was declined from 7.22 per cent to 6.60 per cent. The financial benefit availed by this farmers was also declined from 8.12 per cent to 7.52 per cent in Bagalkot district. In contrast to this the agriculture credit extended to ST farmers was increased from RS 1427.86 lakhs to Rs 1541.72 lakhs. However, it declines from 4.13 per cent to 2.62 per cent. It is inferred from the table that the No. of SC/ST farmers together raised from 11.2 per cent to 14.25 per cent, but in terms of amount it was declined from 12.25 per cent to 10.14 per cent during the same period.

TABLE 3: LOANS AND ADVANCES BY THE BAGALKOT DCC BANK (Rs in lakh)

year	Loans to SF and MF		Loans to SC		Loans to ST		Loans to SC and ST	
	No. of Farmers	Amount Sectioned	No. of Farmers	Amount Sectioned	No. of Farmers	Amount Sectioned	No. of Farmers	Amount Sectioned
2010	90686 (65.85)	22346.19 (64.64)	9943 (07.22)	2806.73 (8.12)	5230 (03.80)	1427.86 (4.13)	15173 (11.02)	4234.59 (12.2 5)
2011	102550 (70.65)	29755.12 (66.27)	11057 (07.62)	3603.38 (8.03)	4837 (03.33)	1534.62 (3.42)	15894 (10.95)	5138.00 (11.44)
2012	99114 (61.13)	36669.87 (62.29)	10697 (06.60)	4425.42 (7.52)	12415 (07.66)	1541.72 (2.62)	23112 (14.25)	5967.14 (10.14)

Source: Annual Report of the Bagalkot DCC Bank

AGRICULTURE CREDIT TO WOMEN, MINORITIES AND FRESH MEMBERS

The growth of women farmers and minorities were also raising as compared to the other farmers in the district, the women through the financial inclusion among the excluded a significant change in the financial assistance of the co-operative banks in the Bagalkot district. The SF/MF farmers, SC/ST farmers, women and minorities particularly the dryland area like Bagalkot have been the target of financial inclusion policy and practice since 1904 when the first Cooperative Society was registered in Gadag taluk in Karnataka. Since then several major steps have been taken to expand the network of financial institutions in order to "include" SF/MF, SC/ST farmers, women and minorities farmers in to the country's financial sector. The table 4 shows that the number o women farmers and minorities and fresh farmers have been provided credit by the DCC Bank Bagalkot for agriculture is augmenting steadily over the years. The overall growth of financial assistance to the women, minorities and fresh farmers in region is a progressive. The amount sanctioned to the women farmers was increased from 3.21 per cent to 11.87 per cent during 2011 and 2012.

TABLE 4: LOANS AND ADVANCES BY THE BAGALKOT DCC BANK (contd) (Rs in lakh)

year	Loans to Women		Loans to Minorities		Loans to Fresh members		TOTAL	
	No. of Farmers	Amount Sanctioned	No. of Farmers	Amount Sanctioned	No. of Farmers	Amount Sanctioned	No. of Farmers	Amount Sanctioned
2010	NA	NA	NA	NA	NA	NA	137719	34568.06
2011	4650 (3.20)	1440.03 (3.21)	6950 (4.79)	2015.45 (4.49)	5442 (3.75)	1418.84 (3.16)	145150	44899.20
2012	18297 (11.28)	6985.85 (11.87)	17312 (10.68)	6312.15 (10.72)	16981 (10.47)	5333.91 (9.16)	162131	58867.76

Source: Annual Report of the Bagalkot DCC Bank

The no. of women farmers were also increased from 3.20 per cent to 11.28 per cent. Whereas minorities farmers for whom the amount was sanctioned 4.49 per cent in 2011 and rose to 10.72 per cent. However financially included these were increased from 4.79 per cent to 10.68 per cent. The same position was continued even with the fresh members of the bank. Therefore, the Bagalkot DCC Bank made an effort to bring in to the financial fold of the excluded farmers in Bagalkot district. The details are given in table 3 and 4 respectively.

BRANCH WISE AGRICULTURE MT LOANS BY DIFFERENT BRANCHES

As many as six revenue taluka comes under Bagalkot jurisdiction; the Bagalkot DCC Bank established each branch in all the taluka head quarters in the district to provide term loans to agriculture farmers. The table 5 vivid the MT agriculture loans by the different branches in the district. The amount advanced to the agriculture and to the different farmers was fluctuated over's the year. The amount of loan advanced by the Bagalkot branch was increased from Rs 601.33 lakhs in 2010 to Rs 951.42 lakhs in 2011. However, it declined to Rs 441.2 lakhs in 2012. Similarly, the No. of farmers were also increased from 150 to 206 and declined to 84 during under study period, but both the amount sanctioned and financially included farmers in terms of per cent were increased. Amongst the six branches the performance of Badami branch in terms of financial inclusion did an outstanding work when compared to the other branches in the entire district. In contrast to this poorest performance made by Bilagi branch, it is evident from the table that Rs 817.07 lakhs was advanced to the farmers and was highest in 2010 and the lowest was Rs 386.46 lakhs advanced by the Bilagi branch. Same way the No. of farmers financially included was also highest and lowest ie 268 and 121 respectively both in Badami and Bilagi.

TABLE 5: MT AGRICULTURE LOANS BY THE DIFFERENT BRANCHES IN BAGALKOT DISTRICT (Rs in lakh)

Name of the Branch	Total Advances in 2010		Total Advances in 2011		Total Advances in 2012	
	No. of Farmers	Amount Sectioned	No. of Farmers	Amount Sectioned	No. of Farmers	Amount Sectioned
Bagalkot	150 (14.04)	601.33 (15 .93)	206 (17 .03)	951.42 (15 .80)	84 (22 .70)	441.2 (22 .06)
Badami	268 (25.11)	817.07 (21 .64)	301 (24 .90)	1211.66 (29 .12)	89 (24 .05)	433.30 (21 .66)
Hunugund	257 (24.09)	1031.97 (27 . 33)	187 (15 .47)	1016.23 (16 .87)	76 (20 .54)	427.15 (21 .36)
Jamakandi	138 (12.93)	469.65 (12 .44)	215 (17 .78)	1181.76 (19 .62)	49 (13 .24)	283.31 (14 .17)
Mudhol	133 (12 .46)	468.87 (12 .42)	155 (12 .82)	959.98 (15 .94)	35 (9 .46)	191.65 (9 .58)
Bilagi	121 (11 .57)	386.46 (10 . 24)	145 (11 .99)	701.00 (11 .64)	37 (10 .00)	223.10 (11 .15)
TOTAL	1067 (100)	3775.35 (100)	1209 (100)	6022.05 (100)	370 (100)	1999.71 (100)

Source: Annual Report of the Bagalkot DCC Bank

During 2012 all the branches advanced very less amount of money and also the farmers included less in numbers, due to the lack of timely rainfall the farmers did not borrowed money from the banks. Moreover, the problems of recovery are also a cause of concern to all the branches. Hence, from the above it is inferred that during 2012 was considered as the bad year for both farmers and the different branches in the district.

MAIN FINDINGS OF THE STUDY

Following are the main findings of the study.

Credit is essential for all types of small, medium farmers, SC / ST farmers, women farmers and minorities' farmers. However it is inevitable for small and marginal farmers which constitute 78 per cent of the total farmers

Due to low income and yield in the region few farmers have been borrowed from the banks when compared the national level and other banks.

Economy of the Indian farmer is dualistic where existence of two different segments. One is developed, which makes use of modern technique of production and have a few problems regarding bank finance. The other is subsistence which makes use of primitive methods of production and has lot of problems in financing agriculture credit.

Credit flow to agriculture particularly to the small and medium farmers increased manifold over the time. DCC Bank Bagalkot provides the credit to the different purposes and for different farmers. The loans and advances to the SF/MF increased from Rs 22346.19 lakhs to Rs 36669.87 lakhs over the period from 2010 to 2012.

Financially included No.of SC farmers were declined from 7.22 per cent to 6.60 per cent. The financial benefit availed by this farmers was also declined from 8.12 per cent to 7.52 per cent in Bagalkot district.

The agriculture credit extended to ST farmers was increased from RS 1427.86 lakhs to Rs 1541.72 lakhs. However, it declines from 4.13 per cent to 2.62 per cent.

The SF/MF farmers, SC/ST farmers, women and minorities particularly the dry land area like Bagalkot have been the target of financial inclusion policy and practice since 1904 when the first Cooperative Society was registered in Gadag taluk in Karnataka.

The overall growth of financial assistance to the women, minorities and fresh farmers in region is a progressive. The amount sanctioned to the women farmers was increased from 3.21 per cent to 11.87 per cent during 2011 and 2012.

Amongst the six branches the performance of Badami branch in terms of financial inclusion did an outstanding work when compared to the other branches in the entire district. In contrast to this poorest performance made by Bilagi branch, it is evident from the table that Rs 817.07 lakhs was advanced to the farmers and was highest in 2010 and the lowest was Rs 386.46 lakhs advanced by the Bilagi branch.

During 2012 all the branches advanced very less amount of money and also the farmers included less in numbers, due to the lack of timely rainfall the farmers did not borrowed money from the banks. Moreover, the problems of recovery are also a cause of concern to all the branches.

CONCLUSIONS

Bagalkot district is one of the backward areas in spite of the major river flowing in the district, the DCC bank made an effort to financial inclusion of the excluded. When compared with the SF/MF, the SC/ST farmers, women farmers, minorities' farmers were less financially included, due to small size of land holdings, low yielding, and the use of primitive methods in agriculture and others. However, there is a good scope for all the financial institutions in the district regarding the financial inclusion of the excluded segment of the district.

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MNREGA AND RURAL POVERTY: A CASE STUDY OF NILOKHERI BLOCK IN HARYANA PROVINCE

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ABSTRACT

This paper evaluates the effectiveness of the MNREGA to enhance livelihood security and incidence of rural poverty in Haryana. The measurement of poverty is the most important problem to be addressed first in understanding the problem of poverty. The present paper measure the poverty among the beneficiaries of MNREGA in Haryana. The MNREGA has now emerged as one of the important tools for rural development and poverty eradication. However, the MNREGA is not fully successful in achieving its objectives. To eradicate poverty, it is essential to create employment opportunities in the rural areas. The study confirms that a large proportion of the MNREGA beneficiaries have been living below the poverty line and the success of the MNREGA depends upon the effective implementation of this scheme.

KEYWORDS
MNREGA, rural poverty.

1. INTRODUCTION

Reduction in poverty and unemployment and in improvement in the quality of life has been the basic goal of our five-year plans. After independence, many programmes for the weaker sections of the society have been started in India. To eradicate poverty it is essential to create employment opportunities in the rural areas. The MNREGA can prove to be a milestone in this direction. Poverty can be defined as a social phenomenon, in which a section of society is unable to fulfill even its necessities of life. The planning commission has defined the poverty line based on recommended nutritional requirements of 2400 calories person per day for rural areas and 2100 calories for the urban areas. Based on this the latest income criteria has been adopted in India to determine poverty line in India is based on 2009-10 data where it is stated that all Indian minimum income for rural and urban areas for a person per month should be Rs. 672.8 and Rs.859.6 respectively, on the basis of this criteria33.8 per cent in the rural areas and 20.9 per cent population in the urban areas are living below the poverty line. The all India HCR has declined 7.7 per cent from 37.2 per cent in 2004-05 to 29.8 per cent in2009-10. In Haryana, the income criteria to determine the poverty line for rural and urban areas for a person per month are Rs. 791.6 and Rs. 975.4 respectively. According to this criterion 18.6 per cent, population in rural areas and 23 per cent population in urban areas are still living below poverty line in Haryana.

2. REVIEW OF LITERATURE

Poverty is associated with the history of humanity. Right from the ancient times, attempts have been made to solve this problem. The social scientists, particularly economists have been trying to develop models for solving the problem of poverty.

Bardhan (1974) in his study pointed out that in 1968-69, 54 per cent of the rural population and 41 per cent of the urban population lived below the poverty line. Ahluwalia (1976) in his study analysis the time series estimates of rural poor for the period 1970-71 to 1973-74. According to him, percentage of rural poor has declined from 49.1 per cent in 1970 to 47.6 percent in 1973-74. According to Balakrishan and Ghosh(1980) who used NSS data of the 26th round (1971-72) and 28th round (1973-74), the rural poor increased from 178 million in 1871-72 to 217 millions in 1973-74, the corresponding rise in per cent being from 40.5 to 45.9. Puran Singh (2006) reveals that the National Rural Employment Guarantee Act, 2005, which concern legal right to employment on the rural citizens, is a landmark in the history of independent India. This article is a modest attempt to critically examine the various provisions of this scheme with special reference to the delivery mechanism and role of Panchayati Raj institutions in implementation of the scheme and suggestions to make it more effective. Rajesh Shukla (2009) has pointed out that the MNREGA offers an opportunity of introducing the target households to saving and investment culture that has major implications for future economic growth of the country as well as for the financial security of these households. The challenge for the MNREGA would be transforming itself into a self- sustaining programme the benefits the poorest of the poor. Ashok lahiri (2007) narrates that the MNREGA is like a life insurance. The life insurance benefits a family only if the insured dies. However, that may not be the outcome that the family wants. Therefore, in the ultimate analysis, we should not drive satisfaction when more people take up jobs under the MNREGA. It is an interim solution until more productive and gainful employment is generated in the economy. It is very important that the MNREGA be mixed with creation of durable assets.

Thus, the MNREGA is gradually emerging as one of the most effective strategies to alleviate rural poverty. It can effectively generate employment and sustain the income of households by giving the opportunities of work.

3. OBJECTIVES OF THE STUDY

i) To evaluate the incidence of poverty among MNREGA beneficiaries.
ii) To assess the effectiveness of MNREGA to enhance livelihood security in rural area.
iii) To analysis the current status of this scheme.
iv) To suggest some policy implication for the effective implementation of this scheme.

4. METHODOLOGY

This study had been carried out in one block Nilokheri, District Karnal of Haryana. From the block Nilokheri, four villages were selected for the purpose of survey. These four villages were Raipur Roran, Seed Pur, Dabarthala and Jamba, from each village 25 beneficiaries were selected randomly. The total sample was 100. The study was carried amongst adults of age group 20-55 years. Male and female respondents were included in this survey. It was conducted with the help of a questionnaire. All the interviews were conducted in Hindi/local dialect. The survey was conducted in April 2012. The secondary data used in the study were collected from the various authenticated sources. Most of the data used in the study are collected form annual reports of the Ministry of Rural Development, Government of India, New Delhi, and Reports of Planning Commission of India, New Delhi.

For the measurement of the poverty, the poverty line taken based on minimum consumption criteria, which is Rs. 791.6, because according to 61 rounds N.S.S.O. results the latest minimum income criteria for a person per month in rural areas is Rs. 791.6 in Haryana.

5. CALCULATION OF POVERTY INDICES

A poverty measure is a function of individual incomes and the poverty line. The literature on poverty measure is huge and technical in nature. It deals with the choice of functional form of a suitable poverty index. This study has been taken the four different indices to measure the poverty and the outcomes of MNERGA on income of beneficiaries. These are;

(I) HEAD COUNT RATIO;

$$H = \frac{q}{y} \qquad (i)$$

where q is the no. of beneficiaries living below poverty line. n is the total no. of beneficiaries in the sample.

(II) INCOME- GAP RATIO;

$$I = \frac{q}{\pi . q} \qquad (ii)$$

where g = $\sum_{i=1}^{n}$ g_i he aggregate poverty gap)

$g_i = p_1 - y_1,$

P is the poverty line (Rs. 791.6)

Y_i= Income of the i^th beneficiary.

(II) GINI-COEFFICIENT;

$$[1 - \sum_{t-0}^{n} (\sigma Y_{t-1} - \sigma Y_t)](\sigma X_{t-1} - \sigma X_t)]$$

$$[1 - (\sigma Y_{t-1} - \sigma Y_t)(\sigma X_{t-1} - \sigma X_t)] \qquad (iii)$$

X is the number of observations

Y is the beneficiary's income level

(IV) SEN'S INDEX

$$P = H[I + (1 - I)G] \qquad (iv)$$

7. RESULTS AND DISCUSSION

In Haryana, the rural poverty has significantly declined over the years. The decline in the incidence of poverty in rural areas is depicted in the Table-1, which shows the percentage of population in rural areas below the poverty line between 1973-74 and 2004-05,

TABLE: 1 PERCENTAGE OF POPULATION BELOW POVERTY LINE (in percent)

Year	Rural	Urban	Total
1973-74	34.23	40.18	35.36
1977-78	27.73	36.57	29.55
1983-84	20.56	24.15	21.37
1987-88	16.22	17.99	16.64
1993-94	28.02	16.38	25.05
2004-05	13.60	15.10	14.00

Source: Planning commission, Government of India.

Indian government has started various poverty alleviation schemes to eliminate poverty from the country. Particularly from rural areas, as rural poverty of India is a massive and conspicuous due to unemployment, under employment etc. In view of this at present in rural India the MNREGA employment schemes is in operation sponsored by the government of India.

8. THE NATIONAL RURAL EMPLOYMENT GURANTEE ACT

This is a wage employment scheme implemented in the country under National Rural Employment Guarantee, Act 2005. This act starts functioning in 2006-07 and at first, it was implemented in 200 districts. In 2007-08, this act was extended to 330 districts and further extended to all 596 districts of India in 2008-09. In Haryana, this scheme was implemented in district Mahendergarh and Sirsa on 2^nd February 2006. The MNREGA was implemented since April 2008 in all districts of Haryana.

The basic objective of the scheme is to enhance livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

The scheme is applicable only to rural areas. 1/3^rd of the jobs are reserved for women. Minimum wages applicable in the state would be payable to the persons employed. Unemployed persons are to apply for registration with concerned Gram Panchayats. After registration, job Cards are issued to the households by the Gram Panchayats. The payment of wages is being made on weekly or fortnight basis. The contractors are banned under this programme.

The following works are permissible under the MNREGA:-

i) Water conservation and water harvesting;

ii) Drought proofing (including a forestation and tree plantation);

iii) Irrigation canals including micro and minor irrigation works

iv) Irrigation facility to land owned by households belonging to the Scheduled Castes and Scheduled Tribes;

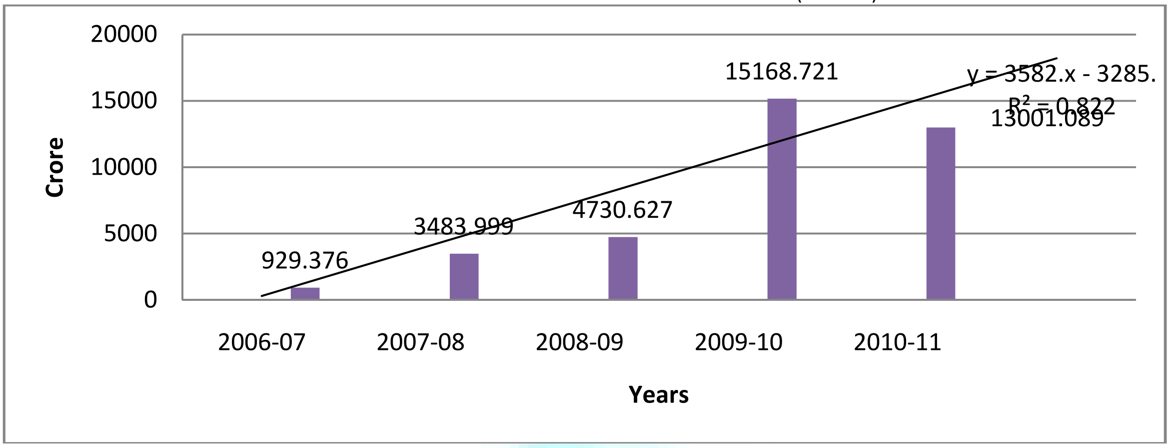
v) Flood control and protection works including drainage in water logged areas;

vi) Rural connectivity to provide all-weather access; and

vii) Any other work, which may be, notified the Central Government in consultation with the State Government.

The programme is being implemented through the Gram Panchayats.

TABLE: 2 THE TOTAL EXPENDITURE UNDER THE MNREGA (in Lakhs)



Source: Annual Reports of the Various Years, Ministry of Rural Development.

The Table -2 reveals that the total expenditure is increasing under this scheme. It was Rs. 929.376 lacks in 2006-07 to Rs. 3483.999 lacks in 2007-08, Rs. 4730.627 lacks in 2008-09, Rs. 15168.721 lacks in 2009-10, and Rs. 13001.089 lacks in 2010-11. The Table 3 shows that, in Haryana as on April 2010, 1233038 households were registered under this scheme. Out of 431620 households that demanded employment, the number of households working under the MNREGA is 429957, but the numbers of households that have completed 100 days of employment is only 28597.

TABLE: 3 THE EMPLOYMENT GENERATIONS UNDER THE MNREGA (in Numbers)

Year	No. of Households			No. of households	No. of works completed	No. of Works
	Job card issued	Demanded Employment	Provided Employment	completed 100 Days of employment	Completed	
2006-07	74401	7004	5586	0	0	77
2007-08	106772	50765	50765	5626	985	667
2008-09	1614.45	67883	67883	7402	1609	1189
2009-10	378286	153513	153273	6698	3513	2798
2010-11	512134	152455	152450	8871	4070	3645
Total	1233038	431620	429957	28597	10182	8376

Source: Annual Reports of the Various Years, Ministry of Rural Development.

It shows that the MNREGA is not able to achieve the set targets, but it is true that the MNREGA is able to provide jobs and employment to many households in the rural areas. It is a big achievement.

9. SOCIO-ECONOMIC CONDITIONS OF THE BENEFICIARIES

In the study, 100 beneficiaries were selected randomly for the survey from the four villages of block Nilokheri in which 78 were male and 22 were female. 38 beneficiaries were literate and 62 were literate. Out of 62 literate beneficiaries, 39 had only primary education, 12 had metric, 9 had secondary education and 2 had graduate degree. 7 beneficiaries were small farmers, 36 were agricultural laborers, 57 were non agricultural casual laborers 34 beneficiaries had a family size of 1-5 members, 52 had family size of 6-10 members and only 14 had a family size of 11 or more. 60 beneficiaries were scheduled caste, 32 were OBC's and 8 belonged to general category.

10. CALCULATION OF POVERTY INDICES

(i) Head Count Ratio;

$H = \frac{74}{100} = 0.74$

(ii) Income- Gap Ratio;

$I = 0.176$

(iii) Gini Coefficient;

$G = 0.0314$

Poverty line =791.6 per capita per month

(iv) The Sen Index;

$P = 0.74[0.176 + (1 - 0.176)(0.03146)]$

$= 0.74[0.176 + (.824)(0.03146)]$

$= 0.74[0.176 + (0.026071)]$

$= 0.74[0.004589]$

$P = 0.00339$

The calculation of Head-Count Ratio (H) for these beneficiaries of the MNREGA shows that 74 per cent beneficiaries were below poverty line. The estimate value of income gap ratio (I) comes out to be 0.176 which signifies that a large proportion of beneficiaries were in the upper income slab below poverty line. A low estimate of Gini Coefficient (G) of 0.031 reveals a very low degree of income disparity among the beneficiaries below poverty line. The sen-index being calculated based on above information gives a value of 0.003396, which also reveals that a considerable number of beneficiaries come from the upper income slab below poverty line.

11. CONCLUSION AND POLICY IMPLICATION

The MNREGA is very useful for the poverty alleviation in rural areas. The final objective and goal of the MNREGA is to bring about an increase in the standard of living of the people and to bring them above the poverty line. The implementation of the MNREGA has provided employment during the lean season and reduced migration to some extent. The MNREGA has created necessary infrastructure in rural areas. The infrastructure in the process has laid the foundation for further development work. The MNREGA has not been fully successful in achieving its targets- to reduce poverty, to eliminate economic and social disparities. The main reasons for its failure are- funds were not realized timely, lack of coordination between Gram Panchayats and Government's officials, lack of awareness among the people, lack of proper trained staff, lack of proper supervision, no funds to purchase working tool. The success of the MNREGA depends upon the active participation of the people and coordination between the Gram Panchayats and Government's officials. On the basis of above discussion the following suggestions are made to improve the performance of the MNREGA in Haryana.

i) The release of the funds should be timely, the budgetary allocation for this scheme should be sufficient to provide genuine wage rates to the beneficiaries.
ii) Proper maintenance of job cards, muster rolls and other records relating to the scheme at the block and panchayat level should be ensured.
iii) The community participation is necessary for the effective implementation of the MNREGA. Gram Sabha must play an important role in the implementation of the scheme.
iv) For a BPL family 100 day's employment is not sufficient. There should have been weight-age for BPL, landless families in providing job opportunities.
v) The people should be aware about this scheme. Awareness camps should be organized at village level.
vi) For the effective implementation of the MNREGA, it is necessary that the panchayat should be educated about various activities that can be covered under the MNREGA.

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EXTERNAL DEBT OF MALDIVES: GROWTH AND ECONOMIC GROWTH

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ABSTRACT

This study investigates the factors that determine and enhance economic growth. The factors to determine the economic growth of Maldives is total debt, Long-term Debt, Short-term Debt, and Gross domestic Products. Simple Linear Regression model, Semi Log Linear Regression models, Correlation and Regression are applied to analyze the determinates of economic growth with the help of time series data for 29 years with annual frequency from 1981 to 2009. The economic growth may gain boost by the factors not only by these but also many others. In this study total debt, Long-term Debt, Short-term Debt relationship with economic growth are found positively associated with economic growth.

KEYWORDS
external debt, Maldives.

1.1. INTRODUCTION

Most of the under developed and developing countries suffer from a low level of income and consequently their saving and capital accumulation are also very low. When a country is facing a crunch in the capital market, to undertake activities generally it goes in for internal borrowing and when it is not enough, it resorts to external resources. Moreover, when there is less scope to receive foreign direct investment, NRI earnings, grants, aids and export most of the developing countries resort to external borrowing. Generally public debt means an amount owed by a government. External debt means owed by one country to another. It refers to the obligations of a country to foreign governments or foreign nationals or international institutions. A country borrows externally to augment its domestic resources with the knowledge that all the resources generated in the future will not be available for domestic purposes and a part of them will have to be transferred to external creditors. PEP defines it as "Gross external debt, at any given time, is the outstanding amount of those actual current, and not contingent, liabilities that require payment(s) of principal and/or interest by the debtor at some point(s) in the future and that are owed to nonresidents by residents of economy".

Definition of 'External Debt The portion of a country's debt that was borrowed from foreign lenders including commercial banks, governments or international financial institutions. These loans, including interest, must usually be paid in the currency in which the loan was made. In order to earn the needed currency, the borrowing country may sell and export goods to the lender's country.

Investopedia explains 'External Debt' A debt crisis can occur if a country with a weak economy is not able to repay external debt due to the inability to produce and sell goods and make a profitable return. The International Monetary Fund (IMF) is one of the agencies that keep track of the country's external debt

External Debt or Foreign Debt is that part of the total debt in a country that is owed to creditors outside the country. The debtors can be the government, corporations or private households. The debt includes money owed to private commercial banks, other governments, or international financial institutions such as the international monetary fund (IMF) and World Bank.

1.2. EXTERNAL DEBT MANAGEMENT

Developing countries with managed exchange rate mechanisms and is aimed at addressingb to real issues facing the developing countries. The advantage of external debt is that it add resources in the economy however excess reliance on external debt may expose thecountry to certain risks that may trigger a debt crises asGovernments cannot print foreign currency unlike the domestic curreny. External Debt is pro-cyclical and can stop suddenly exposing the borrowing countries to Refinancing risk that may lead to balance of payment crises. The problems of extraordinarily high public debt and very large external debt are the consequence of (a) large and persistent fiscal and current account balance of payments deficits, (b) imprudent use of borrowed resources, such as wasteful government spending, resort to borrowing for non-development expenditures, undertaking of low economic Priority development projects and poor implementation of foreign aided projects, (c) weakening debt carrying capacity in terms of stagnation or decline in real government revenues and exports, and (d) rising real cost of government borrowing bot domestic and foreign. External debt is one of the components of total debt stock and should be availed with great cautious as this is a limited sourc of funding for Developing countries.

1.3. DEBT SUSTAINABILITY

A portion of nominal debt is normally wiped out by inflation, which reduces the burden of real debt, and, therefore, a part of nominal interest payments in fact represents repayment of principal. In analyzing the burden of debt the focus should, therefore, be on the real magnitudes, that is, real interest rate (nominal interest rate minus the rate of inflation) and the real rate of growth of debt (nominal growth less the rate of inflation). If the real growth rate of debt exceeds the real growth rate of GDP or revenue, the debt-to-GDP or debt-to-revenue ratio will begin to rise and if this excess persists for a long time, the growth in debt burden will assume explosive proportions. Similarly, in the case of external debt, as long as growth rate of foreign exchange earnings exceeds the rate of growth of debt, the debt burden as a proportion of foreign exchange earnings will not go up. The more sophisticated rules of debt management relate growth of debt burden to cost of borrowing. For instance, it can be mathematically demonstrated that if the primary fiscal deficit (i.e. deficit before interest payments) is zero, the ratio of public debt to revenues will not rise as long as the average real interest rate on debt does not exceed the real rate of growth of revenues. Similarly, if there is no current account balance of payments deficit, before interest payments, it can be shown that the ratio of external debt to foreign exchange will not increase as long as average real interest rate on debt does not exceed the real rate of growth of foreign exchange earnings.

Quite obviously, therefore, the levels of deficits before interest payments, the costs of borrowing, and rate of growth of revenues and foreign exchange earnings are critical determinants of trends in public and external debt burden. But what are excessive levels of debt burden? If the debt is not concessional, public debt to revenue ratio should not normally exceed 250 percent and the ratio of external debt to foreign exchange earnings should not exceed 150 percent. With a moderate degree of concessionality of debt say from 20 to 30 percent, these ratios should stay around 350 percent and 200 percent respectively. Similarly, it is normally considered desirable that external debt service payments not exceed 20-25 percent of foreign exchange earnings and similarly public debt service payments are kept below 25-30 percent of government revenues.

1.4. KINDS AND NEEDS OF EXTERNAL DEBT

External debt may be broadly classified under eight kinds. These include multilateral, bilateral and commercial loans and cover both the Government and non-government sectors. These also comprise highly concessional loans as well as loans on market term.

1.4.1. Multilateral Debt

This refers to loans and credits extended by multilateral organizations to the Government or, in some cases, with Government guarantee, to Public and Private sector corporate bodies. This includes long-term credits (40 years) of International Development Association (IDA) and long-term loans from the World Bank or the Asian Development Bank (ADB), which have market interest rates and long repayment period (From15to20years).

1.4.2 Bilateral Loans

This refers to borrowing on varying degrees of concessionality, from other governments. Such loans are given to the government and in some cases to public sector organizations.

1.4.3 Loans from the International Monetary Fund (IMF)

The IMF debt assumed significance in the early 1980s, when India resorted to withdrawals under the Extended Fund Facility (EFF)/supplementary Financing Facility (SFF) to ease out the balance of payments difficulties.

1.4.4 Export Credit

This comprises buyers' credit, suppliers' and exports credit for defense purchases. Buyers' credit and suppliers' credit are treated as forms of commercial borrowing.

1.4.5 Commercial borrowing

This includes market borrowings abroad by corporate entities and public sector undertakings and includes commercial bank loans, securitized borrowings (including India Development Bonds) and loans or securitized borrowings with multilateral or bilateral guarantees. Commercial borrowings also include loans from International Finance Corporation (IFC), Washington, and self-liquidating loans.

1.4.6 Non-Resident Deposits

This refers to various types of Non-Resident (NR) deposits and Foreign Currency (Banks & others) Deposits (FC (B&O) D) with maturities of over one year.

1.4.7 Rupee Debt

This refers to debt denomination in rupees owed to Russia (with some very small amounts owed to other East European Countries) and paid through exports. Rupee debt is broken up into a defense and a civilian component. Since March 1990. The civilian component of rupee debt has also included rupee supplier's credits.

1.4.1. Short term debt

This refers to debt with a maturity period of up to one year. This is usually trade related debt. The first seven categories may be termed as long-term debt. The eighth category is short term, as the very name suggests. A comprehensive definition of India's external debt must include all these items although in different contexts external debt is defined to include only some of these kinds.

1.5. ADVANTAGES

FASTER GROWTH

A business needs investments to grow. Even the most profitable companies cannot rely solely on reinvested profits to finance their expansion. Accordingly, a business needs to secure bank credit, partner with venture capital firms or in any other way tap external sources of finance. External finance provides the room for faster growth, allowing the company to operate on a far bigger scale, capturing new markets and providing products and services to an ever greater number of customers.

GREATER ECONOMIES OF SCALE

Large businesses are generally more efficient than small ones. They have a greater bargaining power with suppliers and they can spread their fixed costs, such as administrative expenses, over larger sales. This results in lower costs per unit of production, which, in turn, gives the company a competitive edge in the marketplace. External sources of finance help a company grow faster, achieving the economies of scale necessary to compete with the rival firms on regional, national, or even international level.

2. REVIWE OF LITERATURE

2.1. INTRODUCTION

This chapter is devoted to present a brief review of the earlier works related to the external debt to Maldives. A survey of available literature reveals the facts that studies undertaken in the area of external debt of Maldives are limited in number. Most of the available works on Maldives external debt have been undertaken only in recent years. This chapter does not intend to review all available works on external debt. However, in this chapter, some important research works undertaken in recent years which are very closely connected with the present study are reviewed.

In their study on,‟ **External debt and economic growth in Iran**", Mehdi Safdari1 and et al (2011) has Explained the balance relation and the long term of five variables (gross domestic product, private investment, public investment, external debt and imports) and also their influences on each other in Iran for the period from 1974 to 2007, were analyzed. As such, the Vector Autoregressive Model (VAR) was used. Stability of variables by the use of Dickey-Fuller test was examined, after which analysis of Johnson test for considering the convergence among five variables was used. The results of this research showed that the external debt had a negative effect on gross domestic product and private investment. Also, public investment had a positive relation with private investment.

In their work on **,‟ Domestic Investment, FDI and External Debt: An Empirical Investigation,"** Manop Udomkerdmongkol and et al (December, 2011) has Explained to make predictions on the relative importance of three different sources of financing, namely domestic capital self-financing (private investment); FDI financing; external debt financing, for domestic investment under two types of political regime– politically unstable and stable regimes, based on a sample of low and middle-income countries over the period 1995-2001. Author hypotheses are that international borrowing financing would be the major source of finance in both regimes. Private investment would be least important source in unstable regime. Yet, in stable regime, it would be of similar importance to FDI financing. FDI financing would be between foreign debt financing and domestic capital self-financing in unstable regime. Findings suggest that external debt financing has no impact on domestic investment. By contrast, FDI and private investment crowd in the investment. In unstable regime, the effect of domestic capital self-financing is greater than FDI financing effect. Domestic capital self-financing, however, is of similar significance to FDI financing in stable regime.

In her work on ," **External Debt, Internal Debt and Economic Growth Bound in Nigeria Using a causality Approach",** D.Amassoma (2011), the study examined the casual between nexus between external debt, domestic debt and economic growth in Nigeria between 1970 and 2009 using a vector autoregressive (VAR) and a Vector Error Correction (VEC) models. The variables used in the study were tested for stationary using the augmented dickey fuller and Philip perron test. In this paper result showed that the variables are stationary at first differencing. Co-integration test was also performed and the result revealed the absence of co-integration between domestic debt and economic growth while the result also revealed the presence of co-integration between external debt and economic growth. The co-integration results determined the appropriateness of methodological test for causality. The findings of the VAR model revealed that there is a bi- directional causality between domestic debt and economic growth while that of the VEC model revealed a unidirectional causality from economic growth to external debt in Nigeria. The study recommends that government should rely more on domestic debt in stimulating growth than on external debt.

In Their work on (2011)," **The Internal- External Debt Ratio and Economic Growth**," P.Tsintzos, Efthimiadis.T, In this paper examined the effects of the ratio of internal to external to external public debt on a country's economic growth. These effects are examined through a competitive, decentralized model of endogenous economic growth, which relies on public investments. Our finding shows that as the internal public debt ratio increases, the public the long run economic growth rate. The main conclusion of this paper is that the outflow of domestic capital which is needed to service external debt has unfavorable on an economy's long run steady state growth rate.

Yunhe Qiu (July, 2010) in his work on , **"Debt crisis and Debt Sustainability in Developing countries,"** in this paper to find out how future debt crisis can be prevented, first take a look at the history and development of the debt crisis in developing countries. He discussed the causation, as well as preferable, advantageous solution for the developing countries debt crisis. And some policy suggestions are also given out at the end. More over in order to find out if the government of developing countries pursued a sustainable debt policy after the experienced the debt crisis, six selected developing countries from Asia and Latin America and latest in terms of sustainability of their public debt. The results showed that, although there is a high debt ratio in some countries, the empirical evidence for most of the selected countries show that their public debt is sustainable.

In Their work on (2011),‟ **The Internal- External Debt Ratio and Economic Growth**,” P.Tsintzos, Efthimiadis.T, In this paper examined the effects of the ratio of internal to external to external public debt on a country's economic growth. These effects are examined through a competitive, decentralized model of endogenous economic growth, which relies on public insvestments. Our finding shows that as the internal public debt ratio increases, the public the long run economic growth rate. The main conclusion of this paper is that the outflow of domestic capital which is needed to service external debt has unfavorable on an economy's long run steady state growth rate.

Shahnawaz Malik (2010)[8] In his work on,‟ **External Debt and Economic Growth: Empirical Evidence from Pakistan",** has Explained Foreign aid or External Debt is considered a significant source of income for developing countries. Pakistan has relied much on foreign debt to finance its balance of payments deficits and saving investment gap. This heavily dependence on external resources became uncontrollable in late 1980s.primary objective of this paper is to explored the relationship between external debt and economic growth in Pakistan for the period of from 1972 to 2005, using time series econometric techniques. He took a point of glance of external debt and economic performance of Pakistan. In this paper showed that external debt is negatively and significantly related with economic growth. The evidence suggests that increase in external debt will lead to decline in economic growth. Debt servicing has also significant and negative impact on GNP growth. As the debt servicing tends to increase, there will be fewer opportunities for economic growth.

In their Work on, ‟ **The impact of Nigeria's external debt on economic development** ", Esther O. Adegbite and et al (2008), they investigated the impact of huge external debt with its servicing requirements on economic growth of the Nigerian economy so as to make meaningful inference on the impact of the debt relief which was granted to the country in 2006. The neoclassical growth model which incorporates external sector, debt indicators and some macroeconomic variables was employed in this study. The paper investigates the linear and nonlinear effect of debt on growth and investment utilizing the ordinary least squares and the generalized least squares. Among other things, the negative impact of debt on growth is confirmed in Nigeria. In addition, external debt contributes positively to growth up to a point after which its contributions become negative reflecting the presence of nonlinearity in effects. Nigeria's external debt is analyzed in a new context utilizing a different but innovative model and econometric techniques. It is of tremendous value to researchers on related topic and an effective policy guide to policymakers in Nigeria and other countries with similar characteristics.

M.S. Ogunmuyiwa (2008) in his work on, ‟ **Does External Debt Promote Economic Growth in Nigeria**?" has examined external debt actually promotes economic growth in developing countries using Nigeria as a case study. Time series data from 1970 to 2007 were fitted into the regression equation using various econometric techniques such as Augmented Dickey Fuller (ADF) test, Granger causality test, Johansen co-integration test and Vector Error Correction Method (VECM). Empirical results reveal that causality does not exist between external debt and economic growth as causation between debt and growth was also found to be weak and insignificant in Nigeria.

In their study on, ‟ **Public External Debt, Informality and Production Efficiency in Developing Countries**, ". Imed Drine and et al (2006) this paper proposed an alternative approach to investigate the non-linear effect of external debt on growth. An endogenous growth model with formal and informal sectors is developed to analyze the effect of public external debt on production efficiency in developing countries. Using a stochastic frontier technique with unobserved heterogeneity, for a panel of 27 developing countries for the period from 1970 to 2005, They confirms that the turning point associated to the effect of the share external public debt is apparent at 84 per cent.

Chinedu B. Ezirim and et al (2006) in their Study**, ‟ Exchange Rate Determination, Foreign Investment Burden and External Debt Crisis in Less- developed Countries: Nigerian Experience,**" they investigate the relationships between three external sector economic crises: exchange rate, foreign investment, and external debt. More pointedly it seeks to know how external debt burden and foreign investment burden, in the midst of internal oil price movements, affect exchange rates conditions in a typical oil-producing LDC. Four log-linear multiple and distributed lag models were estimated using the OLS and exact maximum likelihood methods against annual Nigerian data from 1970 to 2001. Globally, the study found clear-cut and significant relationships between the three external sector economic crises. Relatively, foreign investment burden, international oil prices and previous exchange rate conditions are important arguments in explaining current exchange rate crisis in a typical LDC. External debt burden was not found to be a consistent factor contributing to exchange rates crisis in Nigeria. A major imperative of these results is that the observed role of the investment burden was that of putting immense pressures on the exchange rates, and thus aggravates the crisis condition. External debt burden does not have the same magnitude of effect.

In their study work on, ‟ **The impacts of External Debt Burden and Foreign Direct Investment Remittances on Economic Growth: Empirical Evidence from Nigeria",** Emmanuel Anoruo and et al (2006) have analysed the economies of LDCs have been bedeviled, among others, by the twin external eco-financial crises of mounting debt burden and foreign investment inadequacies accompanied by more than proportionate FDI income remittance out of these economies. The worst hit by these trend are the highly indebted poor sub- Saharan African countries, including Nigeria. Against this background, this study sets out to investigate the casual relationship between external debt crisis and foreign investment crisis plaguing these countries, using Nigeria as a test case. It also attempts to x-ray the relationship between these two external sector crises and the GDP of the country. Use is made of modified granger causality procedure to derive the relevant models while estimation followed the log-linear least square procedure against annual Nigerian data from 1970 through 2001. The diagnostic test results indicate that the specified models possess satisfactory forecasting and explanatory powers. The relative statistical results indicate the existence of dual causality between external debt and foreign investment burdens in the country. Evidently, the two economic problems do not contribute positively and significantly to growth in the output levels of Nigeria, ceteris paribus.

Naeem Akram (2006) in his work on, "**Impact of Public Debt on the Economic Growth of Pakistan"**, this paper explain over the year Pakistan has failed to collect enough revenues to finance its budget. Consequently, it has been facing the problem of twin deficits and resultantly to finance their developmental activities government has to rely on public external and domestic debt. The positive effects of public debt relate to the fact that in resource- starved economies debt financing if done properly leads to higher growth and adds to their capacity to service and repay external and internal debt. The negative effects work through two main channels—i.e.,‟Debt Overhang" and "Crowed Out" effects. The present study examines the consequence of public debt for economic growth and investment in Pakistan for the period from 1972 to 2009. It develops a hybrid model that explicitly incorporates the role of public debt in growth equations. As the some variables are I (1) and other are I (0) so autoregressive distributed lag (ARDL) technique have been applied to estimate the model. Study finds that public external debt has negative relationship with per capita GDP and investment conforming the existence of "debt overhang effect". However, due to insignificant relationships of debt servicing with investment and per capita GDP, the existence of the crowding out hypothesis could not be confirmed. Similarly, domestic debt has a negative relationship with investment and per capita GDP. In other words, it seems to have crowded out private investment.

In their study, ‟ **External debt and economic growth in Latin America,"** Alfredo Schclarek (May 16, 2005), has explained the relationship between external debt and growth for a number of Latin America and Caribbean economies. Researcher find that lower total external debt levels are associated with higher growth rates, and that this negative relationship is driven by the incidence of public external debt levels, and not by private external debt levels. Regarding the channels through which debt accumulation affects growth, Author find that this mainly driven by the capital accumulation growth. In addition, neither total factor productivity growth nor private savings rates are affected by external debt levels. Researcher does not find evidence of nonlinear effects for these relationships. The data set consist of a panel of 20 Latin American and Caribbean countries with data averaged over each of seven 5 year period between 1970 and 2002. Methodologically, the paper uses a dynamic system GMM panel estimator.

In Her work on**, ‟ Does External Debt Affect Economic Growth: Evidence from Developing Countries,**" Safia Shabbir (2004), has Explained by taking a dataset from 24 developing countries over the period from 1976 to 2003, this paper attempts to explore the relationship between external debt and economic growth, focusing on whether external debt stock and the external debt servicing leads to crowding out. Researcher findings are consistent with both the debt overhang theory and the liquidity constraint hypothesis suggesting that external debt stock adversely affects economic growth and higher level of external debt stock leads to crowding out.

Albert wijeweera and et al (2004) in their work on,‟ **Economic Growth and External Debt Servicing: A co integration analysis of Sri Lanka, 1952 to 2002,"**Explained the immediate aftermath of the tsunami disaster, many of Sri Lanka 's creditors nations granted debt write- offs and interest free periods on loans to assist the recon structure process. The macro- economic effects stem from excessive external debt; a debt overhang problem and a credit- rationing problem. Using econometric analysis and Sri Lankan data for the periods from 1952 to 2002, this paper investigates whether Sri Lanka faces a debt overhang problem. Long run estimation rely on coindegration methodology were as short run analysis employees error correction method. The results indicate that Sri Lanka does not have a debt overhang problem, probably because total external indebtedness is not too high.

Benedict Clements and et al (December, 2003) in their work on,**"External Debt, Public Investment, and Growth in Low-Income Countries**," have examined the channels through which external debt affects growth in low-income countries. Our results suggest that the substantial reduction in the stock of external debt projected for highly indebted poor countries (HIPCs) would directly increase per capita income growth by about 1 percentage point per annum. Reductions in external debt service could also provide an indirect boost to growth through their effects on public investment. If half of all debt-service relief were channeled for such purposes without increasing the budget deficit, then growth could accelerate in some HIPCs by an additional 0.5 percentage point per annum.

Meltem Ucal and et al (2001) in their work on,‟ **The Solvency Ratio of External Debt (SRED) as an Indicator of Debt Crisis: The Case of Turkey,"** they Analyzed the objective of this research was to found a sound indicator to provide timely warnings to emerging economies of approaching debt crises. To achieve this, Researcher used the solvency ratio of external-debt (SRED) as an analytical tool, by applying it to the case of Turkish external debt between 1980 and 2009. Analysis of our results indicated that the SRED was a powerful indicator of Turkey's external debt crisis.

In their work on, ‟ **External Debt and its Impact on Economic and Business Growth in Pakistan** ," Abid Hammed & et al (2001) have analyzed the long-run and short-run relationships between external debt and economic growth of Pakistan. By fitting production function model to annual data for the period from 1970 to 2003, the study examines the dynamic effect of GDP, debt service, capital stock and labour force on the economic growth of the country. By following Cunningham (1993), it has identified the long-run and short-run causal relationships among the included variables. The results show that debt servicing burden has a negative effect on the productivity of labor and capital, and thereby affect economic growth adversely. Results also show that debt service ratio tends to affect negatively GDP and thereby the rate of economic growth in the long-run, which, in turn, reduces the ability of the country to service its debt. Similarly, the estimated error correction term shows the existence of a significant long-run causal relationship among the specified variables. Overall, the results point to the existence of short-run and long-run causal relationship running from debt service to GDP.

S.Gangadharan (2007) in his work on,‟ **Reducing Public debt – Is it a realizable objective of Privatization?,"** has Analysed Disinvestment and Privatization is one type of economic reform programme initiated in 1991 by the Government of India as a part of its liberalization efforts to restructure the Public sector enterprises. One of the prime objectives of this programme is the reduction of Public Debt. This paper examined the extent of realization of this objective by examining the level of indebtedness of the Government of India in the Pre (1980-81 to 1989-90) and Post Privatisation (1990-91 to 1999-2000) period. The paper also brings out an analysis on what drives the debt ratio? The study concludes that given the type of monitoring and control methods by the RBI, a favorable economic scenario of 2005-06 and the overwhelming response the PSU shares received in the recent "Offer of Sale" programme, reducing public debt is a realizable objective of the Privatization programme.

Aktham maghyereh and et al (2001) in their work on, ‟ **External debt and economic growth in Jordan: the threshold effect",** have Explained by the Jordanian economy has a serious external debt problem. Based on several indicators, it can be argued that foreign debt has reached an excessive level and has become an impediment to economic growth .This paper examined the impact of external debt on the performance of the Jordanian economy and determines its optimum level using new econometric techniques that provide appropriate procedure for estimation and inference. The findings of the study indicate that the optimal level of external indebtedness is about 53 percent of GDP. In other words when the external debt exceeds this level, its impacts on the performance of the Jordanian economy becomes negative.

In his work on ,‟ **External Debt and Economic Growth in Sub- Saharan African Countries: An Econometric Study**", Milton A. lyoha (March, 1999) have explained this econometric study takes a simulation approach to investigate the impact of external debt on economic growth in sub- Saharan African countries using a small macro econometric model estimate for 1970-1994. An important finding was the significance of debt overhang variables in the investment equation, suggesting that mounting external debt depresses investment through both a "disincentive" effect and a "crowed out" effect. Policy simulation was undertaken to investigate the impact of alternative debt stock reduction scenarios (debt reduction package of 5 per cent, 10 per cent, 20 per cent and 50 per cent), effective in 1986, on investment and economic growth in the subsequent years. It was found that debt stock reduction would have significantly increased investment and growth performance. A 20 per cent debt stock reduction would, on average, have increased investment by 18 per cent and increased GDP growth by 1 per cent during the period from 1987 to 1994 period. Thus, the results demonstrate that forgiveness could provide a much needed stimulus to investment recovery and economic growth in sub- Saharan Africa.

Jen-te hwang and et al in their Work on, ‟ **Debt overhang, financial sector Development and Economic Growth**," Explained panel data of 20 high external debt countries selected from Asia and Latin-America to investigate the financial sector development-debt-growth nexus within the framework of an endogenous growth and financial development mechanism. Author found that among 20 high external debt countries, the external debt-to-GDP ratio is significantly negatively correlated with economic growth rates, indicating that excessive debt is detrimental to the growth of an economy. Researcher introduced the simultaneous GMM equations between financial sector development and economic growth to evaluate the interaction effects among economic growth, external debt, and financial sector development. In empirical results, Authors find that the negative impact of high debt on growth appears to operate through a strong negative effect, in terms of compulsion to resort to financially repressive policies. In addition, we also find a two-way relationship between financial sector development and economic growth.

3. OBJECTIVES AND METHODOLOGY

3.1. INTRODUCTION

This section presents an account of the methodology adopted for carrying out this research. Research methodology referred to the method conduction a research study systematically and scientifically. Research methodology include a description of the choice of the study period, the sources of data, the choice of the variables selected and the tools made use of the study.

3.2. STATEMENT OF THE PROBLEM

After the globalization of the economy the external debt sector has assumed more important. Though there are a number of international economics, researches relating to ASIAN countries are very limited in number. Moreover public debt is an important variable and external debt influences the international trade. A survey of existing research works reveals the fact that attempts to examine the external debt of Maldives are very limited. The trend and growth of external debt of Maldives is focus of this research work.

3.3. OBJECTIVES

The main objectives of the present study are as follows:

1. To study the Trend and the growth rates of different components of the external debt.
2. To examine the relationship between external debt and GDP during the period from 1981 to 2009.
3. To study the spillover effect of external debt on economic growth of the Maldives.

3.4. SOURCES OF DATA

For this study the above specified data have been collected mainly from the Asian Development Bank Annual Year Books published by Asian Development Bank.

3.5. DATA REQUIREMENTS

The data used for this research work are secondary data only. The data required for this study are: GDP, external debt, Domestic debt and total debt of Maldives.

3.6 PERIOD OF STUDY

The time period taken for analysis of this study is a period of 30 years from 1981 to 2009. This period is divided in to three sub periods namely, from 1981to 1990, from 1991to 2000 and 2001 to 2010. This choice of this study period is primarily due to the availability of data.

3.7. SCOPE OF THE STUDY

This study focused on the problems and prospects of external debt source in Maldives due to the reason such as the growth and structure of external debt.

3.8. TOOLS OF ANALYSIS

1. This study has been used averages, annual growth rate and percentages.
2. In necessary cases linear growth rate has been worked out for comparison. Index numbers have also been worked out to understand the trend of external debt.
3. To analyze the trend compound growth rate of external debt, simple linear and semi log linear regression techniques have been used in which the external debt is taken as the dependent variable and time is taken as the independent.

4. GROWTH OF THE DIFFERENT COMPONENTS OF EXTERNAL DEBT

4.1. INTRODUCTION

The external debt may be classified either on the basis of the time period maturity or on the basis of the sector in which the external assistance has been utilized. In this chapter, an attempt is made to study the growth of the different components of external debt, during the period from 1981 to 1990 from 1991 to 2000 and from 2001 to 2009. For this purpose, the external debt is classified initially into total debt, long term debt and short – term debt. The external debts which have a maturity period of one year or less are grouped under short term debt. All categories of debt which have a maturity period of more than one year is grouped under long – term debt. Hence, in this study also, the same type of classification, (i) availability of data and (ii) to facilitate easy compression.

4.2. TOTAL DEBT

The Table 4.2.1 shows that data on total debt in Maldives. During the decade from 1981 to 1990, the total debt has been increased from 38.9 US Dollars in 1981 to 83.1 Million US Dollars in 1985 and then it started showing a declining trend. The highest index number was to 213.62 Million US Dollars in 1985.In this decade the highest annual growth rate was 67.35 per cent in 1982 and lowest growth rate was-17.33 per cent in 1986. In this decade the average value of total debt and annual growth rate was works out to 70.48 Million US Dollar and 11.168 per cent, per year respectively.

During the decade from 1991 to 2000, the total debt has been increased from 81.2 Million US Dollars in 1991 to 218.9 Million US Dollars in 1991 and then it started showing a declining trend. The highest index number was 269.58 in 1999. In this decade the highest annual growth rate was 25.43 per cent in 1995 and lowest growth rate was -5.89 per cent in 2000. In this decade the average value of total debt and annual growth rate was works out of 152.48 Million US Dollar and 15.36 per cent, per year respectively.

During the period from 2001 to 2009, the total debt has been increased from 234.9 Million US Dollar in 2001 to 780.2 million US dollars in 2009. The highest index number was 332.14 in 2009. In this decade the highest annual growth rate was 29.06 per cent in 2007 and lowest growth rate was 7.14 per cent in 2005. In this decade the average value of total debt and annual growth rate was works out to 463.65 Million US Dollar and 25.79 per cent, per year respectively.

TABLE 4.2:- TOTAL DEBT (Millions of US Dollars)

Year	Total Debt	Index	AGR
1981	38.9	100	
1982	65.1	167.35219	67.352185
1983	77.2	198.45758	18.59
1984	82.8	212.85347	7.25
1985	83.1	213.62468	0.36
1986	68.7	176.60668	-17.33
1987	72.8	187.14653	5.96
1988	71.4	183.54756	-1.92
1989	66.8	171.72237	-6.89
1990	78	200.51414	16.77
Average	**70.48**		**11.168**
1991	81.2	100	4.1
1992	94.9	116.87	16.87
1993	112.3	138.3	18.34
1994	123.5	152.09	9.97
1995	154.9	190.76	25.43
1996	168.2	207.14	8.59
1997	171.3	210.96	1.84
1998	193.6	238.42	13.02
1999	218.9	269.58	13.07
2000	206	253.69	-5.89
Average	**152.48**		**15.36**
2001	234.9	100	14.03
2002	271.7	115.67	15.67
2003	294.7	125.46	8.47
2004	365.8	155.73	24.13
2005	391.9	166.84	7.14
2006	488	207.75	24.52
2007	629.8	268.11	29.06
2008	715.9	304.77	13.67
2009	780.2	332.14	8.98
Average	**463.65**		**25.79**

Source: Asian Development Bank (Key Indicator for Asia and the Pacific 2011)

4.3: LONG-TERM DEBT

The Table 4.3.1 shows that data on long- term debt in Maldives. During the decade from 1981 to 1990 the long-term debt has increased from 36.9 Million US Dollars in 1981 to 61.8 Million US Dollars in 1987 and then it started showing a declining trend. The highest index number was 167.98 in 1987. In this decade the highest annual growth rate was 19.55per cent in 1986 and lowest growth rate was -8.42 per cent in 1989. During 1981-1990, the average value of long- term debt and annual growth rate was works out to 52.44 million US dollars and 8.16 per cent, per year respectively.

During the decade from 1991 to 2000 the long- term debt has increased from 78 Million US Dollars in 1999 and then it started showing a declining trend. The highest index number was 248.85 in 1999. In this decade the highest annual growth rate was 24 per cent in 1995 and lowest growth rate was -4.84 per cent in 2000. During 1991-2000, the average value of long- term debt and annual growth rate was works out to 144.17 million US dollars and 13.68 per cent, per year respectively.

TABLE 4.3:- LONG-TERM DEBT (Millions of US Dollars)

Year	Long-term Debt	Index	AGR
1981	36.9	100	
1982	42.1	114.09	14.09
1983	48.2	130.62	14.49
1984	49.8	134.96	3.32
1985	49.1	133.06	-1.41
1986	58.7	159.08	19.55
1987	61.8	167.48	5.28
1988	59.4	160.98	-3.88
1989	54.4	147.43	-8.42
1990	64	173.44	17.65
Average	**52.44**		**8.16**
1991	78	100	21.87
1992	90.5	116.03	16.08
1993	109.3	140.13	20.77
1994	122.5	157.05	12.08
1995	151.9	194.74	24
1996	163	208.97	7.31
1997	164.3	210.64	0.79
1998	183.4	235.13	11.63
1999	194.1	248.85	5.83
2000	184.7	236.79	-4.84
Average	144.17		13.68
2001	180.7	100	-2.16
2002	223	123.41	23.41
2003	260.7	144.27	16.9
2004	333.3	184.45	27.85
2005	329.7	182.46	-1.08
2006	383.6	212.28	16.35
2007	444.4	245.93	15.85
2008	497.3	275.21	11.9
2009	569.4	315.11	14.49
Average	322.21		23.90

Source: Asian Development Bank (Key Indicator for Asia and the Pacific 2011).

During the period from 2000 to 2009 the long term debt has increased from 180.7 Million US Dollar in 2001 to 569.4 Million US Dollars in 2009. The highest annual growth rate was 27.85 per cent in 2004 and lowest growth rate was -1.08 per cent in 2005. During the period from 2001 to 2010, the average value of long-term debt and annual growth rate was works out to 322.21 million US dollars and 23.90 per cent, per year respectively.

4.4: SHORT-TERM DEBT

The data Table 4.4 shows that on short-term debt in Maldives. During the decade from 1981 to 1990, the short-term has increased from 2 Million US Dollars in 1981 to 34 Million US Dollars in 1985 and then is started showing a declining trend. The highest index number was 1700 in 1985. In this decade the highest annual growth rate was 1050 per cent in 1982 and lowest growth rate was -70.59 per cent in 1986. During 1981-1990, average value of short term debt and annual growth rate was works out to 18.04 Million US Dollars and 60 per cent, per year respectively.

During the decade from 1991 to 2000, the short-term has increased from 3.2 Million US Dollars in 1991 to 4.4 Million US Dollars in 1992 and then is started showing a declining trend. The highest index number was 775 in 1999. In this decade the highest annual growth rate was 190 per cent in 1995 and lowest growth rate was -77.14 per cent in 1986. In this decade average value of short- term debt and annual growth rate was works out to 8.26 Million US Dollars and 56.87 per cent, per year respectively.

During the period from 2001 to 2009, the short-term has increased from 32.5 Million US Dollar in 2004 to 214.6 Million US Dollars in 2008 and then is started showing a declining trend. The highest index number was 395.65 in 2008. In this decade the highest annual growth rate was 153.73 per cent in 2001 and lowest growth rate was -30.18 per cent in 2003. During the same period, average value of short- term debt and annual growth rate was works out to 91.96 Millions US Dollars and 30.22 per cent, per year respectively.

TABLE 4.4:- SHORT-TERM DEBT (Millions of US Dollars)

Year	Short-term Debt	Index	AGR
1981	2	100	
1982	23	1150	1050
1983	29	1450	26.09
1984	33	1650	13.79
1985	34	1700	3.03
1986	10	500	-70.59
1987	11	550	10
1988	12	600	9.09
1989	12.4	620	3.33
1990	14	700	12.9
Average	**18.04**		**60**
1991	3.2	100	-77.14
1992	4.4	137.5	37.5
1993	3	93.75	-31.81
1994	1	31.25	-66.6
1995	2.9	90.63	190
1996	4.7	146.87	62.07
1997	7	218.75	48.93
1998	10.2	318.75	45.71
1999	24.8	775	143.14
2000	21.4	668.75	-13.71
Average	**8.26**		**56.87**
2001	54.3	100	153.73
2002	48.7	89.69	-10.31
2003	34	62.62	-30.18
2004	32.5	59.85	-4.41
2005	56.3s	103.68	73.28
2006	98	180.85	74.4
2007	179	329.65	82.28
2008	214.6	395.21	19.89
2009	202	372.007	-5.87
Average	**91.96**		**30.22**

Source: Asian Development Bank (Key Indicator for Asia and the Pacific 2011).

4.5 TREND ANALYSIS OF EXTERNAL DEBT

4.5.1. INTRODUCTION

In this study deals with analysis and interpretation of External Debt in Maldives. This is used on the availability of data. Various tools used for analysis of Total debt, long term debt and Short term debt during the time period from 1981 to 2009. The tools like Regression (simple linear and Log linear).

4.5.2. REGRESSION ANALYSIS

To analysis the relationship between the total debt and GDP, simple linear regression model is used by taking the total debt as the independent variable for the 3 decades separately. Total debt and GDP are measured in millions of US Dollar. The regression Co-efficient in this case will measure the increase in GDP in Millions of US Dollar. If the total debt is increased by the one million Dollar. The regression co-efficient is also tested for the null hypothesis that its value is zero. The co-efficient determination, R^2 will measure the ability of the independent variable, Total debt to explain the variation in GDP.

The results of the Table 4.5.2 shows that the trend analysis reveal that the total debt in Maldives increased annually by 71.77 million of US Dollars in 1981 to 1990. The regression co- efficient of the semi log linear model implies that the total debt increased at the compound growth rate of 44.21 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the total debt in Maldives had registered a linear trend in this period and 95 per cent of variations in the dependent variable are explained by the independent variable.

The results of trend analysis reveal that the total debt in Maldives increased annually by 1.76 million of US Dollars in 1991 to 2000. The regression co- efficient of the semi log linear model implies that the total debt increased at the compound growth rate of 7.8946 per cent per year. The value of adjusted R^2 is low value in the simple linear model and semi log linear model. It means that the total debt in Maldives had registered a linear trend in this period and 7 per cent of variations in the dependent variable are explained by the independent variable.

The results of trend analysis reveal that the total debt in Maldives increased annually by 15.481 million of US Dollars in 2001 to 2009. The regression co- efficient of the semi log linear model implies that the total debt increased at the compound growth rate of 28.5286 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the total debt in Maldives had registered a linear trend in this period and 96 per cent of variations in the dependent variable are explained by the independent variable.

Comparing the three periods, during the period from 1981 to 1990, from 1991 to 2000 and from 2001 to 2009, the total debt in Maldives increased annually by the highest amount of 71.77 million of US Dollars in 1981 to1990. The highest compound growth rate of 44.211 per cent was recorded only in 1981-1990.

The results of the trend analysis reveal that the Long term debt in Maldives increased annually by 46.509 million of US Dollars in 1981 to 1990. The regression co- efficient of the semi log linear model implies that the long term debt increased at the compound growth rate of 37.0881 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the long term debt in Maldives had registered a linear trend in this period and 98 per cent of variations in the dependent variable are explained by the independent variable.

The results of the trend analysis reveal that the Long term debt in Maldives increased annually by 2.616 million of US Dollars in 1991 to 2000. The regression co- efficient of the semi log linear model implies that the long term debt increased at the compound growth rate of 12.7194 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the long term debt in Maldives had registered a linear trend in this period and 78 per cent of variations in the dependent variable are explained by the independent variable.

The results of the trend analysis reveal that the Long term debt in Maldives increased annually by 13.288 million of US Dollars in 2001 to 2009. The regression co- efficient of the semi log linear model implies that the long term debt increased at the compound growth rate of 26.1827 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the long term debt in Maldives had registered a linear trend in this period and 93 per cent of variations in the dependent variable are explained by the independent variable.

TABLE 4.5.2:- RESULTS OF TREND ANALYSIS FOR THE EXTERNAL DEBT IN TO MALDIVES

S. NO	Variation	Year	Model	a	b	SE	t	sig	R^2	adjusted R^2	CGR
1	Total debt	1981-1990	linear	-143435.194	71.77	6.058	11.847	0	0.946	0.946	
			Semi-log	-311.912	0.159	0.007	22.683	0	0.987	0.985	44.2115
		1991-2000	linear	-3424	1.76	1.352	1.302	0.229	0.175	0.072	
			Semi-log	-61.645	0.033	0.023	1.459	0.183	0.21	0.111	7.8946
		2001-2009	linear	-30740.279	15.481	0.994	15.576	0	0.968	0.964	
			Semi-log	-212.909	0.109	0.009	12.068	0	0.948	0.941	28.5286
2	Long- Term Debt	1981-1990	linear	-93054.939	46.509	2.447	19.037	0	0.981	0.978	
			Semi-log	-268.341	a0.137	0.007	18.321	0	0.98	0.977	37.0881
		1991-2000	linear	-5141.147	2.616	0.448	5.833	0	0.81	0.786	
			Semi-log	-99.795	0.052	0.009	5.721	0	0.804	0.779	12.7194
		2001-2009	linear	-26371.792	13.288	1.149	11.561	0	0.944	0.936	
			Semi-log	-196.297	0.101	0.011	9.006	0	0.91	0.899	26.1827
3	Short- Term Debt	1980-1990	linear	-4374.584	2.196	0.572	3.84	0.005	0.648	0.604	
			Semi-log	-501.978	0.252	0.071	3.544	0.008	0.611	0.562	78.6487
		1991-2000	linear	-48151.511	24.067	5.007	4.806	0.002	0.767	0.734	
			Semi-log	-467.805	0.236	0.055	4.305	0.004	0.726	0.687	72.1868
		2001-2009	linear	1717.147	-0.856	1.243	-0.689	0.51	0.056	-0.062	
			Semi-log	-48.57	0.026	0.097	0.265	0.797	0.009	-0.115	6.1695

Source: Asian Development Bank (Key Indicator for Asia and the Pacific 2011)

Comparing the three periods, during the period from 1981 to 1990, from 1991 to 2000 and from 2001 to 2009, the total debt in Maldives increased annually by the highest amount of 46.509 million of US Dollars in 1981 to1990. The highest compound growth rate of 37.0881 per cent was recorded only in 1981-1990.

The results of the trend analysis reveal that the Short-term debt in Maldives increased annually by 24.067 million of US Dollars in 1981 to 1990. The regression co- efficient of the semi log linear model implies that the Short-term increased at the compound growth rate of 78.6487 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the Short-term in Maldives had registered a linear trend in this period and 60 per cent of variations in the dependent variable are explained by the independent variable.

The results of the trend analysis reveal that the short term debt in Maldives increased annually by 2.196 million of US Dollars in 1991 to 2000. The regression co-efficient of the semi log linear model implies that the total debt increased at the compound growth rate of 72.1868 per cent per year. The value of adjusted R^2 is high in the simple linear model and semi log linear model. It means that the total debt in Maldives had registered a linear trend in this period and 73 per cent of variations in the dependent variable are explained by the independent variable.

The results of the trend analysis reveal that the short term debt in Maldives increased annually by -0.856 million of US Dollars in 2001 to 2009. The regression co- efficient of the semi log linear model implies that the total debt increased at the compound growth rate of 6.1695 per cent per year. The value of adjusted R^2 is low or negative value in the simple linear model and semi log linear model. It means that the total debt in Maldives had registered a linear trend in this period and -6 per cent of variations in the dependent variable are explained by the independent variable.

Comparing the three periods, during the period from 1981 to 1990, from 1991 to 2000 and from 2001 to 2009, the total debt in Maldives increased annually by the highest amount of 24.067 million of US Dollars in 1991 to2000. The highest compound growth rate of 78.6487 per cent was recorded only in 1981-1990.

5. EXTERNAL DEBT AND ECONOMIC GROWTH

5.1. INTRODUCTION

One of the advantages of External debt is that it will stimulate growth process and help to achieve a higher rate of growth. However, external debt does not guarantee growth uniformly in the countries and at all points of time.

Many factors influence the effect of external debt on growth in an economy. Hence, in this chapter an attempt is made to study the relationship between external debt and economic growth through correlation and regression analysis.

5.2. CORRELATION ANALYSIS

Correlation analysis generally helps to study the degree and direction of relationship between two variables. If external debt stimulates the growth process and a higher growth rate is achieved, there will be a strong positive correlation between external debt and GDP. If the growth of external debt does not yield adequate growth, the correlation will be High or Insignificant.

To study the correlation between external debt and GDP the time period taken for analysis is divided in to three sub periods. The first period is up to 1981 to 1990 and the second period is up to 1991 to 2000 and the third period is up to 2001 to 2009. The Karlpearson's correlation co- efficient is calculated for these three periods, for the Maldives taken for analysis, depending on available data.

The correlation coefficient is tested favour the null hypothesis that their value is not equal to zero. Using the test a negative and insignificant correlation implies a high degree of association between external debt and economic growth.

The Table 5.2 shows that during the first period, the correlation co-efficient between external debt and GDP is significant during the 1981 to 1990. Even though the actual values of correlation co-efficient for these total debt at 0.1 per cent, they do not indicate a statistically insignificant association between external debt and economic growth in these case.

In the second period, the correlation co-efficient between external debt and GDP is insignificant during the 1991 to 2000. Even though the actual values of correlation co-efficient for these total debt, they do not indicate a statistically significant association between external debt and economic growth in these cases.

During the Third period, the correlation co-efficient between external debt and GDP is insignificant during the 2001 to 2009. Even though the actual values of correlation co-efficient for these total debt at 0.1 per cent, they do not indicate a statistically significant association between external debt and economic growth in these case.

5.2. THE RESULT OF CORRELATION ANALYSIS IN MALDIVES

S. NO	VARIABLE	FIRST PERIOD	n	SECOND PERIOD	n	THIRD PERIOD	N
1	TOTAL DEBT And GDP	0.981** (.000)	10	0.311 (.382)	10	.907** (.000)	9
2	LONG TERM DEBT And GDP	0.971** (.000)	10	0.848** (.002)	10	0.856** (.002)	9
3	SHORT TERM DEBT And GDP	0.943** (.000)	10	0.931** (.000)	10	-0.32 (.367)	9

Sources: Asian Development bank (Key indicator for Asia and the pacific 2011)

The first period, the correlation co-efficient between external debt and GDP is significant during the 1981 to 1990. Even though the actual values of correlation co-efficient for these Long term debt at 0.1 per cent, they do not indicate a statistically significant association between external debt and economic growth in these case.

In the second period, the correlation co-efficient between external debt and GDP is significant during the 1991 to2000. Even though the actual values of correlation co-efficient for these Long term debt at 0.1 per cent, they do not indicate a statistically significant association between external debt and economic growth in these case.
The Third period, the correlation co-efficient between external debt and GDP is significant during the 2001 to 2009. Even though the actual values of correlation co-efficient for these Long term debt at 0.1 per cent, they do not indicate a statistically significant association between external debt and economic growth in these case.
In the First period, the correlation co-efficient between external debt and GDP is significant during the 1981 to 1990. Even though the actual values of correlation co-efficient for these Short term debt at 0.1 per cent, they do not indicate a statistically significant association between external debt and economic growth in these case.
In the Second period, the correlation co-efficient between external debt and GDP is significant during the 1991 to 2000. Even though the actual values of correlation co-efficient for these Short term debt at 0.1 per cent, they do not indicate a statistically significant association between external debt and economic growth in these case.
In the Third period, the correlation co-efficient between external debt and GDP is insignificant during the 2001 to 2009. Even though the actual values of correlation co-efficient for these Short term debt, they do not indicate a statistically insignificant association between external debt and economic growth in these case.

5.3. REGRESSION ANALYSIS

To analysis the relationship between the FDI and GDP, simple linear regression model is used by taking the External debt as the independent variable and GDP as the dependent variable for the only one period. External debt is measured in millions of US Dollars. The regression co- efficient in this case will measure the increase in GDP in millions of US Dollar if the External debt is increased by one million of US Dollars. The regression coefficient is also tested for the null hypothesis that its value is zero. The coefficient of determination, R^2 will measure the ability of the independent variable, external debt to explain the variations in GDP. The regression analysis can reveals that the relationship in the table 5.2.
For Maldives, the regression coefficient in the first decade is 36.961 and it is insignificant. GDP increased by 36.961 million of US Dollars, if total debt is increased by one million of us dollar in Maldives in the first decade .However, total debt high explanatory power .It is capable of explaining -1.6 percent of variation in GDP. If total debt no influences the GDP insignificant in the first decade in Maldives.
For Maldives, the regression coefficient in the Second decade is 128.55 and it is significant at one per cent level of significance. GDP increased by 128.559 million of US Dollars, if total debt is increased by one million of us dollar in Maldives in the Second decade .However, total debt high explanatory power .it is capable of explaining 80 percent of variation in GDP .if total debt influence the GDP .if total debt influences the GDP significant in the second decade in Maldives.
For Maldives, the regression coefficient in the Third decade is 49.770 and it is significant at one per cent level of significance. GDP increased by 49.770 million of US Dollars, if total debt is increased by one million of us dollar in Maldives in the Third decade. However, total debt high explanatory power .it is capable of explaining 95 percent of variation in GDP. If total debt influences the GDP significant in the first decade in Maldives.
For Maldives, the regression coefficient in the first decade is 146.095 and it is significant at one per cent level of significance. GDP increased by 146.095 million of US Dollars, if total debt is increased by one million of us dollar in Maldives in the first decade .However, Long term debt high explanatory power .it is capable of explaining 68 percent of variation in GDP. If Long term debt influences the GDP significant in the first decade in Maldives.
For Maldives, the regression coefficient in the Second decade is 139.560 and it is significant at one per cent level of significance. GDP increased by 136.560 million of US Dollars, if Long term debt is increased by one million of us dollar in Maldives in the second decade .However, Long term debt high explanatory power. it is capable of explaining 70 percent of variation in GDP. If Long term debt influences the GDP significant in the second decade in Maldives.
For Maldives, the regression coefficient in the Third decade is 76.987 and it is significant at one per cent level of significance. GDP increased by 76.987 million of US Dollars, if Long term debt is increased by one million of us dollar in Maldives in the Third decade .However, Long term debt high explanatory power .it is capable of explaining 93 percent of variation in GDP. If Long term debt influences the GDP significant in the third decade in Maldives.
For Maldives, the regression coefficient in the first decade is -44.311 and it is insignificant. GDP increased by -44.311 million of US Dollars, if total debt is Decreased by one million of us dollar in Maldives in the first decade .However, total debt Low explanatory power .It is capable of explaining -0.1 percent of variation in GDP. If the short term debt no influences the GDP insignificant in the first decade in Maldives.

TABLE 5.3:- RESULTS OF THE REGRESSION ANALYSIS IN MALDIVES

S. NO	VARIABLE	YEAR	a	b	SE	t	SIG	R^2	Adjusted R^2	F
1	Total Debt	1981 - 1990	1180.717	36.961	39.987	0.924	0.382	0.096	-0.016	0.854
		1991 - 2000	-4602.708	128.559	21.055	6.106	0	0.823	0.801	37.282
		2001 - 2009	20858.421	49.77	3.701	13.447	0	0.963	0.957	180.822
2	Long-Term Debt	1981 - 1990	-3875.535	146.095	32.291	4.524	0.002	0.719	0.684	20.47
		1991 - 2000	-5120.387	139.56	29.749	4.691	0.002	0.733	0.7	22.008
		2001 - 2009	16372.208	76.987	7.187	10.711	0	0.942	0.934	114.733
3	Short-Term Debt	1981 - 1990	4585.075	-44.311	46.385	-0.955	0.367	0.102	-0.01	0.913
		1991 - 2000	8636.015	770.458	96.371	7.995	0	0.889	0.875	63.915
		2001 - 2009	31026.457	126.355	18.786	6.726	0	0.866	0.847	45.239

Source: Asian Development Bank (Key Indicator for Asia and the Pacific 2011)

For Maldives, the regression coefficient in the Second decade is 770.458 and it is significant at one per cent level of significance. GDP increased by 770.458 million of US Dollars, if short term debt is increased by one million of us dollar in Maldives in the Second decade .However, short debt high explanatory power .It is capable of explaining 87 percent of variation in GDP. If Short term debt influences the GDP significant in the second decade in Maldives.
For Maldives, the regression coefficient in the Third decade is 126.355 and it is significant at one per cent level of significance. GDP increased by 126.355 million of US Dollars, if short term debt is increased by one million of us dollar in Maldives in the third decade .However, short debt high explanatory power .It is capable of explaining 84 percent of variation in GDP. If Short term debt influences the GDP significant in the third decade in Maldives.

6. CONCLUSION

The external debt of Maldives growth and structures are taken for investigation in this research work is in different stage of external debt like total debt, long term debt and short term debt. In the research work to find out the economic growth which use of external debt and GDP. This study found positive relationship between the economic growth and Total debt. Long term debt, Short term debt has no effect on economic growth.

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CORPORATE GOVERNANCE DISCLOSURE PRACTICES IN G N F C LTD.

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ABSTRACT

The cases of corporate failures in past and latest satyam due to failure of corporate governance, the word "governance" has become a hot word of discussion in corporate sector and government corporate governance disclosure (CGD) demonstrate the quality, reliability and accuracy of information to the users mainly stakeholders. In the present study, an attempt is made to analyze CGD practices in GNFC by the item-wise disclosure ratings. It observes that there is no relationship between level of disclosure and market valuation of the firm.

KEYWORDS
corporate governance, disclosure practices.

INTRODUCTION

The concept of corporate governance which merged as a response to corporate failures and wide spread dissatisfaction with the way many corporate function, has become one of wide and deep discussions around the global. Recently, governance has assumed greater limelight with the public and private sectors, following which the markets, the investors and the infallibility of these large systems. Corporate governance can be improved by making corporate operations more transparent, without sacrificing business strategy and secrets, which are absolutely necessary for success in the competitive market places

DEFINITION

The Kumar Mangalam Birla Committee constituted by SEBI has observed that: "Strong corporate governance is indispensable to resident and vibrant capital market and is an important instrument of investor protection it is the blood that fills the veins of transparent corporate disclosure and high quality accounting practice, it is the muscle that moves a viable and accessible financial reporting structure." Cadbury committee U.K. has defined corporate governance as follows: "The system by which companies are directed and controlled,"

LITERATURE REVIEW

Gopalsamy N. has written a book "A Corporate Governance a new paradigm published by Wheeler & Co., It covers basic three parts (1) Corporate Governance (2) Business Environment and (3) Globalization. In this basic he has covered conceptual overview, role of Board of Directors, Audit, Corporate Disclosure and Investor's protection etc.

In july 2003, The Chartered Accountant, an article written by Prof. Saeed Khwaja Amjad titled "Corporate Governance Global and Pakistan Experience." In this article, he has focused on concept, major theme, global dimension and experience of Pakistan. It is an empirical study on corporate governance.

Bhattacharya Ashish k. has highlighted corporate governance through his article titled "Ethics in Corporate Financial Accounting". He has focused on fundamental relationship, shareholders value, accounting standards and ethical dilemma.

Garg Laxmikant, in the same journal has evaluated implications for the Accountants, Audit Committee, Directors Report, Accountant's Role and Good Governance Practices.

Through amazon.com researcher has collected various definitions on corporate governance, their relationship with company.

CORPORATE GOVERNANCE

The initiative taken by government in 1991 aimed at economic liberalization and globalization of domestic economy, led India to initiate reform process in order to suitably respond to development taking lace world over on account of interest generated by the Cadbury Committee Report.

The Confederation of Indian Industries (CII) has done pioneering work in this field. It formulates its code on governance in 1998. We have the Kumaramangalam Birla Committee Report 2000 focused on the need for code on corporate governance. Further there are committees under the Ministry of Company Affairs and the Securities and Exchange Board of India (SEBI) which also brought out reports to supplement the emerging need for public policy on corporate governance. Then, the Standing Conference on Public Enterprises (SCOPE) came out with guidelines on the subject. For public enterprises and banking sector, the consultative group of Reserve Bank of India (RBI) gave recommendations for strengthening the boards of banks, in particulars, in related areas of selection of directors, their training and contract.

SEBI has amended section 49 (dealing with listing agreement with companies) to include conditions which will reinforce governance in corporate bodies. Besides these, the self-regulatory section of The Institute of Chartered Accountants of India and the Company Secretaries took initiatives to raise the professional standards of the corporate bodies at par with the changing international levels. The Indian company law has been amended and is now under revision for meeting the exigencies of business and industry in the contemporary competitive globalize market ambience, where effective corporate governance is inevitable for success. All these initiatives establish the emergent desire as well as the need at policy making and institutional levels to make improvements in the structure and the system for effective governance in corporate organizations. In addition, corporate bodies having international presence have voluntarily taken initiatives not only to meet the basics in good governance but have done excellently, and even exceeded the international expectations on disclosure and accounting reporting.

Indian Institute of Management, Bangalore and the Management Development Institute, Gurgaon, organize courses for the top management on corporate governance The Government of India has set a national foundation for corporate governance.

Private companies like Wipro, ICICI Bank, Infosys and the PSUs like ONGC, are making efforts to internationalize their business. These organizations observe the codes of corporate governance in the respective countries.

The International Monetary Fund (IMF) brought out its principle on transparency and OECD (Organization for Economic Cooperation and Development) has set forth its codes on governance, which are taken as global standards. The group of thirty member countries has adopted the revised version of the code in April 2004.

After issuing August'03 circular, SEBI received representations/suggestions from the corporate/public on various provisions of the said circular. Then SEBI decided to defer the implementation of the provisions of the August 26, 2003 circular and revisit Clause 49. The Narayana Murthy committee then considered and deliberated on suggestions and comments received from corporate/ public. Based on the revised recommendations of the committee, it was decided to further revise the provisions of clause 49 of the listing agreement vide circular dated 29th October'05, SEBI has again revised clause 49. This circular is a master circular and supersedes all other earlier circulars issued by SEBI on this subject.

OBJECTIVES OF THE STUDY

1. To determine the disclosure and transparency score of GNFC.
2. To determine the market valuation and operating performance of GNFC.
3. To examine the relationship between market valuation and operating performance with disclosure and transparency score of GNFC.

HYPOTHESIS OF THE STUDY

$H_{1:}$ There is no significant difference between disclosure score and dividend payout ratio of GNFC.
$H_{2:}$ There is no significant difference between disclosure score and profit after tax of GNFC.
H_3: There is no significant difference between disclosure score and revenue of GNFC.

SOURCES OF DATA

The present study is based on secondary data. The data relating to this study are extracted from the following sources:

- Published Annual Reports for five years of GNFC.
- Books & Journals.
- Websites:
- www.gnfc.in
- www.google.com

ANALYTICAL TOOLS USED FOR THE STUDY

To determine the relationship between disclosure and transparency with performance of the company (from 2005-06 to 2009-10) the various statistical techniques are used, such as Correlation Analysis, Regression Analysis, Coefficient of Determinants and ANOVA-test.

PROFILE OF THE GUJARAT NARMADA VALLEY FERTILIZERS COMPANY LIMITED (GNFC.)

Gujarat Narmada Valley Fertilizers Company Limited engages in manufacture and marketing of fertilizers and industrial chemicals in India. It offers nitrogenous and phosphate fertilizers, such as urea, ammonium nitro phosphate, and calcium ammonium nitrate. The company also involves in handling and importing urea, diammonium phosphate, and muriate of potash; and handling traded fertilizers, such as single super phosphate. It also provides calcium ammonium nitrate and chemicals comprising ammonia, weak nitric acid, concentrated nitric acid, methanol, acetic acid, formic acid, aniline, and toluene di-isocyanate. The company's industrial products are used in chemicals, rubber, textiles, tanneries, and pharmaceuticals industries. In addition, it offers various information technology services, including digital signature certificates, data centers, e-procurement, and e-governance services. The company was founded in 1976 and is based in Bharuch, India.

IMPACT OF DISCLOSURE SCORE ON MARKET VALUATION

The disclosure and transparency of GNFC crossed check with the latest guidelines of SEBI by using annual reports of the company from 2005-06 to 2009-10 in detail and specific score are allotted for the compliance of each clause. The following disclosure scores for GNFC were determined.

TABLE -1: SHOWS THE DISCLOSURE SCORES OF GNFC (2005-06 TO 2009-10)

Years	2005-06	2006-07	2007-08	2008-09	2009-10
Disclosure Score (%)	84.62	89.74	81.18	81.18	89.74

To determine the impact of disclosure and transparency and market valuation, the following two parameters are taken into consideration.

1. Dividend payout ratio
2. Operating performance (sales and profit after tax)

DISCLOSURE SCORE AND DIVIDEND PAYOUT RATIO

Dividend pay out ratio is the percentages of earning paid in cash to shareholders. It is calculated by dividing the dividend paid on common stock by earning per share. In general, a corporation with a higher payout ratio will be more mature where as company in a growth phase usually reinvests all earning and pays little or no dividend. In this part, the impact of corporate governance on Dividend payout ratio is determined. The result of the calculation is given below:

TABLE -2: SHOWS THE DISCLOSURE SCORES AND DIVIDEND PAYOUT RATIO OF GNFC

Years	2005-06	2006-07	2007-08	2008-09	2009-10
Disclosure Score (%)	84.62	89.74	81.18	81.18	89.74
Dividend payout ratio (%)	42.50	42.50	42.50	32.50	32.50

The result of the correlation between disclosure score and dividend pay out ratio is -0.036. The regression equation for Dividend payout ratio (Y) dependent on Disclosure score (X) is Y = 42.381 – 0.046 (X). Here coefficient of determination between Disclosure score and Dividend payout ratio is: $R^2 = 0.001$. The p-value is more than 0.05, it concludes that the null hypothesis is accepted.

OPERATING PERFORMANCE (REVENUE AND PAT)

The operating performance is the measure of profitability in relation to sales revenue, this ratio determines the net income earn on the sales revenue generated. Improving the performance is related with profitability, which in turn returns to brand image. Therefore, the brand is the practical reason for improving the governance. Improved governance also protects the viability of business by regaining the customer confidence and market trust. This section of the study attempts to determine the impact of transparency and disclosure on operating performance of GNFC for the years 2005-06 to 2009-10.

TABLE -3: SHOWS THE DISCLOSURE SCORES, TURNOVER AND PAT OF GNFC

Years	2005-06	2006-07	2007-08	2008-09	2009-10
Disclosure Score (%)	84.62	89.74	81.18	81.18	89.74
Turnover (in Rs. Cr.)	2281.33	2956.67	3433.91	2920.06	2614.45
PAT (in Rs. Cr.)	294.72	326.47	372.88	227.52	123.84

DISCLOSURE SCORE AND TURNOVER

Revenue is an amount generated from sale of goods or service, or any other use of capital or assets, associated with the main operations of firm before any cost or expenses are deducted revenue as shown usually as the top item in an income statement from which all charges, cost, an expenses are subtracted to arrive at net income of the firm, also called sales or turnover.

The result of the correlation between Disclosure score and Turnover is -0.391. The regression equation for Turnover (Y) dependent on Disclosure score (X) is Y = 6168.309 – 39.007 (X). Here coefficient of determination between Disclosure score and Turnover is: $R^2 = 0.153$. The p-value is more than 0.05, it concludes that the null hypothesis is accepted.

DISCLOSURE SCORE AND PROFIT AFTER TAX

Profit is often a better predicator of company's future performance. Security analysis do use company profile profits as a key measure of performance, usually in the form of Earning Per Share (EPS) which (in its most straightforward form) is PAT divided by the number of ordinary shares in issue.

The result of the correlation between Disclosure score and PAT is -0.399. The regression equation for Dividend payout ratio (Y) dependent on PAT (X) is Y = 1035.992 – 8.992 (X). Here coefficient of determination between Disclosure score and PAT ratio is : $R^2 = 0.159$. The p-value is more than 0.05; it concludes that the null hypothesis is accepted.

In case of GNFC it can be observed from the table-3 that in the year 2005-06 the disclosure score of the company is 84.62, but in the year 2006-07 the score has increased by 5.12% due to which there was a increase in profit after tax of the company. From the year 2007-08 to 2008-09 the disclosure score has decreased 8.56% it is reverse effect due to PAT. And again the disclosure score in the 2009-10 has increased by 8.56% which had significant impact on the profit after tax of the company.

RESULT OF THE STUDY

In this study, it is found through a comprehensive analysis, a negative relationship between level of disclosure and market valuation of company which indicates increase or decrease in transparency and disclosure does not affect on valuation of the company.

CONCLUSION

It can be concluded that there is no link between disclosure and transparency of a firm with profitability and investment performance measure of the GNFC.

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NRM POLICY OF NABARD AND SUSTAINABLE DEVELOPMENT BIRDS-EYE VIEW ON AURANGABAD DISTRICT

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ABSTRACT

Sustainable Development can create the necessary moral, intellectual, and democratic resources for the overall development of any nation. Even though also deliberate to local natural resources for the Sustainable Development. In India, 216 million poor people depend on natural resources for their livelihood. Sustainable management of natural resources holds the key for socio-economic and environment prosperity. The most critical elements here are the access to and equitable management of local resources in a viable and sustainable way. NABARD, set up as an apex Development Bank with a mandate for facilitating credit flow for promotion and development of agriculture and integrated and sustainable rural development, has the mission of "Promoting sustainable and equitable agriculture and rural development through effective credit support, related services, institution building and other innovative initiatives". NABARDs pioneering and innovative work in the NRM sector through implementation of Wadi, Indo-German Watershed Development Programme (IGWDP), Rural Infrastructure Development Fund (RIDF), Watershed Development Fund (WDF), Tribal Development Fund (TDF), SHG- Bank Linkage Programme and other related programmes, positions NABARD as the national agency which can influence not only the policy environment but also investment level and capacity building of stakeholders in livelihood based NRM. With this policy on natural resource management (NRM), NABARD strives to reinforce its commitment to furthering agriculture development and rural prosperity on a sustainable basis and emerge as a thematic leader in the NRM sector in the country. In the context of sustainable development, this paper draws attention to Hazard of Climate change to rural and traditional livelihoods, its Impact on water resources and also Opportunities in Renewable energy sources and role of banking sector with special reference to Aurangabad district.

KEYWORDS

NABARD, Natural Resources Management, Renewable energy sources, Sustainable Development.

INTRODUCTION

In spite of India's recent high economic growth rate, around 350 million out of its more than one billion strong populations is still living below one dollar a day. Seventy-five percent (262 million) of India's poor are living in rural areas, primarily dependent on agriculture and natural resources for their subsistence. Acknowledging the rural distress, the Indian Government has declared the **development of rural areas a top national priority** (National Common Minimum Programme of the GoI, 2004). Although there are several instances of increased policy direction towards greater investment for sustainable management of natural resources from the state and private channels, the policy governing sustainable management for rural livelihoods has not been well defined. Hence, it is imperative that a clearly defined NRM sector policy is evolved to give a focused and coordinated attention for management of natural resources for enhanced livelihood for the rural people on a sustainable basis.

NABARD was established on the recommendations of Shivaraman Committee, by an act of Parliament on 12 July 1982 to implement the National Bank for Agriculture and Rural Development Act 1981. It replaced the Agricultural Credit Department (ACD) and Rural Planning and Credit Cell (RPCC) of Reserve Bank of India, and Agricultural Refinance and Development Corporation (ARDC). It is one of the premiere agencies to provide credit in rural areas.

NABARD's refinance is available to State Co-operative Agriculture and Rural Development Banks (SCARDBs), State Co-operative Banks (SCBs), Regional Rural Banks (RRBs), Commercial Banks (CBs) and other financial institutions approved by RBI. While the ultimate beneficiaries of investment credit can be individuals, partnership concerns, companies, State-owned corporations or co-operative societies, production credit is generally given to individuals. NABARD has its head office at Mumbai, India.

NABARD operates throughout the country through its 28 Regional Offices and one Sub-office, located in the capitals of all the states/union territories. Each Regional Office[RO] has a Chief General Manager [CGMs] as its head, and the Head office has several Top executives like the Executive Directors [ED], Managing Directors [MD], and the Chairperson. It has 336 District Offices across the country, one Sub-office at Port Blair and one special cell at Srinagar. It also has 6 training establishments.

NABARD is also known for its 'SHG Bank Linkage Programme' which encourages India's banks to lend to self-help groups (SHGs). Because SHGs are composed mainly of poor women, this has evolved into an important Indian tool for micro finance.

NABARD also has a portfolio of Natural Resource Management Programmes involving diverse fields like Watershed Development, Tribal Development and Farm Innovation through dedicated funds set up for the purpose.

NABARD'S POLICY ON NATURAL RESOURCE MANAGEMENT (NRM)

NABARD's Policy on NRM seeks to "enhancing livelihoods and quality of life of rural communities through improved resource conditions". NABARD's interventions would be directed towards achieving a balance between livelihood enhancement, poverty reduction and ecological sustainability. Towards this end it is necessity to give attention to NRM sector. It has established the Natural Resource Management Center at Kolkata, which became functional on 01 April 2009.

COVERAGE OF NABARD'S NRM POLICY

"Natural resources" in the context of agriculture and rural development, mainly comprise land, water, forest, energy, biological and climate resources needed to sustain and improve quality of life. However, to provide flexibility in terms of catering to the diverse needs of a wide range of stakeholders in the context of NABARDs NRM Policy, NRM definition would be extended to include entire value chain of natural resource management beginning with awareness generation, capacity building, technology & information inputs, developing physical structures for management & utilization of natural resources for sustainable livelihood generation.

Policy Goal and Objectives: Enhancing livelihoods of the rural community for equitable and sustained enhancement in their quality of life through improved natural resource conditions. In this context, the more specific objectives are:

- To integrate NABARD's existing and future NRM efforts into a streamlined approach of participatory interventions with the aim of mainstreaming holistic, and financially sustainable livelihood solutions into relevant public policy framework and financial instruments for improving the livelihoods of the rural poor.
- To support planning and promotion of rational use, conservation and improvement of natural resources essential to continuous and self sustaining livelihood opportunities.

- To support and stimulate new and innovative initiatives aimed at improving the stock, quality and productivity of the natural resource base and livelihood opportunities.
- To empower local communities to become equal and increasingly self-reliant partners in sustainable NRM.

The goals and objectives of the NRM policy are to be achieved through synergy and in consonance with various policies, programmes, missions, guiding principles, reform processes and decentralised management systems of Ministry of Rural Development, Ministry of Agriculture, Ministry of Environment & Forests, Ministry of Tribal Affairs and other Governmental agencies or Special Purpose Vehicles (like National Rainfed Area Authority) dealing in NRM sector.

NABARD's activities in the NRM sector shall also take due cognisance of the National commitments under the relevant millennium development goals and NRM-related international conventions like United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), UN Convention to Combat Desertification (UNCCD), etc.

Strategic Considerations; NABARD would direct its NRM interventions towards achieving structural impact on the NRM sector for livelihood enhancement (poverty reduction) and ecological sustainability. One of the most important interventions in this direction would be to integrate NABARD's existing and future NRM efforts into a streamlined approach of participatory interventions with the aim of mainstreaming holistic and financially sustainable livelihood solutions into relevant public policy framework. This would necessitate:

- Establishing an independent NRM unit/ department and an institute of excellence in NRM within NABARD and consolidating NABARDs successful NRM oriented initiatives into a unified programme under this unit.
- Convergence of various programmes and resources for up-scaling the successful models to contribute towards greater efficiency of public investment schemes (macro-economic impact) and provide the rural population with viable livelihood opportunities, thereby reducing rural poverty.
- Building partnerships with various national and international funding/donor agencies and institutions to (i) broaden, replicate, and sustain the impact of NABARD's efforts; (ii) mobilize additional knowledge and financial resources; and (iii) ensure coordination, avoid duplication, and maximize effectiveness in the use of scarce resources.

NABARD would make efforts towards facilitating higher level of investments in the NRM sector, for which it would support gradual shift from grant-based funding to loan-based funding in NRM sector in consonance with the recommendations of Working Group (on Watershed Development and Natural Resource Management) of Planning Commission. This would entail:

- Exploring **new and innovative modes of delivery** for NRM programme implementation through various channel partners including state governments, PRIs, corporates, banks, mFIs and NGOs.
- Development of a wide range of alternative **technical & financial NRM models /products** to be tested and adapted in pilot phase supported by appropriate funding & technical agencies.
- Up-scaling the successful models into large public investment schemes.

In order to consolidate and to further reinforce its position as a leading credit agency in the NRM sector, NABARD would work towards strengthening the NRM sector at the National level through:

- Establishing a strong Information & Knowledge Management (IKM) platform /network and leverage IKM system and capacity building to raise the relative profile and positioning of NABARD in NRM sector.
- Achieving synergy within and among communities, state governments, PRIs, private sector, banks, mFIs and NGOs for sustainable NR management and utilization.
- Dissemination of learning to decision makers to guide national policies and public investment schemes in natural resource management sector.

NABARD considers it of utmost importance for the beneficiaries to be actively in a project throughout its life right from its inception through planning to implementation and post project management. An integral part of this would be to empower the local communities through improved accessibility to natural resources and related services, promoting and strengthening participatory community structures and enhanced livelihood security.

NABARD will encourage development of demand-driven integrated NRM projects which offer necessary flexibility for periodic readjustments. Focus would also be on improving quality of various aspects of NRM intervention including project design, planning, and implementation and monitoring.

LAUNCHING A JOINT UMBRELLA PROGRAMME ON NATURAL RESOURCE MANAGEMENT (UPNRM)

NABARD has Launching a joint Umbrella Programme on Natural Resource Management with the German Development Cooperation (2007-08) for restructuring the bilateral cooperation in the field of Natural Resource Management (NRM). The programme aims at improving livelihood situation in rural areas through promoting and funding sustainable use, management and conservation of natural resources. The programme integrates NABARD's existing and future Indo-German NRM efforts into a stream-lined approach of participatory NRM-related interventions. The cooperation under the UPNRM envisages a shift from a project based approach to program based approach with growing emphasis on achieving strategic impact on development policies.

The total estimated cost of the programme is Euro 22.4 million out of which KfW (Kreditanstalt fur Wiederaufbau (German Development Bank)) will finance up to Euro 19.4 million and NABARD will contribute Rs. 16.5 crore (Appx. Euro 3.0 million). In addition, under Technical Cooperation (GTZ) will finance Euro 3.0 million for capacity building, Information knowledge management (IKM), product development, etc. Technical cooperation of Euro 3.0 million has already been commissioned by BMZ (Federal Ministry for Economic Cooperation and Development, Federal Republic of Germany) through GTZ.

NABARD has since sanctioned six community managed NRM based livelihood projects with financial assistance of Rs. 557.39 lakh (Rs.516.34 lakh as loan and Rs.41.05 lakh as grant) in Bihar, Gujarat, Maharashtra, Orissa and Tamil Nadu as on 31 March 2009, to be implemented by NGOs and Producers' Companies. This would require development of new models and programmes for financing and managing watershed development. With this policy on natural resource management (NRM), NABARD strives to reinforce its commitment to furthering agriculture development and rural prosperity on a sustainable basis and emerge as a thematic leader in the NRM sector in the country.

WATERSHED DEVELOPMENT

Watershed development has proved to be a comprehensive approach to enhance productivity of dry land through conserving soil, rainwater and vegetation. NABARD has been actively supporting Watershed Development which covered 1.7 million ha under various Programmes. NABARD's Participatory Watershed Development Programme has been considered as a pioneering model in community based Natural Resources Management.

AURANGABAD DISTRICT SCENARIO

INTEGRATED WATERSHED MANAGEMENT PROGRAMME (IWMP)

Total 42 villages have been identified under this programme covering a total area of 38000 ha for development of watershed. Awareness is created amongst villagers on changes in cropping pattern, management of own natural resources, sustainability of watershed project, water accounting etc. Watershed develop programmes are being implemented by the Agriculture Department and DRDA. Further, the Indo-German Watershed Development Project (IGWDP) has been completed in 10 watersheds and is currently being implemented by NABARD with financial assistance from KFW of Germany, in 6 watersheds. One watershed development programme approved by NABARD at Jamalwadi in Khultabad block under Watershed Development Fund is currently in the Full Implementation Phase. Considering the importance of soil and water conservation, various Watershed development programmes like:- IGWDP, DPAP, Hariyali, NWDPRA, IWMP etc. have been undertaken for implementation by the State Govt. /GOI/NABARD/NGOs. Some of the major watershed development programmes being implemented in the district are as under Table: 1-

TABLE 1: MAJOR WATERSHED DEVELOPMENT PROGRAMMES IN THE DISTRICT

Programme	No. of W. sheds	Tot. Area (ha)	Work completed (ha)	Programme	No. of W .sheds	Tot: Area (ha)	Work completed (ha)
IGWDP	29	22180	19810	NWDPRA	. 16	12000	NA
Hariyali	56	56000	20285	IWMP	1	38000	NA
DPAP	62	31000	20995				

(Source- PLP of NABARD for Aurangabad District- 2007-08, 2011-12 & MAHA Bank 2011.)

- **Marathwada Panlot Vikas Mission-** Total 21 villages have been identified/ covered under this programme for development of watershed. The total estimated cost of the project is 1626.41 lakh covering an area of 18235 ha (expenditure- Rs.I130.70 till 31.03.2010).
- **Indo-German Watershed Development Programme (IGWDP)**

The IGWDP is one of the important projects being implemented through NGOs in Aurangabad by NABARD with emphasis on direct participatory role of village community. The project is a bilateral assisted programme being implemented in the state since 1992, with bilateral aid from the Federal Republic of Germany. The main objective in the IGWDP project is to create models for the development of micro-watersheds in a comprehensive manner with the active participation of village community. The IGWDP projects completed / currently being implemented in Aurangabad district are indicated below Table: 2-

TABLE 2: IGWDP PROJECTS IN AURANGABAD DISTRICT

Sr.	Name of NGO	Name of project !block	Total Area (ha.)
1	Marathawada Sheti Sahay Mandai [MSSM]	Jadgaon-A'bad (Mangrul)	2,853
2	GRASP	Boltek - Kannad	1 ,346
3	GRASP	Sitanaik Tanda - Kannad	1,909
4	DILASA	Kachheghati- A'bad	781
5	Loksathi Pratishthan	Wadgaon –Jaitkheda-Khultabad	1,087
6	MANAV	Dhanora	1,348
7	Jigyasa	Ghardon Tanda, A'bad	802
8	Abhinav Vikas Sanstha	Varkhedi, Soegaon	664
9	Loksathi Pratisthan	Salegaon - Kannad	793
10	DILASA	Murumkheda	1,458
TOTAL			13,041

(Source- PLP of NABARD for Aurangabad District- 2007-08, 2011-12 & MAHA Bank 2011.)

CONCLUSION

THE FOLLOWING ISSUES DEMAND ATTENTION

FOR BANKS

- The banks will prepare a policy and a strategic plan to finance Green projects
- Awareness creation and capacity building of staff about green finance
- Disseminate information about green projects, project profiles, unit costs etc.
- Create awareness among potential entrepreneurs
- Identify suitable projects.
- Facilitate preparation of project and consider End to End solutions / advisory role
- Finance green projects
- Set up bio-carbon funds
- Facilitate trading of CERs
- Transfer proceeds to entrepreneur/ share proceeds
- Earn themselves C credit by Funding green projects

NGOs AND FARMERS' CLUBS

- Identify the possible green projects in their area of operation
- Awareness creation at grassroots level among rural populace
- Identify and mobilize entrepreneurs/ farmers to take up green projects
- Handhold for green projects- projects preparation, facilitate credit linkage and provide escort service whenever required.
- Set up demonstration of green projects and facilitate replication
- Facilitate in baseline documentation of emission levels in respect of agriculture, Fisheries, allied activities and in measuring reduction levels.
- Facilitate and act as aggregator for smaller units
- Facilitate C trading and transfer to entrepreneurs

FOR NABARD/ NRMC

- Set up a group to workout the profiles, units cost of a few green projects
- Awareness creation among and capacity building of Stakeholders
- Facilitate in fixing the baseline emission levels in respect of agriculture, fisheries and allied activities and in measuring reduction levels.
- Pre and post project C- sequestration, bench marking for a few model projects.
- Facilitate accessing Green technology and transfer
- Sharing risks through co financing and setting up of Bio-carbon fund
- Facilitate state level action plans.

There is an urgent need to have legislation on groundwater. The legal regulations have, of necessity, to be region specific, namely groundwater abundant regions, scarcity regions and islands surrounded by oceans. The Government of India has already formulated a model groundwater bill but the states have not yet established the legislative measures in that direction. Proper climate needs to be created in the country for the acceptance of such legal measures.

Development and regulation of interstate river waters, mandates cooperation amongst basin states along with the existing procedures for compulsory adjudication of disputes by tribunals. Constitution may be amended to incorporate a provision on interstate agreements (compacts) in respect of interstate rivers.

The existing law on water quality needs to be effectively implemented for prevention of pollution of surface and groundwater. Groundwater pollution being more serious and hazardous than surface water pollution would require different institutions for prevention and abatement of pollution.

Water resource development projects should, as far as possible, be planned and developed as multipurpose projects. Provision for drinking water should be a primary consideration. The projects should provide for irrigation, flood mitigation, hydroelectric power generation, navigation, pisciculture and recreation wherever possible.

The study of the impact of a project during construction and later on, human lives, settlements, occupations, economic and other aspects should be an essential component of project planning.

In the planning, implementation and operation of projects, the preservation of the quality of environment and the ecological balance should be a primary consideration.
There should be an integrated and multidisciplinary approach to the planning, formulation, clearance and implementation of projects, including catchment treatment and management, environmental and ecological aspects, the rehabilitation of affected people and command area development.
Special efforts should be made to investigate and formulate projects either in, or for the benefit of, areas inhabited by tribal or other specially disadvantaged groups such as Scheduled Castes and Scheduled Tribes. In other areas also, project planning should pay special attention to the needs of Scheduled Castes and Scheduled Tribes and other weaker sections of society.
The planning of projects in hilly areas should take into account the need to provide assured drinking water, possibilities of hydropower development and the proper approach to irrigation in such areas, in the context of physical features and constraints such as steep slopes, rapid run-off and the incidence of soil erosion. The economic evaluation of projects in such areas should also take these factors into account.
Irrigation planning, either in an individual project or in a basin as a whole, should take into account the irritability of land, cost-effective irrigation, and options possible from all available sources of water and appropriate irrigation techniques. The irrigation intensity should be such as to extend the benefits of irrigation to as large a number of farm families as possible, keeping in view the need to maximize production.
There should be a close integration of water-use and land-use policies.
Water allocation in an irrigation system should be done with due regard to equity and social justice. Disparities in the availability of water between head-reach and tail-end farms and between large and small farms should be obviated by adoption of a rotational water distribution system and supply of water on a volumetric basis subject to certain ceilings.
Concerted efforts should be made to ensure that the irrigation potential created is fully utilized and the gap between the potential created and its utilization is removed. For this purpose, the command area development approach should be adopted in all irrigation projects.
Water rates should be such as to convey the scarcity value of the resource to the users and to foster the motivation for economy in water use. They should be adequate to cover the annual maintenance and operation charges and a part of the fixed costs. Efforts should be made to reach this ideal over a period. While ensuring the assured and timely supplies of irrigation water. The water rates for surface water and groundwater should be rationalized with due regard to the interests of small and marginal farmers.
Rain Water harvesting should be made compulsory both in urban and rural areas to recharge ground water.
Free electricity/ subsidized electricity to farmers provided by same state Govt. should be ensure better water use efficiency and adequate recharge of ground water by the farmers.
Eschewing water intensive crop i.e. rice, sugarcane, jute are done on voluntary basis. Legal measures should be put in place to decide about the cultivation of such crops. If cultivation of such crops are essential, improved methods such as system of Rice Intensification (SRI) should be adopted. Rain Water Harvesting structure should be made mandatory in such field.

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MANAGEMENT OF NON-PERFORMING ASSETS: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR BANKS

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ABSTRACT

Today the Indian banking system has witnessed a significant change in line with financial sector reforms, adopting international best practices. Several prudential payments, integrating and provisioning norms have been setup and these are shaping up the banks to improve efficiency and trimming down NPAs to improve the financial situation in the banking system. Non- performing assets are a major issue and challenge for banking industry in India. Non –performing Assets threaten the stability and impact bank's profitability through a loss of interest income, write-off the principal loan amount. RBI had issued guidelines in 1993 based on recommendations of the Narasimham Committee that mandated the identification and reduction of NPAs to be treated as a national priority because NPA are directly linked towards the credit risk that a bank faces and it impact its efficiency in allocating resources. Apart from this, NPAs affect profitability as well. Since higher NPAs require higher provisioning, which means a large part of the profits needs to be kept aside as provision against bad loans. Therefore, the problem of NPAs is not the concern of the lenders alone but is, indeed, a concern for policy makers as well involved in accelerating the economic growth. In recent years financial reforms led by RBI have helped to bring down the level of NPAs and have achieved little success in terms of recovery and up gradation of the existing NPAs. The present study highlights that the problems of NPAs are more serious in Public Sector Banks than Private Sector Banks. Reduction of NPAs in banking sector should be treated as a national priority to make the Indian banking system more strong and resilient.

KEYWORDS

NPA, Public Sector Banks, Private Sector Banks, Financial reforms.

INTRODUCTION

NPAs IN BANKING SECTORS

NPAs the three letters create terror in banking sector and business circle . NPA stands for "Non Performing Asset". The NPA simply indicates that: when interest or other due to a bank remains unpaid for duration of more than 90 days, the loan amount automatically turns into a non performing asset. The loan's recovery has always been giant problem for banks and financial institution. We need to find the ways to decrease NPAs and categories the factors responsible for NPA and then find way outs.

The core banking business is to mobilize the deposits and to utilize it for lending. Lending business transfers funds for the productive purposes which is must for economic growth. The debtor borrows the funds from the bank in the form of credit and pays back the principle amount with the interest (profit for lender) and again this profit is reinvested leading economic growth. However lending goes with credit risk, arising from the failure of borrower to meet its contractual obligations either during the course of a transaction or on a future obligation. Due to Non performance of the fund the financial institutions become bankrupt and reflect a degree of risk that many investors could neither resist nor welcome.

The Financial companies and institutions are now a day's facing a challenge of managing the Non Performing Assets (NPA) as these assets prove to become a major setback for the growth of the economy. Undoubtedly, the world economy is undergoing recession. Globally stock markets have fluctuated and business itself is getting harder to do with the simple reason that the bank's (creditor) money gets blocked. Under such a situation, banks are bound to face the heat of a global crisis.

NARASIMHAN COMMITTEE RECOMMENDATION FOR NPAs

Narasimhan Committee found NPAs as one of the possible cause for the mal-functioning of the Public Sector Banks. It mandated for the banks to develop their branch network after nationalization to raise the savings and extend their credit facility to the agricultural, priority sectors and SSI sectors. This system has been achieved very well. While the before 1990's and focus has altered in the direction of improving quality of assets and better risk management. The focused lending approach has given way to market focused exercises. It suggested prudential norms on income recognition, asset classification and provisioning. Narasimhan Committee mandated it for the banks publish the NPAs magnitude such as advances, overdrafts and cash credit etc. every year in their Balance sheet for any amount due for 180 days.

IMPACT OF NPAs ON BANKS

PROFITABILITY

NPA means money getting blocked and turning into a bad debt, which occurred due to incorrect selection of client. The profitability of the bank is generally affected by NPAs as banks have to keep some amount to cover up for the loss caused by NPA. It is because of this provision for NPAs the bank write off the bad debts or NPAs account from the current profit earned. It has an adverse impact on returns on investments along with the opportunity cost that if the same money would be invested in other assets would give the banks attractive returns. So NPA doesn't affect only the current profit but also the profits to be earned at later stages which may lead to loss of long-term beneficial opportunities. Another impact of reduction in profitability is low ROI (return on investment), adversely affecting current earning of banks.

LIQUIDITY

Money getting blocked decreases profit leading to lack of sufficient cash at hand which lead to borrowing money for short period of time.

STATEMENT OF THE PROBLEM

Credit is like taking the paste out of a tooth paste tube, but its recovery is as difficult as putting that paste back in to the tube. That is the reason why good money lent, sometimes becomes bad and doubtful, in the banking terminology it is called as Non-Performing Asset. NPA are like burden, which causes in convenience to the Banking sector. Ever increasing NPAs have a direct impact on profitability, liquidity and solvency. Since Indian banking industry is largely dominated by Public sector banks with almost two third shares of total advances in the economy. It is facing an acute problem with regard to NPAs. There is a need to manage the ever increasing level of NPAs. Keeping this issue in view the present Study has been undertaken.

REVIEW OF LITERATURE

In the context of banking sector, Non-performing assets have been studied and keenly observed by plenty of researchers, a synoptic review of the relevant literature on the topic of NPAs has been described as under.

Basavaraj.G.Bhavi, (1990), a teacher fellow, conducted a study on Assessment of Regional rural banks credit on target groups- A case study of Krishna Grameena Bank. The essential objective of the study is to Banks credit on target groups in terms, Formation of assets, and to examine the extent of repayment of loan and overdue position and reasons for over dues. **Bhatacharya (2002),** studied NPA management of banks and stated that surest way of containing NPAs is to prevent their occurrence. He offered suggestion on proper risk management, strong and effective credit monitoring, co-operative working relationship between banks and borrower etc should be tenets of NPA management policy. **Ramkrishna and Bhargavi (2004),** study on Non- performing asset management, found that the asset quality of commercial banks has improved considerably due to bringing in the reform packages. **C.Chandrakant, (2007),** conducted a study on Non -performing assets in Karnataka State financial Corporation – A case study of Gulbarga Division. The main objective of the study was to assess the impact of NPA. And he suggested that better credit risk management will be an effective tool in resolving the issue NPAs. **Ashok Khurana and Mandeep Singh (2009)** stated that issue of mounting NPAs is a challenging to public to public sector banks. The study found that the asset wise classification of PSBs is in right direction and there is significant variation in the recovery of NPAs in the different sector. The research observed that PSBs should not be loaded with the twin object of profitability and social welfare.

OBJECTIVES OF THE STUDY

The banking sector is striving very hard to nullify NPAs; in fact it is the level of NPAs that to a great extent determines its financial health. Hence the following objectives have been set up for our study.

1. To study the trend of NPA level of Public sector banks and Private Sector banks in India.
2. To highlight the NPAs position of Public sector banks and Private Sector banks.
3. To focus on sector wise NPAs and determine depth of it.
4. To analyze the impact of non-performing assets on the profitability of banks.
5. To evaluate the impact of non-performing assets on profitability with other variables.

HYPOTHESIS OF THE STUDY

1. H0: There is no significant relation between profits & NPAs of Public Sector banks for the last 5 years.
   H1: There is significant relation between profits & NPAs of Public Sector banks for the last 5 years.
2. H0: There is no significant relation between profits & NPAs of Private Sector banks for the last 5 years.
   H1: There is significant relation between profits & NPAs of Private Sector banks for the last 5 years.

RESEARCH METHODOLOGY

PERIOD OF STUDY

The post- reform period of five years has been taken for measuring the impact of NPAs on banking sector. The years selected for analysis are 2007-2011.

SAMPLE- SIZE

The study is based on Public sector banks and Private Banks Group.

DATA COLLECTION

The study is primarily based on secondary data. A major part of the database has been drawn from the published secondary sources, primarily the reports of Indian Bankers Association (IBA) and the Reserve Bank of India (RBI). The data relating to NPAs of the public sector banks and Private sector banks has been obtained from various sources like "Financial Analysis of Banks" brought by Indian Banker's Association, "Statistical Tables Relating to Banks of India". "Reserve Bank of India Monthly Bulletin", "Report on currency and Finance" and other publications of Reserve Bank of India.

DATA ANALYSIS

The following accounting, statistical and diagrammatic techniques are used:

(A) Accounting techniques-(1) Comparative statement analysis (2) Ratio analysis

(B) Statistical techniques- (1) Mean (x), (2) Standard Deviation (3) Coefficient of Variation (C.V.) (in percentage)

(C) Diagrammatic and Graphic Presentation of Data- Diagrams and graphs are exhibiting the data in sample, comprehensible and intelligible form.

ANALYSIS AND DISCUSSION

1. GROSS NPAs AND NET NPAs

Gross NPAs are the sum total of all loans assets classified as NPAs as per RBI guidelines. Gross NPA shows the nature of the loans made by banks. It includes of all the Non- Standard assets like Sub- Standard, Doubtful and Loss assets. It can be understood with the help of the following ratio.

Gross NPAs ratio = Gross NPAs/Gross Advances.

Net NPAs is the provision which the bank has deducted regarding NPAs .Net NPAs show the actual burden on banks. In India, bank balance sheets contain a huge amount of NPAs and the process of recovery and writting off of loans is very time consuming. The provisions the banks need to set up against the NPAs according to the RBI guidelines, are quite significant. Hence, the difference between Gross and Net NPAs is alarming. It can be calculated as under.

Net NPAs =Gross NPAs- Provisions/Gross Advances- Provisions

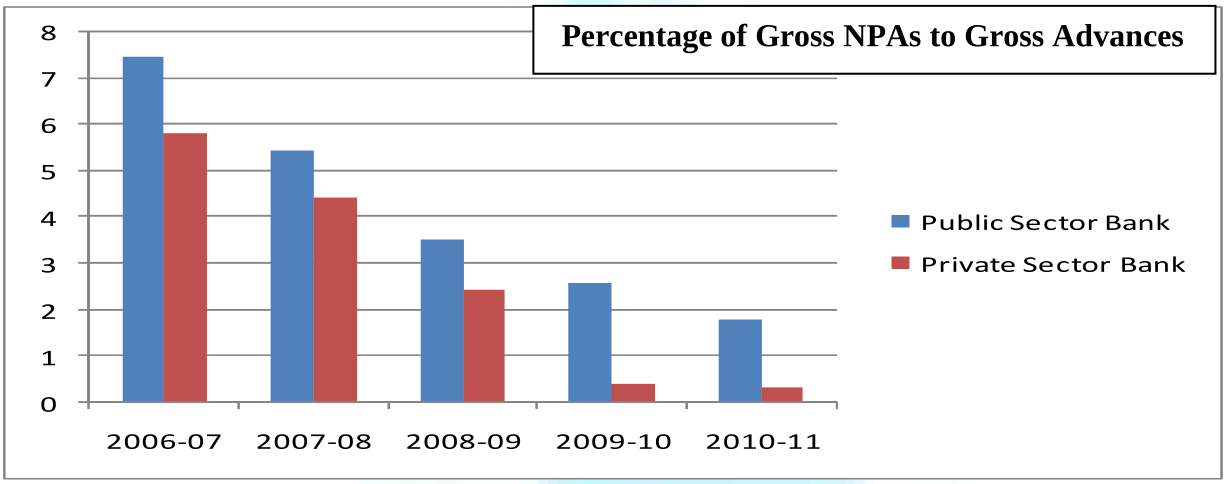
TABLE 1: GROSS AND NET NPAs OF PUBLIC AND PRIVATE SECTOR BANKS

	% of Gross NPAs to Gross Advances		% of Net NPAs to Net Advances	
Years	Public Sector Bank	Private Sector Bank	Public Sector Bank	Private Sector Bank
2006-07	7.49	5.84	2.95	2.42
2007-08	5.46	4.44	2.03	2.20
2008-09	3.53	2.45	1.27	1.01
2009-10	2.61	0.41	0.71	0.44
2010-11	1.82	0.32	0.52	0.26
Average	4.182	2.692	1.496	1.266
Standard Dev.	2.294	2.44	1.002	0.995
C.V	.55	.91	.67	.79

Source: Data calculated from Statistical Tables Relating to Banks in India, R.B.I., and Mumbai Issues of relevant years.

GRAPHICAL PRESENTATION OF ABOVE FINDINGS

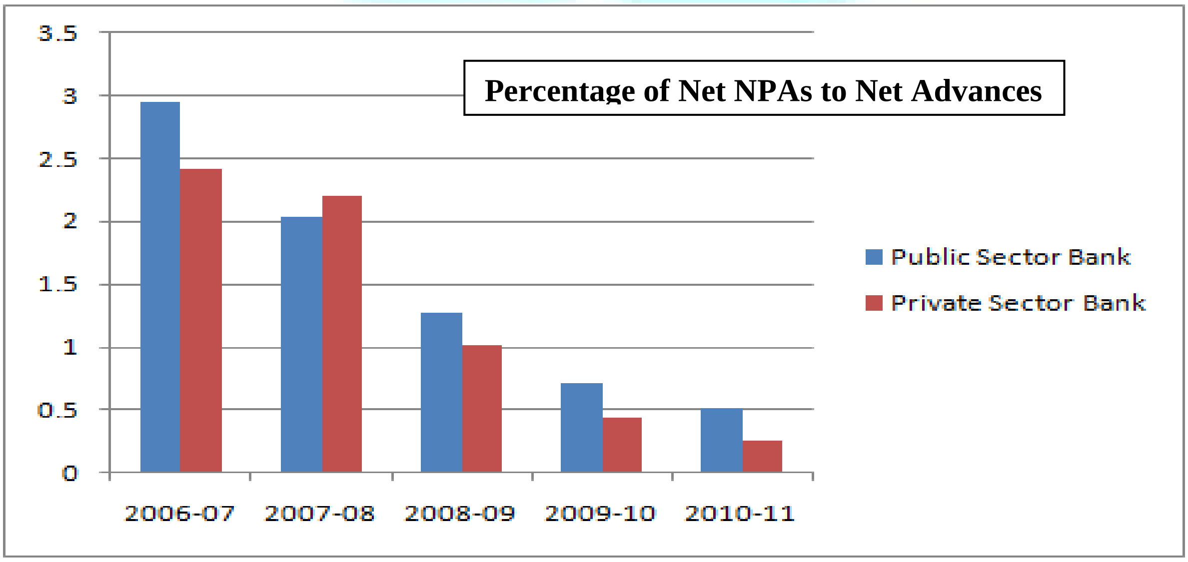
FIG. 1



PERCENTAGE OF GROSS NPAs TO GROSS ADVANCES

An analysis of this ratio reveals that the Public sector Banks group varied between 7.49 per cent in 2006-2007 and 1.82 per cent in 2010 - 2011. The average of this ratio was worked out at 4.182 per cent over the period of study. Among Private sector group, this ratio was minimum (0.32 per cent) during 2010-2011 and maximum (5.84 per cent) during 2006-2007.The private banks group witnessed an average ratio of 2.69 per cent over the study period. The least variability in the ratio in terms of dispersion was found.

FIG. 2



PERCENTAGE OF NET NPAs TO NET ADVANCES

An analysis of this ratio reveals that the Public sector bank's group varied between 2.95 per cent in 2006-2007 and 0.52 per cent in 2010 - 2011. The average of this ratio was worked out at 1.496 per cent over the period of study. Among this group, this ratio was minimum (0.52 per cent) during 2010-2011 and maximum (2.95 per cent) for during 2006-2007.

The Private Sector Banks group witnessed an average ratio of 1.266 per cent over the study period. This ratio varied between 2.42 per cent in 2006 - 2007 and 0.26 per cent in 2010-2011. The least variability in the ratio in terms of dispersion was found. Thus, it can be inferred that Public sector bank group & Private Bank group invested largely in Government securities during the period under study.

2. ASSETS CLASSIFICATION

All Advances should be classified into the following four categories.

Standard Assets: Standard Assets is one, which does not disclose any problem and which does not have more than usual risks attached to the business. Such Assets are a Performing Assets. Substandard Assets: With effect from 31st March 2005, a substandard assets is one, which has remained NPA for less than or equal to 12 months. Doubtful Assets: With effect from 31st March 2005, an asset needs to be classified as doubtful if it has remained NPA for a period more than 12 months. Loss Assets: A loss assets is the assets where banks internal or external auditors or the RBI inspection identifies the loss but the amount has not been written off wholly.

TABLE 2 (A): CLASSIFICATION OF LOAN ASSETS OF PUBLIC SECTOR BANKS

Years/Banks	Standard Assets		Sub-Standard Assets		Doubtful Assets		Loss Assets		Total Advances	
Public Sector Banks	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
2006-07	1335175	97.19	14147	1.03	19944	1.45	4510	0.33	1373777	100
2007-08	1656585	97.66	16870	0.99	19167	1.13	3712	0.22	1696333	100
2008-09	2059725	97.91	19521	0.93	20715	0.98	3803	0.18	2103763	100
2009-10	2462030	97.73	27688	1.10	24685	0.98	4928	0.20	2519331	100
2010-11	3008757	97.90	33614	1.1	31919	1.0	5514	0.20	3079804	100
Average	2104454		22368		23286		4493		2154602	
Standard Dev.	659546		8073		5273		761		672924	
C.V	0.313		0.36		0.23		0.17		0.313	

Source: Off-site returns (domestic) of banks, Department of Banking Supervision, RBI

TABLE 2 (B): CLASSIFICATION OF LOAN ASSETS OF PRIVATE SECTOR BANKS

Years/Banks	Standard Assets		Sub-Standard Assets		Doubtful Assets		Loss Assets		Total Advances	
Private Sector Banks	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
2006-07	382630	97.64	4368	1.11	3930	1.00	941	0.24	391869	100
2007-08	459369	97.25	7280	1.54	4452	0.94	1244	0.26	472345	100
2008-09	502768	96.75	10526	2.03	5017	0.97	1345	0.26	519655	100
2009-10	567207	97.03	8676	1.48	6542	1.12	2166	0.97	584591	100
2010-11	714338	97.50	4398	0.6	10735	1.50	2839	0.40	732310	100
Average	525263		7050		6135		1707		540154	
Standard Dev.	125201		2693		2751		779		128360	
C.V	0.24		0.38		0.49		.46		0.24	

Source: Off-site returns (domestic) of banks, Department of Banking Supervision, RBI

In **Table 2 (A) & 2 (B)** all Advances are classified into the four categories, taking into the degree of weakness and extent of dependence of security for realization of dues.

Table 2 (A) Classification of loan assets of Public Sector Banks shows that the percentage of Standard Assets is more in total Advances nearly about 97%.In Public Sector Banks the Average of Doubtful Assets is more than the Average of Sub-Standard Assets & Loss Assets. It tells that Public Sector Banks have characteristic by the weaknesses in collection or liquidation of outstanding dues in full on the basis of current facts, conditions and values which are questionable and almost impossible.

Table2 (B): Classification of loan assets of Private Sector Banks shows that Average of Sub-Standard Assets in Total Advances is more i.e.7050 crore followed by the Average of Doubtful Assets 6135.2 crore. It shows the credit weaknesses of Private Sector Banks that hinders the liquidation of the debt and are characterized by the probability that the Banks will face some losses, if deficiencies are not corrected.

3. SECTOR – WISE COMPOSITION OF NPAs OF BANKS

Distribution of Gross NPAs of Banks should be classified into different sectors i.e. Priority sector, Public sector and Non- Priority sector for the period 2007-2011.So far the focus of attention of the Indian banking industry has largely been extending finance to agriculture and manufacturing sectors covering small, medium and large industries. But now banks should capture services sector also. Through IT, banks therefore, have to sharpen their credit assessment skills and lay more emphasis in providing finance to the wide range of activities in the services sector.

TABLE 3 (A): COMPOSITION OF NPAs OF PUBLIC SECTOR BANKS

Years/Banks	Priority Sector		Non-Priority Sector		Public Sector		Total Amount	
Public Sector Banks	Amount	%	Amount	%	Amount	%	Amount	%
2006-07	22954	59.46	15158	39.27	490	1.27	38602	100
2007-08	25287	63.62	14163	35.63	299	0.75	39749	100
2008-09	24318	55.21	19251	43.71	474	1.08	44042	100
2009-10	30848	53.83	25929	45.25	524	0.91	57301	100
2010-11	41245	58.05	29524	41.56	278	0.390	71047	100
Average	28930		20850		413		50148	
Standard Dev.	7510		6721		115		13844	
C.V	0.26		0.32		0.28		0.28	

Sources: Off- Site returns (domestic)-Latest updated database, Division of banking Supervision, RBI

It is visible from the Table 3(A) that major chunk of NPAs came from priority-sector as well as Non-Priority Sector. In priority sector Gross NPAs showed a declining trend from 2007 onwards but it started increasing again 2008 &2011. This may be due to the implementation of the one-time settlement scheme for small and marginal farmers. In Non-Priority Sector Gross NPAs showed an increasing trend during study period. The share of Public sector with regard to NPAs has been negligible and declined from 1.27% in 2007 to 0.390% in 2011.

TABLE 3 (B): COMPOSITION OF NPAs OF PRIVATE SECTOR BANKS

Years/Banks	Priority Sector		Non-Priority Sector		Public Sector		Total Amount	
Private Sector Banks	Amount	%	Amount	%	Amount	%	Amount	%
2006-07	2284	29.17	5541	.71	4	.0005	7829	100
2007-08	2884	.313	6321.51	.69	2.79	.0003	9208.3	100
2008-09	3419	.26	9557	.74	.01	-----	12976.01	100
2009-10	3640	0.22	13172	.78	.75	----	16812.75	100
2010-11	4120	.21	15416	.79	.55	-----	19536.55	100
Average	3270		10002		1.62		13273	
Standard Dev.	708		4272		1.7		4950	
C.V	0.22		0.43		1.05		0.37	

Sources: Off- Site returns (domestic)-Latest updated database, Division of banking Supervision, RBI.

Table 3 (B) shows the sector wise distribution of Gross NPAs in Private sector banks. It is visible from the table that the share of non-priority sector has been much higher as compared to other two sectors i.e. priority sector and public sector. On the other hand, public sector contributed very negligible proportion ranging between 0 to 2% in total NPAs. The proportion of non-priority sector increased significantly from 70.8% in 2007 to 82% in 2011. The proportion of priority sector in gross NPAs has been declining in Private sector banks and has also been lesser as compared to Public sector banks.

4. HYPOTHESIS TESTING (t-TEST)

t- Test is used to identify the relations between two variables. The variables in our study are Net NPA and Net Profit.

HYPOTHESIS TESTING OF PUBLIC SECTOR BANKS

	NPA	Profits
Year	X	Y
2007	15145	20152
2008	17836	26592
2009	21155	34392
2010	29644	39257
2011	36071	44901
Total	119851	165294
mean	23970	33058
S.D	8689.92	9859.48
C.V	36.25	29.82

$$t = \frac{\bar{X}1 - \bar{X}2}{\sqrt{\frac{(N1-1)\sigma^2 s1 + (N2-1)\sigma^2 s2}{N1+N2-2}} * \sqrt{\frac{1}{N1} + \frac{1}{N2}}}$$

Degrees of Freedom= (n1+n2-2) =5+5-2=10

As H0 is two sided, we shall apply a two- tailed test for determining the rejection regions at 5 percent level which come to as under, using table of t-distribution for 10 degrees of freedom the value is 2.228.

The observed value of t is-2500 which falls in the rejection region and thus, we reject H0 and concluded that there is a significant relationship between Net Profits and NPAs of Public Sector Banks.

HYPOTHESIS TESTING OF PRIVATE SECTOR BANKS

	NPA	Profits
Year	X	Y
2007	4028	6468
2008	5647	9521
2009	7411	10865
2010	6505	13111
2011	4431	17712
Total	28022	57677
mean	5604.4	11535
S.D	1408.77	4207.69
C.V	25.14	36.48

$$t = \frac{\bar{X}1 - \bar{X}2}{\sqrt{\frac{(N1-1)\sigma^2 s1 + (N2-1)\sigma^2 s2}{N1+N2-2}} * \sqrt{\frac{1}{N1} + \frac{1}{N2}}}$$

Degrees of Freedom= (n1+n2-2) =5+5-2=10

As H0 is two sided, we shall apply a two- tailed test for determining the rejection regions at 5 percent level which come to as under, using table of t-distribution for 10 degrees of freedom the value is 2.228.

The observed value of t= -1690.59 is which falls in the rejection region and thus, we reject H0 and concluded that there is a significant relationship between Net Profits and NPAs of Private Sector Banks.

INTERPRETATION

- There is significant relation between Net profit and Net NPA of Public Sector banks and Private sector banks.
- Net Profit consists of income earned by the banks. Income is divided into two parts interest income & other income. Interest income includes interest/Discount on advances/bill, income on investments, interest on balances with RBI and other interbank funds. While non- interest income includes fee income components such as commission, brokerage and exchange transactions, sale of investments, corporate finance transactions and any other income other than the interest income generated by the bank. But in interest income, income from interest/Discount on advances/ bill is the major contributor towards NPA.
- Public sector banks depend excessively on their interest income as compared to their peers in the Private sector and their fee- based earnings from services remain quite low.

FACTORS FOR RISE IN NPAs

The banking sector is facing the challenge of rising NPAs. But the problem of NPAs is more in public sector banks when compared to private sector banks.

- **INEFFECTIVE RECOVERY TRIBUNAL**

The Govt. has set up numbers of recovery tribunals, which works for recovery of loans and advances. Due to their negligence and ineffectiveness in achieving their goals the bank suffers the consequence of non-recovery, reducing their profitability and liquidity.

- **WILLFUL DEFAULTS**

There are borrowers who are able to pay back loans but are intentionally doing not pay back it. Such borrowers should be identified and proper measures should be taken in order to get back the money lended to them as advances and loans.

- **NATURAL CALAMITIES**

This is a major factor, creating alarming rise in NPAs of the PSBs. even now and then India is hit by major natural calamities making it difficult for the borrowers to pay back their loans. Thus the banks have to make provisions in order to compensate those loans, to meet this fiscal deficit with a reduced profit. Indian agriculture depends on monsoon. Due to irregularities of rain fall the framers may or may not achieve the production level thus they may or may not be able for repayment of the loans.

- **INDUSTRIAL SICKNESS**

Improper project handling, ineffective management, lack of adequate resources, lack of advance technology, changing govt. Policies give birth to industrial sickness. Hence the banks financing those industries end up with a low recovery of their loans reducing their profit and liquidity.

- **LACK OF DEMAND**

Entrepreneurs in India could not foresee their product demand and starts production which ultimately piles up inventory thus making it more difficult to pay back the money they borrow to operate these activities. The banks recover the amount by selling off their assets, which covers a minimum level. Thus the banks calculate the non recovered part as NPAs and have to make provision for it.

- **CHANGING GOVERNMENT POLICIES**

Every Govt. introduces new policies for the banking sector. Thus it has to cope with the changing principles and policies for the regulation of the rising of NPAs. The fall out of handloom sector is continuing as most of the weavers Co-operative societies have become defunct because of withdrawal of state patronage. The rehabilitation plans created by the Central govt. to revive and boost up the handloom sector has not yet been implemented. So the over dues due to the handloom sectors are becoming NPAs

SUGGESTIONS FOR REDUCTION OF NPAs

- It is the onus on the concerned bank which has given the loan to tackle the problem of NPA. Therefore the recommendations of Narasimham Committee which suggested that the asset management companies or asset reconstruction fund must redress the NPAs to be reviewed.
- A strong Banker-Borrower relationship should be improved. Forceful recovery by the banks, which is against corporate. Debt recovery will be much easier in a friendly atmosphere.
- Supporting the borrowers in developing his entrepreneurial skills will establish a good relation between the borrowers and the banks. But also help the bankers to maintain a track of their resources.
- Commercial Banks should be allowed to come up with their own method to address the problem of NPAs. It includes surrendering and reducing the principle and interest on such loans, extending the loans, or settling the loan accounts. They should be fully authorized to apply all the privileged policies granted to the asset management companies.
- Another way to manage the NPAs by the banks is Compromise Settlement Schemes or One Time Settlement Schemes. Under these situations, it is necessary to bring more simplicity in such deals so that any mistake could be removed.

CONCLUSION

Banking Sector is the back-bone of the Indian Economy and it is being adversely impacted by the levels of NPAs. It impacts Indian Economy as well. The reasons found in the study are industrial challenges, responsibilities of Govt. towards the priority sector being a welfare state and operational costs of the banks. Non – performance of recovery procedure has also boosted the issue. It can be concluded that a dynamic frame work is much needed to find the solution. A more vibrant approach is required while distributing loans. Public & Employee Forums can be established to find the ways for more effective recovery procedures because if Non- performing Assets go beyond control it may turn the whole bank into a Non- performing Bank. It is high time to pull up the socks to curb NPAs and see that the Non-Performing Assets do not turn the banks into Non-Performing Banks; but steps should be taken to convert Non-Performing Assets into Performing Assets.

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PORTFOLIO SIZE AND PORTFOLIO RISK: EVIDENCE FROM THE INDIAN STOCK MARKET

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ABSTRACT

The present paper addresses the issue of diversification. In the study the relationship between portfolio size and portfolio risk has been checked. For the purpose of examining the effect of diversification, the present study used daily adjusted closing prices of listed 225 securities of BSE-500. BSE-Sensitive Index has been used as market index. The present study is for eleven years starting from 1 January, 2001 to 31 December, 2011 due to the transition economy. The study is based on the secondary data and the data related for this study has been collected from the Centre for Monitoring of Indian Economy (CMIE) prowess database software. Theoretical justification about diversification concept is that as more and more securities added, the risk of the portfolios declines. The results produce interested finding which are also consistent with the previous studies. The results of the current study showed negative relationship exists between portfolio size and portfolio risk. As far as this type of research is essential due to the interest of investors, researchers and financial analysts. Therefore, this research will be valuable for interested parties, investors, researchers that contribute towards the perceptive of the Indian stock market.

KEYWORDS

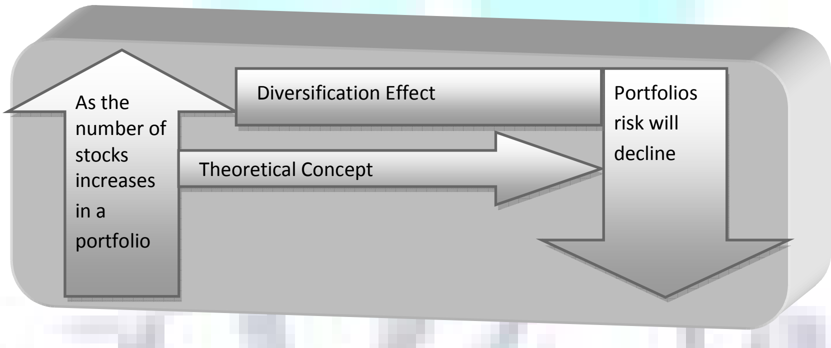
Bombay Stock Exchange (BSE), Diversification-Effect, Portfolio risk.

INTRODUCTION

The risk of a stock portfolio depends on the proportion of the individual stocks, their variances and their covariance's. A change in any of these variables will change the risk of the portfolio. Still it is generally true when stocks are randomly selected and combined in equal proportions into a portfolio, the risk of portfolio declines as the number of different stocks in it increases (Statman, 1987). Risk inherent in an investment are often described as being made up of those risks which are common to all assets, and thus cannot be diversified (market risk) and those which are unique to the asset, and can thus be eliminated by diversification(firm-specific risk).

As portfolio size increase, so the risk of the portfolio falls. Of importance to investors is the number of assets in portfolio beyond which addition of further assets will not result in further reduction in risk. Modern portfolio theory (MPT) proposes how rational investors will use diversification to optimize their portfolios, and how risky asset should be priced. Markowitz (1952) showed that the variance of the return in a portfolio of financial securities depends not only on the riskiness of individual securities in the portfolio, but also on the relationship of risk among these securities. This suggests that as more assets classes added to the portfolio, the more portfolio risk reduced (Al Suqaier and Al Ziyud, 2011). Harry Markowitz, known as the father of modern portfolio theory, who founded the portfolio selection model. He was the first to develop the concept of portfolio diversification and showed that how portfolio diversification works to reduce the risk of a portfolio to an investor. The selection of a portfolio is a major issue and the modern portfolio theory argues that the investment risk can be reduced significantly by clubbing a number of assets. The figure 1 depicts the diversification effect concerned with the theoretical justification. Theoretical justification regarding diversification concept is that as more and more securities increases in a portfolio, the risk of portfolios will decline.

FIG. 1: THEORETICAL CONCEPT OF DIVERSIFICATION



REVIEW OF LITERATURE

Evans and Archer (1968) estimated the relationship between diversification and the level of variations of portfolio returns. The study used 470 of the securities listed on Standard and Poor's Index. The results of the study suggested that a somewhat stable and predictable relationship does indeed exist between the number of securities included in a portfolio and portfolio dispersion. The study also explained that for the purpose of concluding portfolio according to their methodology, there is a need to perform on marginal analysis.

Wagner and Lau (1971) conducted a study on the effect of diversification on risk and in their study showed that the rate of return on well diversified low risk portfolios indeeded significantly lower than the return on well diversified higher risk portfolios. The study suggested that the investment performance can often be improved by expanding the list of qualified securities to include higher return, higher risk stocks, while offsetting the increase in market risk through more effective diversification.

Elton and Gruber (1977) presented the formula for determining the effect of diversification on risk and showed that estimating expected variance and total risk seems to be very good but much cruder in estimating variance in variance.

Statman (1987) conducted a study on how many stocks make a diversified portfolio. The study showed that for borrowing investors, a well diversified portfolio must include 30 stocks and for lending investors there must be at least 40 stocks. The conclusion of this study was the extensively accepted idea that the benefits of diversification are practically exhausted when the number of stocks reaches 10 to 15.

Woerheide and Persson (1993) studied whether a diversification index could measure the degree of diversification of an unevenly distributed portfolio and what index value represents a reasonably diversified portfolio. The study concluded that index values of less than 0.85 implied that a portfolio was possibly not adequately diversified. It revealed that portfolios with index values greater than 0.91 were maybe adequately diversified. The study also indicated that the index could be used to define an evenly distributed portfolio equivalency.

Another study conducted by **Gupta and Khoon (2001)** examined the relationship between the portfolio risk and the number of stocks in a portfolio in the period of September 1988 to June 1997 to determine the optimum size of portfolio of stocks. In the study a sample of 213 stocks traded on Kuala Lumpur Stock Exchange (KLSE) were used. The results of the study revealed that the diversification benefits are available upto the 27 securities.

Goetzmann and Kumar (2008) examined the diversification choices of individual investors during a six-year period in the U.S. capital market history. The present study used a data from U.S. discount brokerage house and found that the sample was under-diversified.

Al Suqaier and Al Ziyud (2011) examined the effect of diversification as Amman Stock Exchange during the study period of 2/12/2005 to 13/3/2010. In the study, for the purpose of testing the hypothesis, a sample of 100 companies was used. The results of the study revealed that diversification increase with a decrease rate.

On the other hand **Alekneviciene et al. (2012)** in their study measured the effect of diversification on differently-weighted stocks during the study period of 2009 to 2010 on the basis of daily stock prices in the Lithuanian Stock Exchange. The research results showed that forming naive portfolios, the diversification effect is a little larger than forming differently-weighted portfolios by capitalization. The study showed that forming differently-weighted portfolios by capitalization from 22 stocks, 97 % of diversifiable risk can be eliminated. The study showed that the main reason of both differences is due to the consistence of smaller number of stocks.

RESEARCH QUESTION

- Is there a relationship between portfolio size and portfolio risk?

RESEARCH OBJECTIVE

- To examine the relationship between portfolio size and portfolio risk.

RESEARCH HYPOTHESIS

To examine the relationship between portfolio size and portfolio risk, the following hypothesis has been tested against the alternative hypothesis:

Null Hypothesis (H0): There is a positive relationship between portfolio size and portfolio risk.

Alternative Hypothesis (H1): There is a negative relationship between portfolio size and portfolio risk.

RESEARCH METHODOLOGY

To examine the relationship between portfolio size and portfolio risk, a sample of 225 securities listed on BSE-500 has been used. The study is based on the secondary data and the data relevant for this study has been collected from the Centre for Monitoring of Indian Economy (CMIE) prowess database software. The present study is for eleven years starting from 1 January, 2001 to 31 December 2011. This period is relevant because it represents transition economy. The selection of securities varies on the basis of market capitalization, trading volume and the availability of data. The BSE Sensex is taken as the market proxy. Normality of data has been checked through the Jarque-Bera Statistics. The present study also tested hypothesized relationship between portfolio size and portfolio risk by using the regression equation. The Microsoft Office Excel, SPSS 17 version, E-view was used as a software program for the analysis of the data.

Daily return of securities has been calculated by applying the following formula:

$$HoldingPeriod\ Return(R_{it}) = l_n(\frac{P_t}{P_{t-1}}) * 100$$

Where R_{it} is return on security i in time period t, P_t is the security price at the time t, P_{t-1} is the security price at the time period t-1.

The average return of securities is calculated as:

$$\overline{R}_i = \sum_{t=1}^{N} R_{it}$$

And the average return of market has been computed as:

$$\overline{R}_m = \sum_{t=1}^{N} R_{mt}$$

PORTFOLIO RETURN

It is the weighted average of the estimated return for each security in the portfolio. Portfolio return has been calculated by using this formula:

$$\overline{R}_P = \sum_{i=1}^{N} W_i \overline{R}_i$$

Where $\overline{R}_P$ is the portfolio return and W_i is the weight give to security i.

PORTFOLIO STANDARD DEVIATION

Symbolically, portfolio standard deviation can be obtained as:

$$\sigma_P = \sqrt{\sum_{i=1}^{n} \sum_{j=1}^{n} w_i w_j \operatorname{cov}(R_i, R_j)}$$

Where $Cov\ (R_i R_j)$ is the covariance between the rate of return of the *i* and the *j* security.

RELATIONSHIP BETWEEN PORTFOLIO SIZE AND PORTFOLIO RISK

The following regression equation are estimated to test the relationship between portfolio size and portfolio risk as suggested by Al Suqaier and Al Ziyud (2011)

$$Y_i = \beta_i (\frac{1}{X_i}) + A$$

Where, X_i is the size of portfolio i

β_i is the parameter of the model

Y_i Computed mean portfolio standard deviation.

A is constant

FINDINGS

RESULTS OF PORTFOLIO SIZE AND PORTFOLIO RISK (EFFECT OF DIVERSIFICATION)

Table 1 presents the result of the relationship between portfolio size and the portfolio risk. In the study normality has been checked with the help of Jarque-Bera Statistics and from the Jarque-Bera statistics found, data follow the normal distribution. Using data for 225 securities over the period of 2001-2011, showed that as more and more securities increase in the portfolio, the securities risk declines. In the current study to examine the relationship between portfolio size and risk, securities are randomly selected assuming equally weighted portfolios. The results of the diversification effect have been measured by using the Markowitz model. Table (1) shows that as the number of securities in portfolio increases, the portfolios risk as measured by the standard deviation decreases, which indicates the existence of a negative relationship between portfolio size and portfolio risk.

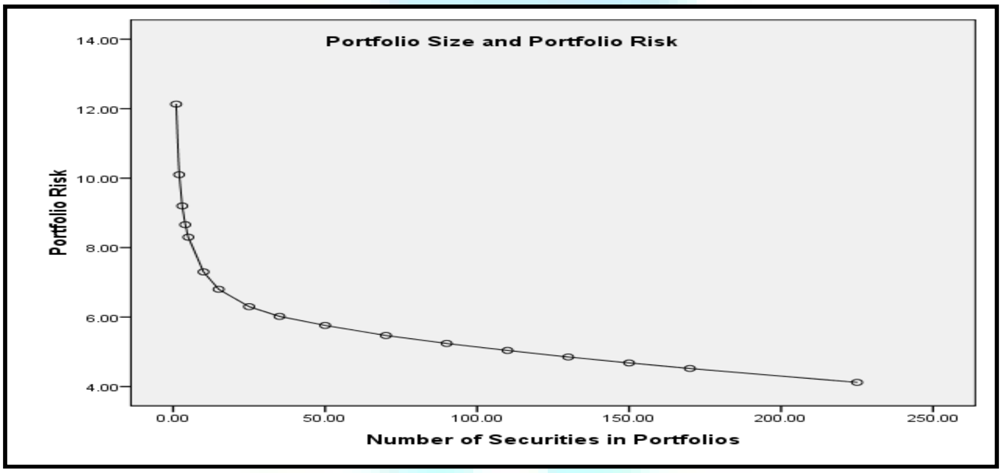
TABLE 1: PORTFOLIO SIZE AND PORTFOLIO RISK (EFFECT OF DIVERSIFICATION)

No. of Securities in Portfolios	Portfolios Standard Deviation (Portfolios Risk)
1	12.13
2	10.10
3	9.20
4	8.66
5	8.30
10	7.30
15	6.80
25	6.30
35	6.02
50	5.76
70	5.47
90	5.24
110	5.04
130	4.85
150	4.68
170	4.52
225	4.12

Source: Compiled and calculated by the author

Figure 2 presents the relationship between portfolio size and portfolio risk. It is noted through the figure 2 that there is an inverse relationship between the portfolio size and portfolio risk.

FIG. 2: EFFECT OF DIVERSIFICATION



TESTING THE RELATIONSHIP BETWEEN PORTFOLIO SIZE AND PORTFOLIO RISK

The present study also tested the hypothesized relationship between portfolio size and portfolio risk and it is noticed that our results are significant that means we reject the null hypothesis. The results showed that there is a negative relationship between portfolio size and portfolio risk. It revealed from the table 2 that the value of beta is (-0.03) indicated inverse relationship exists between portfolio size and portfolio risk and the coefficients are also significant at 1 percent level of significance. The results of the present study supported the theoretical concept of diversification.

TABLE 2: REGRESSION MODEL RESULTS

Model	R^2	A	β	F sig.
$Y_i = \beta_i \left(\frac{1}{X_i}\right) + A$	0.61	8.34 (0.00)*	-0.03 (0.00)*	0.00

Source: Compiled and calculated by the author

Figures in brackets represent the p-values
*denotes significant at 1 percent level of significance

CONCLUSION

The present study has investigated the relationship between portfolio size and portfolio risk. It is noticed from the current study that as more and more securities increase in the portfolio, the portfolios risk declines. It found that the value of beta is (-0.03) that indicated inverse relationship between portfolio size and portfolio risk and the coefficients are also significant at 1 percent level of significance. The results of the present study supported the theoretical concept of diversification. Overall, this evidence seems to be consistent with other researches like Elton and Gruber (1977) and Wagner and Lau (1971). The present study provides the trustworthiness results of diversification effect.

Still there is a further scope of research related to the diversification effect. Further research should be made to test the best method of diversification effect. Numerous studies proved that a well diversified portfolio must contain a minimum number of 25-30 securities. It is a doubtful issue. The study can be further analyzed to test the well diversified portfolio concept.

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