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THE SMALL AND MEDIUM ENTERPRISES IN GCCS: A COMPARISON BETWEEN SULTANATE OF OMAN AND UNITED ARAB EMIRATES

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ABSTRACT

Small and Medium-sized Enterprises are the main drivers of job creation, growth and economic diversification (Gulf Research Centre, 2009). They have local roots and provide local jobs, but can also exploit the opportunities from globalization. Despite the GCC region's strong entrepreneurial traditions and the large size of the Gulf SME sectors, they have not yet fully lived up to their potential of sustainable diversification and job creation. SMEs therefore deserve an adequate public policy to help them to get their ideas off the ground and grow, as well as tailor-made services provided by specialized support organizations. Chambers of Commerce in GCC countries are at the core of SME development. Building on their expertise in providing business support services and their daily direct contact with their member enterprises, they are in the best position to put forward specific policy recommendations to national and regional governments. At this junction, this research paper tried do a comparative framework, comparing SME policies of Oman and U.A.E in particular. This study tried to give an insight to the various programmes and structures of SME's in these two countries by addressing the existing definitions of SMEs in the Oman and the U.A.E through presenting and analyzing the available economic data on both country's Small and Medium Enterprises (SMEs).This study have used the secondary data and relied on a descriptive methodology. Here we tried to propose some recommendations that could be considered across the region to further SME development.

KEYWORDS
Annual turnover, GCC, SME.

INTRODUCTION

Entrepreneurship is thriving around the world. Many nations across the globe are seeing similar growth in their small Business sectors. A variety of competitive, economic and demographic shifts have created a world in which "small is beautiful" (Scarborough, Zimmerer & Wilson, 2009). It is generally agreed that Small and Medium enterprises are the main pillars of growth, development and diversification for countries in all stages of development. (EU-GCC Chamber Forum -2009). The SME definition that is the most widely shared in the developing world – adopted among others by UNIDO – is based on the headcount of the workforce using the following thresholds: Micro enterprises: employment level below 10,Small enterprises: employment level from 10 to 49,• Medium enterprises: employment level from 50 to 249.(UNIDO,2008).

Small and Medium-sized Enterprises (SMEs) are the main drivers of job creation, growth and economic diversification (Gulf Research Centre, 2009). They have local roots and provide local jobs, but can also exploit the opportunities from globalisation. SMEs therefore deserve an adequate public policy to help them get their ideas off the ground and grow, as well as tailor-made services provided by specialized support organisations. Chambers of Commerce are at the core of SME development. Building on their expertise in providing business support services and their daily direct contact with their member enterprises, they are in the best position to put forward specific policy recommendations to national and regional governments.

This research paper tried do so in an explicitly comparative framework, comparing SME policies of Oman and U.A.E in particular. This study tried to give answer to the various programmes and structures of SME's in these two countries. The study has used the secondary data to assess the SME situation in both countries being relied on a descriptive methodology. The present study intends to address to existing definitions of SMEs in the Oman and U.A.E through presenting and analyzing the available economic data on Oman and U.A.E SMEs, identifying the main development challenges Oman U.A.E SMEs face, comparing and evaluating existing SME support programs in the region, and proposing a list of key policies that should be considered across the region to further SME development.

SMES IN THE GULF COOPERATION COUNCIL

The GCC is an oil-based region with the largest proven crude oil reserves in the world (486.8 billion barrels), representing 35.7% of the world's total; while the OPEC accounts for 70% of the world's total proved crude oil reserves. This region ranks as the largest producer as well as exporter of petroleum and plays a leading role in the world in general and OPEC in particular. The six countries of the GCC region have enjoyed a spectacular economic boom until late 2008. The GCC economy tripled in size to $ 1.1 trillion during 2002 to 2008 (Kaleej Times-2009) .GCC countries account for 52% of the total OPEC oil reserves and 49% of the total OPEC crude oil production. For the GCC region, oil and gas sector represents approximately 73% of total export earnings, roughly 63% of government's revenues and 41% of its GDP. The region is continuing its economic reform program, focusing to attract domestic, regional and foreign private sector investment into oil & gas, power generation, telecommunications, and real-estate sectors. The slump in global oil market due to the global financial and economic crisis slowed the pace of investment and development projects, but the recent global economic recovery will result in a sharp rebound in the region's economic activities. Small and medium enterprises (SMEs) have become the talk of the town in the Gulf region. Barely a month passes without a workshop, conference or major public event on SME development. It is generally agreed that economic diversification and job creation for Gulf nationals will not succeed if SMEs do not play a substantial role in the process. Yet, only limited research has been done about the challenges that Gulf SMEs face; policy prescriptions are often quite generic; and no systematic, Many SME development issues in the Gulf resemble those of the developing and developed world more generally; others are more particular to the Gulf. In almost all cases, the policy solutions need, to some extent, to be specific to the region. The assumption of the present report is that SME growth is not desired at all cost, but only makes sense if it leads to diversification, innovation and the creation of employment for Gulf nationals.Gulf-wide benchmarking of SME policies has been undertaken so far. It is not even clear how exactly an SME is defined.

WHAT IS A GULF SME?

There are three main criteria used to define when a company is considered a small or medium enterprise: the number of employees, the annual turnover and the assets of a company. Due to the scarcity of financial company data in the Gulf, most public and private bodies dealing with SMEs base their definitions merely on the first criterion, the number of employees. Even then, however, there is no consistent definition of the thresholds which define whether a company is considered small, medium or large – neither between nor, often, within countries. The issue of definition is important, as only a generally agreed categorization of companies allows for collecting comparable data across sectors and countries. Such data are essential for coherent and coordinated policy and resource planning. As important, the needs and capacities of medium-size companies are often quite different from those of small or micro-enterprises. For tailor-made support programs, the target groups need to be exactly identified and measured. This requires a consistently applied definition.

The average share of small and medium scale enterprises (SMEs) lending in the GCC is only 2% of total lending, while in the non-GCC, it is 14%, according to a World Bank study. (Worldbank.2009) .Although the size of the SME sector in the GCC may remain constrained by the nature of the oil economies, there is scope for enhanced funding, provided access to finance is expanded for resident non-nationals. (Draft working paper of the Bretton Woods institution).With the

average share of SME lending in the Middle East and North Africa remaining low at 8% of total lending, there is a dire need to improve the financial infrastructure to enhance funding for the SME sector, the paper said. It is "noticeable" that the average shares of SME lending was "consistently" low across all the GCC countries, while there is more variation among the non-GCC countries, said the paper, titled 'The Status of Bank Lending to SMEs in the Mena Region: The Results of a Joint Survey of the Union of Arab Banks and the World Bank'.(Gulf times,4th august,2010)

The low share of SME lending in the GCC reflected to a large extent by the structure of the oil-based economies as they were less diversified, dominated by very large enterprises and characterised by appreciated exchange rates and small non-oil traded sectors."These factors imply a more narrow space for SMEs to flourish, especially in non-oil sectors producing traded goods," (Roberto Rocha, Subika Farazi, Rania Khouri and Douglas Pearce-2009).Moreover, according to the paper, the GCC countries tend to have small populations and the nationals tend to find attractive positions in the public sector, which may also discourage risk-taking in the SME sector. By contrast, in the non-GCC countries, there is probably scope for more SME growth across a wider range of economic sector, including traded sectors and also as part of supply chains linked to large enterprises.

Finding "significant" scope for further SME lending in the Mena region, the paper found large differences between the long-run targets and the actual shares of SME lending as reported by the banks."This is true in both the GCC and non-GCC regions, although targets are significantly lower in the GCC (about 12% of total lending), revealing that the banks themselves have concluded that there are natural limits to profitable SME lending in oil-based economies," (Roberto Rocha, Subika Farazi, Rania Khouri and Douglas Pearce-2009)

SMES IN THE SULTANATE ON OMAN

Sultanate of Oman is a middle-income economy with notable oil and gas resources and substantial trade and budget surpluses. Petroleum accounts for 64% of total export earnings, 45% of government revenues and 50% of GDP. Hydrocarbon sector represents one of the most important sectors of the Omani economy. Oman possesses 5.50 billion barrels of proven crude oil reserves which account for 1.2% of the total GCC reserves – almost 0.4% of the world total reserves. With current oil production at 0.806 million barrels a day, oil reserves are expected to last for 19 years. A period between 2003 to late 2008 was the best period for the economy in terms of economic performance on the back of sustained high oil prices, which have helped build Oman's twin surpluses (budget and trade surpluses), and foreign reserves. (Ministry of National Economy, 2008)It has a strong and diversified private sector, which covers industry, agriculture, textile, retail and tourism. Its major industries are copper, mining and smelting, oil refining and cement plants. It further seeks private foreign investors, especially in the industrial, IT, tourism and higher education fields. Industrial development plans focus on gas resources, metal manufacturing, petrochemicals, and international transshipment ports. Oman is actively pursuing a development plan that focuses on diversification, industrialization and privatization, with the objective of reducing oil sector's contribution to GDP to (9%) in 2020. The global economic recovery will have a positive impact on the economy. (8th FYP, 2011-2015)

According to the Omani Ministry of National Economy, companies with up to 5 employees are micro-enterprises; companies with up to 20 are considered small, while those with up to 100 are medium. According to the Ministry of Commerce and Industry, however, companies with up to 10 workers are small, while those with up to 50 are considered medium size. Banks in Oman have yet different definitions, sometimes based on company turnover – data which private financial institutions can more easily obtain from their clients than state agencies can.

There are only in fact 15,000-20,000 of SMEs in Oman generating 10-20 per cent of employment. (Oman Economic Review, August 17th,2011). In Oman, SMEs finance comprises only 2-5 per cent of the portfolios of local banks. Estimates from the World Bank indicate that SMEs have contributed over 55 per cent of GDP in OECD countries and between 60-70 per cent of GDP in middle-income and low-income countries generating 60-70 per cent of employment. Thus there is a significant potential for the SME segment in Oman to grow in terms of contribution to GDP and creation of employment.

There are essentially three distinctive features of SMEs in Oman. Firstly the SME sector in Oman is relatively young in terms of its life cycle as compared to other similar markets, through the potential for growth is tremendous. Secondly, in terms of access to finance, financial institutions in Oman are yet to match the varying needs of SME customers in terms of products and services. And lastly, use of electronic banking channels like Internet Banking is relatively lower in Oman.

TABLE 1: EMPLOYEES REGISTERED WITH PUBLIC AUTHORITY FOR SOCIAL INSURANCE, 2007

EMPLOYEES		REGISTERED	COMPANIES	
Number of Insured	(%)	Number	(%)	Number
1	3.4	4,501	42.6	4,501
2-5	8.4	11,080	37.2	3,934
6-10	4.4	5,832	7.4	787
11-20	5.8	7,585	4.9	514
21-100	20.8	27,344	5.9	929
100+	57.2	75,433	2	212
Total	100	131,775	100	10,577

Source: Oman Chamber of Commerce and Industry-2007-2008

We see that companies with up to 10 workers constitute 87% of all companies, but employ only about 16% of total Omani private sector employees with social insurance – a modest contribution. About 43% of total employees work in companies with up to 100 insured workers. About 2% of companies employ more than 100 workers, and their share in total employment provision is 57% – both higher shares than in Europe.

TABLE 2: NUMBER OF OMANI REGISTERED COMPANIES BY CAPITAL

Number	Capital(<000 OR)
39,366	Under 5
24,385	5 to 10
46,055	10 to 25
8,878	25 to 50
9,382	50 to 100
9,366	100 to 250
1,061	250 to 500
539	500 to 1000
205	1000 to 2000
85	2000 to 3000
49	3000 to 4000
18	4000 to 5000
156	Over 5000

Source: Ministry of National Economy, Sultanate of Oman-2008

Large companies with more than 5.3 million $ in capital constitute only 0.2% of the total. It is noteworthy that the second table (about capital) includes many more companies than the first one (about employment). This reflects the fact that the dominant share of micro-enterprises, perhaps 90%, does not employ nationals as formal workers with social insurance, and hence does not figure in national employment statistics.

The US-Oman Free Trade Agreement (FTA) is expected to open the gateway to more ICT imports while local spending is also being boosted by the benefits of recent high oil prices and improved performance of the non-hydrocarbon economy. (Times Oman, 2009)

As a consequence of these developments, Omanis having increasing amount of vendors increasing their investment in direct presence in the Sultanate, attracted by the strong economic growth. Many are focused on the emerging SME sector, as well as opportunities created by telecom and e-government initiatives. Oman remains one of the regions' more fledgling ICT markets. However, the government's emphasis on diversification is encouraging a wave of large infrastructure projects in sectors ranging from tourism to ports, with ICT as a key component. The total size of the ICT market is forecast to increase from $230 million in 2005 to $400 million in 2010. The government is stepping up the information society drive with implementation of a 'Towards Digital Oman' and e-government strategy, led by the National Committee on Information Technology.

SMES IN UNITED ARAB EMIRATES

The UAE is a Federation of seven Emirates including Dubai, Abu Dhabi, Sharjah, Ajman, Al-Fujayrah, Umm Al-Quwain and Ras Al-Khaima, which are governed by the Federal Supreme Council (FSC) of rulers. Abu Dhabi and Dubai, the largest and the wealthiest two Emirates, dominate the UAE economy. It is a rich and open economy with a high per capita income and a sizable annual trade surplus. It has official proven crude oil reserves of about 97.8 billion barrels – almost 7.2% of the world crude oil reserves and 20% of the GCC reserves. With a current level of production at about 2.256 million barrels a day, oil reserves will last for about 119 years. Oil and Gas account for nearly 25% of GDP, 45% of export earnings and 40% of government revenue(Kaleej Times-2008) .Since the discovery of oil in the UAE more than 30 years ago, the UAE has achieved a profound transformation from a small desert region to a modern state with very high standards of living. The government has increased spending on job creation and infrastructure expansion, and opened up its utilities to greater private sector participation. The sound policies supported by structural reforms have enhanced the role of the private sector, contributing to growth of the non-hydrocarbon sector and diversification of the economy. They have also enhanced economy's resilience to external shocks. Foreigners have been allowed to buy property in Dubai since 2002 and have usually received long-term visas, allowing them to settle in the Emirates. Higher oil prices, increased export revenues, strong liquidity, housing shortages and cheap credit in 2005-08 led to a surge in asset prices (shares and real estate) and consumer price inflation. But the global financial and economic crisis, tight international credit, falling oil prices, and deflated asset prices, caused the UAE economy to shrink in 2009. The UAE's strategic plan for the next few years focuses on diversification and creating more job opportunities for nationals through improved education and increased private sector employment. In its diversification efforts, the UAE has developed its tourism sector and held the leading position for the destinations attracting business in the future.

In the UAE, different definitions have been used for SME's by government and by banks. Until
recently, the Dubai Chamber of Commerce considered companies with less than 10 employees micro, those with less than 20 or 25 small, and those with less than 100 medium-size, provided turnover is less than 100 million Dirham/year. UAE banks usually consider companies small if their turnover is below 10 million $/year (37 million Dirham) and medium-size if it is under 25 million $ (90 million Dirham). In late 2009, the Dubai government set a general definition for SMEs, which is differentiated by sector and takes both turnover and workforce size into account. A UAE-wide SME definition is currently under preparation by the federal government.

TABLE 3: OFFICIAL DEFINITION OF SME CATEGORIES IN DUBAI

	Trading		Manufacturing		Services	
	Employees	Turnover	Employees	Turnover	Employees	Turnover
Micro	<=9	<=AED9mn	<=20	<AED 10mn	<=20	<=AED3mn
Small	<=35	<=AED50mn	<=100	<=AED100mn	<=100	<=AED25mn
Medium	<=75	<=AED 250mn	<=250	<=AED250mn	<=250	<=AED150 mn

Source: Mohammed Bin Rashid Establishment for SME Development-2008

In the UAE, SMEs also constitute at least 90% of all businesses. As the most recent available establishment survey stems from 1995, some extrapolation is necessary to estimate their role today. In 1995, a total of 93,263 companies were registered as active in the UAE, of which 1020 had more than 100 employees. The share of SMEs hence was about 99%, and the share of micro-companies with up to 9 employees almost 80%.At the same time, micro-companies contributed about a third to total employment, The total employment by SMEs, i.e. companies with less than 100 workers, amounted to 63% of the overall workforce (Report Mohammed Bin Rashid Establishment for SME Development -2008)

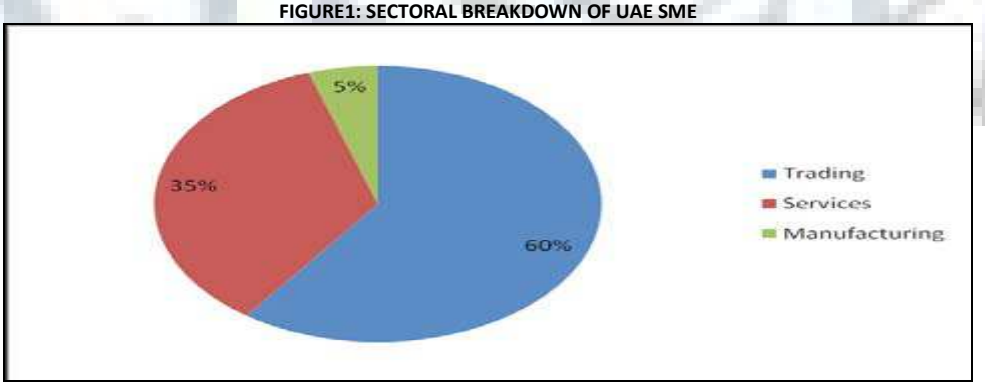
TABLE 4: BREAKDOWN OF UAE COMPANIES BY ESTABLISHMENT BY SIZE

size of the company	Number of the company	(%)	Total Employees	(%)
1-9	73204	78.49%	257,615	33.02%
10-49	8283	8.88%	161,341	20.68%
50-99	1039	1.11%	69,502	8.91%
100+	1020	1.09%	291,681	37.39%
Total	93,263	100%	780,139	100%

Source: Chamber of Commerce and Industry-2008 Report

We know however that the total number of establishments has increased from 93,000 to about 157,000 by 2005, a growth of almost 70%. During 2007, there were about 85,000 SMEs registered with the Dubai Chamber of Commerce and Industry alone. The sectoral breakdown of SMEs in the UAE shows that three fifths of companies active in the trading sector, and a mere 5% in manufacturing. This probably has to do with the large expatriate-run economy in the Emirates that is supported by small retail outlets.

FIGURE1: SECTORAL BREAKDOWN OF UAE SME



Source: Standard Chartered -2009

With development of the ICT sector a key element of the UAE government's economic development strategy, a number of major initiatives together with regional economic and trade liberalization ensure strong growth. The UAE government is encouraging the development of 'smart cities' - another regional hot point. ICT is expected that the total size of the UAE ICT market to increase from $1.3 billion in 2005 to around $2.6 billion in 2010, with the ICT services sector at the forefront of growth. Recently, the UAE government announced that ICT is targeted 90% of businesses online by the end of 2007. One of the key non-oil sectors driving the economy is real estate, which is experiencing a massive investment boom in the past five years. Banking sector is one of the single largest industry vertical in terms of ICT investments over the next five years.

CONCLUSION

We need to conclude that the data on SMEs' economic contribution to U.A.E and Oman are incomplete and only partially comparable across cases. Some basic facts about their economic role can be established, however: SMEs constitute more than 90% of businesses in every country of the region. A large share of SMEs is active in the trade sector; other important sectors include small-scale workshops, hotels and restaurants as well as contracting. Major Findings are that the sectoral structure of both countriy's SMEs is skewed towards simple contracting and trading operations, other sectors tend to be under-represented and micro-enterprises in particular offer very little employment to both countries citizens and existing SME support programs are diverse and often innovative, but also very fragmented and have not seen a systematic evaluation of their results. It can be concluded that because of more globalized U.A.E's SME sector is little more advanced than Oman in many directions.

SME support programs in the future can be more oriented towards providing an enabling environment for SME growth and less towards subsidized credit and free business support services. The fostering of cooperative structures among SMEs, which currently operate in an atomized environment, should be one main focus of support programs .It would be advisable that lead agencies should be designated to coordinate and benchmark SME support policies, consolidate available information, and make it publicly available.

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LAND TENURE AND FARMERS' INVESTMENT ON AGRICULTURE: EVIDENCES FROM THREE COUNTIES IN HAWZEN DISTRICT, TIGRAY, NORTHERN ETHIOPIA

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ETHIOPIA

ABSTRACT

Security of tenure has long been an issue of argument and still is an area of debate in the proposition that secured farmers have better confidence to invest on land and produce more. However, studies also revealed that there has been little relationship between tenure security and agricultural investment. This paper aims at providing preliminary and up-to-date scientific evidence about the debate in the context of three administrative units (Tabias) in Tigray, Northern Ethiopia. 150 survey questionnaires were administered to farming households and OLS was employed to determine the statistical significance of the independent. Findings of the study revealed that tenure security adversely affected farmers' investment and the vegetating effort households made on their land; and it was found statistically significant. The model result also revealed that fertilizer, labor and gender matters were found determinant for agricultural productivity. The existing land tenure has negative impact on terracing (soil and water conservation) yet statically insignificant. Investment on labor, vegetating effort and technology found to have a direct bearing on agricultural productivity. Hence, improving the farming households' confidence through land certification and related measures which enhance 'ownership' needs to be considered to supplement farmers' effort of investment on their land and improving vegetation cover.

KEYWORDS

Agriculture, Ethiopian land, Farmers' investment, Hawzen, Land tenure, Tigray.

INTRODUCTION

LAND TENURE, INVESTMENT AND PRODUCTIVITY

Land is the heart of economic, political and social life in many of the African states where citizens' economy continue to rely significantly on agriculture and natural resources upon which national food needs, export revenue, employment and prominent share of national GDP are significantly dependent on (Commission for Africa, 2005). However, sub-Saharan Africa has no formal documentation for most land regarding who owns it or who has the right to use it. The discourse on the impact of land tenure on sub-Saharan agricultural productivity not new, yet is particularly challenging provided that a number of different forms of land tenure systems exist, the mechanisms by which they impact on farmer incentives are not understood easily, and it is well perceived that problems related to land tenure may be among the most challenging issues to be "fixed" through institutional reforms (Place, 2009; Adams and Palmer, 2007). Evaluation of land tenure in the context of economic productivity of land portrays that there are areas of both convergence and divergence in the literature (Deininger et al., 2006; Smith, 2004). Furthermore, attention has been given to the perceived effects of land tenure upon productivity which has considerable variation in the policy and related literatures. There is significant heterogeneity in findings themselves which suggests that institutional or policy responses should pay attention to the overarching macro, sectoral and local contexts within which tenure systems function (Place, 2009; Deininger, 2003; Gavians and Ehui, 1999).

In comparison to the outputs on the tenure security versus investment studies, majority of the studies examining the nexus between tenure security and productivity find that there is insignificant relationship. One of the most comprehensive studies was by Place and Hazell (1993), for example, found no evidence of differences in productivity across divergent bundles of land rights in Ghana, Kenya, and Rwanda. Similarly, Hunt (2003) found that land registration program in Kenya failed to bring considerable results on productivity because of reasons such as credit systems which are at their under developmental stage. A study by Gavian and Ehui (1999) depicted that there is homogenous total factor productivity (TFP) across plots under heterogeneous tenure arrangements in Ethiopia since efficiency measures and input use offset each other. Pender et al. (2004) likewise did not get evidence that land titling or tenure arrangements had effect on agricultural intensification in a national level study conducted in Uganda. Place and Otsuka (2002) too discovered that no impact of security variables on productivity in Malawi and Uganda. Deininger et al. (2006) came across with that tenure security variables had impact on land productivity in Uganda Moreover, Pender and Fafchamps (2006) confirmed this relationship through the application of econometric techniques. A study by Deininger et al. (2006) discovered that tenure security variables did impact on productivity in Uganda through their impact on investments in trees, yet without other direct effect.

In a relatively recent household studies conducted in Ethiopia and Uganda, however, challenges the preceding findings. Deininger and Castagnini (2006) discovered that the presence of land conflicts had a devastating outcome on agricultural productivity throughout Uganda which contributed for 50% reduction in productivity on those plots which were under dispute. In another study, Deininger and Jin (2006) found that strong transfer rights have positive effects on conservation (eg. terracing) investment in Ethiopia which itself is discovered to have a momentous impact on land productivity. In many of the African states, rights to land can be established through clearing of bush or through the planting of trees. A negative relationship between pre-investment stage of tenure security and investment could be found if security enhancement is the dominant reason for investing. Besley (1995) developed an econometric model to test this who then applied it to the Ghanaian tree planting behavior. There are mixed empirical findings in relation to this. In a cocoa growing area of Ghana, land security enhancing investment was found (Quisumbing et al., 1999; Besley, 1995) with similar findings in Burkina Faso (Brasselle et al., 2002) and Uganda (Place and Otsuka, 2002). According to Gray and Kevane (2001) the key strategy used among farmers of southwestern Burkina Faso, especially the wealthier was to plant or retain trees and to refrain from long fallows so as to retain access to land use. Similar findings were described by Woodhouse (2003).

Concerning land titling and examination of its effect on agricultural investment and productivity, Roth et al. (1994) found certain impact of title on investment in pilot title schemes in Uganda unlike in Somalia. Carter et al. (1994) found that, in Kenya, title did not have an impact on agricultural outputs and profits, Place and Migot-Andholla (1998) likewise found titling had no impact on productivity or investment. Similarly, Pender et al., (2006) did not find any positive impact upon crop output in Uganda. Yet, Smith (2004) found that a positive and significant relationship between land title and productivity in Zambia where the existence of formal land title led to more investments and more profitable entrepreneurial choices. Though the magnitude of the impact was low, results from

larger national sampling from Ethiopia indicated that land certification did have a positive impact on investment (Deininger et al., 2007). What about in the case of contemporary Ethiopia? - is the concern of this paper trying to investigate whether the existing land tenure system has impact on agricultural productivity in a specific local context through the application of simple econometric and regression models.

LAND POLICY ENVIRONMENT OF ETHIOPIA: POINT OF 'ENDLESS' DISCOURSE

With strong links to class and political structure, before 1975, Ethiopia had a complex land tenure system which had high regional variation. The major tenure forms were a communal '*rist*' system which was dominant in the Northern part of the country and largely constitutes feudal system encouraging absentee landlordism in the Southern part of the nation (Rahmato, 2003; Kebede, 2002; Hoben, 1973). The overall land tenure system was highly insecure accompanied with arbitrary evictions and availability of significantly underutilized lands. Unequal and inequitable land entitlement in the country reduced investment and productivity which led to political grievances and the eventual overthrow of the feudalistic imperial regime of the nation. Following the overthrow of the imperial regime, the Marxist government took power and transferred ownership of all lands in the rural areas to the state, peasant associations with wider administrative and judicial powers at village level were established, followed by the promotion of producer cooperatives, as well as villagization and resettlement programs. In combination with lack of public investment, the Marxist-oriented property administration, led to swift declines in productivity which, with high rate of population growth, resulted in widespread land degradation and severe soil erosion (Kebede, 2002).

In the early 1990's, following the overthrow of the Marxist regime, attempts to move towards a system of private land ownership was unable to be materialized. Actually, the 1995 constitution of the Federal Democratic of Ethiopia baldly states that ownership of land is with the state and upholds the right of every Ethiopian citizen who wants to engage in agricultural activities to receive inheritable use rights to free land, a belief that can be enforced through administrative reallocation of land which likely conflicts with the objective of ensuring tenure security for land users. According to the 1997 federal law (federal proclamation), the responsibility for land policy is devolved to the administrative regions which results in inter-regional diversity of determinant legal provisions. However, administrative devolution of land to the regions has its own challenges of differing contexts. In the first place, it is not free from threats as demonstrated by such measures, particularly from the pursuit of political ends in the *Amhara* National Regional State, for example(Ege, 1997).

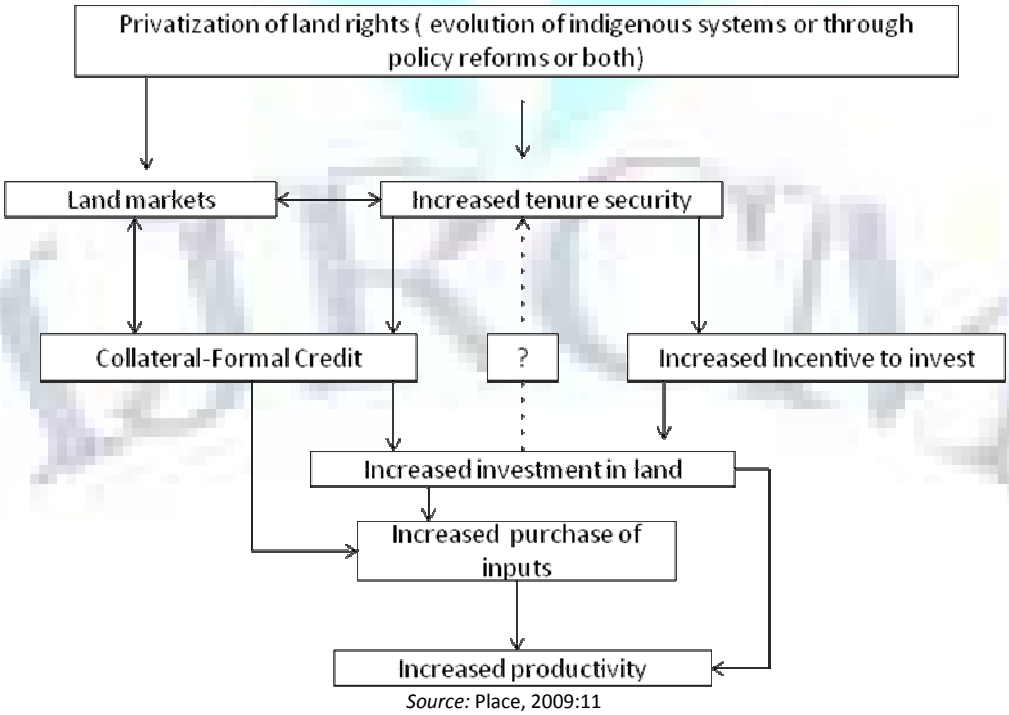
Many surveys highlight that a greater number of farmer households anticipate redistribution of land in the near future, a mentality that reduces investment and/or land productivity (Deininger and Jin, 2006). The attempts to thwart this mentality led official in *Amhara* region towards more strictly circumscribe conditions for land redistribution. In the second place, award and persistent enjoyment of land use rights is subjected to being a residence in the village though land transfers through rental have been permitted officially, administrative issue that may avert migration from rural areas (Rahmato, 2003). Besides, except *Amhara* National Regional State, all regions of the country run legal provisions limiting the amount of land to be rented out to half of holding size and fixing a maximum duration in case of rental contracts. Lastly, both the mortgage and sale of land are prohibited everywhere in the country. With a number of gray areas in the proclamations which are not resolved through regulations, unable to specify how the 2005 federal proclamation seeking to establish vital guidance relates to current regional laws unlocks considerable scope for bureaucratic discretion. As elucidated by (Holden and Zevenbergen, 2008), in the process of interpreting empirical findings of the impact of tenure on productivity, we should bear in mind that land certification is not a sufficient response to eliminate structural and systematic uncertainty though it may contribute in reducing its impact land transfers or investment.

LINKING TENURE TO AGRICULTURAL PRODUCTIVITY: CONCEPTUAL MODEL

A number of sounding hypotheses can be developed concerning the nexus between property ownership (in general) and land tenure in particular with respect to productivity. The conceptualization and analysis of land tenure vis-à-vis agricultural productivity are primarily based on recent socio-economic studies of tenure systems and associated reforms in the Sub-Saharan continent, particularly within the past 17 years. In the prominent conceptual model developed by Feder (1988) for Thailand's agriculture, three prominently important economic relations were considered concerning land titles and productivity: (a) titles may stimulate markets for land which can assist the transfer of land to a relatively better productive farmers, (b) titles can be used as collaterals so as to improve credit access which in turn adds momentum on agricultural investment, and (c) title to land could increase security of tenure for farmer households and augment farmers' willingness on medium to long-term investments upon their land. A number of economists used the aforementioned pathways so as to test linkages between security of tenure, investment and land productivity in addition to the analysis of policy instruments and land markets they made (Peters, 2009; Bruce and Knox, 2008).

Considering the inputs from the previously accomplished works of conceptualizing property rights, agricultural productivity, a conceptual model is developed linking policy, tenure security, and productivity/economic efficiency (Figure 1).

FIGURE 1: INTEGRATED CONCEPTUAL MODEL LINKING POLICY, TENURE SECURITY, AND PRODUCTIVITY



Source: Place, 2009:11

Almost all the relationships among variables in the model are clear except in the case of the relationship between increased investments in land versus tenure security, i.e., does increased investment on land lead to increased tenure? Therefore, one important issue that needs to be addressed is the testing of the

supposition that investment in land can enhance security in tenure leading to a bidirectional linkage between the two variables. Although it is a framework for testing a hypothesis, the model has added momentum on those strongly held beliefs concerning the relevance of land tenure and particular types of reforms in Sub-Saharan Africa. On one extreme of the spectrum, there are those who feel that nothing short of land tilting and land registration reforms can trigger appropriate functioning of the conceptual framework. On the other side of the spectrum, there is a challenge to the stated notion, considering that poor markets for credit and land weaken, if not nullify, some of the hypothesized links (De Soto's, 2000).

Specific to Ethiopian context, the rights to ownership of rural and urban land as well as of all natural resources are, exclusively vested in the state and in the peoples of the nation. According to Article 40 of the Constitution of the Federal Democratic Republic of Ethiopia, land is a common property of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or to other means of exchange (CFDRE, 1995). The constitution has made some provisions that may relax the delimitation imposed earlier on Constitutions. It provides that "Ethiopian peasants have the right to obtain land without payment and the protection against eviction from their possession" and that "government shall ensure the right of private investors to the use of land on the basis of payment arrangements established by law." Also, it provides that "every Ethiopian shall have the full right to the immovable property he builds and-to the permanent improvements he brings about on the land by his own labor or capital."

DATA AND METHODOLOGY

THE STUDY AREA

The Tigray Region has an estimated total population of about 4.3 million; among which 19.5% are urban inhabitants (CSA, 2008). The region is primarily agricultural and more than 80% of the population is employed in the sector though agriculture is dependent on unreliable rainfall. Livestock also play significant role in the rural economy of Tigray. They are sources of draft power for tillage and transportation, cash income from sale of livestock and livestock products, food such as milk and honey for household consumption and manure to maintain soil fertility. The study is embedded in the Eastern zone of Tigray where 9% of the inhabitants of the zone has access to electricity, this zone has a road density of 88.2 kilometers per 1000 square kilometers, the average rural household has 0.5 acre of land (compared to the national average of 1.01 acre of land and a regional average of 0.51) and the equivalent of 0.7 heads of livestock. 38.9% of the population is in non-farm related jobs, compared to the national average of 25% and a regional average of 28%; 91% of all eligible children are enrolled in primary school, and 35% in secondary schools(World Bank, 2004). Among the districts in the Eastern zone, Hawzen District is the one that is predominated by rural kebeles that constitute 93% of the population. The district has 26 *Tabias*[1] including the town of hawzen. Based on the primary data acquired from the District administration and district rural development office; three *Tabias* were selected and from these three *Tabias* 150 (50 each) households were identified for filling the questionnaire. Selection of the household was made after having the whole list of households. Systematic random sampling was employed to select the households. The selected *Tabias* were from the three different agro-ecology with similar population and village (*kushet*) size. The villages are Debreabay from the cool (*Dega*), Giraaras from midland (*woinadega*) and Megab from the desert (*Kola*) area. The three *Tabias* are similar in their population, cultivated land and crops harvested. The distribution of the population among the *Tabias* looks the following (Table 1):

TABLE 1: SUMMARY OF SELECTED TABIAS

No.	*Name of Tabia*	*No. of villages*	*No. of household*	*Total population*	*Sample taken*	*agroecology*
1	Giraaras	3	1222	5802	50	Midland
2	Megab	4	1314	5285	50	Desert
3	Debreabay	3	1084	5257	50	Cool

Source: Hawzen District Administration and district agriculture and rural Development office

MODEL ASSUMPTION

In order to address the objectives of this research project, both secondary and primary data were used. Secondary data is relevant because analyzing the land tenure issue demands more of policy and related documents, research findings and principles of natural resource/and land management issues.

So as to see the impact of land tenure on agricultural productivity, we could use the Cobb-Douglas production function as a standard but it is modified to fit to the production methods of farmers in rural Ethiopia. To measure the impact, farmers who produce crops were selected and data were collected from them to fit to the model. Accordingly, the annual production of crops (Y) is a function of Land (L), capital (K), labor (l) and others (O) like fertilizer and selected seeds; and the production function is written as:

$$Y = f(L,l,K,O), \qquad Y = AL^a l^b K^c O^d \quad \text{..... (1)}$$

The elasticity of crop production with respect to land, labor, capital and others are represented by a, b, c and d; this model is not linear and it can be expressed in an alternative but equivalent form as follows:

$$\ln Y_i = \ln A + \ln L^a + \ln l^b + \ln K^c + \ln O^d \quad \text{..... (2),}$$

Where ln is natural logarithm to the base e.

$$\alpha = \ln A; \varepsilon = d \ln O \quad \text{.....(3);}$$

and for estimation purpose it can be rewritten as

$$\ln Y_i = \alpha + a \ln L_i + b \ln l_i + c \ln K_i + \varepsilon_i \quad \text{..... (4),}$$

In order to check whether land tenure has an impact on productivity a dummy variable (D_i) is introduced in the equation 4 with a value of 1 if they are secured and 0 otherwise; and the equation will again be rewritten as

$$\ln Y_i = \alpha + a \ln L_i + b \ln l_i + c \ln K_i + \beta_i S + \varepsilon_i \quad \text{.... (5)}$$

Where, Y = the quantity of barely in terms of kilogram produced in one production cycle

l = the amount of labor a house hold spent on their land in one production cycle

L = the size of the land in acre

S = tenure security as Dummy with value 1 if tenure has impact, 0 otherwise.

ε = the error term that explains other factors attributable to wheat production

RESULTS AND DISCUSSION

[1] *Tabia*, in Ethiopian context, refers to the smallest administrative unit

Among the selected households, 130 questionnaires were properly filled and subject to analysis; and from whom, 15 were female headed and 115 were male headed ones. Regarding the size of the household, the average size was 6.56 and the number of children was 4.64. The average land holding was nearly 0.72 acres of land. Male headed households were shown to be involved more on their land compared to female headed households. This was due to the reason that, males constitute the agricultural labor force in rural Ethiopia. The holdings of the female households is however are above the average. With respect to the active family member, 53% of the households has two active members who are expected to work on the plot of the land the family holds (Table 2).

It is observed that female headed households have got a bit larger holding than male headed though the sample size was not proportional. Besides, the average number of children of female headed households is less than the male headed households. The average productivity however was less in female headed households than in male headed households. The time spent on the plot was also different among the female headed household and male headed households. Male headed households did spend a bit more time than female headed households. Almost all the farm land of female households looked terraced compared to their male counter parts. With the current holding system, women looked more secured as it is also supplemented by the land registration reported by Mitiku et al. (2005).

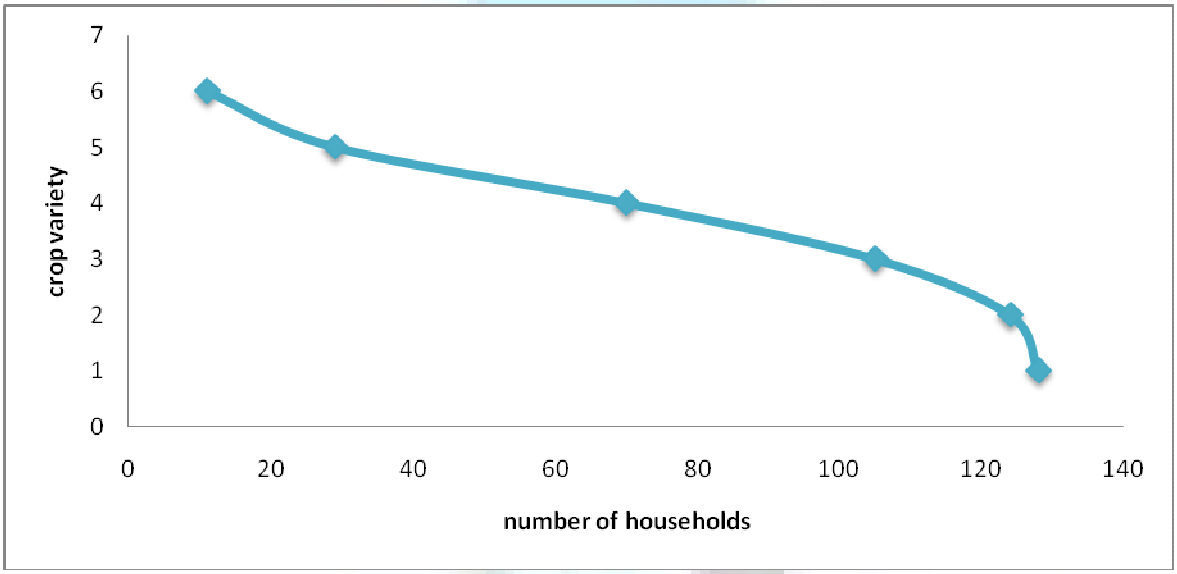
TABLE 2: SUMMARY TABLE

head of household	Average land holding (acre)	Average daily working hour in the plot	influence of tenure	Average number of child	Average total output	Average terraced land
Female	0.783333	2.933333	No influence at all	3.733333	5.083333	0.740385
Male	0.711623	3.043478	10 of them are influenced	4.765217	8.261739	0.685587

Farmers usually produce variety of crops from the limited land holding they have. Commonly farmers did not concentrate on the most productive crop at their farm land. For about 58 per cent of the farmers, it is *karkata* (mix of wheat and barley) which was the number one crop, for the rest wheat (*Triticum aestivum*), barley (*Hordeum vulgare)*, teff (*Eragrostis tef*), bean and sorghum (*Sorghastrum bicolor*) respectively. There were 11 different types of crops produced by the responding households as their second crop. Wheat (*Triticum aestivum*) was the 2nd major crop type for 31% of the respondents. Besides, barely (*Hordeum vulgare)*, teff (*Eragrostis tef*), karkata, sorghum (*Sorghastrum bicolor*), vetch (*Vicia grandiflora)*, millet *(Urochloa ramose)*, maize (*Zea mays*), onion (*Allium cepa*), bean (*Phaseolus lunatus*), and pea (*Pisum sativum*) were the second crop types for the rest of the respondents. With regard to the 3rd crop, there were 12 different types of crops produced by the responding households. Sorghum (*Sorghastrum bicolor*) was the 3rd crop type by 17 % of the respondents. Besides to sorghum (*Sorghastrum bicolor*), barely (*Hordeum vulgare)*, wheat (*Triticum aestivum*)**,** vetch (*Vicia grandiflora)*, teff (*Eragrostis tef*), beans (*Phaseolus lunatus*), onion (*Allium cepa*), maize (*Zea mays*), millet *(Urochloa ramose)*, and pea (*Pisum sativum*) were the second crop for the rest of the respondents.

Seventy out of 130 responding farmers produced 11 varieties of crops as their fourth type of products as they are described from the above table. The households also produce 9 varieties of products as their 5th crop. Eleven of them produced 6 types of crops as the 6th crop (see fig. 2).

FIG.2 RELATIONSHIP BETWEEN CROP VARIETY AND NUMBER OF HOUSEHOLDS

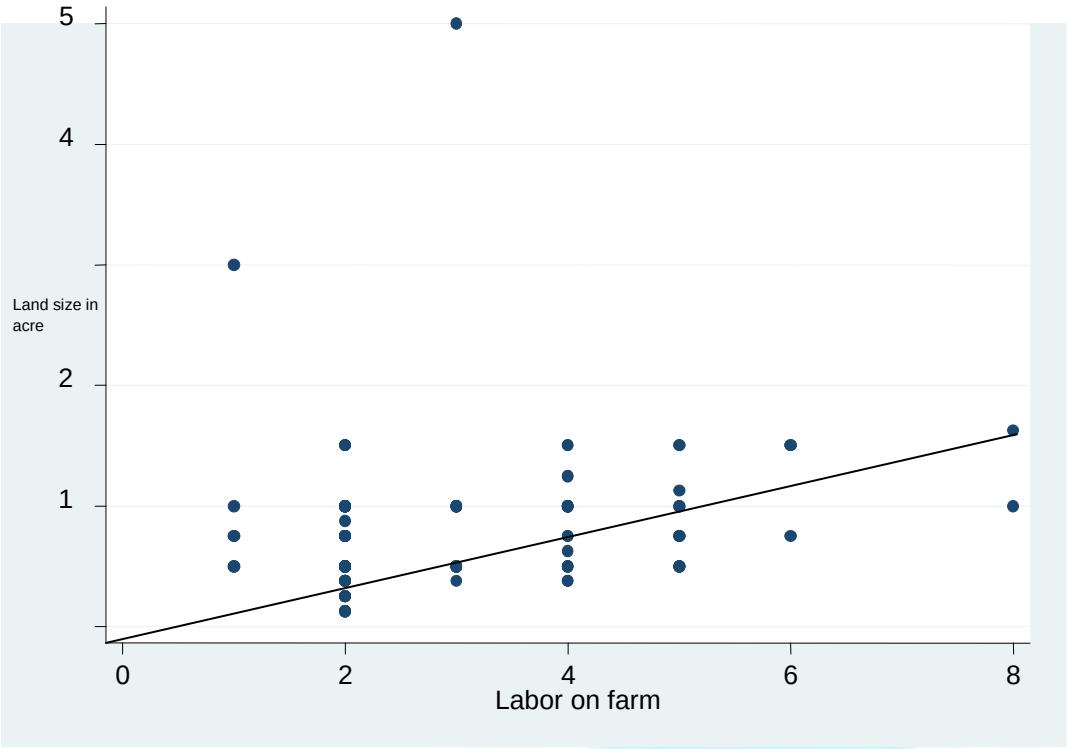


One hundred and twenty eight households produced one type of crop, 124 households produced two types of crops, 105 households produced three types of crops, 70 produced crops of four varieties, 29 of them produced five crops of varieties and 11 of them produced crops of six varieties, that might reduce the productivity of the land they held as they fragmented their holding to these varieties of crops.

Households were not specializing in the more productive crops due to several factors. First of all, their land is highly fragmented located in several different areas that does not help them to take advantage of economies of scale. Secondly, through diversification, they tried to manage crop failure. As the rural market system is highly imperfect, it will not enable them to get what they miss from their land.

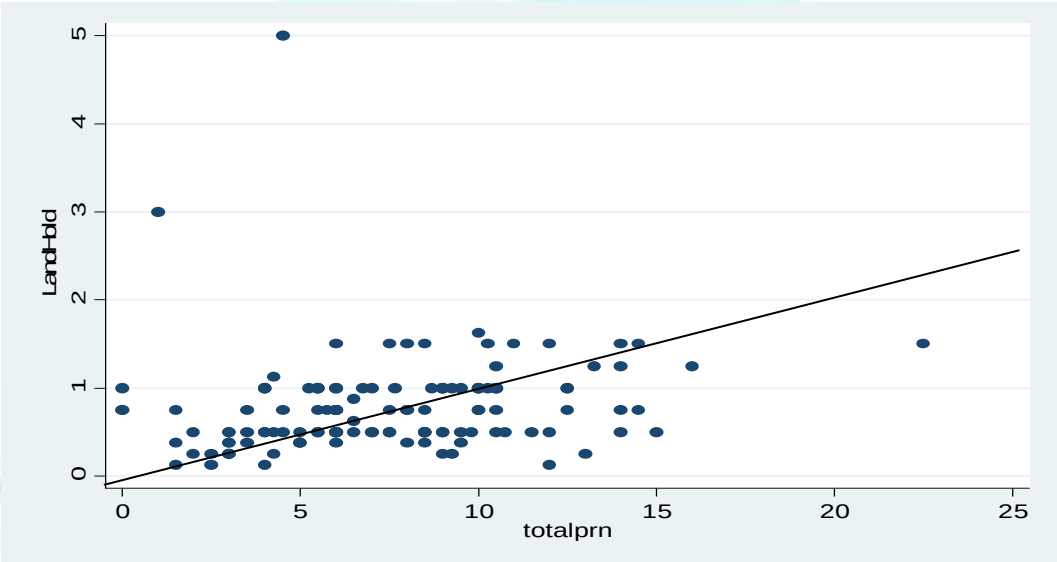
Tenure security is believed by some as an important factor affecting farmers' commitment to invest on their land. Descriptive statistical results of this study demonstrate whether tenure security has adversely affected farmers' investment on fertilizer, inputs, effort on vegetation and terracing. The scatter diagram (fig. 3) shows that as the size of land increases, the number of household members working on land increases. Irrespective of the tenure security, the household members invest their time more on the land. The scatter diagram below shows that larger land size is associated with larger household size; implying that the larger the size of the household, the better will be the tenure security as the land is expected to be distributed among siblings in a household.

FIG. 3: LABOR ON FARM AND LAND SIZE



One of the determinant factors for the volume of crop production is the size of the land. Moreover, technology and labor are contributing in improving agricultural productivity. From the scatter diagram below (fig. 4), it is shown that production seems proportional to land size. The average land holding of each household is 0.72 acre and the average crop production per the holding is 7.98 quintal that is proportional to 11 quintal per acre.

FIG. 4: CROP PRODUCTION AND LAND SIZE



IMPACT OF LAND TENURE

The thesis of this paper is mainly to test whether tenure has a perceived or actual impact on crop productivity assuming that if farmers feel unsecured, they will not invest much time and money on their land and then crop productivity will dwindle. Data on tenure security was acquired by requesting farmers whether the current tenure system has an influence or whether it has any inconvenience in their farming system and many (about 92%) of them responded that they did not have any inconvenience with it (Table 3).

TABLE 3: SECURED AND UNSECURED FARMING HOUSEHOLDS

Impact of tenure system	Number of respondents	Average land holding	Average daily working hour on plot	Average crop production in kg/acre of land
Has No influence	112	0.78	3.08	930
Has influence	11	0.97	2.91	679

Interestingly, those farmers who were comfortable with the current land holding did have less average land holding than those who were not. Besides, they did invest more time on their plot compared to those who were not influenced by tenure insecurity and their crop productivity was better than those who felt uncomfortable with the current tenure system. From this, it might be possible to conclude that the smaller the size of the land, the better is the tenure security as it prevents further redistribution of land. Those who felt secured were found more productive and investing much of their time in comparison to those who felt unsecured.

TERRACED LAND, VEGETATION EFFORT AND INVESTMENT ON INPUTS

The impact of tenure security is also reflected on the investment farmers made on their land. It has been argued that unsecured farmers put less effort for terracing, vegetation (environmental protection) and use of technology to improve fertility of land for fear of further redistribution. Farmers used to terrace their land so as to conserve the soil and water and protect the land from erosion and to conserve land that enables them to improve productivity. Among the 130 respondents, 110 replied that they did cover their land with terrace. Respondent households have an average land holding of 0.72 acre and they cover 0.698 acre of land on the average with tracing. However, the table below reveals that tenure insecurity has adverse impact on vegetation, terracing and investment. Its impact on investment was found statistically significant at 5 per cent significant level.

TABLE 4: RELATIONSHIP BETWEEN TENURE SECURITY AND VEGETATION, TERRACING AND INVESTMENT

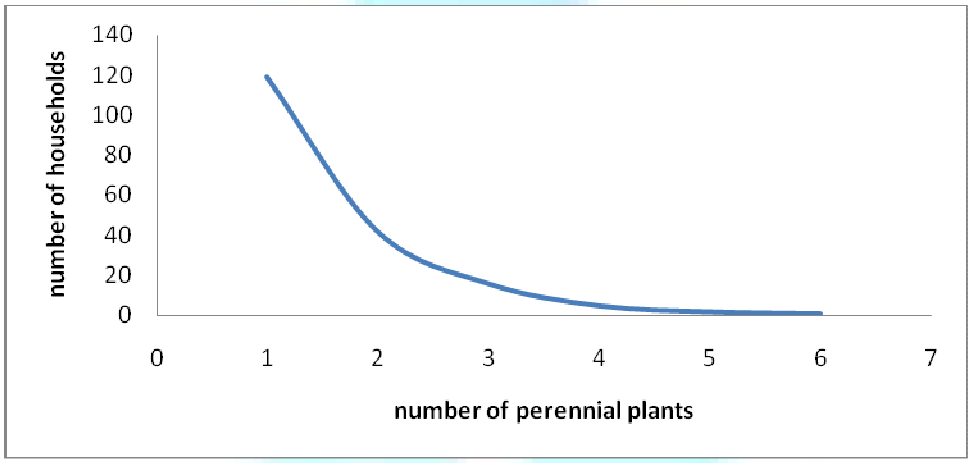
Tenure security	Number of observation	Number of perennial plants (average)	Size of terraced land	Investment of fertilizer in one production cycle in birr
Secured	92	164	0.72	305.60
Unsecured	11	126	0.63	200.09
t-test (diff=Mean unsecured-Mean secured)		-0.3435	-0.7380	-2.1537**

*** Significant at 5% significant level*

With regard to the number of perennial plants, those households feeling secured were shown having more fixed plans though the difference between the two was not statistically significant. Similarly, the land covered under terracing is larger for those who are secured but not statistically significant. Moreover, the investment farmers made over their land in terms of fertilizer and other inputs were found more for those who felt secured than unsecured farming households and it is statistically significant at 5% significance level (Table 4). Tenure security adversely affects households' motivation to invest on land that again affects land productivity.

Specifically, 119 households did have at least one type of fixed plant in their plot; 42 of them have two types of plants; 16 of them have three types; 5 of them have 4 types; two of them have 5 varieties and one of them have six types of crops. Unlike the crop production, many of the respondent farmers seem concentrating on one or two types of perennial plants. The figure below (fig. 5) shows the summary of perennial plants households have in their plot:

FIG. 5: RELATIONSHIP BETWEEN HOUSEHOLDS AND NUMBER OF PERENNIAL PLANTS



Farmers did invest their money on selected seeds and fertilizer. Accordingly, 85.4% of the respondents used technology that worth on the average Birr 287.40[2]. The maximum investment was Birr 928.00 and the minimum investment was Birr 30.00. It is possible to deduce that farming households still invest on fertilizer.

MODEL RESULT

Regression analysis using Ordinary Least Squares method was conducted to test the significance of the variables in explaining the dependent variable. To control problem of endogeniety of tenure over terracing, vegetation and investment, the predicted value of tenure security as an instrument has been employed. The model result revealed that fertilizer, labor and gender were found determinant for agricultural productivity. However, tenure security was found affecting agricultural production adversely but not statistically significant. Hence, a one Birr increase in the investment on fertilizer will result in an increase in 0.2 % increase in crop production. If farmers spent one more day in their agricultural land, crop production will increase by 10.7 %. As the number of perennial plants increases by one, the amount of crop production will increase by 11.1%. As it is depicted from the result table(Table 5), the model explains 37% of the relationship between the independent and the dependent variables that is acceptable due to the cross sectional nature of the data and the heterogeneity of agricultural products. Though the result revealed that tenure security has negative relationship with agricultural productivity, it was not found statistically significant.

TABLE 5: LINEAR REGRESSION RESULT (DEPENDENT VARIABLE: TOTAL PRODUCTION IN QUINTAL)

Independent variables	Robust Coefficient	Std. Err.	t
Tenure security (predicted)	-0.803	1.041	-1.05
Investment on fertilizer	.002***	.001	2.66
Terraced land	-.271	.180	-1.50
Amount labor on farm	.107**	.049	2.14
Number of trees	0.111***	0.032	3.45
Household size	.026	.038	0.68
Constant	1.362	.892	1.53
Number of observation	101		
F(6, 94)	5.82***		
R-squared	0.3710		

****,**.* significant at 1%,5% and 10% significant level*

[2] 1 USD ≈ 16.6 Ethiopian Birr as of February 2011

CONCLUSION AND IMPLICATIONS

Many of the farming households were male headed households and the average family size was 6.56; the average land holding per household was about 0.7 acre. Female headed households were with better holding and they feel better secured but less productive. Farmers did not seem specializing on single crops; they produce variety of crops given their limited land holding. Lion's share of farmers produces four to six varieties of crops in the limited land they hold. It is also observed that many of the farming households did not have any trouble with the current tenure system. However, those who felt influenced were relatively with larger land holding who nevertheless were less productive and spend less working hours on their plot(s).

It was also observed that agricultural productivity was explained by tenure security, time spent on plot, investment on fertilizer, selected seeds and number of perennial plants. However, tenure security was not statistically significant. Nevertheless, its impact on fertilizer investment was found significant. Many of the farmers did make an effort on planting their lands; a significant portion of the vegetation incorporates perennial plants such as cactus *(Cacti),* orange *(Citrus sinensis)*, and *gesho* (*Rhamnus prinioides*). Furthermore, there are also nitrogen fixing plants helpful for farmers in improving the fertility of their soil such as *girar*[3] *(Faidherbia albida)*, and acacia *(Acacia ethebica, Acacia mearnsii)* with which many of the respondent farmers allot significant amount of their labor-time in efforts of improving their land productivity.

Many of the farmers also terraced their land so as to conserve the soil and keep its fertility. Farmers seem conscious on technology; it is shown that all farmers, irrespective of the amount of expenditure did spend money on selected seeds and fertilizer. The lion's share of farmers did have at least one type of plant in their plot of land that could naturally be grown or planted by them for conservation and income generation purposes.

To conclude, in this study it is found that land tenure was not as such a big threat that prevents farmers from investing on their land. There were a few respondents who were not comfortable with the current tenure system and the data shown that they did invest less time on their land and they were also less productive even though their average holding was greater. Improving their feeling of security can be strengthened by creating awareness and coaching them to invest more time and resources on their land. Besides to application of fertilizer and selected seed to improve productivity, it would be better if farmers make agreements so as to plough their land cooperatively to improve land productivity through economies of scale. It is also important to coach farmers to specialize and improve crop productivity. In off-farm areas, cactus was the common plant used for fences, fodder and alternative source of income for farming households; its expansion and improved harvesting techniques should also be properly communicated to the farming households. Furthermore, training farmers on the development and management of nitrogen fixing multipurpose agroforestry trees that suitable for dry land ecosystems could be supportive. Agroforestry tree species such as mimosa[4] (*Acacia saligna*) and *garsha* (*Faidherbia albida)* can be considered as priority areas of improving agricultural productivity in the study area, in addition to efforts required in relation to the buildup of security of tenure.

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[4] Locally called 'yetebmenja zaf' (in Amharic) and palasandro (in Tigrigna).

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LEADERSHIP QUALITY PRACTICES AND PERFORMANCE OF AUTONOMOUS POLYTECHNIC COLLEGES IN TAMIL NADU

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ABSTRACT

The leadership in educational institutions is widely recognized as having crucial importance for performance. There is a strong association between leadership quality practices and performance of the educational institutions. The students of autonomous polytechnic colleges have been selected by adopting random sampling and the data and information have been collected from 200 faculties and pertain to the year 2010-2011. The foregoing analysis shows that that the results show that about 70.50 per cent of students are males while the rest of 29.50 per cent of students are females. The results indicate that about 73.50 per cent of students of autonomous polytechnic colleges in Tamil Nadu belong to the age group of 16-17 years and about 27.00 per cent of students belong to the Mechanical followed by Electrical and Electronics (23.00 per cent), Electronics and Communication (21.00 per cent), Civil (16.50 per cent) and Computer Science engineering (12.50 per cent). The student's satisfaction, faculty's satisfaction, service to the students and environment and safety discriminate best among five branches of the students in autonomous polytechnic colleges in Tamil Nadu. The correlation analysis indicates that there is a meaningful positive and strong correlation between leadership quality practices and performance results in autonomous polytechnic colleges in Tamil Nadu. Leaders in polytechnic colleges often have a space of action where it is possible to influence the inhibiting structures. In polytechnic colleges, which is characterized by internal responsiveness, the leaders are sensitive to the needs of the faculties and students and will change regulation when necessary and possible, in order to achieve the higher academic performance.

KEYWORDS
Correlation, Discriminant, Leadership, Performance.

INTRODUCTION

The leadership in educational institutions is widely recognized as having crucial importance for performance. Indeed, it is acknowledged as being second only to classroom teaching in terms of its influence on student learning with the greatest impact found in institutions where students' learning needs are the most acute. There is a wide range of issues relating to supporting and promoting the provision of effective leadership in educational institutions, including those around recruitment, roles and responsibilities, retention, succession planning, governance, continuing professional development and reward.

Leaders often have a space of action where it is possible to influence the inhibiting structures of educational institutions. In an educational institution, which is characterized by internal responsiveness, the leaders are sensitive to the needs of the teachers and will change regulation when necessary and possible, in order to support and promote development. This requires measures where leaders develop their habits to listen to experiences made by teachers. This is important for all the efforts made by individual academic teachers to reach their full potential in terms of collaboration and mutual support.

The way in which successful leaders apply leadership quality practices will be influenced by a number of factors, including their judgments about the conditions for teaching and learning in the institutions, the confidence and experience of their staff; and the behaviour, aspirations and attainment levels of the students. There is a strong association between leadership quality practices and performance of the educational institutions. The role of leaders in polytechnic educational institutions has changed in recent years, becoming increasingly complex and demanding. Polytechnic institutions are becoming more autonomous and are facing higher levels of accountability, while serving more diverse stakeholders and being confronted with a broad range of social issues. The polytechnic educational institutional leaders will require a broad range of skills and qualities in order to effectively discharge the roles and responsibilities in leading the polytechnic institutions.

The successful leadership quality practices improve students' outcomes through their values, virtues, dispositions, attributes and competences as well as what they do in terms of the strategies they select and the ways in which they adapt their leadership practices to their unique context in order to achieve the excellent performance. With this background, the present study was made to examine the leadership quality practices and performance of autonomous polytechnic colleges in Tamil Nadu.

METHODOLOGY

Among the polytechnic colleges in Tamil Nadu, the autonomous polytechnic colleges in Tamil Nadu have been purposively selected for the present study. The students of autonomous polytechnic colleges have been selected by adopting random sampling technique through pre-tested, structured interview schedule through direct interview method. The data and information have been collected from 200 students and pertain to the year 2010-2011.

STATISTICAL TECHNIQUES

The frequency and percentage analyses were carried out to understand the characteristics of students. The correlation analysis has been carried out to examine the relationship between leadership quality practices and performance of autonomous polytechnic colleges in Tamil Nadu. In order to discriminate the branches of the students in autonomous polytechnic colleges in Tamil Nadu based on the performance results, the discriminant analysis has been applied and the functional form of discriminant function is:

$$D = b_1 X_1 + b_2 X_2 + \ldots + b_n X_n + c$$

Where,

D = Discriminant (dependent) Variable (Branches)

X_i=Discriminating (independent) Variables (Performance Results)

b_i= Discriminant coefficients;

c = Constant

The Likert five point scale (strongly agree to strongly disagree) was used to measure the variables of leadership direction, organizational governance, organizational performance reviews, social responsibility and ethics, students focused results, faculty focused results, Institutional Effectiveness results, Governance and social responsibility results.

RESULTS AND DISCUSSIONS

CHARACTERISTICS OF STUDENTS

The characteristics of students in autonomous polytechnic colleges were analyzed and the results are presented in **Table 1.** The results show that the results show that about 70.50 per cent of students are males while the rest of 29.50 per cent of students are females. The results indicate that about 73.50 per cent of students of autonomous polytechnic colleges in Tamil Nadu belong to the age group of 16-17 years followed by 18-19 years (18.50 per cent) and 20-21 years (8.00 per cent). It is clear that about 27.00 per cent of students belong to the Mechanical followed by Electrical and Electronics (23.00 per cent), Electronics and Communication (21.00 per cent), Civil (16.50 per cent) and Computer Science engineering (12.50 per cent).

TABLE – 1: CHARACTERISTICS OF STUDENTS IN AUTONOMOUS POLYTECHNIC COLLEGES IN TAMIL NADU

Variables with Category	Households(N=200)		Variables with Category	Households(N=200)	
	Number	Per Cent		Number	Per Cent
Gender			**Branches**		
Male	141	70.50	Civil	33	16.50
Female	59	29.50	Mechanical	54	27.00
Age(Years)			Electronics and Communication	42	21.00
16-17	147	73.50	Electrical and Electronics	46	23.00
18-19	37	18.50	Computer Science	25	12.50
20-21	16	8.00			

DISCRIMINANT ANALYSIS FOR PERFORMANCE RESULTS

In order to discriminate the branches of the students in autonomous polytechnic colleges in Tamil Nadu based on the performance results, the discriminant analysis has been applied and the results are hereunder discussed.

SELECTION OF DISCRIMINATING VARIABLES

In order to determine the performance results which significantly contribute to the differentiation of branches of students in autonomous polytechnic colleges in Tamil Nadu, F test is used for Wilks' Lambda. The ANOVA results are presented in **Table .2.** The F test is significant for six variables of student's satisfaction, loyalty of students, faculty's satisfaction, service to the students, improvement of students and environment and safety.

ESTIMATION OF DISCRIMINANT FUNCTION

In this study, the discriminant analysis is carried out for five branches of the students in autonomous polytechnic colleges in Tamil Nadu in and it results four discriminant functions and consequently four eigen values and the results are presented in **Table 3.** The highest value (0.68) corresponds to the first discriminant function, which shows that it has the strongest power of discrimination of the four functions. Also, the first function accounts in a ratio of 65.30 per cent for the dispersion of the group means, as compared to the second function accounts 14.70 per cent, third function contributes 12.50 per cent and fourth function accounts 7.30 per cent.

The canonical correlation coefficient, measuring the relation between discriminant factorial coordinates and the grouping variable show that 71.57 i.e $(0.846)^2$ of the total variance accounts for the differences among for five branches of the students in autonomous polytechnic colleges in Tamil Nadu through the first discriminant function.

TABLE – 2: TESTS OF EQUALITY OF GROUP MEANS

Performance Results	Wilks' Lambda	F	df1	df2	Sig.
Student's satisfaction	.946	8.460	2	194	.021
Loyalty of students	.916	9.192	2	194	.023
Faculty's satisfaction	.960	5.964	2	194	.015
Loyalty of faculties	.924	2.182	2	194	.124
Service to the students	.922	7.846	2	194	.030
Improvement of students	.943	7.178	2	194	.025
Utilization of funds	.973	1.280	2	194	.174
Rules and regulations	.962	1.273	2	194	.156
Code of conduct	.956	1.284	2	194	.121
Environment and safety	.924	5.862	2	194	.023

TABLE – 3: EIGEN VALUES

Function	Eigen Value	% of Variance	Cumulative %	Canonical Correlation
1	.684	65.50	65.50	.846
2	.348	14.70	80.20	.426
3	.282	12.50	92.70	.328
4	.198	7.30	100.00	.243

STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS

The standardized coefficients for the discriminant function were calculated and the results are presented in **Table 4.** The discriminant function coefficients are used for calculating the discriminant score for each case in particular.

Taking into the account that the first function has the highest discriminating power, the first discriminant function is:

$Z = 0.462\ Z_1 - 0.124\ Z_2 + 0.381Z_3 + 0.112Z_4 + 0.424Z_5 + 0.122\ Z_6 - 0.142Z_7 - 0.143Z_8 - 0.201Z_9 + 0.396\ Z_{10}$

The Z_1 to Z_{10} are standardized X_1 to X_{10} variables.

TABLE – 4: STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS

Performance Results	Function 1	Function 2	Function 3	Function 4
Student's satisfaction	.462	-.112	.144	-.103
Loyalty of students	-.124	-.284	-.142	-.147
Faculty's satisfaction	.381	.115	.202	.115
Loyalty of faculties	.112	.298	.392	.192
Service to the students	.424	.134	.114	.101
Improvement of students	.122	.222	.325	.420
Utilization of funds	-.142	-.262	-.363	-.128
Rules and regulations	-.146	-.210	-.110	-.213
Code of conduct	-.201	.245	.189	.245
Environment and safety	.396	-.164	-.264	-0.127

The size of the coefficients indicates of student's satisfaction, faculty's satisfaction, service to the students and environment and safety discriminate best among five branches of the students in autonomous polytechnic colleges in Tamil Nadu.

STRUCTURE MATRIX

The structure matrix coefficients are presented in **Table 5.** From the table, the results indicate the correlation between each predictor measures and the discriminant function.

TABLE – 5: STRUCTURE MATRIX

Performance Results	Function			
	1	2	3	4
Student's satisfaction	-.546*	.246	-.189	.011
Faculty's satisfaction	.504*	-.236	.172	.023
Service to the students	.482*	.284	.168	.171
Environment and safety	-.162	.432*	-.228	.182
Rules and regulations	.148	-.446*	-.198	.154
Code of conduct	-.124	.408*	.164	.128
Loyalty of students	-.180	.164	-.342*	.111
Utilization of funds	-.075	-.182	.284*	.124
Improvement of students	-.064	.172	-.112	-.353*
Loyalty of faculties	.015	-.126	-.146	-.296*

*Note: * indicates largest absolute correlation between measure and discriminant function*

For the first discriminant function, it can be seen that correlation coefficients have high values for three measures *viz.,* student's satisfaction, faculty's satisfaction and service to the students which means that these measures are strongly correlated with the first function. These measures would probably characterize best division of branches of students in autonomous polytechnic colleges in Tamil Nadu.

For the second function, environment and safety, rules and regulations and code of conduct are strongly correlated. These measures would also probably characterize best division of branches. For the third function, loyalty of students and utilization of funds are strongly correlated and these measures would also probably characterize best division of branches. For the fourth function, improvement of students and loyalty of faculties are strongly correlated and these measures would also probably characterize best division of branches of students in autonomous polytechnic colleges in Tamil Nadu.

EFFICIENCY OF DISCRIMINANT FUNCTION

The efficiency of discriminate function is presented in **Table 6**. Based on the discriminant function, 78.00 per cent of the measures have been correctly classified.

TABLE – 6: EFFICIENCY OF DISCRIMINANT FUNCTION

Branches	Predicted Group Membership					Total
	Civil	Mechanical	Electronics and Communication	Electrical and Electronics	Computer Science	
Count						
Civil	24	2	3	2	2	33
Mechanical	3	42	4	3	2	54
Electronics and Communication	2	1	35	2	2	42
Electrical and Electronics	2	3	2	37	2	46
Computer Science	1	2	2	2	18	25
%						
Civil	72.73	6.06	9.09	6.06	6.06	100.00
Mechanical	5.56	77.78	7.40	5.56	3.70	100.00
Electronics and Communication	4.76	2.38	83.34	4.76	4.76	100.00
Electrical and Electronics	4.35	6.52	4.35	80.43	4.35	100.00
Computer Science	4.00	8.00	8.00	8.00	72.00	100.00

Note: 78.00 % of original grouped cases correctly classified

RELATIONSHIP BETWEEN LEADERSHIP QUALITY PRACTICES AND PERFORMANCE RESULTS

The relationship between leadership quality practices and performance results of autonomous polytechnic colleges in Tamil Nadu was analyzed by working out correlation coefficients and the results are presented in **Table 7.** The correlation analysis indicates that there is a meaningful positive correlation between leadership quality practices and performance results in autonomous polytechnic colleges in Tamil Nadu.

TABLE – 7: RELATIONSHIP BETWEEN LEADERSHIP QUALITY PRACTICES AND PERFORMANCE RESULTS

	LD	OG	OPR	SRE	SFR	FFR	IER	GSR
LD	**1.00**							
OG	0.72**	**1.00**						
OPR	0.61**	0.64**	**1.00**					
SRE	0.71**	0.79**	0.74*	**1.00**				
SFR	0.88**	0.78*	0.80**	0.82*	**1.00**			
FFR	0.79*	0.71**	0.79**	0.75*	0.52**	**1.00**		
IER	0.75**	0.84**	0.83*	0.86**	0.54**	0.54**	**1.00**	
GSR	0.73*	0.79*	0.74**	0.72*	0.61**	0.66**	0.52**	**1.00**

Note: Significant at five per cent level, ** Significant at one per cent level*

Source: Computed Data

Note: LD=Leadership Direction
OG=Organizational Governance
OPR=Organizational Performance Review
SRE=Social Responsibility and Ethics
SFR= Students Focused Results
FFR=Faculty Focused Results
IER=Institutional Effectiveness Results
GSR=Governance and Social Responsibility Results

The results show that leadership direction is positively significantly correlated with students focused results and institutional effectiveness results at one per cent level and it is positively significantly associated with faculty focused results and governance and social responsibility results at five per cent level of significance.

The correlation coefficients indicates that organizational governance is positively significantly associated with faculty focused results and institutional effectiveness results at one per cent level and is positively significantly correlated with student focused results and governance and social responsibility results at five per cent level of significance.

The correlation analysis further shows that organizational performance review is positively significantly correlated with student focused results, faculty focused results and governance and social responsibility results at one per cent level, while it is positively significantly associated with institutional effectiveness at five per cent level of significance.

The results indicate that social responsibility and ethics is positively significantly associated with institutional effectiveness at one per cent level of significance and it is positively significantly correlated with student focused results, faculty focused results and governance and social responsibility at five per cent level of significance.

CONCLUSION AND RECOMMENDATIONS

The foregoing analysis shows that that the results show that about 70.50 per cent of students are males while the rest of 29.50 per cent of students are females. The results indicate that about 73.50 per cent of students of autonomous polytechnic colleges in Tamil Nadu belong to the age group of 16-17 years followed by 18-19 years (18.50 per cent) and 20-21 years (8.00 per cent). It is clear that about 27.00 per cent of students belong to the Mechanical followed by Electrical and Electronics (23.00 per cent), Electronics and Communication (21.00 per cent), Civil (16.50 per cent) and Computer Science engineering (12.50 per cent).

The student's satisfaction, faculty's satisfaction, service to the students and environment and safety discriminate best among five branches of the students in autonomous polytechnic colleges in Tamil Nadu. Based on the discriminant function, 78.00 per cent of the measures have been correctly classified. The correlation analysis indicates that there is a meaningful positive correlation between leadership quality practices and performance results in autonomous polytechnic colleges in Tamil Nadu.

Leaders in polytechnic colleges often have a space of action where it is possible to influence the inhibiting structures. In polytechnic colleges, which is characterized by internal responsiveness, the leaders are sensitive to the needs of the faculties and students and will change regulation when necessary and possible, in order to support and promote development. This requires measures where leaders develop their habits to listen to experiences made by faculties. This is important for all the efforts made by individual academic faculties to reach their full potential in terms of collaboration and mutual support.

The other side of the coin is that leaders of polytechnic colleges often experience needs for institutional change before individual faculties experience these needs. This phenomenon points towards a need for developed strategies to formulate and implement change top-down. That is, to develop a leadership quality practices suitable to support the engagement shown by individual faculties, which has to be even more promoted and combined with top down initiatives. Only then can the institution get the most out of its support for student learning, performance and personal development. Improving learning and performance outcomes require an approach to leadership development, which focuses on 'instructional leadership'. This means attempting to change the mind set of leaders to regard the processes of teaching and learning as central to their role rather than simply leaving such matters to educators.

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STUDENTS PERCEPTION TOWARDS ENTREPRENEURIAL TRAITS AND THEIR COMPETITIVENESS: AN EMPIRICAL STUDY

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ABSTRACT

Entrepreneurs play an important role in any given economy and are the prime movers of economic development. However, the concept of entrepreneurship is complex phenomenon and difficult to determine entrepreneurial behaviour for innovation and business competitive. Competitiveness is viewed as a threefold concept comprising the potential, the process and the performance. To remain competitive, a firm needs to satisfy the four conditions of sustainability, controllability, relativity, and dynamism. The potential dimension of entrepreneurial traits like Initiative, See and act on opportunity, Self confidence, assertiveness and persuasion were taken into consideration and questionnaire was developed to identify entrepreneurial traits and its linkage with firm's performance as perceived by students. This study examined relationships among entrepreneurial traits and their performance using survey data from 326 students doing professional courses in various management, engineering, low and medical colleges of Uttarakhand and aspiring to become entrepreneurs. The study indicates a dominant and close relationship between the entrepreneurial traits across the parental background and across the professional courses. However study reveals that in spite of high entrepreneurial traits more students are inclined to join government sector as well as public sector job as compared to private sector. Majority of the students are of the opinion that entrepreneurial traits and firm's competitiveness are closely related to each other.

KEYWORDS
Entrepreneurship, Entrepreneurial Traits, Entrepreneurial Success, Entrepreneurial success, Motives, Professionalism, Competitiveness.

INTRODUCTION

Entrepreneurship is the process of wealth creation and individuals referred to as entrepreneurs create this wealth by being innovative operating competitive businesses. They assume the major risks in terms of equity, time, and/or career commitment of providing value for some product or service. In entrepreneurship and small business research, firm performance is often considered as the ultimate criterion for research. The entrepreneur's demographic, psychological and behavioral characteristics as well as his or her managerial skills and technical know-how are often cited as the most influential factors related to their performance and the performance of firm. In this study, an attempt was made to analyse the relationships among entrepreneurial traits and their performance as perceived by the students who are doing professional courses like engineering, management, law and medical. The various personality traits variable was constructed and students were rated these traits like initiatives, see and act on opportunities, self confidence, degree of assertiveness and the level of persuasion.

REVIEW OF LITERATURE

Entrepreneurship is a complex phenomenon, as it can be viewed from economic, psychological, sociological cultural and integrative perspectives. These different view points lead to varying definitions of entrepreneurship. Barnett (1993) after studying more than 70 viewpoints of scholars on entrepreneurs and entrepreneurship concluded that, it is not easy to come up with a consensus definition from the literature. It is people with their experience, knowledge and commitment that provide a lasting advantage to a company through their decisions which have roots in their behaviours and attitudes. Some of traits that reflect such high levels of competitiveness among people are: Entrepreneurship, Innovativeness, and self discipline. Entrepreneurship and innovativeness in the people ensures that "out of the box thinking" is at work and value innovation is an ongoing exercise in the company. Self discipline is an essential element of entrepreneurship in the companies.

Psychological view attempts to understand the mindset of the entrepreneurs, while the personality perspective examines the characteristics of the entrepreneurs. Entrepreneurial behaviour can be looked at from either internal or external viewpoints of an individual. Internal viewpoint looks at the personality traits of an individual such as, locus of control, risk taking, need for achievement, problem solving, innovation, creativity perception and work values. While external viewpoint examines things like, culture, role models, work experiences, education and environment. McClelland (1961) says that entrepreneurs are persons who have a high need for achievement. He goes on to explain that, individuals with a high need to achieve will exhibit entrepreneurial behaviour. (Casson, 1982) quotes Kets De Vries (1985) as saying that family background and work experiences were significant in forming an entrepreneurial personality, he says that individuals who have gone through hardship in childhood need to escape from their harsh background. Their aggressive behaviour forces them to start their own enterprises, instead of being employed by others. Rotter (1989) developed the concept of locus of control whereby the forces responsible for an individual's destiny are either internal or external .Individuals with a high internal locus of control are more likely to become entrepreneurs, than those of high external locus of control. Timmons (1990) refers to entrepreneurial behaviour as a way of thinking, reasoning, and acting that is opportunity directed, and leadership balanced. He acknowledged that entrepreneurship personality can be acquired or in born.

The review of the literature focuses on the definition of entrepreneurship and on why people start businesses. The review also explains some personality instruments used to identify specific traits. In the word of Peter Drucker "The entrepreneur has to create tomorrow". His definitions emphasize the theme that certain individuals play critical roles in changing stagnant bureaucracies into adaptive and creative organizations. An early and important contribution to the study of entrepreneurial individuals was David McClelland's 'The Achieving Society' (1961). McClelland argued that some societies have cultural attitudes which translate into primary socialization practices that foster entrepreneurial individuals. Kets de Vries (1977) similarly argued that the entrepreneurial personality

was the result of a particularly painful upbringing. Other researchers have sought the entrepreneurial personality in risk-taking propensity, internal locus of control, tolerance for ambiguity; over-optimism and need for autonomy (cf. Delmar 2000). Cai Li Yin Miao-miao Zhang Ying has studied on the effects of entrepreneurial traits on entrepreneurial orientation. In his study dimensions of entrepreneurial traits include need for achievement, risk propensity and locus of control; the dimensions of entrepreneurial orientation include innovativeness, risk taking and proactiveness. Their finding indicates entrepreneurial traits positively affect entrepreneurial orientation.

Aurora A. C. Teixeira[2] in his study on title "Entrepreneurial Potential in Engineering and Business Courses analyze the magnitude of the propensity in engineering and economics/business courses. The empirical results, based on a large-scale survey of 2430 final-year students, reveal that no statistical difference exists in entrepreneurial potential of economics/business and engineering students, and that these two latter groups have lower entrepreneurial potential than students from other courses

Yonca Gurol and Nuray Atsan in their research work on title "**Entrepreneurial characteristics amongst university students in Turkey "** explore the entrepreneurship orientation by comparing them with non-entrepreneurially inclined students in Turkey. The study indicates that except for tolerance for ambiguity and self-confidence, all entrepreneurial traits are found to be higher in entrepreneurially inclined students, as compared to entrepreneurially non-inclined students. That is, these students are found to have higher risk taking propensity, internal locus of control, higher need for achievement and higher innovativeness.

The changing nature of work suggests that young people may face the prospect of a "portfolio" career including periods of paid employment, non-work and self-employment, of which the latter implies greater scope for entrepreneurial activity. Roger Henderson and Martyn Robertson, in his study on title "**Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career"**. examine the attitudes to entrepreneurship as a career in UK. Their finding suggests that generally positive images of entrepreneurship are hampered by a lack of identifiable role models, poor media presentation of individuals or small firms, and lack of encouragement from important influencers on career choice such as teachers and career guidance specialists

The structural tradition on the other hand seeks to understand how social, cultural and institutional factors induce entrepreneurship. Some argue that deviance and marginality encourage entrepreneurship, but most authors instead emphasize that cultural and institutional support, including good access to resources, is what encourages entrepreneurship (Martinelli 1994). Busenitz, Gomez and Spencer (2000) break this down into regulatory factors (e.g. institutions and policies), cognitive factors (e.g. knowledge of how to start ventures and obtain financial support), and normative factors (e.g. the perception of entrepreneurship as a career) which are used to explain both types and levels of entrepreneurship in different countries. Management researchers often emphasize the special influence of organizations and especially prior employment in established firms (Freeman 1986). Organizations are said to serve three critical functions: they provide opportunities to build confidence especially in the ability to create new organizations; provide general industry knowledge and specific information about entrepreneurial opportunities; and provide social networks and access to critical resources (Audia and Rider 2005).

Begley and Boyd (1987) found that risk taking had a curvilinear relationship with performance in entrepreneurial firms. Their findings suggested that entrepreneurs exhibiting moderate levels of risk taking would outperform those exhibiting either very high or very low levels of risk. The researchers concluded that "risk taking has a positive effect on return on asset" (p. 89). Palich and Bagby (1995) found that entrepreneurs tend to categorize business situations as possessing less risk than non-entrepreneurs. In other words, "entrepreneurs may not think of themselves as being any more likely to take risks than non-entrepreneurs, but they are nonetheless predisposed to cognitively categorize business situations more positively" (p. 426). Busenitz (1999) also argued that entrepreneurs tend to view situations more favorably than non-entrepreneurs, and his results indicated that entrepreneurs do indeed use representativeness more in their decision making and are more overconfident than managers in large organizations" (p. 325).

Successful distance learners and entrepreneurs may be similar in that they seek out and capitalize on opportunities and marshal resources to achieve their goals. Further, entrepreneurial behavior is a vital asset in the rapidly changing global knowledge economy of the 21st Century. *James W. King, John E. Foster, Susan M. Fritz, Steven S. Waller in their paper* presents a theoretical framework for examining the characteristics of successful distance learners through the lens of entrepreneurship. The proposed theoretical framework suggests a relationship between the entrepreneurial personalities, which is the combined score of locus of control, need for achievement and risk taking propensity, with success and persistence in the academic environment.

To categorize entrepreneurs, some researchers provide novel, functional personality theories. One of these approaches creates four categories of entrepreneurs: finders, binders, grinders, and minders (Singer, 1990). Briefly, finders create new products, services and processes; grinders generate a new use for a product or service; minders replicate an existing product; and binders synthesize a number of ideas. Another approach recognizes that each entrepreneur has a behavioral pattern that motivates him or her to start a business (Carland & Carland, 1992) (i.e., certain types of personality characteristics are associated with entrepreneurs). Other research (Kendrick & Funder, 1988) provides evidence that people have an innate capacity to be satisfied with specific kinds of behavior. This propensity represents a need that guides individuals to select occupations and situations consistent with genetic predispositions.

PRESENT STUDY

The present study is a focus on student's perception towards entrepreneurial traits and their competitiveness. The researcher has focused on the assessment of entrepreneurial traits among the students doing professional courses in Uttrakhand State. An attempt was also directed to analyse the relationships among entrepreneurial traits and their performance as perceived by the student doing professional courses Uttrakhand state. It tries to assess the student's demographic profile, their attitude and preference towards different types of organization they opt after completion of their present professional education. In this study, the students who are doing professional courses like engineering, management, law and medical were rated on the five personality traits such as initiatives, see and act on opportunities, self confidence , degree of assertiveness and the level of persuasion.

METHODOLOGY

Present study is an exploratory research study. For this purpose of the study, a structured questionnaire was designed using open ended and close ended questions and likert scale was developed to rate their personality on the basis of their perceived behavioural pattern. Three hundred and twenty six students were selected at random from various institutes imparting professional courses in Uttrakhand state. The data was systematically arranged, tabulated and appropriate analysis was carried out. The uni variate and bi variate analysis using SPSS-15 was used to analyse the data received from the respondents. Results thus received are evaluated and analysis was conducted.

TABLE – 1: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

	Categories	Count	Percentage
Age	Upto 20 Years	81	24.8
	20 to 25 years	221	67.8
	More than 25 years	24	7.4
Gender category	Male	234	71.8
	Female	92	28.2
Education Level	Upto Matric	4	1.2
	Upto Intermediate	129	39.6
	Upto Graduation	174	53.4
	Post Graduate and Others	19	5.8
Monthly Income	Upto Rs. 15000PM	137	42.0
	From Rs,15000 to Rs, 25000PM	108	33.1
	Rs.25000 and above	81	24.8
Father Education Qualification	Illiterate	9	2.8
	Upto matriculate	57	17.5
	Upto Intermediate	45	13.8
	Upto Graduation	135	41.4
	Post Graduate and Others	80	24.5
Fathers' Profession	Farmer	16	4.9
	Businessman	107	32.8
	Engineer	8	2.5
	Doctor	27	8.3
	Manager	12	3.7
	Teacher	46	14.1
	Others	110	33.7

INFERENCE

A demographic characteristic of the respondents reveals that majority of the respondent's falls in the age between 20 to 25 years. Almost three fourth students (71.8%) belong to male respondents. Sample is dominated by those respondents who are educated up to graduation. Parental back ground of the respondents indicates that more than two third respondent are either graduate or post graduate. One third respondent (32.8%) belong to business category.

TABLE – 2: TYPES OF COURSE DOING AT PRESENT

Sl NO	Description	No of respondents	Percentage
A	Engineering	26	8.0
B	Management	197	60.4
C	Law	22	6.7
D	Medical	77	23.6
E	others	4	1.2
	Total	326	100.0

For the development of entrepreneurship, it is necessary to understand where entrepreneurship comes from. If entrepreneurial skills, for example, are innate, active promotion policies have a small role to play. If instead, only certain entrepreneurial characteristics are innate, then active promotion policies can contribute to entrepreneurship development in the community in the region and in the nation, since entrepreneurial skills can be acquired through training, various institute promoted by government at national, regional or local, should target their promotional efforts through different professional course. Keeping this into consideration, an attempt was made to know which type of courses the students are doing at present for acquiring entrepreneurial traits. The study indicates that 60.4% student are doing management courses. It was followed by 23.6% student who are doing medical courses. 8% respondent belongs to engineering courses and 6.7% respondent belongs to Law courses. Very few students indicate other unspecified course under taken to acquire entrepreneurial knowledge and skill.

TABLE – 3: INTENTION TO JOIN AFTER COMPLETION OF PRESENT COURSE

Sl NO	Description	No of respondents	Percentage
A	Start own business	21	6.4
B	join private sector organisation	91	27.9
C	Join Public Sector organisation	17	5.2
D	Join Govt sector organisation	150	46.0
E	Thinking to go abroad	21	6.4
f	others	26	8.0
	Total	326	100.0

The process of globalisation and liberalisation has started from has generated substantial amount of job in private sector as compared to the government. These policies have stimulated the youth to choose their aspired profession. Keeping this into consideration an attempt was made to explore the mood of the student to choose the job after completion of their present professional education. Analysis reveals that 27.9 percent respondent opted private sector job after completion of their study. 5.2% respondent indicated that they want to join public sector job. 46% are of the opinion that they want to join government sector job after completion of their education. 12.8% respondents are equally divided in their opinion to start their own business or they are willing to go abroad. Remaining 8% indicated other choice of their profession.

TABLE -4 TYPES OF COURSE DOING AT PRESENT * INTENTION TO JOIN AFTER COMPLETION OF PRESENT COURSE

		Intention to join after completion of present course						Total
		Start own business	join private sector organisation	Join Public Sector organisation	Join Govt sector organisation	Thinking to go abroad	others	
Types of Course Doing At Present	Engineering	0	0	4	13	7	2	26
	Management	17	63	10	83	14	10	197
	Law	2	9	3	7	0	1	22
	Medical	2	18	0	44	0	13	77
	others	0	1	0	3	0	0	4
Total		21	91	17	150	21	26	326
Pearson Chi-Square		66.704(a)						

An attempt was made to assess degree of association between student choice of profession with the nature of professional course they are doing at present The calculated value of the Chi Square test statistics (χ^2)= 66.704 at 5 percent level of significance is greater than the tabulated value (26.2962) with 20 degree of freedom. Hence the hypothesis is rejected indicating that nature of course opted by the students is dependent to their aspiring organisation.

TABLE – 5: INTENTION TO START OWN BUSINESS

Sl NO	Description	No of respondents	Percentage
A	Yes	149	45.7
B	No	177	54.3
	Total	326	100.0

The process of liberalization is on. Since the inception of Uttrakhand state, the state is trying its best with the various plans and policies to develop the entrepreneurial skill in the mind of youth of the state. This will not only help the student in securing their job but also help the migration of youth to other state in search of their livelihood. Keeping this into consideration, an attempt was made to know the mood of student whether they were having any intention to start their own business after completion of their present professional courses. . The analysis reveals that 45.7% respondents indicated that they intention to start their own business. On the other hand majority of them indicated negatively.

TABLE – 6: NATURE OF BUSINESS INTENDING TO START

Sl NO	Description	No of respondents	Percentage
A	Trading	66	44.295302
B	Manufacturing	83	55.704698
	Total	149	100

An attempt was made to know from those respondent who were aspiring to start their own business that what type of business they want to do in future. Information pertaining to this indicates that 44.29%) in the sample wanted to do trading job where as 55.70% indicated that they want to start manufacturing job in future.

TABLE – 7: REASONS OF NOT STARTING OWN BUSINESS

Sl NO	Reasons	No of respondents	Percentage
A	Parent does not support it	11	6.21468927
B	Lack of Technical know how	42	23.7288136
C	Lack of Finance	24	13.559322
D	Not willing to take Risk	90	50.8474576
E	Other Reasons	10	5.64971751
	Total	177	100

An attempt was also made to know the reasons from those respondents who were not aspiring to start their own business. The information pertaining to this indicates that 6.21 % respondents were not willing to start their own business as their parent are not supporting to this. Almost one fourth (23.72%) respondents in the sample indicated that they were not willing to start their own business because they are lacking the technical knowhow of the business. 13.55% respondent indicated lack of finance as the reason of not starting their own business. It is significant to know that majority of the respondent in the sample (50.84%) were not willing to start their own business as they are not willing to take the business risk. Very few 5.64% indicated other reason of not starting their own business.

TABLE – 8: ROLE OF INSTITUTE IN IMPROVING ENTREPRENEURIAL TRAITS

Sl NO	Role of Institute	No of respondents	Percentage
A	To a great Extent	36	11.0
B	to a considerable extent	95	29.1
C	To a some extent	38	11.7
D	To a little extent	107	32.8
E	Not at all	50	15.3
	Total	326	100.0

The debate whether entrepreneurs are born or made has been the matter of hot discussion for a long period of time. Many social and academic scientists using academia to develop the talents of social entrepreneurs. Vivek Wadhwa, an entrepreneur turned academic, just wrote a thought provoking piece on TechCrunch on the subject, arguing that entrepreneurs are made, not born. In line with this many technical and professional institutes at national and international level has been developed to nurture the entrepreneurial traits among the student. Keeping this into consideration, an attempt was made to know the students the student's perception about the role of professional institute in improving entrepreneurial traits among them. The information in this respect reveals that very few students (11%) feel that institute plays a great role in improving entrepreneurial traits among students. In comparison to this almost half of them feels that institute plays a little role in developing entrepreneurial traits among students

TABLE 9: TYPES OF COURSE DOING AT PRESENT * ROLE OF INSTITUTE IN IMPROVING ENTREPRENEURIAL TRAITS CROSS TABULATION

		Role of Institute in improving Entrepreneurial traits					Total
		To a great Extent	to a considerable extent	To a some extent	To a little extent	Not at all	To a great Extent
Types of Course Doing At Present	Engineering	14	0	2	3	7	26
	Management	21	94	21	31	30	197
	Law	1	0	15	2	4	22
	Medical	0	1	0	71	5	77
	others	0	0	0	0	4	4
Total		36	95	38	107	50	326
Pearson Chi-Square		316.118(a)	16				

An attempt was made to test the hypothesis regarding perception towards role of Institute in improving Entrepreneurial traits across the student's different stream. Chi-square test was used to test the hypothesis. The Calculated value of chi-square is 316.118. Chi-square value at 5% significance level and 16 degrees of freedom is 26.2962. As calculated value of chi-square is higher than the critical value, null hypothesis is rejected indicating that perception towards role of Institute in improving Entrepreneurial traits across the students of different stream differs significantly.

TABLE – 10: LEVEL OF ENTREPRENEURIAL TRAIT AMONG THE STUDENT OF DIFFERENT PARENTAL EDUCATION LEVEL

Father Education qualification level	Initiative	See and act on opportunity	Self confidence	assertiveness	persuasion
Illiterate	4.06666	4.68888	3.31112	2.97778	3.53334
Upto matriculate	3.61754	4.12982	3.58596	3.46316	3.84912
Upto Intermediate	3.51556	4.10666	3.60444	3.43112	3.54666
Upto Graduation	3.6726	4.08444	3.50962	3.32592	3.42074
Post Graduate and Others	3.63	4.0575	3.4575	3.1775	3.72
Total	3.64172	4.10552	3.5178	3.3184	3.58958

INFERENCE

As is evident from the mean ratings of various entrepreneurial traits across five different parental educational back ground student have high initiative and see and act on opportunity traits among them even if their father is illiterate. The student have got high rating of see and act on opportunity among all the education level of parental education as compared to other entrepreneurial traits.

TABLE -11: LEVEL OF ENTREPRENEURIAL TRAITS AMONG DIFFERENT PROFESSIONAL COURSES

Types of Course Doing At Present	Initiative	See and act on opportunity	Self confidence	assertiveness	persuasion
Engineering	3.24616	3.81538	3.46924	2.97692	3.3077
Management	3.53198	4.12588	3.48122	3.33402	3.51574
Law	3.61818	3.9909	3.7	3.28182	3.4091
Medical	4.04416	4.18442	3.58962	3.41818	3.93766
others	3.75	4.1	3.35	2.7	3.35

INFERENCES

As is evident from the mean ratings of various entrepreneurial traits across five different professional courses medical and management courses student have high initiative and see and act on opportunity traits. Engineering student has got poor ratings on initiative and self confidence. Also a comparative analysis of the five entrepreneurial traits, the assertiveness was rated lowest among the entire student.

TABLE 12: ANOVA WITH DIFFERENT PROFESSIONAL COURSE

		Sum of Squares	df	Mean Square	F	Sig.
Initiative	Between Groups	455.442	4	113.860	13.098	.000
	Within Groups	2790.374	321	8.693		
	Total	3245.816	325			
See and act on opportunity	Between Groups	75.969	4	18.992	2.384	.051
	Within Groups	2557.282	321	7.967		
	Total	2633.252	325			
Self confidence	Between Groups	40.250	4	10.062	1.389	.237
	Within Groups	2324.670	321	7.242		
	Total	2364.920	325			
assertiveness	Between Groups	136.480	4	34.120	3.092	.016
	Within Groups	3542.260	321	11.035		
	Total	3678.739	325			
persuasion	Between Groups	335.397	4	83.849	9.515	.000
	Within Groups	2828.716	321	8.812		
	Total	3164.113	325			

One way ANOVA has been applied to test the significance of the difference between mean values of various entrepreneurial traits across five various professional courses. Assuming null hypothesis as Null Hypothesis (H_o): There is no significant difference on the persuasion dimension between the different professional courses.

Since calculated value is greater than tabulated value therefore null hypothesis (H0) is rejected. Hence there is significant difference on persuasion traits between the students of different professional course.

The prime motive of any business is to earn profit and sustained growth. The entrepreneur is characterized principally by innovative behavior and will employ strategic management practices in the business to remain competitive. This innovativeness approach distinguished the entrepreneur from a small business owner. The business must be the primary source of income and will consume the majority of one's time and resources. The owner perceives the business as an extension of his or her personality, intricately bound with family needs and desires. And this personality trait of an entrepreneur is closely associated with the firm's competitiveness. Keeping these factors into consideration, an attempt was made to know about opinion of student about relationship between entrepreneurial traits and firm's competitiveness. Analysis indicates that sample is dominated by those students who are of the opinion that firm's competitiveness is dependents to a great extent on the entrepreneurial traits the entrepreneur.

TABLE 13: STUDENTS THINKING ABOUT ENTREPRENEURIAL TRAITS AND FIRM'S COMPETITIVENESS

Sl NO	**entrepreneurial traits and firms competitiveness**	No of respondents	Percentage
A	To a great Extent	98	30.1
B	to a considerable extent	81	24.8
C	To a some extent	57	17.5
D	To a little extent	54	16.6
E	Not at all	36	11.0
	Total	326	100.0

TABLE 14: TYPES OF COURSE DOING AT PRESENT * THINKING ABOUT ENTREPRENEURIAL TRAITS AND FIRMS COMPETITIVENESS CROSS TABULATION

		thinking about entrepreneurial traits and firms competitiveness					Total
		To a great Extent	to a considerable extent	To a some extent	To a little extent	Not at all	To a great Extent
Types of Course Doing At Present	Engineering	3	4	4	9	6	26
	Management	84	50	26	15	22	197
	Law	5	4	6	6	1	22
	Medical	4	23	20	23	7	77
	others	2	0	1	1	0	4
Total		98	81	57	54	36	326
Pearson Chi-Square		69.397(a)	16				

An attempt was made to test the hypothesis regarding thinking of students regarding relationship between about entrepreneurial traits and firm's competitiveness across the student's different stream. Chi-square test was used to test the hypothesis. The Calculated value of chi-square is 69.397. Chi-square value at 5% significance level and 16 degrees of freedom is 26.2962. As calculated value of chi-square is higher than the critical value, null hypothesis is rejected indicating that significant difference of opinion across the students of different stream.

CONCLUSION

The importance of entrepreneurship for economic development has been widely acknowledged in recent years. Entrepreneurship is assumed to be a major source of innovation job creation and growth. Traditionally, the educational system has inhibited the development of entrepreneurial qualities because it taught young people to obey, reproduce facts and to engage in wage employment after finishing their education. In contrast, entrepreneurs tend to rely on their own judgment, learn through the process of trial-and-error and create and facilitate their own job-environment. The present research reveals significant difference in the entrepreneurial traits among the students of different stream. The dominant and close relationship between the entrepreneurial traits across the parental background and across the professional courses infers that entrepreneurial traits can be developed by giving suitable training and development thorough creating learning environment. The study indicates that perception towards role of Institute in improving Entrepreneurial traits across the students of different stream differs significantly. The survey also project the students thinking regarding relationship between entrepreneurial traits and firms competitiveness across the students of different stream differs significantly. Entrepreneurial factors influence the level of entrepreneurship in a person or a community or a country. The integration and the inter-dependence of two or more determinant factors in a person give rise to a complex phenomenon of entrepreneurship. The general finding about the determinants of entrepreneurial behaviour, is very important for policy makers and will enable the policy makers to come up with viable interventions to stimulate entrepreneurial behaviour in our economies and thus bring economic growth and development and consequently better livelihood outcomes of the people. By comparing the answers given to an entrepreneurial intentions questionnaire by students aspiring to become entrepreneur and taking education and professional training in different stream, a few differences were spotted. A larger sample and future research may provide more information about the matching proportion of entrepreneurs' personality's traits on different dimension.

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EMPOWERING WOMEN THROUGH SELF HELP GROUPS

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ABSTRACT

Socio-economic empowerment amongst people in general, women in particular is a hallmark and a major indication of transformation. In the recent years transformation of lives and livelihood of the underpriviledged has gained highest prominence the entire world over, especially in the developing countries. Empowerment is a phenomenon of nineties, which means equipping women to be economically, physically and mentally independent, self-reliant, have a positive self esteem to enable them to face any difficult situation and active participation in decision making. Economic empowerment means the upliftment of women with economic well being associated with a changed status of women. A SHG is a registered or unregistered group of entrepreneurs having heterogeneous social and economic background; voluntarily coming together to save small amounts regularly. They mutually agree to contribute to common fund and to meet their emergency needs. The objectives of the study were to examine the demographic factors of SHG, to assess whether women are economically empowered, to evaluate women in SHG's are properly trained in all respects for empowerment and to estimate whether women are politically and socially empowered through SHG. The sample size is 50 respondents who met in a gathering and data was collected through interview schedule. The findings showed that majority of the respondents have agreed the positive impact of SHG on their economic empowerment and their association with SHG has contributed to their social and political empowerment .The contribution of SHG is yet another step towards the path of the socio- economic status of women and it also proved to be instrumental for the rural transformation.

KEYWORDS

Empowerment, Self Help Group, Transformation, Socio-economic.

INTRODUCTION

Socio-economic empowerment amongst people particularly women is a hallmark and a major indication of transformation. In the recent years transformation of lives and livelihood of the underpriviledged has gained highest prominence world over, especially in the developing economics. Empowerment is a phenomenon of nineties, which means equipping women to be economically independent, self-reliant, with positive self esteem to enable them to face any difficult situation and actively participate in decision making. Women folk are the prime contributors to the socio-economic development of the country. In order to improve the socio-economic conditions of the people of any country, it has become indispensable to empower them, by enhancing and ensuring their role to the optimal level. Thus women empowerment is a mantra of the new millennium, which has become a significant component in the in the development of a nation. Hence, Saint Vivekananda said that "As a bird cannot fly on one wing no society can make progress unless its women too join in all activities". About women empowerment Nehru has said, "Once women moves, village moves, country moves". Therefore, the need to empower women arises in the Third world developing countries at global level. In the 20th century, the term economic empowerment has come to limelight in the development analysis of both developed and developing nations.

ECONOMIC EMPOWERMENT OF WOMEN

Economic empowerment means the upliftment of women with economic well being associated with a changed status of women. This approach offered a special opportunity to change the lives of women, particularly poor women. According to Ratna. M, "Economic empowerment refers to, the process of economic and the structural change which enables women to secure economic gain on sustained basis. Nowadays self-help groups are instrumental for enhancing the economic status of women in many states of our country. Batliwala (1994), a developmental researcher says "women empowerment is the process of challenging patriarchal relationship, distributing power in such a way that women gain greater equality than men". Goetz (2001) defined women's empowerment as "weakening the basis of gender subordination".

SHG's

SHG is a group of poor women who have volunteered to organize themselves for their development. A SHG is a registered or unregistered group of entrepreneurs having heterogeneous social and economic background; voluntarily coming together to save small amounts regularly. They mutually agree to contribute to common fund and to meet their emergency needs.

THE ROLE OF SHG IN ECONOMIC EMPOWERMENT

- To cultivate saving habits.
- To utilize the borrowed loans properly and also to repay them promptly.
- To increase the family income.
- To see that the earnings of the members go for their sustained economic development.
- To obtain bank loans and also to get the benefits of the government welfare measures in a proper manner.

These developments cannot take place in a short span of time. It will be the result after a long period. To start with, economic empowerment may be the result while social empowerment would take time to become a reality.

OBJECTIVES OF THE STUDY

- To find out the demographic factors of SHG.
- To find out if the women associated with SHG's are economically empowered.
- To find out if the women in SHG's are being trained in all aspects of empowerment

- To find out if women are politically and socially empowered through SHG.

METHODOLOGY

The study is carried out with both qualitative and quantitative approach. The sample size is 50 respondents met in a gathering and data was collected through interview schedule.

FINDINGS

- Age, education and marital status were some of the important variables that affect women in their empowerment and development.
- More than three-fourth belong to the middle age group.
- 31 of the respondents reported to be married, 6 of them were unmarried, 7 of them were widows and 6 of them were divorced and separated. Hence majority of the respondents were married.
- 44 respondents have agreed on the positive impact of SHG on their economic empowerment.
- 41 respondents reported that they have received training from SHG.
- Majority of the respondents don't own land or property.
- 42 women's agree that their association with SHG has contributed to their social and political empowerment.

SUGGESTIONS

- They felt that efficiency and effectiveness of SHG should be regularly monitored by a qualified and designated body to give corrective input wherever necessary.
- The contribution of banks, NGO's associated with SHG etc should be published to gain public support.
- Family as well as group counseling should be given through qualified people dedicated themselves for that purpose.

CONCLUSION

After joining SHG's the level of income, expenditure and savings of women are increasing day by day. All the women are very happy and satisfied about being the member of SHG's which is a real boon for the development of women in Tamil Nadu. To conclude, the contribution of SHG is yet another step towards the path of the socio- economic status of women and it also proved to be instrumental for the rural transformation.

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PRODUCTIVITY GROWTH AND PRODUCTION STRUCTURE IN SMALL SCALE INDUSTRIAL SECTOR: A COMPARISION OF PUNJAB AND HARYANA

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ABSTRACT

The major thrust of the present paper is to analyse the inter-temporal variations in the total factor productivity growth of the Small-Scale Industrial sector in India with specific reference to Punjab and Haryana for the period 1971-2006. Total factor productivity (TFP), and Partial productivity during the period 1971-2006, pre-reform period (1971-1990) and Post- reform period (1991-2006) are estimated by using the Kendrick index of TFP growth. The paper also estimates the production structure using Cobb-Douglas and CES production function. The findings of the present study are quite interesting. Results reveal that the economic reform package failed to sustain the TFP growth and led to decline in the average annual growth rates.

KEYWORDS

Small Scale Industrial Sector, Productivity Growth, Production Structure, Regional level.

INTRODUCTION

The Small Scale Industrial sector plays a vital role in the industrial development of any country. The importance of the Small Scale Industrial Sector is well-recognized world over for its significant contribution in gratifying various socioeconomic objectives, such as higher growth of employment, output, promotion of exports and fostering entrepreneurship. The small scale industrial sector in India employs 31.25 million people and produces over 8,000 industrial items with the product range varying from very simple items produced with traditional technology to hi-tech products like electronic goods, television sets, engineering products, etc. At present, the Small Scale Industry (SSI) sector accounts for over 90% of industrial units in the country, 8 percent in the GDP and approximately 40 percent of India's exports Directorate of Industries (2005). Since 2006 small industries include all those units having a fixed capital of Rs. 5 crores invested in plant and machinery. From employment point of view SSI have special significance because of its low investment requirements. As per the census report of the year 2001-02, employment generated by SSI per Rs.1 Lakh investment was 1.39, while employment generated by large scale industry was 0.20 implying that large scale industry requires an investment of Rs. 5 lakh to generate employment for one person whereas SSI generates employment for 7 persons with same investment. Thus, the SSI provides 7 times more employment with the same level of investment in large scale industry.

Further, SSI sector is a major source of raw material for some large scale industries. The spread of the SSI will prevent the concentration of economic power in a section of society. Moreover, most of these industries were characterized as being environmentally friendly. The possibility of establishing these industries in different regions is favorable because they do not need a special infrastructure, once these industries are well established then the encouragement of their spread in the rural regions will help to achieve many of the social and economic goals, such as increasing income in rural areas, controlling the migration from rural areas to cities and controlling demographic growth.

Hence, the SSI sector plays a significant role in determining the growth performance of Indian economy. Thus, the Government of India took a number of steps for promoting SSI sector in India by establishing Handloom board, Handicraft board, Cottage industry board, Khadi and Village industry board, etc. to augment the performance of SSI in India. Despite these efforts of Indian government 1,30,041 sick units in Indian small scale industry have been observed in the year 2005. A huge number of sick units, therefore, portray the gloomy picture of the health status of the Indian SSI. Therefore, any attempt to analyze the sources of growth of Indian SSI gains worth to study the health status of small scale industry of India.

Some of the studies have endeavored to analyze the structure and performance of SSI in India, Punjab and Haryana. Brahmananda (1982), Pandit, (1985), Golder, (1986), Gupta, (1990) Ramaswamy (1994), Chand (2000), Sahoo (2003), Venkataramaiah (2003), Golder, (2004), Latha (2005). Veeramani, (2005), Gupta, (2006), However, none of these studies attempted the task of measuring the production structure and TFP growth in small scale industrial sector at regional level. The present study tries to enrich the existing literature on measuring the TFP growth of SSI in India and endeavored to ascertain the production structure in it.

METHODOLOGY APPLIED

The present study utilizes the simple arithmetic indices, to obtain the total factor productivity (TFP) growth in small scale industrial sector. The TFP is taken as a weighed arithmetic mean of factor inputs with weights being the respective income share:

$$TFP_t = \frac{(y_t / y_0)}{\sum_{i=1}^{k} S_i (X_{i,t} / X_{i,0})} \quad (1)$$

Where S_i is income share of the input i. The most important widely used variant of arithmetic indices is Kendrick index. The Kendrick index (1961) of TFP is based on a linear production function, which assumes infinite elasticity of substitution between factors of production. The Kendrick index is defined as:

$$TFP_t = \frac{y_t}{\sum_{i=1}^{k} W_{i,0} X_i} \quad (2)$$

Where, $W_{i,0}$ refers to the reward of the input in the base year. The arithmetic index of TFP growth rate from base year 0 to period 1 is expressed as:

$$\frac{\dot{TFP}}{TFP} = \frac{y_1 / y_0}{\sum_{i=1}^{k} W_{i,0} X_{i,1} \Big/ \sum_{i=1}^{k} W_{i,o} X_{i,0}} \quad (3)$$

Where TFP indicates the rate of change of TFP with respect to time. The present exercise also attempts to estimate different productivity components of technical change with the use of the production function approach. A production function captures the relationship between the output(s) obtained from a given set of inputs at a specified stage of technical change. The present study restricts itself to the use of the following specific forms of production functions: 1) Cobb-Douglas (CD) Production Function, and 2) Constant Elasticity of Substitution (CES). In the Cobb-Douglas production function, the marginal product of labor and capital, the sources of output growth, and the returns to scale can be estimated. In the CES production function, one can obtain the parameter of elasticity of substitution, apart from those estimated by the CD production function. CES is more general than the CD in the sense that it does not assume the elasticity of substitution to be unity. In algebraically form production function can be represented as:

Q = f(K,L)

Where, K ≥0 and L ≥0 represent the amount of capital and labor, and represent the value added. In particular, CD and CES production functions, respectively, can be specified as follows:

$$Q = AK^{\alpha}L^{\beta} \quad (4)$$

$$Q = A\left[\delta K^{-\rho} + (1-\delta)L^{-\delta}\right]^{\frac{v}{\rho}} \quad (5)$$

In the former case, coefficients α and β represent the elasticity of output with respect to capital and labor respectively. The value of $\alpha+\beta$ provides a measure of *returns-to-scale*, which may be increasing, constant or decreasing according as the value of $\alpha+\beta$ is greater than, equal to, or less than unity, respectively.

However, the introduction of the Harrod neutral type of technical progress in the two production functions adapts the production technology as follows:

$$Q = AK^{\alpha}L^{\beta}e^{\lambda t} \quad (6)$$

$$Q = Ae^{\lambda t}\left[\delta K^{-\rho} + (1-\delta)L^{-\delta}\right]^{\frac{v}{\rho}} \quad (7)$$

Where, *t* represents the time trend and the parameter λ represent the rate of disembodied technical change.

In CES specification, one can estimate the parameters related to efficiency (*A*), technical change (λ), distribution (δ), returns-to-scale (*v*), and elasticity of substitution (ρ). The specification of the Cobb-Douglas production function can be arrived at without and with the rate of technical progress:

$\text{Log } Q = a_0 + a_1 \log K + a_2 \log L$ (8)

and

$\text{Log } Q = a_0 + a_1 \log K + a_2 \log L + a_3 \log t$ (9)

The CES production function is intrinsically non-linear, which means that there is no way that parameters can be estimated directly by ordinary least square (OLS). However, Kmenta (1967) suggested that the OLS technique could be used, by showing that, the CES form (4) could be approximated by the following equation:

$\text{Log } Q = \text{Log } A + v\,\delta \log K + v(1-\delta) \log L - 1/2\,\rho\, v(1-\delta)(\log K - \log L)^2$

This form is similar to the CD specification except for the addition of the squared term. The above form can be written more clearly, without and with technical change

$\text{Log } Q = a_0 + a_1 \log K + a_2 \log L + a_3 (\log K - \log L)^2$ (10)

and

$\text{Log } Q = a_0 + a_1 \log K + a_2 \log L + a_3 (\log K - \log L)^2 + a_4 \log t$ (11)

Respectively, where

Efficiency: $A = e^{a_0}$

Distribution: $\delta = \frac{a_1}{a_1 + a_2}$

Scale: $v = a_1 + a_2$

Substitution: $\rho = \frac{-2a_3}{a_2}$ and $\sigma = \frac{1}{1+\rho}$

Technical Progress: $\lambda = a_4$

The estimation of Cobb-Douglas and the CES functions, without and with 'technical change' parameter, represented by equations (8), (9), (10) and (11), can be estimated by using the-method of ordinary least squares.

SOURCES OF DATA AND CONSTRUCTION OF VARIABLES

It is evident from above discussion that for obtaining the arithmetic index (i.e., Kendrik index) of TFP and estimating a production function requires a well defined set of output and input variables. In the present study, we considered only one output (gross output at constant prices) and two inputs (gross fixed capital at constant prices and number of employees). The required data have been collected from various issues of economic survey, Directorate of Industries

government of Punjab and Haryana and downloaded from the official web site India Stat. The present study is confined to the period from 1971-72 to 2006-07. The choice of terminal year is governed by the availability of latest data from the Ministry of Statistics and Program Implementation (MOSPI). All monetary data have been deflated by using appropriate price deflators. The gross output figures at constant prices have been utilized as an index of output. Following Jayadevan (1995) and Goldar (1986), we preferred the use of 'gross output' in place of 'net output' because depreciation charges in the Indian industries are known to be highly arbitrary and fixed by the income tax authorities and seldom represent true/actual capital consumption.

The gross fixed capital stock has been utilized as a measure of capital input. The standard practice of perpetual inventory method has been followed here to generate the series of gross fixed capital stock at constant prices. This requires a gross investment series, an asset price deflator, a depreciation rate, and a benchmark capital stock. We followed the procedure adopted by Austria and Martin (1995) and Wu (1997) for getting an estimate of initial value of capital stock. This procedure involves the following steps:

Step 1: Download the figure of fixed investment in SSI sector of Punjab, Haryana and of India, deflate the current prices figures at the constant prices using 'Price index of machinery and machine tools', given by using relationship:

$I_t = GFI_t/P_t$

Where,

GFI_t = Fixed Investment at current prices in the year t; and

P_t = Price index of machinery and machine tools in the year t.

Step 2: The logarithm of gross real investment was first regressed against a time trend to obtain its average growth rate ω and a trend value of investment at the beginning of the same i.e., I_0.

Step 3: Making the conventional assumption that the capital stock grows at a steady state at time t_0 the value of capital stock for initial year (K_0) has been estimated as:

$$K_0 = \frac{I_0}{\omega + \delta}$$

Where,

K_0= Gross value of initial capital stock;

ω= Estimated growth rate of investment; and

δ = Annual rate of discarding of capital.

In the present analysis, we have taken annual rate of discarding of capital equals to 5 percent.

Step 4: After obtaining the estimate of fixed capital for the benchmark year, the following equation has been used for the measurement of gross fixed capital series at 1981-82 prices:

$K_t = K_{t-1} + I_t - \delta K_{t-1}$

Where, K_t = Gross fixed capital at 1981-82 prices by the end of year t; I_t = Gross real investment in fixed capital during the year t; and δ = Annual rate of discarding of capital.

In present study, the number of employees consisting of both non-production and production workers has been taken as the measure of labour market. After obtaining all the outputs and factor inputs, the variables have been divided by the number of SSI units operating in Punjab, Haryana and In India. The figures of number of SSI units have also been downloaded from the same above mentioned sources. Thus, the figures obtained by dividing the output and input variables by number of SSI units will provide Gross Output per SSI unit, Labour per unit and GFC per SSI units.

EMPIRICAL RESULTS

Table 1 provides the empirical evidences regarding the partial and total factor productivity growth in small scale industrial sector in India. The total factor productivity in SSI of India has been observed to be growing at an average annual growth rate of 1.11 percent per annum. The inter-temporal analysis of TFP growth provides that the TFP scores vary between the minimum of 0.63 for the year 1996-97 and the maximum of 3.07 for the year 1989-90. Thus, there exist huge variations in the TFP growth of Indian small scale industry. Further, a comparison of the growth rates of three measures of productivity over two different sub-periods (i.e., pre-reforms and post-reforms) reveals an upward trend during the pre-reforms period. However, the economic reforms package failed to sustain the TFP growth as a downward trend for the three measures has been noticed. A decline in the average annual growth rate of TFP from 1.64 percent per annum during the pre-reforms period to the 0.72 percent per annum during the post-reforms period imitate the fact that TFP has declined at a severe rate during the post-reforms period. The observed decline is statistically significant as the observed value of the Kruskal-Wallis test is significant at 1 percent level of significance.

The decomposition of the TFP growth in the partial productivity measures i.e., labour productivity and capital productivity reflects that the labour productivity growth is the major contributor of the TFP growth in Indian SSI sector. The labour productivity is contributing about 83 percent of TFP growth and the remaining portion is contributed by the capital productivity. Moreover, the decline TFP growth has been contributed by the declines in the labour and capital productivities to the tunes of 37.38 percent (i.e., ((0.717-1.145)/0.717)×100) and 98.57 percent (i.e., (0.007-0.490)/0.490)×100), respectively. Thus, the capital productivity regress by about 100 percent is the major factor and labour productivity decline is relatively feeble source of declining TFP growth in Indian small scale industry. The Kruskal-Wallis test also support the inference of significant decline in TFP growth in Indian small scale industry. However, the capital productivity has been observed to be negative during the later years of the study period.

The empirics regarding the production structure of Indian small scale industrial sector have been given in Table 2. The estimated coefficient of technical progress is -0.1 percent per annum and thus, reflects a negative growth of technology in Indian small scale industrial sector. However, this technical regress is statistically insignificant and thus, proves the situation of technology stagnation in Indian SSI sector. Further, the significant value of 3.69 for the squared item supports the suitability of the CES production function and refutes the application of Cobb-Douglas type of production technology in SSI sector of India.

TABLE 1: PARTIAL AND TOTAL FACTOR PRODUCTIVITY GROWTH IN SMALL SCALE INDUSTRIAL SECTOR IN INDIA

Year	Labour Productivity Growth	Capital Productivity Growth	TFP Growth (Kendrick Index)
1971-72	-----	-----	-----
1972-73	0.998	0.049	1.047
1973-74	0.964	0.101	1.065
1974-75	1.033	0.073	1.106
1975-76	0.943	0.158	1.101
1976-77	0.991	0.216	1.207
1977-78	1.032	0.273	1.305
1978-79	0.918	0.388	1.306
1979-80	1.195	0.489	1.684
1980-81	1.252	0.537	1.789
1981-82	1.163	0.532	1.695
1982-83	1.084	0.546	1.630
1983-84	1.153	0.643	1.796
1984-85	1.217	0.748	1.965
1985-86	1.299	0.863	2.162
1986-87	1.392	0.97	2.362
1987-88	1.505	1.084	2.589
1988-89	1.606	1.180	2.786
1989-90	1.756	1.315	3.071
1990-91	0.735	0.487	1.222
1991-92	0.651	0.246	0.897
1992-93	0.569	0.126	0.695
1993-94	0.579	0.069	0.648
1994-95	0.630	0.029	0.659
1995-96	0.655	-0.009	0.646
1996-97	0.662	-0.031	0.631
1997-98	0.682	-0.050	0.632
1998-99	0.710	-0.067	0.643
1999-00	0.716	-0.075	0.641
2000-01	0.744	-0.083	0.661
2001-02	0.718	-0.080	0.638
2002-03	0.741	-0.081	0.660
2003-04	0.795	-0.085	0.710
2004-05	0.854	-0.091	0.763
2005-06	0.890	-0.086	0.804
2006-07	0.991	0.007	0.998
Average	**0.924**	**0.186**	**1.110**
Pre-Reforms	**1.145**	**0.490**	**1.635**
Post-Reforms	**0.717**	**0.007**	**0.724**
Kruskal Wallis	**18.350****	**23.684****	**24.668****
Note: ** represents that coefficient is significant at 1 percent level of significance.			
Source: Author's Calculations			

The estimates of the parameters of CES production function have been provided in Table 3. The efficiency parameter of the CES production function has been observed to the level of 0.774. Thus, the SSI sector of India is operating with an average inefficiency to the tune of 22.6 percent per annum. In general, if the SSI sector of India operates on efficient frontier then 22.6 percent more output can be produced with same bundle of inputs. The distribution parameter observed to the tune of 62.14 percent reveals that the share of capital in total value added is 62.14 percent whereas the remaining of the 37.86 percent of the output is shared by the labour. The value of the returns-to-scale parameter is greater than one and thus, the existence of increasing returns-to-scale has been observed in Indian SSI. Therefore, the modernizations and up gradation of technology in Indian SSI can help to improve the performance of the industry. The elasticity of substitution is less than unity and observe to be very low i.e., 0.2049. Hence, labour and capital are imperfect substitutes and thus, support the inference that labour cannot be substituted for capital and vice-versa.

TABLE 2: THE CES PRODUCTION FUNCTION ESTIMATION FOR INDIAN SMALL SCALE INDUSTRIAL SECTOR IN INDIA

Parameter	Value	*P-Value*
Intercept	-0.256	0.0001
LL	1.900	0.0001
LK	-0.728	0.0001
T	-0.001	0.934
$(LK\text{-}LL)^2$	3.687	0.0001
Notes: i) The Lower and Upper bounds have been obtained using 95 percent level of confidence; ii) * signifies that the coefficient is significant at 5 percent level.		

Source: Author's Calculations

In sum, the analysis reveals a huge variation in the TFP growth and partial productivity measures of Indian small scale industrial sector. The economic reforms have found to be adversely affected the three measures of productivity performance in Indian SSI sector. The characteristics of the production structure in Indian SSI sector reveals increasing returns-to-scale and limited substitutability of two factors of production. The efficiency parameter reflects that SSI sector in India is operating with a high level of production inefficiency which can be mitigated with the introduction of advance and upgraded technology given the increasing returns-to-scale.

TABLE 3: PARAMETERS OF CES PRODUCTION FUNCTION WITH TECHNICAL PROGRESS

Variables/Parameter	Estimated Coefficient
Efficiency ($\hat{A}$)	0.7741
Distribution ($\hat{\delta}$)	0.6214
RTS ($\hat{v}$)	1.172
Elasticity of Substitution ($\hat{\sigma}$)	0.2049
Technical Progress	-0.1000
Notes: RTS represent *returns-to-scale*.	

Source: Author's Calculations

PRODUCTION STRUCTURE IN SSI SECTORS OF PUNJAB AND HARYANA

Regarding the production growth and production structure of small scale industrial sector of Punjab, it has been observed that both capital productivity and total factor productivity (TFP) growth are declining over the study under evaluation. The average TFP growth observed in the Small scale industrial sector of Punjab is at the rate of 3.23 percent per annum. The major contributor of this growth rate is capital productivity improvement. Table 4 depicts sharp decline in capital productivity of small scale industrial sector of Punjab up to 1991, however, after the year 1991, a mild improvement has been observed in labour and capital productivity measures. After 1991, the trend has started rising upward although the average growth rate of TFP has reduced from 3.61 percent during pre-reform period to 2.89 percent during the post reform period. This decline is statistically significant in both capital and labour productivity indices.

TABLE 4: PARTIAL AND TOTAL FACTOR PRODUCTIVITY GROWTH IN SMALL SCALE INDUSTRIAL SECTOR OF PUNJAB

Year	Labour Productivity Growth	Capital Productivity Growth	TFP Growth (Kendrick Index)
1971-72	-----	-----	-----
1971-72	1.002	13.084	14.086
1972-73	1.002	6.755	7.757
1973-74	1.002	4.481	5.482
1974-75	1.002	3.433	4.435
1975-76	1.002	3.330	4.331
1976-77	1.002	3.043	4.045
1977-78	1.002	2.715	3.717
1978-79	1.002	2.602	3.604
1979-80	1.001	2.308	3.310
1980-81	1.001	2.096	3.097
1981-82	1.001	2.053	3.054
1982-83	1.001	2.061	3.062
1983-84	1.001	1.931	2.932
1984-85	1.001	1.789	2.790
1985-86	1.001	1.713	2.714
1986-87	1.001	1.619	2.620
1987-88	1.001	1.563	2.564
1988-89	1.001	1.558	2.559
1989-90	1.001	1.521	2.522
1990-91	1.001	1.493	2.494
1991-92	1.001	1.359	2.360
1992-93	1.001	1.417	2.418
1993-94	1.001	1.650	2.651
1994-95	1.001	1.725	2.726
1995-96	1.001	1.695	2.696
1996-97	1.001	1.765	2.766
1997-98	1.001	1.880	2.881
1998-99	1.001	1.843	2.844
1999-00	1.001	1.918	2.920
2000-01	1.001	1.856	2.857
2001-02	1.001	1.876	2.877
2002-03	1.001	1.897	2.898
2003-04	1.002	1.892	2.894
2004-05	1.002	1.940	2.942
2005-06	1.002	2.023	3.025
2006-07	1.024	2.503	3.527
Average	**1.002**	**2.175**	**3.236**
Pre-Reforms	**1.001**	**2.519**	**3.613**
Post-Reforms	**1.003**	**1.811**	**2.819**
Kruskal Wallis	**3.001**	**20.321****	**18.996****
Note: ** represents that coefficient is significant at 1 percent level of significance.			

Source: Author's Calculations

In nutshell the overall picture reveals that the average TFP growth has although observed less than pre-reform period, yet a U-turn has started a phase of slow improvement in productivity growth rate of small scale industrial sector of Punjab. To explain the production structure of Punjab, CES production function has been estimated, the parameter α_3 has been observed insignificant and thus, CD production function has been found an appropriate choice for explaining the production structure of SSI sector of Punjab. The application of CD production function provides an insignificant technical regress in the SSI sector of Punjab in comparison to capital elasticity of output, labour elasticity of output is much higher in the SSI sector under evaluation. Further the nature of return to scale is increasing, which means that modernization policy can help the SSI of Punjab to improve its output in general and productivity growth in particular.

TABLE 5: THE COBB-DOUGLAS PRODUCTION FUNCTION ESTIMATION FOR SMALL SCALE INDUSTRIAL SECTOR OF PUNJAB

Parameter	Value	P-Value
Intercept	-7.252	0.0001
LL	2.102	0.0001
LK	0.053	0.0001
T	-0.023	0.934
Notes: i) The Lower and Upper bounds have been obtained using 95 percent level of confidence; ii) * signifies that the coefficient is significant at 5 percent level.		

Source: Author's Calculations

TABLE 6: PARAMETERS OF CD PRODUCTION FUNCTION WITH TECHNICAL PROGRESS

Variables/Parameter	Estimated Coefficient
Efficiency ($\hat{A}$)	0.001
RTS ($\hat{v}$)	2.551
Technical Progress	-2.3 Percent
Notes: RTS represent returns-to-scale.	
Source: Author's Calculations	

Source: Author's Calculations

In the Small Scale Industrial sector of Haryana, a cyclical trend, all most like the trend of All India small scale industrial sector, has been observed However in contrast of small scale industrial sector of Punjab, the labour productivity is the major source and capital productivity is the scant source of TFP. Improvement in the SSI sector of Haryana as against stagnate labour productivity growth in SSI sector of Punjab; however an insignificant in capital productivity has been observed in the small scale industrial sector of Haryana. The overall analysis of the growth rate depicts a growth of TFP at the rate of 1.73 percent in the small scale industrial sector of Haryana, about 1 percent of this growth rate has been contributed by labour productivity while the rest is coming from capital productivity growth.

The analysis of impact of economic reforms delineates minute reduction in growth of TFP. However, the major source of this reduction in TFP during the post-reform period is fall in the average growth rates of capital productivity by 0.51 percentage point (0.9566 -0.4467). The analysis of production structure of Haryana also supports application of C-D production function. Table 8; provide the estimated coefficients of C-D production function which reveals an insignificant technical progress at the rate of 1.2 percent per annum. Here also labour elasticity is comparatively large than capital elasticity of output. Return to scale parameters reveals the existence of increasing return to scale in the small scale industrial sector of Haryana. Therefore, the observed production structure calls for modernization in small scale industrial sector in Haryana and exploit the capital productivity up to its optimum extent. These results are in lines of production structure observed in small scale industrial sector of Punjab.

TABLE 7: PARTIAL AND TOTAL FACTOR PRODUCTIVITY GROWTH IN SMALL SCALE INDUSTRIAL SECTOR OF HARYANA

Year	Labour Productivity Growth	Capital Productivity Growth	TFP Growth (Kendrick Index)
1971-72	1.0008	0.6931	1.6940
1972-73	1.0009	0.7578	1.7587
1973-74	1.0012	0.8922	1.8934
1974-75	1.0012	0.8318	1.8330
1975-76	1.0012	0.9454	1.9467
1976-77	1.0014	1.0592	2.0606
1977-78	1.0015	1.1074	2.1089
1978-79	1.0017	1.2899	2.2916
1979-80	1.0017	1.3223	2.3241
1980-81	1.0019	1.4230	2.4250
1981-82	1.0014	1.1503	2.1516
1982-83	1.0012	1.0562	2.0574
1983-84	1.0010	1.0013	2.0023
1984-85	1.0011	1.0397	2.0407
1985-86	1.0010	0.9253	1.9263
1986-87	1.0009	0.9143	1.9152
1987-88	1.0009	0.8510	1.8519
1988-89	1.0008	0.8017	1.8025
1989-90	1.0007	0.7608	1.7615
1990-91	1.0008	0.7069	1.7077
1991-92	1.0006	0.6424	1.6430
1992-93	1.0005	0.6013	1.6019
1993-94	1.0005	0.5714	1.5719
1994-95	1.0004	0.5224	1.5228
1995-96	1.0004	0.4957	1.4961
1996-97	1.0004	0.4844	1.4848
1997-98	1.0004	0.3146	1.3149
1998-99	1.0004	0.2344	1.2348
1999-00	1.0003	0.2349	1.2352
2000-01	1.0003	0.2257	1.2260
2001-02	1.0005	0.3961	1.3966
2002-03	1.0006	0.4454	1.4460
2003-04	1.0007	0.5181	1.5187
2004-05	1.0007	0.5732	1.5740
2005-06	1.0007	0.5836	1.5843
2006-07	1.1256	0.7598	1.8854
Average	**1.0041**	**0.6820**	**1.7306**
Pre-Reforms	**1.0012**	**0.9566**	**1.9677**
Post-Reforms	**1.0079**	**0.4467**	**1.4739**
Kruskal Wallis	**1.258**	**12.668***	**10.254****
Note: ** represents that coefficient is significant at 1 percent level of significance.			

Source: Author's Calculations

TABLE 8: THE COBB-DOUGLAS PRODUCTION FUNCTION ESTIMATION FOR SMALL SCALE INDUSTRIAL SECTOR OF HARYANA

Parameter	Value	*P-Value*
Intercept	-5.858***	0.009
LL	1.397**	0.031
LK	0.341	0.465
T	0.012	0.841
Notes: i) The Lower and Upper bounds have been obtained using 95 percent level of confidence; ii) * signifies that the coefficient is significant at 5 percent level.		

Source: Author's Calculations

TABLE 9: PARAMETERS OF CES PRODUCTION FUNCTION WITH TECHNICAL PROGRESS

Variables/Parameter	Estimated Coefficient
Efficiency ($\hat{A}$)	0.003
RTS ($\hat{\nu}$)	1.738
Technical Progress	1.2 percent
Notes: RTS represent *returns-to-scale*.	

Source: Author's Calculations

CONCLUSIONS AND POLICY IMPLICATIONS

The present study has been conducted with an objective to analyze the production structure and productivity growth in small scale industrial sector in India with specific reference to Punjab and Haryana for the period of 36 years spanning over 1971-72 to 2006-07. The analysis regarding the TFP growth provides that the total factor productivity in SSI is growing at an average annual growth rate of 1.110 percent per annum. The inter-temporal analysis of TFP growth identify a huge variations in TFP growth as the TFP growth rates vary between the minimum of 0.631 for the year 1996-97 and the maximum of 3.071 for the year 1989-90. The comparison of the growth rates of three measures of productivity over two different sub-periods (i.e., pre-reforms and post-reforms) reveals a sharp and statistically significant decline in the trends of three measures of productivity during the post-reforms period in comparison to the pre-reforms period.

The decomposition of the TFP growth in the partial productivity measures i.e., labour productivity and capital productivity reflects that the labour productivity growth is the major contributor of the TFP growth in Indian SSI. The labour productivity is contributing about 83 percent of TFP growth and the remaining portion is contributed by the capital productivity. Moreover, declining in capital productivity is the major source of TFP regress during the post-reforms period. The empirics regarding the production structure of Indian small scale industry provides a negative growth of technology in Indian small scale industry. However, this technical regress is statistically insignificant and thus, proves the situation of technology stagnation in Indian SSI. The estimates of the parameters of CES production function support the existence of increasing returns-to-scale and limited substitutability of two factors of production. The efficiency parameter reflects that Indian SSI is operating with a high level of production inefficiency which can be mitigated with the introduction of advance and upgraded technology given the increasing returns-to-scale.

The comparative analysis of productivity growth trends in Punjab and Haryana reveals a decline in productivity growth rate during the post reform period. In both the states however, if we compare the components of productivity growth then capital productivity growth is the major source of TFP in the small scale industrial sector of Punjab, whereas labour productivity growth is the major source of TFP in the small scale industrial sector of Haryana. The analysis of production structure discloses that in small scale industrial sector of Punjab their exists an insignificant technical regress in comparison to an insignificant technical progress in small scale industrial sector of Haryana. The observation regarding production elasticity and return to scale parameters of CD production function conforms that in both states labour elasticity dominates the capital elasticity and their exists increasing return to scale. Hence their exists ample scope for modernization in the small scale industrial sector both the states under eavluattion.

In sum, the analysis portrays the gloomy picture of Indian small scale industry. The TFP in SSI is growing at a slower rate below 2 percent per annum during the entire and pre-reforms study period. The opening up the economy seems to have adversely affected the performance of the SSI of India. The post-reforms TFP growth has been observed even below unity and thus, supports the inference of adverse effect of economic reforms on the growth performance of SSI. The stiff regulatory environment and cutthroat foreign competition imposed upon the industry during the post-reforms period seems to be imparting significant adverse impact and need to be scrutinized thoroughly by the policy planners of India. An improvement in the product quality via using upgraded technology seems to be the important policy tools for augmenting the TFP growth in Indian SSI sector. Further, the appropriate marketing of the products of SSI sector through arranging trade fairs is required by which the industry owners can sell their product at the relevant prices and avoid the sickness of the industry. Therefore, any policy which consists of the instinct of raising quality of the products of SSI sector will surely help the Indian SSI sector and the region under study to withstand against the deregulatory environment and foreign completion imposed upon after liberalization of Indian economy.

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POLITICAL ECONOMY AND LOCAL AREA DEVELOPMENT SCHEME IN TAMIL NADU

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ABSTRACT

Political economy originally was the term for studying production, buying and selling, and their relations with law, custom, and government. Political economy originated in moral philosophy. These papers give some related studies, statement of the problem, objectives, hypotheses, methodology, appropriate statistical tools and sample size. The study is largely based on primary data collection. In analysis and discussion it is evident that the government has a moral responsibility to take care of the welfare of the people. Ever sinus the political independence the objective of equitable development approach has been on the main agenda in Indian polity. The present exercise reveals that the MPLADS as an instrument to empower the local communities on the economic dynamism. Such useful, interventional mechanism needs to be addressed in the areas, where it is actually and desperately required.

KEYWORDS
Communities, economy, political, facilities and rural.

INTRODUCTION

Political economy originally was the term for studying production, buying and selling, and their relations with law, custom, and government. Political economy originated in moral philosophy. It developed in the 18th century as the study of the economies of states-policies and hence political economy. During late 19th century, the term "political economy" was generally replaced by the term economics and used by those who seeking to place the study of economy upon mathematical and axiomatic bases, rather than the structural relationships of production and consumption (William Stanley Jevons, Alfred Marshall). Today, "political economy" refers to an interdisciplinary approach that applies economic methods to political theories or vice versa, and is available as an area of study in certain colleges and universities. The political economy influences the economic policies and welfare programmes. Ultimately these have direct influences over the people. Hence it is worth exploring in the board of economic development. Generally common people used to approach the Members of Parliament (MPs) for provision of certain basic facilities including community infrastructure in their areas. Government of India considered the need for a mechanism to respond to such requests and decided to have a scheme to meet the felt needs of the people. On 23rd December 1993 Prime Minister announced in the Parliament the MPLADS. Initially the MPLADS was under the control of the Ministry of Rural Development.

The objective of the scheme is to enable MPs to recommend works of developmental nature with emphasis on the creation of durable community assets based on the locally felt needs to be taken up in their Constituencies. Right from inception of the Scheme, durable assets of national priorities viz. drinking water, primary education, public health, sanitation and roads, etc. are being created.

TABLE-1: ENTITLEMENT PER ANNUM

Year	` in crore
1993-94	0.05
1994-95 till 1997-98	1.00
1998-99 onwards	2.00

The Ministry of Statistics and Programme Implementation has been responsible for the policy formulation, release of funds and prescribing monitoring mechanism for implementation of the Scheme. A Department in the State or the Union Territory (UT) is designated as the Nodal Department with the overall responsibility of supervision, monitoring and coordination of the MPLADS implementation with the districts and other Line Departments. In some cases, the District authority engages reputed Non Government Organizations (NGOs) for execution of MPLADS works.

RELATED STUDIES

In general, it is observed that, the ruling parties want to gain the vote bank through the launching of people cantered welfare programs. A Member of Parliament can potentially accumulate `.10 crore during five years of his or her tenure and spend that amount just before the next election (Pal and Das, 2010). This paper highlights the macro perspective of MPLADS in India. Nevertheless, a critic of this work states that his paper unwittingly over signifies the political side of the development embodied in the infrastructural works implemented under the MPLADS and lends politics an autonomous character only to create its negative side and ignore positive socio-economic impact of the works at base level, thereby presenting a distorted view of the scheme (Kumar, 2010).

The administrative reforms commission has also suggested abolishing the MPLADS and member of legislative assembly and local area development schemes. They have been repeatedly accrued of corruption and there is no accountability built into the schemes (Anonym, 2007).

STATEMENT OF THE PROBLEM

There has been a serious attempt from the state reduce poverty and to improve the socio-economic conditions of the communities. There are good amount of theoretical and empirical evidences on the many rural development welfare programmes in India. But many of them are compartmentalized and are not comprehensive.

From the review it is evident that a sizeable number of studies concentrated with only secondary data. Also a complete of studies dealt with the exclusively on the social implications. On the other hand a good amount of earlier studies highlighted the economic implication of welfare ensures like MPLADS. However, there is a need for blending macro level data and analysis with micro level information. The present study aims towards this direction.

OBJECTIVES

1. The following are broad objectives of the present study.
2. To study the pattern of resource allocation under local area development.
3. To study the extend of fund utilization under the MPLADS.
4. To analyze the MPLADS facilities at local level.

METHODOLOGY

Data include from both primary and secondary sources. Secondary data were collected from published sources, District Rural Development Agency, Government of India, Ministry of Statistics and Programme Implementation's annual report of MPLADS 2006-2007, 2007-2008, 2008-2009, 2009-2010 and internet sources.

SELECTION OF SAMPLES SIZE AND VARIABLES

This study is largely based on primary data. The primary data was collected with the help of interview schedule and questionnaire method in five different blocks in Salem district. 130 samples have been randomly selected from where the facilities under MPLADS were provided. Three facilities, founded by MPLADS in Salem have been selected for field exploration. They include high school building (with maximum fund utilization of 25 percent), anganwadi building (with a modest allocation of 7 percent) and maternity building (with low allocation of 0.93 percent). Interview schedules were employed to elucidate micro data.
Samples were collected from high school in two categories - parents and teachers, because; while parents indirectly utilize facilities a teachers directly utilize facilities. 50 samples of both parents and teachers have been collected in different backward areas. In anganwadi, samples were collected in two categories - parents and teachers, because while the parents indirectly utilize facility teachers directly utilize them 10 samples of both parents and teachers have been collected in different areas. Samples were collected from maternity building in two categories - patients and doctors. Both patients and doctors directly utilize facilities. 5 samples of both patients and are doctors have been collected.

SELECTION OF BLOCK AND VILLAGES

Salem district comprises of twenty blocks, nine taluks, and six hundred and twenty four villages. There are twenty panchayat unions, three hundred and eighty five village panchayats and thirty three special village panchayats. Randomly four blocks have been selected viz., Ayothiyapattinam, Kadayamapatti, Omalur and Corporation. The main reasons for selecting Ayothiyappatinam is that it is a backward area at large and comprises of different villages, Sukkampatti, Minnampalli and Valasiyur. The people from the most backward class live in Kadayampatti and hence two village's viz., Dharapuram and Kanjanakkenpatti have been randomly selected. Omalur is a developing area. Two backward areas namely Thekkampatti (Anna Nagar) and Saminaickenpatti (AD Colony) have been randomly selected. Corporation block has been selected mainly because most of rich and middle class people live here. Hence three rich areas namely Pallapatti, Pallapatti East Street and Subramaniya Nagar have been randomly selected.

STATISTICAL TOOLS

Different statistical tools are used in this study for analysis. They are averages and two way ANOVA. Simple and manifold tabulation, pie diagram and chart are used.

TWO WAY ANOVA (ANALYSIS OF VARIANCE)

When it is believed that two independent factors might have an effect on the response variable of interest, it is possible to design the test so that an analysis of variance can be used to test for the effects of the two factors simultaneously. Such a test is called a two-factor analysis of variance. With the two factor analysis of variance, one can test two sets of hypothesis with the same data at the same time. In this study two way ANOVA is used to compare different variables in column and row. This method has been used in detail to analysis different variables like parents and patients (indirect) teachers and doctors (direct).

LIMITATIONS OF THE STUDY

The secondary data has been for a limited period only five years (2004-2009). The main limitation of the present study is that it follows only random sampling method. Primary data was collected only from Salem District. This study has restricted its analysis between direct and indirect users of the facilities under MPLAD scheme. The main focus is on social aspect. Another important limitation of this study is that the Member of Parliament was not contacted.

RESULT AND DISCUSSION

TABLE – 2: EDUCATIONAL STATUS OF THE SAMPLES

Samples / Educational Level	High School		Anganwadi		Maternity Building		Total
	Parents	Teachers	Parents	Teachers	Patients	Doctors	
Illiterate	7(14)	-	3(30)	-	-	-	10(7.70)
Primary	34(68)	-	6(60)	5(50)	-	-	45(34.61)
Secondary	9(18)	-	1(10)	5(50)	3(60)	-	18(13.84)
Higher Secondary	-	-	-	-	2(40)	-	2(1.54)
Graduate	-	50(100)	-	-	-	5(100)	55(42.31)
Total	**50(100)**	**50(100)**	**10(100)**	**10(100)**	**5(100)**	**5(100)**	**130(100)**

The above table shows that 30 percent of parents in anganwadi are illiterate. Minimum 14 percent parents are illiterate in high school. Majority of 68 percent of parents in high school are from primary level. Maximum 60 percent of patients in Maternity building are secondary and only 40 percent of patients in maternity building are studied up to higher secondary.

TABLE -3: SOCIAL STATUS OF THE SAMPLES

Samples / Social group	High School		Anganwadi		Maternity Building		Total
	Parents	Teachers	Parents	Teachers	Patients	Doctors	
BC	7(14)	11(22)	3(30)	3(30)	1(20)	1(20)	26(20)
MBC	22(44)	10(20)	3(30)	2(20)	2(40)	1(20)	40(30.77)
SC/ST	19(38)	16(32)	4(40)	4(40)	2(40)	2(40)	47(36.15)
Others	2(4)	13(26)	-	1(10)	-	1(20)	17(13.08)
Total	**50(100)**	**50(100)**	**10(100)**	**10(100)**	**5(100)**	**5(100)**	**130(100)**

Social status influences a lot among political parties. A high of 22 percent of teachers in high school fall in BC category. In anganwadi both parents and teachers are 30 percent in BC category and in maternity building both 20 percent patients and doctors are in BC categories. Mostly 44 percent of parents in high school are MBC categories. 40 percent of parents, teachers, patients and doctors are SC/ST categories in anganwadi and maternity building. 26 percent of school teachers are others categories.

TABLE – 4: TWO WAY ANOVA RESULT

Source of variation	Calculated Value	Table Value
Between Column (Samples)	6.14	2.90
Within row (Social groups)	0.94	3.28

The above table denotes two way ANOVA if between column (samples) Fc = 6.14 and the table value $F_{0.05}$ = 2.90 therefore hypothesis is rejected. The main reason is mostly amount is spent on backward area. Infrastructure developments are very poor and involve filling vote bank or political gain motive. There is no direct relationship between fund allocation and utilization under the local area development scheme. Within different social groups calculated value Fr = 0.94, and the table value $F_{0.05}$ = 3.28, if hypothesis is accepted on there is significant difference between public facilities and public satisfaction under the local area development scheme. The next table denotes types of family.

TABLE – 5: DISTRIBUTION OF INFLUENCING FACTORS

Samples / Influence factor	High school		Anganwadi		Maternity Building		Total
	Parents	Teachers	Parents	Teachers	Patients	Doctors	
Facilities	2(4)	-	-	-	-	-	2(1.54)
Efficiency teachers / Doctors	2(4)	7(14)	-	-	2(40)	-	11(8.46)
Access	17(34)	11(22)	10(100)	10(100)	-	-	48(36.92)
All of the above	29(58)	32(64)	-	-	3(60)	5(100)	69(53.08)
Total	**50(100)**	**50(100)**	**10(100)**	**10(100)**	**5(100)**	**5(100)**	**130(100)**

The table shows the distribution of influencing factors of the samples. In high school, 58 percent of parents felt that all the above factors are influenced, 4 percent says both facilities and efficiency teachers. 64 percent of teachers felt all the above factors only 14 percent felt efficiency of teachers. In anganwadi 100 percent of parents and teachers say it is access. In maternity building 60 percent of patients said all of the above factors and 100 percent of doctors said all of these.

TABLE-6: TWO WAY ANOVA RESULT

Source of variation	Calculated Value	Table Value
Between Column (Samples)	1.42	2.90
Within row (Influencing factor)	2.31	3.28

The Calculated value Fc=1.42 is less than table value $F_{0.05}$ = 2.90. The hypothesis is true there is direct relationship between fund allocation and utilization under local area development scheme. Within row calculated value Fr = 2.31 and table value $F_{0.05}$ = 3.28 the hypothesis is accepted as there is significance difference between public facilities and public satisfaction under the local area development scheme. The next table denotes social groups in students / patients enrollment.

TABLE – 7: LEVEL OF SATISFACTION OF THE SAMPLES

Samples / Particulars	School-high		Anganwadi		Maternity Building		Total
	Parents	Teachers	Parents	Teachers	Patients	Doctors	
Satisfied	30(60)	32(62)	9(90)	6(60)	4(80)	2(40)	83(63.85)
Highly satisfied	3(6)	10(20)	-	-	-	-	13(10)
No opinion	11(22)	6(12)	1(10)	4(40)	1(20)	2(40)	25(19.23)
Dissatisfied	6(12)	-	-	-	-	1(20)	7(5.38)
Highly dissatisfied	-	2(4)	-	-	-	-	2(1.54)
Total	**50(100)**	**50(100)**	**10(100)**	**10(100)**	**5(100)**	**5(100)**	**130(100)**

The above table shows that level of satisfaction of the samples. In high school 60 percent of parents are satisfied with the facilities 12 percent are dissatisfied with the facilities. 64 percent of teachers are satisfied and only 4 percent are highly dissatisfied with the facilities. In anganwadi 90 percent of parents are satisfied and 60 percent of teachers are also satisfied. In Maternity Building 80 percent of patients are satisfied and 40 percent of doctors give both satisfied and both NO opinion regarding the facilities.

TABLE – 8: TWO WAY ANOVA RESULT

Source of variation	Calculated Value	Table Value
Between Column (Samples)	1.93	2.71
Within row (Particulars)	3.16	2.86

The calculated value between samples Fc is 1.93 and then table value $F_{0.05}$ is 2.71 if hypothesis is accepted there is direct relationship between fund allocation and utilization under the local area development scheme. The calculated value within particulars Fr is 3.16 then table value $F_{0.05}$ is 2.86 the hypothesis is rejected because in the field work many samples like parents, teachers, patients and doctors expressed bias opinion. This is its main reason for significant difference between public facilities and public satisfaction under the local area development scheme.

SUGGESTIONS

Provide adequate facilities in rural areas because most of the facilities are not properly utilized by the public. The MPLADS fund is not sufficient, so the government has to increase the fund as per the local need. The Governments has to concentrate MPLADS fund utilization in a transparent manner. Funds are being used but how far it reaches the public is unknown. More actions to be taken to appoint any special officer for fund utilization activities and monitoring.
Locations of public facilities should be provided only at advantage area. Public facilities are provided and also try to provide related facilities in that area. The relationship between MPs and public is very poor. So MPs should try to increase public relationship. In other words fund allocation alone will not solve the problem. The representative has to keep the people informed.

CONCLUSION

From the above analysis and discussion it is evident that the government has a moral responsibility to take care of the welfare of the people. Ever sinus the political independence the objective of equitable development approach has been on the main agenda in Indian polity. Through political game the solving partly wants to gain political mileage in the minds of vote bank. In the process the community derives at least some benefit from the welfare schemes. One such scheme is the MPLADS. Certainly it has potential and capability to transform the society to a large extent. The present study throws enough evidence on this issue. Nonetheless, there are some difficulties and problems for effective implementation of these are removed/reduced there is a light in the tunnel.
Obviously game theory states that in the game one would lose and other would win. However, in the political game, the political ideology with vote bank politics certainly has vested interests. In the process at least to some extent it has made dent on the society in the socio-economic front. The present exercise reveals that the MPLADS as an instrument to empower the local communities on the economic dynamism. Such useful, interventional mechanism needs to be addressed in the areas, where it is actually and desperately required.

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MARKET INTEGRATION OF INDIAN STOCK MARKETS: A STUDY OF NSE

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ABSTRACT

The study tries to explore the dynamics of comovement of stock markets of USA, Brazil, Mexico, China and India during the period from January, 1996 to July, 2007 using daily closing price data. The long-term relationships among the markets are analyzed using the Johansen and Juselius multivariate cointegration approach. Short-run dynamics are captured through vector error correction models. The analysis reveals that there is an evidence of cointegration among the markets demonstrating that stock prices in the countries studied here share a common trend. The results reveal that the speed of adjustment of Indian stock market is higher than other stock markets of the world.

KEYWORDS

Unit root test, Johansen's cointegration, Vector Error Correction Model.

JEL CLASSIFICATION

G14, C32

INTRODUCTION

The issue of stock market integration and comovements of stock prices across economies has received considerable attention in economic literature. Integration is the process by which markets become open and unified so that participants in one market have an unimpeded access to other markets. The financial market's integration in general implies that in absence of administrative and informational barriers, risk adjusted returns on assets of the same tenor in each segment of the market should be comparable to one another.

Recent globalization and free movements of capital across boundaries of nation have integrated financial market worldwide. Technological innovations have improved market integration. Careful examination of international stock market movements in recent years suggests that there exists a substantial degree of interdependence among national stock markets. It is argued that unexpected development in international stock markets seem to have become important "news" that influences domestic stock markets (Eun & Shim, 1989).

With the automation and liberalization of the Indian stock markets, there has been a perceptible change in the Indian Stock market towards the later part of the 1990s. Trading system in Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) has reached a global standard. It has created a nationwide trading system that provides equal access to all investors irrespective of geographical location. In that sense, technology has brought about equality among the investors across the country. The stock markets introduced the best possible systems; practiced in advanced stock markets like electronic trading system, rolling settlement in place of the account period settlement, increase in trading hour, dematerialization of shares and introduction of derivates etc. The focus on the external sector has prompted many Indian companies, especially those in the area of information technology, to list at the US stock exchanges. With the introduction of advanced practices, transparency has also increased in the stock market. Further, among the significant measures of opening up of capital market, portfolio investment by foreign institutional investors (FIIs) such as pension funds, mutual funds, investment trusts, asset management companies have made the turning point for the Indian stock markets. With the financial sector reforms initiated in 1991, not only FIIs and NRIs are allowed to invest in Indian stock markets, Indian corporate have been allowed to tap the global market with global depository receipts (GDR), American depository receipts (ADR) and foreign currency convertible bonds (FCCB) since 1993. All these changes have led to substantial improvement in market capitalization, liquidity and efficiency of the Indian capital market.

The deregulation and market liberalization measures and the increasing activities of multinational companies have accelerated the growth of Indian stock market. Thus, given the newfound interest in the Indian stock markets during liberalization period, it is interesting to know integration of Indian stock markets. The financial markets, especially the stock markets, for developing and developed markets have now become increasingly integrated despite the uniqueness of the specific market and country profile. This has happened specifically due to financial liberalization adopted by most of the countries around the world, technological advancement in communications and trading systems, introduction of innovative financial products and creating more opportunities for international portfolio investments. This has intensified the curiosity in exploring international market linkages.

Eun and Shin (1989) detected the presence of substantial amount of interdependence among national stock markets of USA, UK, Canada, Germany, Australia, France, Japan, Switzerland and Hongkong. Using daily closing price data during the period January 1980 through December 1985, the study found a substantial amount of multi-lateral interactions among the national stock markets. The analysis indicated that innovations in the U.S. were rapidly transmitted to other markets in a clearly recognizable fashion, whereas no single foreign market can significantly explain the U.S. market movements.

Over the past 40 years, stock market prices have been analyzed using different methods and data sets by investors and researchers with an objective to determine the forecastability of price changes. Chung and Ng (1991) have shown that developments in the U.S. market have significant influence on return of Tokyo stock market on the next day, but Tokyo stock market of Japan does not influence the returns of U.S. market. Given the U.S.'s dominant economic and political strength in the world market, this finding does not seem surprising. However, the recent leading role of other stock markets of the world and their interactive participation in the U.S. may possibly signal a reversal of the widely-held notion that the spillover stock market effect is solely from the U.S. to other stock markets.

Bhattacharya and Samantha (2001) investigated the extent to which news on NASDAQ helped price formation at the beginning and at the end of a trading day at the Indian bourses using daily data of stock price indices from January 3, 2000 to October 31, 2000. They analyzed the impact of NASDAQ on SENSEX through Ordinary Least Square (OLS) equations under cointegration and error correction framework. The study showed that the news on NASDAQ had played an important role in price formation at the beginning of the new trading day at the Indian bourses. Thus, the study suggested the integration of the Indian capital market with the US market.

Wong, Agrawal and Du (2004) investigated the long-run equilibrium relationship and short-run dynamic linkage between the Indian stock market and the stock markets in major developed countries (United States, United Kingdom and Japan) after 1990 using the Granger causality and cointegration method. Using weekly closing prices data from January 1, 1991 to December 31, 2003, they found that Indian stock market was integrated with mature markets.

Compared to other emerging stock markets in Asia, the Indian stock market has been recognized as relatively less sensitive to changes of Asian and other developed markets of the world. Therefore, in spite of the fact that Indian stock market has largest number of listed companies, it has received little attention while undertaking studies on interconnectedness of world stock markets. Researchers have rarely included the Indian Stock Market while studying the influence

of the U.S. markets on Asian markets and interdependence among Asian stock markets (Wong & Ng, 1992, Ng, 2002). These researches are evidences that Indian stock market has not only received relatively less attention of scholars and researchers in the field of international finance but also the market is considered to be somewhat isolated from international markets.

Ahmad, Ashraf and Ahmed (2005) examined the interlinkages and causal relationship between the Nasdaq composite index in the US, the Nikkei in Japan with that of NSE Nifty and BSE Sensex in India using daily closing data from January 1999 to August 2004. The study used Granger Causality and Johansen cointegration methods to examine short run and long term relationship among the stock markets respectively. The results of Co-integration test revealed that there was no long-term relationship of the Indian equity market with that of the US and Japanese equity markets. Granger causality test suggested that there was a unidirectional relationship from Nasdaq and Nikkei to Indian stock markets.

Hoque(2007) explored the dynamics of stock price movements of an emerging market such as Bangladesh with that of USA, Japan and India using daily closing price data starting from January 1, 1990 to December 31, 2000. The indices used for Bangladesh, India, Japan and USA were Dhaka Stock Exchange(DSE) All Share Price Index, BSE30, Nikkei 225 and S&P500 respectively. They analyzed the long term relationships among the markets using the Johansen multivariate cointegration approach and short-term dynamics were captured through vector error correction models. Vector Auto Regression was used to study the impact of shocks of these markets on own markets and other markets. The analysis showed that there was evidence of long term cointegration among the markets suggesting that stock prices in the countries share a common stochastic trend. Impulse response analysis shows that shocks to US market do have an impact on Bangladesh stock market. The response of Bangladesh stock market to shocks Indian stock market is weak. Shocks to Japanese stock market do not generate a response in the Bangladesh stock market.

The integration of Indian stock market with the rest of the world causes the absorption of the news quickly not in the country where the news originates but also in other countries as well. There is an ample literature on financial integration, there are only a few studies related to India. With liberalization in India, changes in the economic environment of the world and growing interdependence of the American and other countries like India, China, Brazil and Maxico, it is interesting to investigate the integration of stock price movements of India with respected to American and other stock markets. China and India are the emerging economics of the world. India has better economic relationship in terms of trade and investment with Maxico and Brazil. The purpose of the paper is to provide analysis with a special emphasis on integrating relationship of the selected stock markets.

The organization of the paper is as follows. Section 2 discusses research design. Results are presented in section 3. Section 4 summarizes.

RESEARCH DESIGN

SAMPLE AND PERIOD OF STUDY

The study uses data on daily closing price of NSE of India, Shanghai Stock exchange of China, IPC of Maxico, Bovespa of Brazil and Standard and Poor (S&P) 500 of United States from 1st January 1996 to 31st December, 2007. We drop the data when any series has a missing value due to no trading. Thus all data are collected on the same dates across the stock exchanges and there are 2951 observations for each series. Many changes took place during the period like introduction of rolling settlement, transactions in futures and options, the bull run and the highs in the indices, increased FII inflows across the world stock markets, gradual lifting of restrictions on capital flows and relaxation of exchange controls in many countries etc. These changes might have influenced the degree of comovement among the stock markets. It will be instructive to examine the cointegration of the stock markets.

METHODOLOGY

Daily returns are identified as the difference in the natural logarithm of the closing index value for the two consecutive trading days. It can be presented as:

$$R_t = \log(P_t / P_{t-1}) \text{ or } R_t = \log(P_t) - \log(P_{t-1}) \quad \text{Equation 1}$$

Where R_t is logarithmic daily return at time t. P_{t-1} and P_t are daily prices of an asset at two successive days, t-1 and t respectively.

UNIT ROOT TEST

Augmented Dickey-Fuller (ADF) test is employed to test the validity of market integration hypothesis. A unit root test is a statistical test for the proposition that in an autoregressive statistical model of a time series, the autoregressive parameter is one. It is a test for detecting the presence of stationarity in the series. The early and pioneering work on testing for a unit root in time series was done by Dickey and Fuller (Dickey and Fuller 1979 and 1981). If the variables in the regression model are not stationary, then it can be shown that the standard assumptions for asymptotic analysis will not be valid. In other words, the usual "t-ratios" will not follow a t-distribution; hence they are inappropriate to undertake hypothesis tests about the regression parameters.

Stationarity time series is one whose mean, variance and covariance are unchanged by time shift. Nonstationary time series have time varying mean or variance or both. If a time series is nonstationary, we can study its behaviour only for a time period under consideration. It is not possible to generalize it to other time periods. It is, therefore, not useful for forecasting purpose.

The presence of unit root in a time series is tested with the help of Augmented Dickey-Fuller Test. It tests for a unit root in the univariate representation of time series. For a return series R_t, the ADF test consists of a regression of the first difference of the series against the series lagged k times as follows:

$$\Delta r_t = \alpha + \delta r_{t-1} + \sum_{i=1}^{p} \beta_i \Delta r_{t-i} + \varepsilon_t \quad \text{Equation 2}$$

$$\Delta r_t = r_t - r_{t-1}; r_t = \ln(R_t)$$

The null hypothesis is H0: $\delta = 0$ and H1: $\delta < 1$. The acceptance of null hypothesis implies nonstationarity.

We can transform the nonstationary time series to stationary time series either by differencing or by detrending. The transformation depends upon whether the series are difference stationary or trend stationary.

CO-INTEGRATION TEST

The purpose of the co-integration test is to determine whether a group of nonstationary series is co-integrated or not. The presence of cointegrating relation forms the basis of the Vector Error Correction (VEC) model specification. The test for the presence of cointegration is performed when all the variables are non-stationary and integrated of the same order. Cointegration exists for variables means despite variables are individually nonstationary, a linear combination of two or more time series can be stationary and there is a long-run equilibrium relationship between these variables. In the present study, we use method proposed by Johansen (1991). This method can be explained by considering the following general autoregressive representation for the vector Y.

$$Y_t = A_0 + \sum_{j=1}^{p} A_j Y_{t-j} + \varepsilon_t \quad \text{Equation 3}$$

where Y_t is a nx1 vector of nonstationary variables, A is a nx1 vector of constants, p is the number of lags, A_j is nxn matrix of coefficients and ε is assumed to be a nx1 vector of Gaussian error terms.

In order to use Johansen's test, the above vector autoregressive process can be reparametrized and turned into a vector error correction model of the form:

$$\Delta Y_t = A_0 + \sum_{j=1}^{p=1} \Gamma_j \Delta Y_{t-j} + \Pi Y_{t-p} + \varepsilon_t \quad \text{Equation 4}$$

where

$$\Gamma_j = -\sum_{i=j+1}^{p} A_j \quad \text{and} \quad \Pi = -\mathrm{I} + \sum_{i=j+1}^{p} A_j$$ **Equation 5**

Δ is the difference operator and I is nxn identity matrix.

The issue of potential cointegration is investigated when we compare the both sides of equation 4. As Y_t is integrated of order 1 i.e. I(1), ΔY_t is I(0), so are ΔY_{t-j}. This implies that left-hand side of equation 4 is stationary since ΔY_{t-j} is stationary; the right hand side of equation 4 will also stationary ΠY_{t-p} is stationary. The Johansen test centres on an examination of the ∏ matrix. The ∏ can be interpreted as a long run coefficient matrix. The test for cointegration between the Y's is calculated by looking at the rank of the ∏ matrix via eigenvalues. The rank of the matrix is equal to the number of its characteristic roots (eigenvalues) that are different from zero. The information on coefficient matrix between the levels of the ∏ is decomposed as ∏=αβ, where the relevant elements, the α matrix are adjustment coefficients and β matrix contains the cointegrating vectors.

There are two test statistics for cointegration under the Johansen method to test for number of characteristic roots. There are trace and the maximum eigenvalues test:

$$\lambda_{trace}(r) = -\mathrm{T}\sum_{i=r+1}^{g} \ln(1-\hat{\lambda})$$ **Equation 6**

and

$$\lambda_{\max}(r, r+1) = -\mathrm{T}\ln(1-\hat{\lambda}_{r+1})$$ **Equation 7**

where $\hat{\lambda}$ is the estimated values of the characteristic roots obtained from the estimated ∏ matrix, T is the number of usable observations and r is the number of cointegrating vectors.

The trace test statistics, test the null hypothesis that the number of distinct cointegration vectors is less than or equal to r against the alternative hypothesis of more than r cointegrating relationships. From the above, it is clear that λ_{trace} equals zero when all $\hat{\lambda}$ =0. The maximum eigenvalue statistics test the null hypothesis that the number of cointegrating vectors is less than or equal to r against the alternative of r+1 cointegrating vectors.

Johansen and Juselius (1990) provided critical values for the two statistics. If the test statistics is greater than the critical value from Johansen's table, reject the null hypothesis in favour of the alternative hypothesis discussed above.

SHORT-RUN DYNAMICS OF THE SYSTEM

Short run dynamics of the system is examined through error correction model. The discussion on the model is given in the following section.

ERROR CORRECTION MODEL

If variables are nonstationary and are cointegrated, the adequate method to capture short run dynamics is Vector Error Correction Models (VECMs). It examines the responses of a variable to changes and innovations in other variables and the adjustments that it takes to correct for any deviations from the long-run equilibrium relationship. Under cointegration, the VECM can be written as:

$$\Delta Y_t = \alpha\beta' Y_{t-1} + \sum_{i=1}^{k-1} \Gamma_i \Delta Y_{t-i} + A_t + \varepsilon_t$$ **Equation 8**

where α is the matrix of adjustment or feedback coefficients, which measures how strongly deviations from equilibrium, the r stationary variables $\beta' Y_{t-1}$, feedback into the system. If there are 0<r<p cointegrating vectors, then some of the elements must be non zero.

RESULTS AND DISCUSSION

A prerequisite for testing cointegration between the stock indices is the all variables are non-stationary. The first phase in the estimation process is deciding the order of integration of the individual price index series in natural log levels. The log of the indices, denoted as LNSE, LSSE, LIPC, LBovespa and LSP500, are tested for unit roots using the Augmented Dickey-Fuller (ADF) test using lag structure indicated by Schwarz Bayesian Information Criterion (SBIC). The results of the Augmented Dickey Fuller test for unit root test are given in Table 1. It shows that all the variables are non-stationary at their log level. However, they are stationary at their first difference and are integrated of order one as the actual values reported in the Table 1 exceed MacKinnon 's critical values of -3.43, -2.86 and -2.56 at 1%, 5% and 10% levels respectively. Thus, all the series under investigation are I(1). This means that all the series are individually integrated.

TABLE 1: UNIT ROOT TEST

Stock markets	Log Level	First Difference of Logarithmic series
LNSE	0.931 (0.996)	-48.506 (0.000)
LSSE	(-0.454) 0.897	-53.227 (0.000)
LIPC	-0.008 (0.957)	-50.331 (0.000)
LBovespa	-0.779 (0.824)	-52.491 (0.000)
LSP500	-2.293 (0.174)	-56.350 (0.000)

Johansen cointegration test is sensitive to the lag length (Enders, 2004). We employ AIC and SBC criteria to select the lag length to include in the analysis. The results of lag length selection criteria are reported in the Table 2.

TABLE 2: LAG LENGTH SELECTION

Lag	AIC	SBC
0	-0.653423	-0.643105
1	-27.17176	-27.10986*
2	-27.18652*	-27.07302
3	-27.18292	-27.01783
4	-27.18125	-26.96457
5	-27.18097	-26.9127
6	-27.18149	-26.86163
7	-27.1808	-26.80935
8	-27.18448	-26.76144

Here, AIC selects the model with two lags and the SBC selects the model with one lag. We can also determine lag-length using a likelihood ratio test. Under the null hypothesis, we can restrict lag 1 of all coefficients in all five equations to be zero. If this restriction is binding, we reject the null hypothesis. The calculated Chi-square value is 92.97. It rejects the null hypothesis of one lag. Thus, AIC and likelihood ratio test both select the two-lag model.

The second phase involves an assessment on the five market series for cointegration. The cointegration test is to determine whether or not the five nonstationary price indices share a common stochastic trend. Table 3 presents the results of cointegration tests pertaining to the indices. The results reveal the presence of significant cointegrating relationships between the stock market indices under investigation. Both the λ_{trace} and λ_{max} test show two significant cointegrating ranks. This indicates the presence of long-run equilibrium relations between the USA, Chinese, Indian, Brazil and Maxico stock markets. In other words, by and large all the stock indices are moving together.

TABLE 3: JOHANSEN'S COINTEGRATION TEST RESULTS FIVE INDICES

λ_{trace}				
Hypothesized		**Trace**		
No. of CE(s)	**Eigenvalue**	**Statistic**	**Critical Value**	**Prob.****
None *	0.024322	135.8939	60.06141	0.0000
At most 1	0.017145	64.53726	40.17493	0.0000
At most 2	0.004557	14.41998	24.27596	0.5023
At most 3	3.39E-04	1.183505	12.3209	0.9919
At most 4	6.92E-05	0.200484	4.129906	0.7100
λ_{max}				
Hypothesized		**Max-Eigen**	**0.05**	
No. of CE(s)	**Eigenvalue**	**Statistic**	**Critical Value**	**Prob.****
None *	0.024322	71.35667	30.43961	0.0000
At most 1 *	0.017145	50.11728	24.15921	0.0000
At most 2	0.004557	13.23647	17.7973	0.2130
At most 3	0.000339	0.983021	11.2248	0.9929
At most 4	6.92E-05	0.200484	4.129906	0.7100
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Johansen Cointegration Equation[1] LNSE-3.42LIPC+2.96LBovespa+0.31LSSE-1.59LSP500=ε_t (8.21) (6.51) (1.42) (3.90)*				

*Figure in the parenthesis are t-statistics.[1]The cointegrating vector is normalized on the NSE stock index.

The model adequacy test of Johansen cointegration is tested using Portmanteau test for autocorrelations. The result of the test at lag length is tabulated as below:

TABLE 4: PORTMANTEAU TEST FOR AUTOCORRELATION

Lags	Q-test	Prob	Adj. Q test	Prob	Df
5	48.69340	0.3267	48.74364	0.3249	45

The result suggests no residual autocorrelation after the model is fit. It implies that the model is adequate to capture the cointegration among the stock markets. The cointegrating equation normalized on Indian stock price presented in the Table 3 suggests that there is a long-term tendency for NSE to converge with those markets.

The second phase involves estimation of five error correction equations, based on cointegrated model. Table 5 represents the results of VECM. It is used to examine the short run equilibrium dynamics of the stock indices.

TABLE 5: RESULTS OF VECM MODEL

Error Correction:	D(LSP500)	D(LSSE)	D(NSE)	D(LBovespa)	D(LIPC)
ECM(-1)	-0.001823	-0.000898	0.002	-0.000458	-0.007313
	[-2.57889]*	[-0.81774]	[1.93062]	[-0.32163]	[-7.42545]

*Indicates t-statistics

The results suggest that the error correction terms or adjustment coefficients are statistically significant (coefficient of NSE is statistically significant at 90%) except for SSE and Bovespa. The speed of adjustment coefficients is low in magnitude. It can be seen from the Table 5 that the coefficients of error correction terms of all stock markets except NSE are negative. For instance, the positive coefficient of (0.002) of the cointegrating relation in the NSE equation means that the return of the underlying goes up when the cointegrating equation shows positive values (direct relationship). The negative coefficients (-0.001823) of SP 500 of USA and (-0.007313) of IPC of Maxico indicate that the returns of the stock markets go down when the cointegrating equation shows positive values (inverse relationship). The speed of adjustment of Indian stock market is marginally higher than rest of the stock markets. The results in the table 5 suggest that Indian stock market goes back to equilibrium faster.

SUMMARY

The present stud endeavored to explore the dynamics of stock price co-movements of USA, Chinese, Brazil, Indian and Maxican stock markets. Cointegration model is used to examine the long-run equilibrium relationship among the time series. The results demonstrate that stock prices in those countries share a common trend. In general long-term relationship and short-term dynamics have been detected in this study.

The results have several policy implications. If the markets are integrated, arbitrage opportunities would be very low. The absence of arbitrage opportunity may lead to low level of speculation leads to better market efficiency and the return would be proportionate to the risk. The existence of market integration among the stock indices under investigations indicates that diversification among these five markets leads to little benefit to international portfolio investors.

The speed of adjustment of Indian stock market is higher implying it absorbs news faster than other stock markets and therefore, it is considered to be more informationally efficient than other stock markets.

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DEMOGRAPHY OF INDIA: THE DYNAMICS AND DIFFERENCES - A REFLECTIVE STUDY OF CENSUS 2011

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ABSTRACT

Demography is the key element of any developmental study. This concept in the Indian context dates back to Mauryan period of BC 350 to BC 150 as a state practice. British period gave it a regular shape of study in India from 1872. National economy and planning requirements are heavily dependent on the outcomes of the Census every decade. No wonder demography has gone beyond the headcounts; study of the population in every census in India raises issues of National and International concern. Especially, India is at the alarming stage of demographic developmental studies as per the statistical anticipation of having the worlds' largest population by 2036. Censuses in India have defined the population growth as – 1891 – 1921, as Stagnant Population, 1921 – 1951, as Steady Growth, 1951 – 1981, as Rapid Growth, 1981 – 2011 High Growth with signs of Slowing down, 2011 – onward, as Controlled Growth which has been used as parameters of measuring many social sciences studies. Current census of 2011 clearly defines the Indian Population as the emerging Super Power in Manpower of the world by 2020 because of the largest segment of the young population, which is of course a transit advantage for the country. Like other censuses this current census 2011 has highlighted the issues like (CSR) declining Child Sex Ratio, higher level of (TFR) Total Fertility Rate, Increased Literacy Rate etc. as controllable measures for the nation. The most significant is the issue of accommodating people in the country by 2101 onward in the country. Will India plan to shift people possibly to the satellite 'Moon' by 2111 AD or will negotiate and buy the land mass from the countries who have surplus to dispose as a good will gesture to the human civilization or will encourage the population to migrate as global citizens to take up different nationalities in different countries. Global citizenship may be a convenient option for the Indian population which is currently seen as the international migration from this country in search of better earning avenues, that trend may be augmented to shift to different countries to avail living space and land. Unless we are prepared for the consequences the disaster of the population growth will be having different roots in the next century. Indian demography needs many facets to study for strategic options in the future otherwise disaster will be faced by the Nation.

KEY WORDS

Population Growth, Census 2011, Child Sex Ratio, Literacy Rate, Decadal Growth Rate.

INTRODUCTION – INDIA'S POPULATION THROUGH DECADES-CENSUS

Census is an age old practice since 1872 of the British Raj. This was in fact not the regular need under the colonial rule for administration. The great rebellion of 1857, named by the history as a 'Sepoy Mutiny' threatened the existence of the British rule in India. The power of this movement forced the colonial administration to keep a record of the number counts of the population of the notified princely states and the territory of the British Raj as disaster management tact for the next level of wars if it crops up. In 1982 although a census was conducted, it is not regarded as a regular census as it was not conducted at the same time. (Rath, 2007) From 1881 India has conducted decennial census without any interruption. Our census 2011 is has large difference than that of our neighbor China 2010 census. Census through a comprehensive questionnaire much beyond the head counts was conducted in 2011. We have numerous tables on the demographic, social and economic life of the people in this country of great demographic diversity. The significant step in the 2011 was conducting house listing in 2011 in every village, towns and city in India. Along with it a Housing Census was also conducted. The census questionnaire had as

many as 35 questions and collected valuable data. The enumeration of the households took place from February 9 to 28, 2011 and the provisional results were declared towards the end of the March, 2011.

THE MEANING & DEFINITION

Study of demography is increasingly assuming more importance not only in India but all over the world. Primarily, ever-growing population in developing countries is straining social, economic and even political system of nations. The importance of population studies is increasing. There is realization that population explosion is hindering economic development. Significance of population studies was realized even in earlier period. Demography today can neither be ignored by the planners nor policy maker, nor administrators nor by academicians and politicians. Demography is the study of changes which take place in population including its size, distribution and organization. It has been derived from the Latin word "demos" meaning people. Hence, it is the science of people. As regards definition of this term, it has been defined in various ways by different authors. Some of these are given below

Bernard Benjamin "The demographer is concerned with the measuring past and forecasting future population change". **Thompson and Lewis** The most appropriate definition is given by Thompson & Lewis; that is "The population studies is concerned with the population, its size, composition and distribution and in changes in these aspects through time, and the causes of their changes as they are related to human welfare." **UNO** According to UNO under demography we study all determinants and consequences of population. Thus, demography deals with study of the components of population varieties and chance.

NATURE OF THE STUDY

Three main aspects are concerned under demography study, *Size and growth* of the population, *Composition* of population and *Distribution* of population. 1. **SIZE**: This deals with the number of people living in an area and what changes are taking place and how these changes are affected. In a demographic study, the concern is not only in finding out, how many people live in a particular area at a given point of time? Whether the number is larger than what it was, but also? What would be the likely number in future? These can be due to increase in the rates of death and birth, or on account of increased migration, etc. 2. **COMPOSITION:** Composition of population mainly related to certain characteristics. Age, Sex & Literacy are most widely used characteristics of population study. According to Thompson & Lewis composition of a population affects demographic processes. 3. **Distribution:** Population distribution study is concerned with matters like, how the people are distributed, what is the nature of changes in population distribution, to find out the proportion of population living in advanced urban industrial areas, newly developing out growing urban industrial areas and rural areas and the ways in which changes are taking place in each category.

DEMOGRAPHIC FEATURES OF INDIA

It shows mainly the number of people living in a country at a particular time, the rate at which they are growing and the composition and distribution of population. India today possesses about 2.4 percent of the total land area of the world but she has to support about 17 percent of the world population. A study of growth rate of India's population falls into four phases.

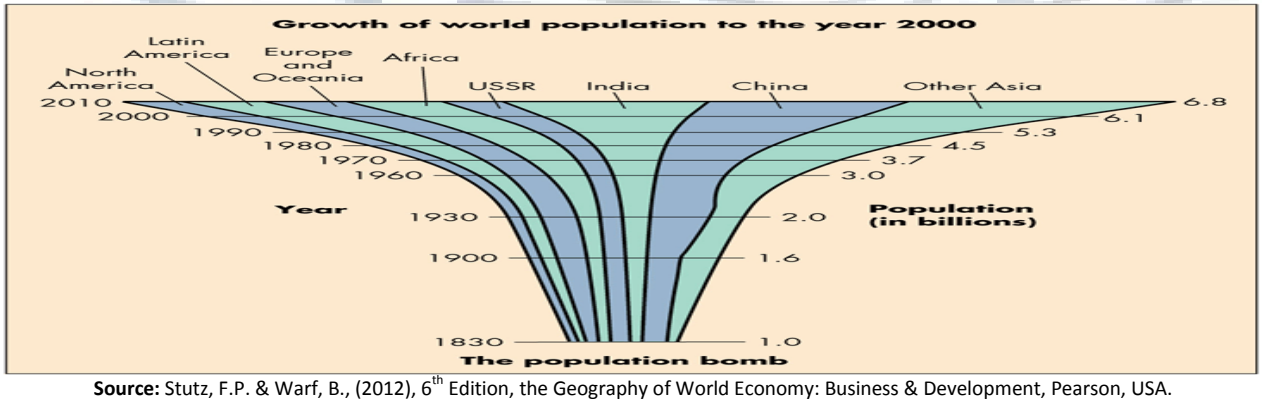
1891-1921: STAGNANT POPULATION
1921-1951: STEADY GROWTH
1951-1981: RAPID HIGH GROWTH
1981-2011: HIGH GROWTH WITH SIGNS OF SLOWING DOWN

TABLE -1: GROWTH OF POPULATION IN INDIA – 1901-2011

Year	Total Population (in Millions)	Increase or Decrease (in Millions)	Percentage Increase or Decrease	Growth Rate
1901	236	--	--	--
1911	252	+ 16	5.7	--
1921	251	-1	-0.3	0.19
1931	279	+28	11.0	--
1941	319	+40	14.2	--
1951	361	+42	13.3	1.22
1961	439	+78	21.5	--
1971	548	+109	24.8	--
1981	683	+135	24.7	2.14
1991	844	+161	23.5	--
2001	1027	+183	21.3	1.09
2011	1210	+181	17.64	1.08

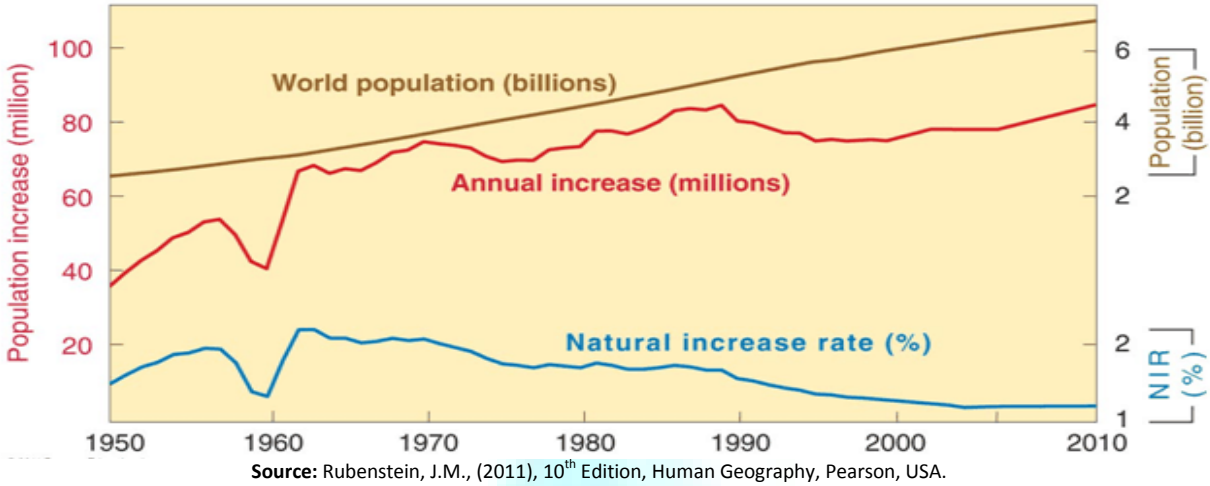
Source: Census of India, Registrar General of India, GOI, New Delhi, 2011

- During the first phase of 20 years (1901-1921), the population of India grew by 15 million. The growth rate per annum was negligible, i.e. 0.19 percent per annum for the period. This stage was characterized by high birth rate and high death rate. Birth and death rates were more or less equal during this period. In this period India was in the first stage of demographic transaction, which marked by stagnant population.
- During the second phase of 30 years (1921-1951), the population of India grew by 110 million. The growth rate of population was 1.22 percent per annum. The growth rate was considered as moderate.
- During the third phase (1951-1981), the population of India grew from 361 million from 1951 to 683 million in 1981. The growth rate of population during this period was 2.14 percent. Compared to previous phase the growth rate is almost double. It is resulted in population explosion. Thus, India is now in the second stage of demographic transaction when death rate is low but the birth rate is high.
- According to latest estimate the population of India in 2005 is 1.1 billion. And it will increase to 1.4 billion by 2026. There is a projection that it may surpass China by 2025. If we compare India's population growth with the most populous country in the world China, we can find the following facts.
- As per the WORLD DEVELOPMENT REPORT – 2004 India and China account for nearly 38 percent of the world population.
- It may be noted that the average annual growth of population has declined to 1.1 percent in China, where as in India it is still quite high at 1.9 percentages.
- It is a very interesting fact that India is adding one **Australia** to its population every year and one **Japan** in every Census.



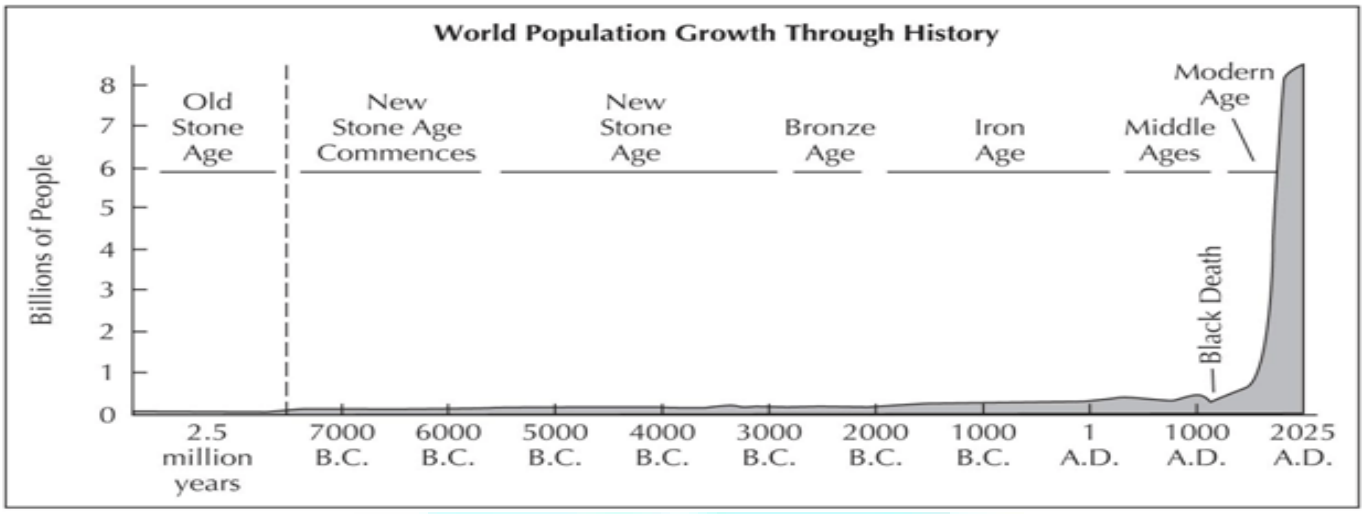
Source: Stutz, F.P. & Warf, B., (2012), 6th Edition, the Geography of World Economy: Business & Development, Pearson, USA.

WORLD POPULATION GROWTH



Source: Rubenstein, J.M., (2011), 10th Edition, Human Geography, Pearson, USA.

WORLD POPULATION GROWTH THROUGH TIME



For most of human existence, population levels were low and growth rates were zero. Only with the Industrial Revolution that created the modern age did growth rates begin to rise.

Source: Stutz, F.P. & Warf, B., 2012, 6th edition, the World Economy, (geography, business, developments), Pearson, USA.

After independence, Parliament passed the Census Act of 1948 and created a post of census commissioner. Earlier, the whole operation used to be temporarily set up for 2-3 years and wound up after the census was conducted and results printed. The act empowered the census officers to ask certain questions and made answering them obligatory for citizens. Information collected is treated as confidential and can be used only for statistical purposes; it cannot be used as evidence in a court of law. Census is not only a head count. Besides the size of the total population, the census of India collects and publishes information on various characteristics of the population such as, age and sex distribution, social and cultural factors such as religion, literacy, languages known, migration and economic activities of the people. Besides, during housing census conducted a year before the population count, information is also collected on type of housing, amenities and assets possessed by households. Analysis of the data collected from several censuses provides a unique opportunity to understand the dynamics of and trends in various facets of the diverse population of the country. Among the developing countries, India is the only one with 15 decennial uninterrupted series of population counts. No other developing country has done this. Further, India makes information on total population by sex for every state available within three to four weeks of reference data of census count. Until 1981, the data were compiled manually. Beginning with 1981, number of literate and illiterate males and females 7+ years of age are also available for all states and union territories within one month. With the computerization of the entire operation now, the 2011 Census promises to make all data available within 2 years. This achievement needs to be appreciated in view of the fact that most of the developed countries take years even to arrive at total population size of their countries after conducting the census. (*Visaria, 2011*)

POPULATION SIZE OF 2011 CENSUS- INDIA

According to the provisional Population count released within four weeks of completing the Census, India's total population in 2011 was 1.21 billion, up from 1.03 billion in 2001, thus adding 181 million people in one decade. However, the 2001 – 2011 decadal growth rates of 17.6%, compared to 21.5 recorded during 1991-2001, suggests slowing down of the growth. Interestingly, the enumerated population size was larger than most projections, including that of the Registrar General's office that projected the 2011 population to be 1.19 billion. India is now expected to become the most populous country of the world by 2030 overtaking China sooner than earlier expected. India's population size is expected to stabilize at 1.81 billion around 2041.

TABLE: 2 - POPULATION SIZE, GROWTH RATE AND SEX RATIO, 2011

	India/State/Union Territory	Persons	Percent of India,s Population	Decadal Growth Rate	Sex Ratio (Females per 1000 males)
			A.Pop. 10 M +		
	INDIA	**1,210,193,422**	**100.00**	**17.64**	**940**
1	Uttar Pradesh	199,581,477	16.49	20.09	908
2	Maharashtra	112,372,972	9.29	15.99	925
3	Bihar	103,804,637	8.58	25.07	916
4	West Bengal	91,347,736	7.55	13.93	947
5	Andhra Pradesh	84,665,533	7.00	11.1	992
6	Madhya Pradesh	72,597,565	6.00	20.3	930
7	Tamil Nadu	72,138,958	5.96	15.6	995
8	Rajasthan	68,621,012	5.67	21.44	926
9	Karnataka	61,130,704	5.05	15.67	968
10	Gujarat	60,383,628	4.99	19.17	918
11	Odisha	41,947,358	3.47	13.97	978
12	Kerala	33,387,677	2.76	4.86	1084
13	Jharkhand	32,966,238	2.72	22.34	947
14	Assam	31,169,272	2.58	16.93	954
15	Punjab	27,704,236	2.29	13.73	893
16	Chhattisgarh	25,540,196	2.11	22.59	991
17	Haryana	25,353,081	2.09	19.9	877
18	NCT of Delhi	16,753,235	1.38	20.96	866
19	Jammu & Kashmir	12,548,926	1.04	23.71	883
20	Uttarakhand	10,116,752	0.84	19.17	963
	Sub Total	**1,184,131,193**	**97.85**		
			B. Pop. 1-10 M		
1	Himachal Pradesh	6,856,509	0.57	12.81	974
2	Tripura	3,671,032	0.30	14.75	961
3	Meghalaya	2,964,007	0.24	27.82	986
4	Manipur	2,721,756	0.22	18.65	987
5	Nagaland	1,980,602	0.16	-0.47	931
6	Goa	1,457,723	0.12	8.17	968
7	Arunachal Pradesh	1,382,611	0.11	25.92	920
8	Puducherry UT	1,244,464	0.10	27.72	1038
9	Mizoram	1,091,014	0.09	22.78	975
10	Chandigarh UT	1,054,686	0.09	17.1	818
	Sub Total	**24,424,404**	**2.02**		
			C. Pop. Below 1M		
1	Sikkim	607,688	0.05	12.36	889
2	Andaman & Nicobar Island UT	379,944	0.03	6.68	878
3	Dadra & Nagar Haveli UT	342,853	0.03	55.5	775
4	Daman & Diu UT	242,911	0.02	53.54	618
5	Lakshadweep UT	64,429	0.01	6.23	946
	Sub Total	**1,637,825**	**0.14**		

Source: Census of India, 2011, Registrar General, GOI, New Delhi, India

TABLE: 3. LITERACY RATE BY SEX, 2011 (PERCENT)

Sl. No.	India/State/Union Territory	Persons	Males	Females
	INDIA	**74.0**	**82.1**	**65.5**
	A. POP 10 M +			
1	Kerala	93.9	96.0	92.0
2	NCT of Delhi	86.3	91.0	80.9
3	Maharashtra	82.9	89.8	75.5
4	Tamil Nadu	80.3	86.8	73.9
5	Uttarakhand	79.6	88.3	70.7
6	Gujarat	79.3	87.2	70.7
7	West Bengal	77.1	82.7	71.2
8	Punjab	76.7	81.5	71.3
9	Haryana	76.6	85.4	66.8
10	Andhra Pradesh	75.6	75.6	59.7
11	Karnataka	75.6	82.9	68.1
12	Odisha	73.5	82.4	64.4
13	Assam	73.2	78.8	67.3
14	Chhattisgarh	71.0	81.5	60.6
15	Madhya Pradesh	70.6	80.5	60.0
16	Uttar Pradesh	69.7	79.2	59.3
17	Jammu & Kashmir	68.7	78.3	58.0
18	Jharkhand	67.6	78.5	56.2
19	Rajasthan	67.1	80.5	52.7
20	Bihar	63.8	73.4	53.3
	B. POP 1-10 M			
21	Mizoram	91.6	93.7	89.4
22	Tripura	87.8	92.2	83.2
23	Goa	87.4	92.8	81.8
24	Puducherry UT	86.6	92.1	81.2
25	Chandigarh UT	86.4	90.5	81.4
26	Himachal Pradesh	83.8	90.8	76.6
27	Nagaland	80.1	83.3	76.7
28	Manipur	79.9	86.5	73.2
29	Meghalaya	75.5	77.2	73.8
30	Arunachal Pradesh	67.0	73.7	59.6
	C. POP Below 1 M			
31	Lakshadweep UT	92.3	96.1	88.3
32	Daman & Diu UT	87.1	91.5	79.6
33	Andaman & Nicobar Islands UT	86.3	90.1	81.8
34	Sikkim	82.2	87.3	76.4
35	Dadra & Nagar Haveli UT	77.7	86.5	65.9

Source: Census of India, 2011, Registrar General, GOI, New Delhi, India

POPULATION DISTRIBUTION & RATE OF GROWTH – STATES & UTS

Uttar Pradesh, the state with 199.6 million people is India's most populous state accounting for 16.5% of country's population. Bihar (103.8) and Maharashtra (112.4) are other two states with more than 100 million people. Other large states are West Bengal with 91, Andhra Pradesh with 85, Madhya Pradesh with 73, and Tamil Nadu with 72 million people. Nearly 42.4% of Indians now live in formerly undivided Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan; a portion that has increased from 40% in 1991. Conversely, the proportion of Indians living in four Southern States of Kerala, Tamil Nadu, Karnataka and Andhra Pradesh has decreased from 22.5% in 1991 to 20.8% in 2011, causing concerns about their representation in parliamentary democracy. (*Bose, 2011*)

Out of the major states of India, Bihar with 25.1% growth rate during 2001-2011 is the fastest growing state. Decadal growth rates have exceeded 20% in the entire core North India States – Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh (including Jharkhand and Chhattisgarh). Kerala's growth during 2001-2011 of 4.9% is indicative of the state reaching stationary population in the next 10-20 years. Growth rate around 11-13% is reported by Punjab, Andhra Pradesh, and West Bengal and around 15-16% by Karnataka, Maharashtra and Tamil Nadu. Southern States are harbinger of population stabilization.

CHANGING DEMOGRAPHIC PROFILE OF INDIA – AGE STRUCTURE AND AGING

Nearly 18 percent of the World Population living in India has been experiencing slow but steady demographic transition since the second half of the last century. In recent years, however, the fertility transition in India has accelerated resulting in rapid changes in the age structure of the population. This change creates unique opportunities along with significant challenges both for the economy and society. The age structure change is expected to create demographic dividend and ageing is also likely to vary significantly across states in India. The provisional population result from 2011 census provides some useful information on the pace of demographic change taking place in the country. Although provisional data do not provide age composition of the population, the available population totals and proportion of children population in the age group of 0-6 years help us to understand the emerging demographic change and the plausible age structure transition in the country. What follows is an analysis of the available data from the 2011 census to understand the emerging age structure changes in India. The proportion of the population in the age group of 0-6 declined from 16 percent to 13 percent over period 2001-2011, growth rate being negative for the first time. One of the important dimensions of demographic change in India is the extreme inter- state variation. Of the total 20 major states, nearly 11 have achieved replacement level fertility while other 4 are around replacement level. (*James & Satyanarayana, 2011*) On the contrary, there are around six major states far away from replacement level fertility. The fertility variation in the country is astounding. The Total Fertility Rate (TFR) varies from 1.7 children per woman in Tamil Nadu to 3.9 children per woman in Bihar in the year 2008 (Sample Registration System data 2009). The 2011 census result also provides information on the proportion of population in the 0-6 age group in each state. The variation clearly indicates that the age structure of the Indian population will vastly be different across states. The proportion of population in the 0-6 age group is a good measure of demographic and age structure change of a state. Those states having less than 12 percent of their population in the age group 0-6, fall among the below replacement level fertility states. These states will have an age distribution with a considerable bulge in the adult age group of 15-59. States having around 13-15 percent of their population in the age group 0-6 are moving towards an age structure transition. On the contrary, those states with more than 15 percent of the population in the 0-6 age group are in the early stages of

demographic change and will have an age distribution typically of a triangle shape indicating higher percentage of child population in relation to adult population. Undoubtedly, India's age structure is undergoing rapid changes. It will have definite implications for the economy and society. The age structure transition typically has two phases. In the first phase of the transition, there will be a bulge in the working age group popularly known as the demographic dividend stage. The demographic divided is a shorter duration in the history of any nation. The span of the dividend varies according to the pace of the fertility transition. The second phase of the age structure transition occurs with the aging of the population. The proportion of elderly is likely to go up at this stage.

DEMOGRAPHIC DIVIDEND

Demographic dividend refers to a change in the age distribution of population from child ages to adult ages. It leads to larger proportion of population in the working age group compared to younger and old age groups. Apparently, given the diversity in the fertility transition in India, the demographic dividend is likely to continue as it shifts from one state to another based on the pace of demographic changes in the respective states. It is generally argued that the demographic change in India is opening up new economic opportunities. There is generally high optimism both based on the experience of many other countries and from India that demographic changes will take the country to newer economic heights. Along with high optimism, there are also larger concerns on the ability of the nation to take full advantage of the demographic dividend. It is often argued that demographic dividend might turn in to a nightmare given the composition of Indian population in terms of educational level and skill levels. It is argued that large segments of adult population in the country are literate and do not have the capacity to contribute substantially to the modern economy. Perhaps, demographic dividend needs to be understood more critically and in a proper perspective. Many of the good empirical studies estimating the impact of the age structure changes on the economic progress have indicated very high impact of age structure change and positive demographic dividend in the country. In other words, these studies bring out clearly that those states moving faster in demographic and age structure change are also experiencing rapid economic growth. The best examples come from southern and western states in India where the demographic changes are also leading to sustained economic changes both in the aggregate economy and in the lives of people. Census 2011 results shows, that there has been significant inflow of migration to many southern states in India. Tamil Nadu, Karnataka and Andhra Pradesh are attracting huge inflow of migrants from other states. In these states, the enumerated population has been far higher than the projected population. Perhaps, it points towards a replacement migration taking place into these states. The replacement migration refers to migration occurring as a result of age structure changes. With the demographic and age structure changes, there will be scarcity of labour particularly in the unskilled sector. This labour has to be replaced from other places with abundance of labour due to lack of any significant demographic changes. In the context of the western countries, the replacement migration mainly came from poor developing countries. On the contrary, India is able to take care of the replacement migration from within due to large diversity in the nature of demographic transition. The replacement migration in to Kerala is well known and many studies have pointed out large inflow of such migrants from other parts of the country. Thus it is clear that the demographic changes create demographic opportunities and dividend and the concern that India may not be able to experience demographic dividend is perhaps not empirically validated. There is also ample evidence to suggest that demographic changes enhance economic changes. Micro level evidence also suggests that age structure changes lead to substantial investment in children both in terms of education and health. Thus the demographic dividend emanates from rapid changes in fertility which has several positive impacts both at Macro and household level.

THE WORLD'S 10 MOST POPULOUS COUNTRIES, 2010

Country	Population 2010 (millions)	% Annual Growth Rate	Estimated Population 2050 (millions)
China	1320	0.6	1437
India	1173	1.4	1755
United States	310	0.6	438
Indonesia	243	1.4	343
Brazil	201	1.0	260
Pakistan	184	2.0	295
Bangladesh	156	2.1	215
Nigeria	152	2.4	282
Russia	139	–0.4	119
Japan	126	–0.1	101

Source: World Population Data Sheet

AGEING AND DEMOGRAPHIC CHANGE

The demographic dividend is of a shorter duration for any country and eventually the nation will move into an ageing population. Although not immediate, change in the age structure from young to old are also accompanied by several social changes with considerable implications on any nation. The size of the Indian elderly (60 years and above) is expected to triple in the next four decades from 92 million to 316 million, constituting around 20 percent of the population by the middle of the century. There is no significant empirical evidence to suggest that larger proportion of elderly population would impede the economic progress of a nation. At the same time, there are many social changes expected as a result of ageing population in any nation. The major challenge would be on the care for the elderly. Demographic and economic changes are often accompanied by enhanced migration of people in search of better and quality employment. As a result of this adult migration, the elderly are often left behind. The living arrangement pattern of the elderly are expected to undergo rapid changes during the period. Such changes are already visible in states like Kerala with early demographic transition. Even though the proportion of elderly at the national level has been low, the ministry of social justice and empowerment (MOSJE), Government of India deserves recognition for its foresight in drafting a National Policy on Older Persons (NPOP) as early as in 1999, when less than 7 percent of the population was aged 60 and above. The policy vision statement is well articulated and action strategies cover important aspects of financial security, health, shelter, education, welfare and protection of life and property. The major lacuna of NPOP, however, has been lack clear prioritization (increasing old-older proportion, ferminization and ruralisation along with inter–State variations). Although many important aspects of ageing policy are mentioned in the NPOP, it is unclear what the specific goals are, what steps are envisaged towards achieving these goals, and how it fits in to a realistic implementation schedule given the emerging demographic scenario in the country and the current institutional arrangements.(*James & Sathyanarayana, 2011*) India is soon to follow the foot-steps of China and is likely to surpass Chinese population to become the country with the largest population in the world between 2025 and 2030. China through policy action has been pushing forward healthy sustainable development of undertakings for its ageing population. The government has attached importance to publicizing and popularizing laws, regulations and policies concerning senior citizens. It has set up an inter-agency / inter-ministerial committee on ageing to monitor and implement policies and programmes for older people. As socio-economic processes associated with ageing are complex, the country needs to plan and gear up well in advance to face the challenge. Sudden intervention may not be appropriate and may not provide significant dividend. Many countries have realized the importance of preparing for the ageing in advance through several policy and programmatic intervention. Perhaps, India too, needs to follow the footsteps of these nations at the earliest to minimize the ill effects of a larger social change. In a nutshell, demographic and age structure changes are inevitable and generally contribute positively to the nation. The demographic changes are also accompanied by considerable social and economic changes. In the future, the success of a nation will critically depend upon its ability to address such sweeping demographic changes effectively through policies and programmes. India is on the course of rapid demographic changes. Hence preparedness in advance might provide dividends in the future.

POPULATION DIFFERENCE 2001- 2011 CENSUS

	2001	2011	Change
Population (in Mn)	1028	1192	+15.9%
Male (in Mn)	532	617	+16.0%
Female (in Mn)	496	575	+15.9%
18+ yrs (in Mn)	599	772	+28.8%
Sex Ratio	933	932	-1 unit
Population Density	313	363	+50
0-14 (%)	35.4	29.1	-6.3 pts
15-59 (%)	57.7	62.6	+4.9 pts
60+ (%)	6.9	8.3	+1.4 pts
Dependency Ratio	734	596	-138

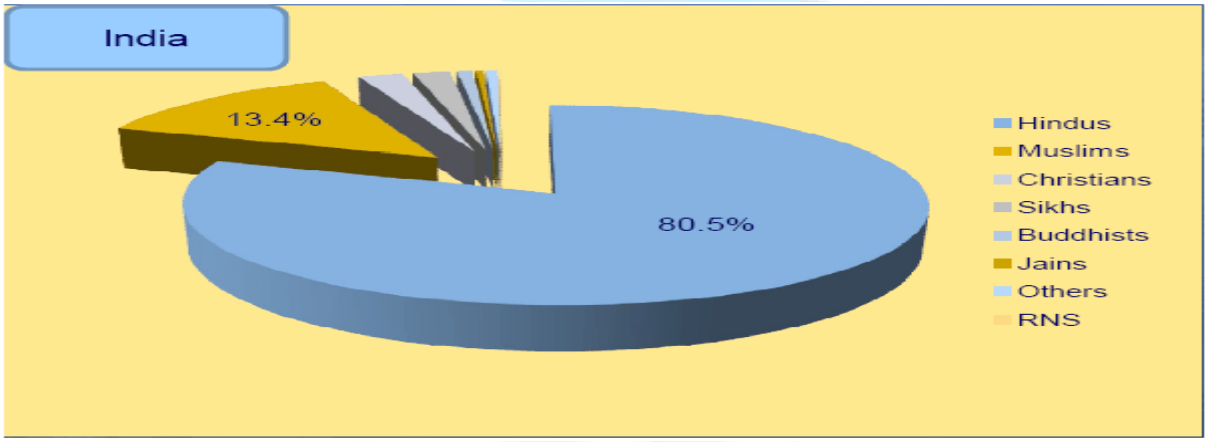
Source: Census of India 2011, Registrar General, GOI, New Delhi

TOTAL FERTILITY RATE OF SELECTED COUNTRIES, 2007

Country	Total Fertility Rate (TFR)
Afghanistan	6.8
Argentina	2.5
China	1.6
India	2.9
Angola	6.8
Mauritius	1.7
Spain	1.4
Russia	1.3
United States	2.1

Source: Population Reference Bureau, *World Population Data Sheet*, 2007.

POPULATION BY RELIGION DISTRIBUTION, 2001 CENSUS



DISTRIBUTION OF POPULATION BY RELIGIOUS GROUPS & SEX RATIO – 2001 CENSUS

Name of Religion	Percentage to total population	Sex ratio
Hindus	80.5	931
Muslims	13.4	936
Christians	2.3	1009
Sikhs	1.9	893
Buddhists	0.8	953
Jains	0.4	940
Other religions	0.6	992
India	**100**	**933**

LITERACY: THE PRIME CONCERN OF THE CENSUS 2011

India has witnessed remarkable progress in spread of literacy. Compared to barely 18 percent of India's population recorded as literate in the first census after independence, according to the 2011 census, that proportion has gone up to 74 percent. The achievement among males has been from 27 to 82 percent in the 60 years. From less than one in 10 women counted as literate in 1951, today two out of three women are enumerated as literate. Nationally, the gender gap in spread of literacy began to narrow first in 1991 and the pace has accelerated. However, there are larger state variations in the gender gap with Rajasthan reporting nearly 28 percentage point gap and other core North Indian States like Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh and Jharkhand reporting a gap between male and female literacy rate of more than 20 percentage points. Compared to 2001, in 2011 male literacy rate increased by 6 percentage points but female literacy increased by nearly 12 percentage points, which is viewed as a remarkable achievement. Some have attributed it to the success of Sarva Siksha Abhiyan, India's flagship programme launched in 2001-02 to universalize elementary education. Male literacy exceeds 75% throughout the country and exceeds 90% in Kerala and some of the smaller states. The achievement in female literacy in Bihar is noteworthy; from 33% in 2001, it has gone up to 53% or by 20 percentage points. The states causing concern as far as female literacy is concerned are Rajasthan and Andhra Pradesh- both have reported 8 percentage point increase during 2001-2011 and both have less than 60% female literacy.

Literacy must be viewed in the context of its immense potential for bringing about transformation in the quality of Human life. Its impact on bringing about a paradigm shift in the direction a society progresses can never be overestimated – be it economic, social and political. Development in educational attainment means increase in literacy level. According to the definition in the census, any person aged seven and above who can read and write with understanding in any language is literate. According to Millennium Development Goals of United Nations, universal primary education must be achieved by the year 2015. Eleventh five year plan has also targeted to increase the literacy rate of children of seven years of age and above to 85% by reducing the gender gap in literacy to 10 percent by 2011-12. (Maulick, 2011) It should be clearly noted that educational development and literacy rate improvement are key factors influencing the demographic variables like fertility, mortality, migration etc. Education promotes quality of life, particularly with regards to life expectancy, infant mortality, learning and nutritional levels. The pace and progress of literacy rates as revealed by decennial census is very slow in India. In the span of fifty years i.e., from 1951 (18.33) to 2001 (64.83), there has been only marginal increase of 46.5 percent in literacy rate. Between 1951 to 2001, female literacy shows a mere 44.7 percent increase which is five times for the whole point. According to the census 2011, out of 74.04 percent of literacy rate, the corresponding figures for male and female are 82.14 and 65.46 percent respectively which means four out of five males and two out every three females of the age seven and above are literate in the country.

LITERACY RATE TREND IN INDIA 1951 - 2011

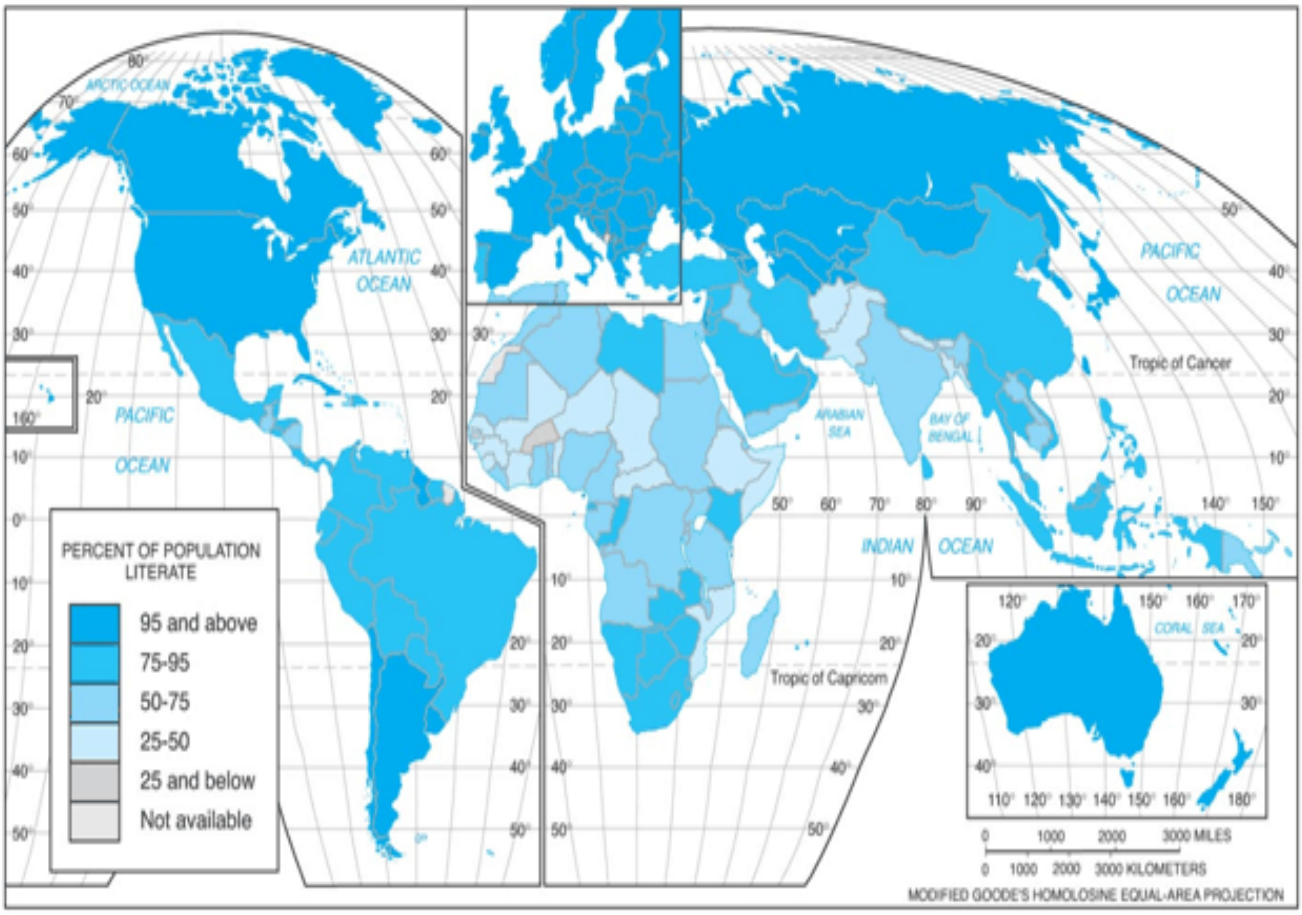
Census Year	Persons	Decadal Increase	Males	Females	Gender Gap
1951	18.33	--	27.16	8.86	18.30
1961	28.3	9.97	40.40	15.35	25.05
1971	34.45	6.15	45.96	21.97	23.99
1981	43.57	9.12	56.38	29.76	26.62
1991	52.21	8.64	64.13	39.29	24.84
2001	64.83	12.64	75.26	53.67	21.59
2011	74.04	9.21	82.14	65.46	16.68

Source: Registrar General of Census, GOI, New Delhi, 2011

LITERACY RATE BY RELIGION DISTRIBUTION, 2001, CENSUS

Name of Religion	Literacy Rate (Total)	Literacy Rate (Males)	Literacy Rate (Females)
Hindus	65.1	76.2	53.2
Muslims	59.1	67.6	50.1
Christians	80.3	84.4	76.2
Sikhs	69.4	75.2	63.1
Buddhists	72.7	83.1	61.7
Jains	94.1	97.4	90.6
Other religions	47.0	60.8	33.2
India	**64.8**	**75.3**	**53.7**

EDUCATION AND LITERACY OF A POPULATION - LITERACY RATES



Source: Stutz, F.P. & Warf, B., (2012), 6th Edition, The world Economy, (Geography, Business, Development), Pearson, USA.

A significant mile stone of Census 2011 is that the total number of illiterates has come down from 30.4 crores in 2001 to 27.2 crores showing a decline of 3.1 crore. Out of total 21.7 crores literates, female (11.0 Crores) outnumber males (10.7 Crores). Another striking feature is that, out of total decrease of 3.1 crore of illiterates, the females (1.7 crores) top male (1.4 crores) in the list. This trend of rising female literacy will have far reaching consequences which may lead to development of the society. When we portray the literary picture of India we find that the ordering of the states are almost same as it was in 2001 as Kerala still continues to top the list with 93.91 percent literacy rate where as Bihar remains at the bottom of the ladder with 63.82 percent. Although Bihar has performed well in 2011 census compared to literacy rate in 2001 (47.00%) still it lies in the lowest rank. States like Punjab (76.68%), Haryana (76.64%), Madhya Pradesh (70.63%), Andhra Pradesh (75.60%), Karnataka (67.66%) and Tamil Nadu (80.33%) and UTs like Andaman & Nicobar Islands (86.27%), Chandigarh (86.43%) were downgraded from their previous rank where as Tripura (87.75%), Sikkim (82.20%), Manipur (79.85%), Nagaland (80.11%) and UTs like Dadra & Nagar Haveli (77.65%), NCT of Delhi (86.34%) and Lakshadweep (92.28%) have shown higher rankings than before. India's literacy rate has shot up during the past decade and now, except Bihar, all other states lie above the national average. Even though Bihar has shown 17 percent increase in literacy rate but still it is below the national average. Out of 38 districts of Bihar, 21 districts have shown an improvement in female literacy rate, with naxal affected region Munger topping the list in female literacy with 65.53 percent.

Literacy rate in non- EAG (Empowered Action Group) States is higher than the literacy rates of the EAG states but the change in percentage points of literacy rate between 2001 and 2011 is higher in EAG states. It can be noted that the gender gap in EAG states declining faster than the non-EAG states. The decline in gender gap between 2001 and 2011 is 5.92 percent in EAG states where as it is 4.38 in non-EAG states. It is really interesting to note that the percentage increase in the number of literates is remarkable in EAG states between 2001 and 2011. Bihar (74.83%), Jharkhand (59.24%) and Uttar Pradesh (56.40%) are in the highest position followed by Rajasthan (40.68%) and Chhattisgarh (39.61%) where as Madhya Pradesh (38.73%), Uttarkhand (37.05%) and Odisha (36.05%) are still lagging behind. In the first five year plan, the programme of social education, inclusive of literacy, was introduced as part of the Community Development Programme in 1952. The national policy on education in 1968 not only endorsed the recommendations of the Education Commission but also reiterated the significance of the universal literacy and developing adult and continuing education as matters of priority. The formal elementary education programme was supplemented by a non formal education system. A multi-pronged approach of universalisation of elementary education and adult literacy has been adopted for achieving total literacy.(Maulick, 2011) Major thrust of these programmes were on promotion of literacy among women, Schedule Casts and Schedule Tribes particularly in the rural areas. The National Adult Education Programme (NAEP) was inaugurated on 2nd October 1978. The education literacy from a vast country like India beset by several social and economic hurdles is not an easy task. Realizing this, the National Literacy Mission was started on 5th May, 1988 to impart a new sense of urgency and seriousness to adult education. After the success of the areas specific, time bound, voluntary base campaign approach first in Kottayam City and then Ernakulum district of Kerala in 1990, the national literacy mission has accepted the literacy campaigns as the dominant strategy for eradication of illiteracy. In 1989, the district based Total Literacy Campaign (TLC) emerged as a programme strategy for the National Literacy Mission. The "Sarve Sikshaya Abhiyan", a flagship programme for the Government of India was started for achievement of universalisation of elementary education in a time bound manner, as later mandated by 86th amendment to the constitution of India making free and compulsory education to children of ages 6-14, as a fundamental right. Now Sarva Sikshya Abhiyan is doing rounds in all the districts in most of the states for which there is huge fund allocation under 9th and 10th Five Year Plans. In the 11th Five Year Plan, by 2011-12, Planning Commission has targeted to increase literacy rate by 85 percent and reduce the gender gap by 10 percent.

In spite of these massive efforts by the government, we are still lagging behind the world literacy rate of 84 percent. Many states have shown rising trend but even then major group of states lie in the average rank i.e., just above national level of 64.8 percent and below 80 percent. Bihar is still lying below the national average. But the stride towards a completely literate India has become surer and more confident. It I also clear that the individual and the community need to play active roles as stake holders in this process and their role need to be recognized and built upon for realizing the objective of a fully literate India.

SEX RATIO & CHILD SEX RATIO (CSR) OF INDIA'S DEMOGRAPHY

The good news of the Census 2011 study is that female of male sex ratio of population has began to improve – from 927 in 1991 to 933 in 2001 to 940 in 2011. Yet, compared to what is observed elsewhere in most countries in the world, India's sex ratio is anomalous. The British Census Commissioners also noted it and were quite puzzled. Quite systematically, they examined a number of factors to understand why there were fewer women in India compared to men in the total population. The possible reasons dwelt upon by them and by other noted population scientists were: under enumeration of women, more masculine sex ratio at birth compared to observed in other populations, higher mortality experienced by women compared to men due to epidemics (such as plague, malaria, and influenza) or deficiency diseases, or due to neglect, premature cohabitation and unskillful midwifery. Except for the persistent survival disadvantage that women experienced from early infancy well into the reproductive period, evidence didn't support any of the other factors. The female to male sex ratio of population historically noted in the contiguous area of Punjab, Haryana, Chandigarh and Delhi, has improved between 2001 and 2011, but it is still below 900 women per thousand men. On the other hand, sex ratio close to unity is recorded in the southern states of Kerala, Tamil Nadu and Andhra Pradesh. This phenomenon observed since the beginning of the 20th century has persisted even now.

Since 1981 Indian censuses have made available data on population in the age group of 0-6 by sex, as a byproduct of information on literacy rates which are calculated for 7+ population, enabling calculation of sex ratio of children in the age group of 0-6. (Typically, age data are generated in five year age groups and thus most populations would provide data on children in the age group of 0 – 4 and not 0 -6.) the census commissioner's office has calculated sex ratio of children aged 0 -6 from the previous census of 1961 and 1971 also showing the trend over 50 years as per the given below table.

TABLE – 4: SEX RATIO OF POPULATION AND CHILDREN AGED 0 -6 YEARS IN INDIA, 1961 - 2011

Census Year	Sex Ratio of Total Population	Sex Ratio of Children Aged 0 – 6 Years
1961	941	976
1971	930	964
1981	934	962
1991	937	945
2001	933	927
2011	940	914

SEX RATIO IS CALCULATED AS NUMBER OF FEMALES PER 1000 MALES

As evident, the child sex ratio has steadily declined from 976 in 1961 to 927 in 2001 and further to 914 in 2011. This phenomenon has drawn worldwide attention and largely attributed to increasing practices of sex detection and selected aborting female fetuses. Between 2001 and 2011, child sex ratio fell in particularly the whole country, giving credence to belief that the practice of female selective abortion is spreading to parts of the country, where it was noted earlier. Child sex ratio improved in 2011 from the level in 2001 in Himachal Pradesh, Haryana, and Punjab & marginally in Gujarat: the states where it was below 850. In 2011 all these states, there are still less than 900 girls per 1000 boys. In particular Indian society son preference is known to have existed for centuries and persists even today. According to the most recent National Family Health Survey (NFHS) conducted during 2005-06, nearly a quarter of women would prefer more sons than daughters but hardly any would desire more daughters than sons. Further, in-depth analysis of NFHS data have shown that when couple wants to limit the family size to two or three children only, if the first child is a daughter, the probability of determining the sex of the second child and aborting the foetus if it is of a girl, is quite high. Thus, while the small family norm has become quite acceptable, son preference persists. Widespread availability and use of prenatal diagnostic techniques for sex determination led to PNDT (Pre Natal Diagnostic Techniques) (Regulation and Prevention of Misuse Act 194) banning their use for determining their use for determining the sex of foetus or reveling it to the parents. The act was amended and made more stringent in 2003 by allowing appropriate authorities even at the district level to take legal action against the use of sex selection technique by any person at any place. Despite the act and the widespread campaign promoting 'Save the Girl Child' messages, decline in child sex ratio has continued leading to a concern that neither the implementation of the Act nor the campaign messages have been very effective. However, it is important to recognize that besides female selective abortion, girls in India have for many decades continued to experience higher mortality compared to boys. Even in recent years, according to the 2008 Sample Registration System data, death rate among girls aged 1-4 years was nearly 40% higher compared to boys. If the sex differentials in mortality continue favouring boys, the deficit of girls would increase over time. (Visaria, 2011) When higher female child mortality is coupled with sex selection and female selective abortion, the deficit of girls would indeed increase at a faster pace.

CHILD POPULATION DECREASE IN INDIA

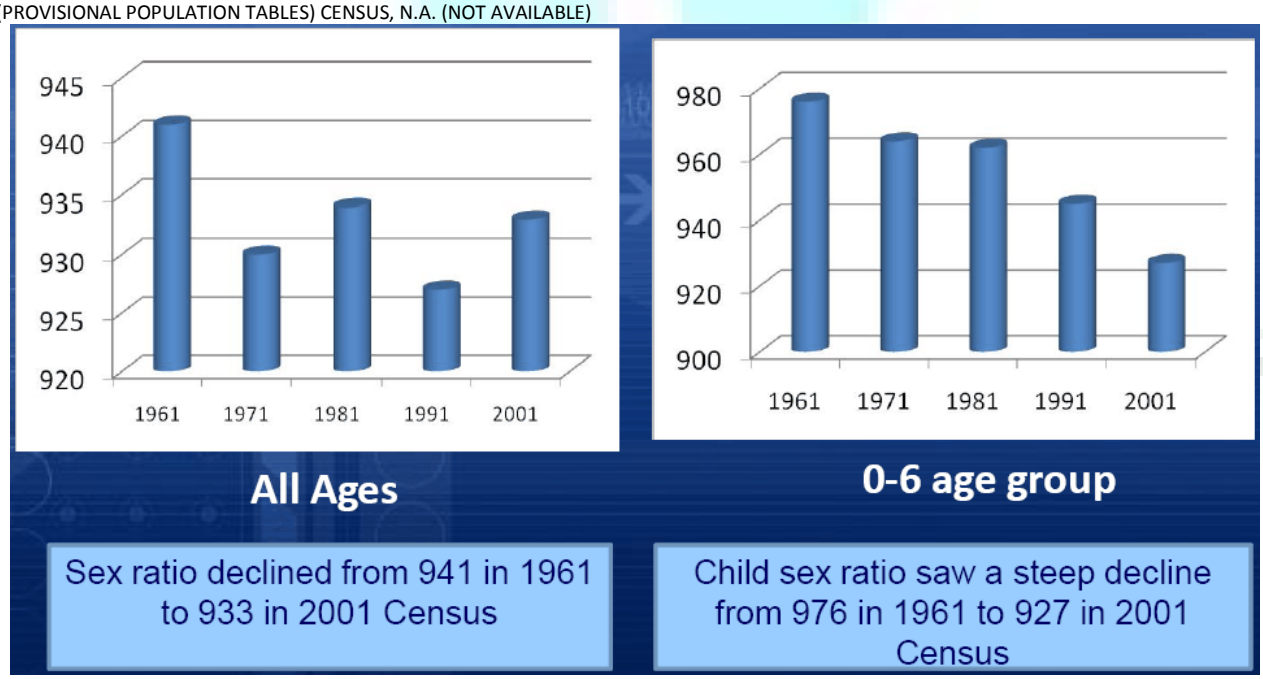
The 2011 census was the first one in many decades which counted less absolute number of children in the age group of 0-6 years. Compared to 2001 census count of 164 million children, there were 159 million children in 2011, or there were 5 million fewer children in India. This is evident in the share of children in the total population, which declined from 16 percent in 2001 to 13.1 percent in 2011. Among the major states, the only exceptions were Bihar and Jammu & Kashmir, which reported some absolute increase in their child population. In Kerala and Tamil Nadu, children aged 0-6 constitutes less than 10 percent of the population but in Rajasthan, Jammu & Kashmir, Uttar Pradesh, Madhya Pradesh and Bihar, children's share in the total population is almost 18 percent. The decline in child population reflects decline in fertility; total fertility rate in India has come down from an average of 3.1 children born per woman in 2001 to 2.7in 2009. For population experts, the provisional findings from the 2011 Census have few surprises. Yet, compared to most projections of the population size, the count was higher and the time when and size at which population would stabilize had to be revised. Also, it implied that India will overtake China by 2030 rather than a decade or so later. Yet, there is no escape from this even though planners, policy makers and programme managers express panic from time to time and attribute India's social and economic problems to its size and growth rate. The family-size preferences of young people now entering the child bearing ages even in North India states are significantly lower than the preferences reported by their parents at the same stage in life. Therefore, good quality uninterrupted family planning and reproductive health services are provided; there is no reason to believe that their preferences and aspirations will not be translated into actual practice. The further decline in child sex ratio, in spite of 15 years of ban on sex determination test, makes us somber with realization that social legislation serves a purpose only up to a point of that fear of punishment does not always act as a deterrent. (Visaria, 2011) It is time we understand and address the cultural and social factors that undervalue girls. Bringing about behavioural change is a tough but a necessary assignment.

2011 Census results were a slightly delayed sinking of the fact that India is still averse to daughters being born, with the provisional figures for the age group of 0-6 showing an all time low sex ratio in this census. Declining number of girls vis-à-vis boys – the child sex ratio (CSR) had primarily caught the attention across the country during the last two decades, particularly since 1991 census that has published the population under 7 for the first time. Ironically it was to bring the literacy count at par with the international practices. However, the data showed that at the national level there were 945 girls to 1000 boys, five points short of generally accepted child sex ratio of 950 girls per 1000 boys. The 2001 census not only saw a sharp decline of 18 points at the national level with child sex ratio of 927, some pockets of the country particularly, the north-west had recorded CSR of 850 and below with some of the prosperous states such as Punjab (-77), Haryana (-60), and Gujarat (-45) occupying the top positions in terms of declining number of girls over the decade. The urbanized Delhi (-47) and Chandigarh (-54) were no better.

TABLE: 5 – CHILD SEX RATIO (CSR) 1991, 2001 & 2011 CENSUS

States	1991	2001	2011	Difference 2001-1991	Difference 2011-2001
India	**945**	**927**	**914**	**-18**	**-13**
Andhra Pradesh	975	961	943	-14	-18
Arunachal Pradesh	982	964	960	-18	-4
Assam	975	965	957	-10	-8
Bihar	953	942	933	-11	-9
Chhattisgarh	984	975	964	-9	-11
Delhi	915	868	866	-47	-2
Goa	964	938	920	-26	-18
Gujarat	928	883	886	-45	+3
Haryana	879	819	830	-60	+11
Himachal Pradesh	951	896	906	-55	+10
Jammu & Kashmir	N. A.	941	859	---	-82
Jharkhand	979	965	943	-14	-22
Karnataka	960	946	943	-14	-3
Kerala	958	960	959	+2	-1
Madhya Pradesh	941	932	912	-9	-20
Maharashtra	946	913	883	-33	-30
Manipur	974	957	934	-17	-23
Meghalaya	986	973	970	-13	-3
Mizoram	969	964	971	-5	+7
Nagaland	993	964	944	-29	-20
Odisha	967	953	934	-14	-19
Punjab	875	798	846	-77	+48
Rajasthan	916	909	883	-7	-26
Sikkim	965	963	944	-2	-19
Tamil Nadu	948	942	946	-6	+4
Tripura	967	966	953	-1	-13
Uttarakhand	949	908	886	-41	-22
Uttar Pradesh	927	916	899	-11	-17
West Bengal	967	960	950	-7	-10
Andaman & Nicobar	973	957	966	-16	+9
Chandigarh	899	845	867	-54	+22
Daman & Diu	958	926	909	-32	-17
Dadra & N. Haveli	1013	979	924	-34	-55
Lakshadweep	941	959	908	+18	-51
Puducherry	963	967	965	+4	-2

Source: Population Foundation of India, 2006
Census of India, 2001
2011* (PROVISIONAL POPULATION TABLES) CENSUS, N.A. (NOT AVAILABLE)



Source: Census of India, RGC, GOI, New Delhi, 2011

The dramatic spread of districts having CSRs below 950is not easy to explain in the absence of more detailed information such as rural-urban break up, but 2011 Census figures do throw up a few leads to suggest an existing link between affluence and 'modern' urbanized contexts with more pronounced decline in CSRs. For example, the earlier Faridabad district (in 2001) is now split in Faridabab and Palwal out of which Faridabad clearly the more advanced district of the two-has a CSR of 842 as compared to Palwal which has a CSR 862. Similarly, Gurgaon now bifurcated in Gurgaon and Mewat has a much lower CSR of 826 as

compared with a CSR of 903. It would be of interest to see if such associations are visible elsewhere in other similarly split districts. A complex and nuanced interplay of a variety of factors, some inadvertent fallout of developmental inputs, seem to have contributed to the prevailing situation. Earlier, couples could not intervene in the reproductive outcomes. In an environment with strong 'son preference', couples could continue to bear children until they got the desired numbers of male babies. Now that technology makes it possible to select the sex of unborn babies, desirable sex composition of children can be achieved without going into multiple pregnancies. The ideal composition is that of one son and one daughter – most families would stop at that. However, if the first two offspring are male babies, families do not feel the need for the third child, be it a boy or a girl albeit more so for girls. Why such a 'choice' remains so gendered is an intriguing question. For one, the 'choice' is selectively exercised – the rationale comes from the 'small family norm' which has come to be associated with late modernity. Much has been said about the enabling environment and empowerment of women in terms of education, employment and financial independence and the interface of these parameters with autonomy and decision-making as well as their being equal partners in the development processes. And yet scores of studies have clearly shown that women's education and employment status do not automatically translate in their agency and freedom of choices. (Raju, 2011) The concept of 'choice' itself is rather contrived – the so called choice can be matter of prolonged social conditioning and socializing process whereby women themselves follow the age-old 'preference' for sons.

Despite acknowledging daughters as more supportive and caring, the societal perception of sons as old age support persists. It may well be argued that these social changes are taking place in several parts of India which also have access to technology to indulge sex-selective abortions. And still there are parts in the country – south, south-eastern and north-eastern – which have better CSRs. Clearly technology operations in consonance with other existing norms and not in contextual isolation independent of socio-culturally entrenched values regarding the relative worth of girls' vis-à-vis boys, men and women. A set of issues concern the overall well-being and enhancement of women's position in the society not only as a full citizen, but as an individual in their own right which include access to education and livelihood and public health facilities including reproductive care. Legal provisions are not the answers, they do provide recourse. Public at large are unaware of most of the legal and institutional provisions that are now available. Some of the suggested steps are essentially long-term. The most immediate response has to be against the nexus between the medical fraternity, health workers and others in the system that makes sex-selective abortion an easy task. Although several cases of violations of PNDT Act are routinely reported, implementation is poor and prosecutions are rare. (Raju, 2011) Undoubtedly, the complex and multi-layered nature of declining numbers of girls require multi-pronged and context specific responses, non-negotiable social commitment at various levels and concerted efforts in a mission mode to avert this national shame.

MILLENNIUM DEVELOPMENT GOALS & POPULATION GROWTH OF INDIA

The Millennium Development Goals and Population Growth have been conceptualized with the following rationale. First, India's progress in achieving the MDGs is of global significance as it constitutes 18% of world population. Second, evidences suggest that the progresses in attaining the MDGs are slow and uneven across and within the countries. Third, though the population growth is not an implicit indicator of MDGs, it is the under laying cause of attaining the MDGs in developing countries. Globally, the countries with higher birth rate and slower growth rate of population (natural growth rate) are faster in achieving the MDGs. For example, the progresses in East Asian countries were faster compared to South Asian and African countries. Studies indicate that India's declining poverty rates have been offset by population growth. (Ravallion, 2004)

MILLENNIUM DEVELOPMENT GOALS

The Millennium Development Goals (MDGs) are a set of numerical and time bound goals adopted by 189 member states of United Nations in September, 2000 at UN Millennium Submit, New York, USA. The MDGs are global effort to address the multidimensional poverty (income poverty, hunger, disease, lack of adequate shelter and exclusion), promoting gender equality, education and environmental sustainability. The MDGs comprise 8 goals, 21 targets and 60 indicators that are placed in the global development agenda. For each goal, there are certain targets and for each target there are certain indicators. The base year of MDGs was 1990 and the final year is 2015. MDG have become the most widely used yardstick of development effort by the government, donors and non-governmental organizations and extensively used in assessing the progress at national and sub-national level. (Mohanty, 2011) The set eight MDGs are given in table 6.

TABLE- 6: LIST OF EIGHT MILLENNIUM DEVELOPMENT GOALS

Goal 1:	Eradicate extreme poverty and Hunger
Goal 2:	Achieve Universal Primary Education
Goal 3:	Promote gender equality and empower women
Goal 4:	Reduce child mortality
Goal 5:	Improve maternal health
Goal 6:	Combat HIV / AIDS, Malaria and other diseases
Goal 7:	Ensure environmental sustainability
Goal 8:	Develop a global partnership for development

POPULATION GROWTH AND MDGs

Population growth is the resultant of both natural increase and net – migration. Natural increase is the net of birth rate over death rate while net-migration is the excess of in-migration over out-migration. Population growth has direct impact on seven of the eight MDGs. At the micro level, rapid population growth creates a demographic –poverty trap. Large families tend to be propoer, suffer disproportionately from illness, makes less use of health services. Smaller families invest more in each child's nutrition and health. At the macro level, the amount of resources, personnel and the infrastructure required to meet the MDGs will be substantially higher with higher population growth.

RESULTS

Table No. 7 gives the population size, distribution, annual exponential growth rate, the crude birth rate and the selected indicators of MDGs for states and Union Territories of India we have presented the indicators in there groups, namely, bigger states of India (constituting about 97% of India's population), smaller states (constituting 2.7% of India's population) and union territories.

(i) Population Growth and eradication of extreme poverty and Hunger

Goal one of MDGs aims at eradication of poverty and hunger between1990 and 2015. While poverty is measured with respect to consumption / income, hunger is measured by reduction of underweight children less than five years of age and population below minimum level of dietary consumption. Higher population growth adversely affects the reduction of poverty and hunger in the population, both at micro and macro level, large families tend to be poorer and it creates demographic poverty trap. At the macro level, the higher rate of population growth means that in order to reduce poverty; the economies must not only grow at a sustained higher pace but generate new jobs and income earning opportunities at an accelerated rate. (Mohanty, 2011) Similarly, poverty and under nutrition are intimately related. A higher proportion of children belonging to poorer and large households are undernourished. The population growth in the last decade, the crude birth rate, the poverty estimates and the trends in under – nutrition among states of India reflect a similar pattern. The estimates shows that the states with higher population growth rate, for example Bihar tend to have higher percentage of population below poverty line and higher under-nutrition than states like Kerala which have lower population growth rates. The same trend can be seen in the smaller states, for example while comparing the figures for Meghalaya and Goa. The high growth rates of Union territories are largely due to migration and the estimates of poverty and nutrition are not available. Studies have documented that the progress towards the MDGs have been slower than the required rate in the states of Uttar Pradesh, Bihar, Jharkhand, Uttar Pradesh and Madhya Pradesh, experiencing higher population growth. (Ram, Mohanty & Ram, 2009)

(ii) Universal Primary Education and Population Growth

Goal 2 of MDGs is to achieve the universal primary education and is measured by the net enrolment ratio in primary school, the proportion of pupils reaching last grade of primary and the literacy rate of 15 – 24 years old (youth literacy rate). While many states have made commendable progress in primary enrolment in last decades, the school dropout rates and the quality of schooling is a concern. About 42% of young people aged 15-24 years in Bihar are non-literate or literate without formal schooling compared to 31% in Jharkhand, 29% in Rajasthan, 16% in Andhra Pradesh, 7% in Maharashtra and 4% in Tamil Nadu as per the IIPS Population Council 2006-07.

(iii) Gender Equality, Empowerment of Women & Population Growth

Goal 3 of MDG aims at promoting gender equality and empowerment of women. The corresponding indicators were ratio of girls to boys in primary, secondary and tertiary education, share of women in wage employment and proportion of seats in national parliament. The recent trends showed improvement in all levels of education among girls, but the gender gap continued to be higher in the states with low level of literacy and higher population growth. However, the decline in sex ratio of 0-6 year children (not an indicator of MDGs) in many progressive states is the most worrying factor. The sex ratio of 0-6 population indicates the number of girls per 1000 boys in the age group of 0-6 years. The decline in sex ratio is due to three possible factors, namely, increase in sex selective abortion, higher child mortality and under-enumeration of girls. Has minimized in recent censuses, the gender differentials in child mortality has also narrowed down. (Mohanty, 2011) Hence, increasing practice of sex selective abortion in the wake of education in fertility and strong son preference is leading to decline in child sex ratio. This phenomenon is more among better educated and economicallybetter off sections of the population across the states.

(iv) Health Related Goals & Population Growth

Reduction in child mortality (Goal 4) and improvement in maternal health are two of the health related goals of MDGs. The monitoring indicators to measure progress in child mortality are under-five mortality, infant mortality rate and the proportion of 1 year-old children immunized against measles. The under five mortality is the probability of not surviving till-fifth birth day while the infant mortality is the probability of not surviving till first birth-day. These are two sensitive indicators that reflect the health situation of the population. India accounts for one fifth of under-five mortality. The underlying causes of under-five mortality are pneumonia, diarrheal diseases, neo-natal infection and birth asphyxia, prematurity and low birth weight, birth trauma (The Million Death Study Collaboration 2010) and closely related to poverty. Regional pattern in child mortality shows that the empowered action group (EAG) states such as Rajasthan, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh and Odisha account for more than two-thirds of under-five and infant mortality rate. (Mohanty, 2011) these are two states with higher population growth. The infant mortality is highest in the state of Madhya Pradesh and higher in Uttar Pradesh. Maternal health is measured by the proportion of births attended by skilled health personnel. In 2007-08, about half of the deliveries in India were conducted at home without any medical assistance (IIPS 201). The medical assistance at delivery is almost universal in states of Kerala and Tamil Nadu where fertility and natural growth rate of population is low. On the other hand, it is low in the states of Uttar Pradesh and Bihar. Several government schemes including the Jananai Surakshaya Yojana are operational to increase the medical assistance at delivery. The higher population growth rate increases the cost of several provisions such as ante-natal care, natal care and child immunization to national and state government.

The progress towards attaining the MDGs is slow and uneven across the states of India. The prime responsibility for achieving the MDG lies with the individual states. The increase in population due to high birth rate is definitely affecting the reduction of multidimensional poverty in many of the states. With limited resources and low levels of income, reduction of population growth will be beneficial to reduce the cost of resou5rces, personnel and infrastructure required to meet the MDGs.

TABLE – 7: POPULATION SIZE, DISTRIBUTION, GROWTH & SELECTED INDICATORS OF MDGS IN STATES OF INDIA

Indicators of Census 2011							MDG Indicators				
Sl.No.	India/ States / Union Territories	Population in Millions in 2011 Col.3	Percentage Share in India's Population 2011 Col.4	Annual Exponential Growth Rate, 2001-11	Sex Ratio of 0-6 Age Group	Crude Birth Rate, 2009	Percentage of Population Below Poverty Line, 2004-05	Percentage of Children Under Weight for age, 2005-06	Infant Mortality Rate, 2009	Proportion of 1 Year Child Immunization against Measles, 2005-06	Proportion of Births attended by skilled Health Personnel, 2007-08
	India	1210.19	100	1.64	914	22.5	37.2	42.8	50	58.8	52.3
	Bigger States	1174.01	97.01								
1	Andhra Pradesh	84.67	7.00	1.06	943	18.3	29.9	32.5	49	69.4	75.6
2	Assam	31.17	2.58	1.58	957	23.6	34.4	36.4	61	37.4	39.9
3	Bihar	103.80	8.58	2.26	933	28.5	54.4	55.9	52	40.4	31.7
4	Chhattisgarh	25.54	2.11	2.06	964	25.7	49.4	47.1	54	62.5	29.6
5	Delhi	16.75	1.38	1.90	866	18.1	13.1	26.1	33	78.2	71.6
6	Gujarat	60.38	4.99	1.77	886	22.3	31.8	44.6	48	65.7	61.6
7	Haryana	25.35	2.09	1.83	830	22.7	24.1	39.6	51	75.5	53.2
8	Jammu & Kashmir	12.55	1.04	2.15	859	18.6	13.2	25.6	45	78.3	58.6
9	Jharkhand	32.97	2.72	2.04	943	25.6	45.3	56.5	44	47.6	24.9
10	Karnataka	61.13	5.05	1.47	943	19.5	33.4	37.6	41	72	71.6
11	Kerala	33.39	2.76	0.48	959	14.7	19.7	22.9	12	82.1	99.4
12	Madhya Pradesh	72.60	6.00	1.87	912	27.7	48.6	60	67	61.4	49.9
13	Maharashtra	112.37	9.29	1.49	883	17.6	38.1	37	31	84.7	69.2
14	Odisha	41.95	3.47	1.32	934	21	57.2	40.7	65	66.5	50.8
15	Punjab	27.70	2.29	1.3	846	17	20.9	24.9	38	78	76.9
16	Rajasthan	68.62	5.67	1.96	883	27.2	34.4	39.9	59	42.7	52.6
17	Tamil Nadu	72.14	5.96	1.46	946	16.3	28.9	29.8	28	92.5	95.5
18	Uttar Pradesh	199.58	16.49	1.85	899	28.7	40.9	42.5	63	37.7	30
19	West Bengal	91.35	7.55	1.31	950	17.2	34.3	38.7	33	74.7	51.6
	Smaller States	32.85	2.71								
1	Arunachal Pradesh	1.38	0.11	2.3	960	21.1	31.1	32.5	32	38.3	48.8
2	Goa	1.46	0.12	0.79	920	13.5	25.0	25	11	91.2	96.6
3	Himachal Pradesh	6.86	0.57	1.21	906	17.2	22.9	36.6	45	86.3	50.9
4	Manipur	2.72	0.22	1.72	934	15.4	38.0	22.1	16	52.8	55.3
5	Meghalaya	2.96	0.24	2.49	970	24.4	16.1	48.8	59	43.8	28.9
6	Mizoram	1.09	0.09	2.07	971	17.6	15.3	19.9	36	69.5	63.3
7	Nagaland	1.98	0.16	-0.05	944	17.2	9.0	25.2	26	27.3	NA
8	Sikkim	0.61	0.05	1.17	944	18.1	31.1	19.7	34	83.1	56
9	Tripura	3.67	0.30	1.39	953	14.8	40.6	39.6	31	59.9	47.2
10	Uttarakhand	10.12	0.84	1.77	886	19.7	32.7	38	41	71.6	35.2
	Union Territories	3.33	0.28								
1	Andaman & Nico.	0.38	0.03	0.65	966	16.3	NA	NA	27	NA	77.4
2	Chandigarh	1.05	0.09	1.59	867	15.9	NA	NA	25	NA	81
3	Dadra & N. Haveli	0.34	0.03	4.51	924	27	NA	NA	37	NA	45.4
4	Daman & Diu	0.24	0.02	4.38	909	19.2	NA	NA	24	NA	69.2
5	Lakshadweep	0.06	0.01	0.61	908	15	NA	NA	25	NA	95.7
6	Puducherry	1.24	0.10	2.48	965	16.5	NA	NA	22	NA	99.2

Source: Census 2011, SRS Bulletin, Vol. 45(1), January, 2011, National Family Health Survey (NFHS-3), Vol. 1, Page 273, Page 231, Household and Family Survey, 2007-08, Page -70.

NA – Data Not Available

FAMILY PLANNING: MATERNAL & CHILD HEALTH ISSUES

There is an urgent need for the XII Five Year Plan to further accelerate the stabilization of India's population by repositioning family planning within the broader framework of reproductive health and primary healthcare, delaying age at marriage and motherhood, spacing births and expanding options for reproductive health. India has a long history in addressing the population question. Beginning with the launch of largely clinic-based National Family Planning programme in 1952, the latest National Population policy (NPP) of 2000 is much more embedded in the empowerment and reproductive rights. An important landmark in the evolution of India's population policy was the establishment in 1966 of a fully fledged Department of Family Planning within the Ministry of Health. However, the global obsession at that time with numbers and targets triggered by the pessimistic forecasts of a 'population explosion' by the Club of Rome and others had an adverse impact on India's family planning programme. The programme became 'centrally sponsored'; financial incentives were introduced for sterilization acceptors; and sterilization was made target-oriented. The compulsory and coercive nature of the programme during 1975 and 1976 made it highly unpopular.

(Muttreja, 2011) An effort was made to correct the situation in 1977 beginning with the rechristening of the Department of Family Planning as the Department of Family Welfare and advocating voluntary acceptance of contraceptive targets without any coercion. Progress was however slow during the 1980s. The 1990s witnessed several shifts in policy especially after the 1994 International Conference on Population and Development (ICPD) when the focus shifted to a target free community based approach. India's NPP 2000 states in no uncertain terms that stabilizing population is not merely a question of making reproductive health services available, accessible and affordable, but also increasing the coverage and outreach of primary and Secondary education extending basic amenities like sanitation, safe drinking water, housing and empowering women with enhanced access to education and employment. India's sustained efforts over the years to achieve population stabilization are finally beginning to yield the desired results. Preliminary results from the Census 2011 reveal several positive trends in India's population growth:

- 2001-2011 is the first decade (with exception of 1911-1921) when the absolute increase in population over the ten-year period has been less than in the previous decade.
- The percentage decadal growth during 2001-2011 has recorded the sharpest decline since independence.
- The average exponential growth rate for 2001-2011 has declined to 1. 64 percent down from 1.97 percent for 1991-2001.
- Fifteen states and Union Territories have grown by less than 1.5 percent per annum between the years 2001-2011 as against only four states during the previous decade.
- The growth rate of population has fallen significantly, perhaps for the first time, in the Eight Empowered Action Group (EAG) states (Bihar, Chhattisgarh, Jharkhand, Rajasthan, Madhya Pradesh, Odisha, Utter Pradesh and Uttarakhand) that have traditionally reported higher than the average rates of fertility and population growth.
- The percentage growth rates of the six most populous states – Utter Pradesh, Maharashtra, Bihar, West Bengal, Andhra Pradesh and Madhya Pradesh – have all fallen during 2001-2011 compared to 1991- 2001.

Despite the many achievements on the population front, many worry, somewhat unnecessarily, about the 'serious problem of rising numbers' and the lack of conviction to contain or stabilize India's population. (Muttreja, 2011) While it is theoretically accepted that family planning cannot be treated as a vertical programme, in practice it continues to be so with very little attention to quality of care. Despite clear evidence that population momentum is the greatest driver of population growth in India, there is continued reliance on the old belief that 'control' approaches with targets, incentives, and distinctiveness work. There are some who disregard the evidence and advocate for strict population control strategies. Some even suggest that India should adopt China's one child policy, ignoring the overflowing evidence on the negative consequences that China confronts today. However, things are changing not only because of the focus of major international donors but also because of the domestic estimate, where the Government of India recently restarted the National Commission on Population (NCP) after a five year gap, with the specific aim of revisiting and repositioning family planning in India.

FAMILY PLANNING REPOSITIONING

On repositioning of family planning need to be strongly grounded in the principles of Human Rights (that respect the dignity of human lives) and ethics (that offer a normative basis for ensuring that rights are not violated). Unfortunately, understanding of the policy and programmatic implications of these two perspectives remains poor. The inclusion of the key principles of a rights based approach viz accountability, participation, transparency, empowerment, sustainability, and non-discrimination into all family planning strategies will ensure that 'people' are at the center of it all. A rights-based approach in the context of Maternal and Child Health will not only provide a conceptual framework but will also contribute directly to the achievement of the health related Millennium Development Goals (MDGs) i.e. reducing child mortality (MDG 4) and improving maternal health (MDG 5). Ultimately, women should be able to exercise their rights to participate in decision-making processes, including those affecting their sexual and reproductive health, family planning, contraception, pregnancy, childbirth, and in addressing unsafe abortion. Experience from across the world suggests that family planning can prevent as many as one in every three maternal deaths by enabling women to delay motherhood, space births, avoided unintended pregnancies and abortions, and stop childbearing when they have reached their desired family size. (Muttreja, 2011) Repositioning family planning is directly linked with advancing family planning on national, state, and community agendas, with a renewed emphasis on enhancing the visibility, availability, and quality of services provided for increased contraceptive use and healthy timing and spacing of births, and ultimately, improved quality of life. At national level, policymakers, donors, scientists, and business leaders ought to create or support budget line items dedicated to family planning, enact supportive family planning laws and policies, participate in multi-sectoral partnerships, and publicly demonstrate their support for family planning. At local level, it means that community leaders should educate and mobilize families, providers should offer reproductive health and family planning counseling and referral with skill, enthusiasm, and consistency, and informed clients should act effectively on their desire to delay, space or limit childbearing. (Muttreja, 2011)

CORE STRATEGIES OF POPULATION CONTROL

Repositioning family planning calls for addressing the three main drivers of population growth. Core interventions with appropriate mechanisms can bring changes for the attainment of the Millennium Development Goals (MDGs).

(i) Population Momentum:

Population momentum accounts for approximately two thirds of the projected population increase. It can be slowed down mainly by delaying age at marriage and child bearing in women. A shocking 47.4% of Indian women aged 20-24 years were married by the age of 18; the proportion was 69% in Bihar and 63.2% in Jharkhand. Early marriage is associated with early and repeated pregnancies, and contributes to maternal and infant morbidity and mortality greatly compromising both women's children's health.

(ii) Unmet Need

Unmet need is a disconnect between a woman's desired fertility and her access to family planning services. It is expected to contribute to approximately 20% of projected population growth. It is as high as 22.8% in Bihar and 23.1% in Jharkhand. Interestingly even though 83% of women with two or more children do not want any more children, only 48.5% use modern family planning methods. Unmet need can be addressed by increasing the supply of quality family planning services and contraceptives.

(iii) High Desired Fertility

This is caused by several factors; including parents giving birth to more children than they actually want to compensate for high rates of infant mortality; the low status of women, the limited voice that women have in family and fertility decisions as well as a strong preference for sons. The mounting pressures of modern society to have a small family combined with a strong preference for sons often leads to female feticide or sex selective abortion. Both high desired fertility and population momentum can be addressed by interventions that stimulate a demand for contraception, such as interventions that promote social norms around small families, delayed age at marriage, and delayed child birth.

Repositioning family planning in the context of maternal and child health can be made possible only when the three drivers of population growth are addressed effectively and an attempt is made to shift ('reposition') the discourse from 'population control' to 'population stabilization.' This can be achieved by focusing on five key focus areas: delaying age at marriage; delaying age at first pregnancy; promoting spacing between births; improving quality of care of family planning and reproductive health (RH) programmes; and prevention of sex selection. A critical starting point is to focus on women and children and to ensure that all children have access to quality health care; and adolescents and women have additional access to quality reproductive health care. A woman's health directly influences the health and development of her child. A vicious cycle of malnutrition is created if nutrition before and during pregnancy is not taken care of. A stunted child becomes a small mother, a small mother gives birth to a small baby, small babies grow less, and girls who grow less becomes small mothers, and vicious cycle continues. Society and policy makers need to view health, and particularly reproductive health, within the holistic life cycle approach. This discrimination against girls and women that begins in infancy determines the trajectory of their lives. Neglect of education and appropriate health care arises in childhood and adolescence. These continues to be issues in the reproductive years, along with family planning, sexually transmitted diseases and reproductive tract infections, adequate nutrition and care in pregnancy, and the social status of women and concerns about cervical and breast cancer. Unwanted

pregnancies may lead to unsafe abortions, child neglect, malnutrition, disease, and social problems. (Muttreja, 2011) This implies ensuring effective contraceptive advice and availability of young people approach puberty and during their reproductive years. Increased public dialogue among a wide range of stakeholders, developed or modified relevant policy, better and more efficient service provision and programme implementation and families taking control of decision making around their health should be the envisaged outputs. At the national level population stabilization should be viewed from the population momentum perspective, looking in a particular at delaying the age of marriage and thereby of childbearing. At the state level unmet need and high desired fertility should be addressed through increasing people's access to quality family planning services as well as by investing in education and health services which would impact services social norms and awareness around the benefits of smaller families. And at the community level, individuals, families (including male members), and members of the large community should engage activity in the enhancement of their health as well as in community monitoring of services, as it is recognized that lack of proper involvement of local communities in the implementation of programmes has been identified as a principal reason for the low accountability in the system.

(iv) Future Perspective

Working with people is critical as India looks ahead to reposition family planning and make the most of the demographic advantage of having young population that it enjoys. It is all the more important to focus on young people as almost one-third of India's population is between the ages of 10-24 years. The need for effective family planning has never been greater than it is today, as the largest group of people in Indian history move through their reproductive years. Access to quality family planning is not only a human right, it is critical to individual and family health and well-being, and to the country's economic development. Urgently needed are advocacy initiatives that concentrate on viewing health and particularly reproductive health within the holistic life cycle approach; call for an end to discriminate against girls and women; emphasize importance of education and appropriate healthcare in childhood and adolescence; campaign against unwanted pregnancies as they lead to unsafe abortions; that address child neglect, malnutrition, disease, and social problems; give effective contraceptive advice and promote improved services especially better quality access to timely and responsive health services. (Muttreja, 2011) Ultimately it is only by repositioning family planning within a rights based framework can India ensure planned and healthier families, a positive outcome for every pregnancy, and most importantly, that every child is wanted as well as a healthy child.

CENSUS FURTHER YEARS TO GO

The Indian census has not been a mere statistical operation and the data collected is not only properly scrutinized at different levels but also presented with cross classification of various parameters for interpretation and analysis in an interesting manner. It may be seen from the history of Indian Census that how the changes have taken place from one census to other depending upon the need of the time, country and also demand of the data users and development of the technology. The Indian census is well recognized for the data it reveals. Problems relating to political, social and cultural reasons also make it challenging. In spite of all these difficulties, the Census of India is being conducted since 1871 uninterruptedly. With a largely young population, problems associated with ageing of population may not appear urgency for the country. Nevertheless, the problem needs to be tackled with advance planning. While the going is still good, India needs to look into the future and plan how it will take care of its elderly in the years to come.

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EMERGING SME CLUSTERS IN INDIA – A STUDY

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ABSTRACT

The paper examines the role of SME clusters in the development of the SMEs of India. It starts with historically; clustering is a known phenomenon in Indian context and has played a significant role in the nation's industrial growth and diversification and now the evolving phase of the same. Study includes the origin of cluster and how this approach concept was introduced in Indian context with the recent emerging trends of New SME clusters. The scope of study is confined to India's emerging new trends in SME cluster but its substantial contribution to the IIP-industrial output & production & overall GDP. The genesis of cluster development was brought into limelight by GoI who had constituted an Expert Committee on Small Enterprises in 1996 and UNIDO along with Ministry of Small Scale Industries who successfully implemented this concept. So the government – tariff rebates, subsidies boosting this sector & commercial banks how they also help in funding aspects. For the analysis part of the report two distinct clusters were studied. The sector chosen was the auto components sector. This industry is dominated by SMEs. Under this, Pune cluster was analysed. Key findings would include like private players constitute the majority in the ownership with 41% of the companies. Majority of the exports are to the American market. The challenges faced by them include infrastructure, power supply, labour unavailability, increasing tariffs and further on. Other sector under study is IT/ITes of Bangalore which has brought India on global platform by Bangalore being deemed as Silicon Valley. The key findings include how tax holidays, global IT companies venturing in this city, better infrastructure & climatic conditions being contributing more & more this sector to grow here. This is a descriptive & analytical study based on secondary data.

KEYWORDS
Clusters, Emerging Market, Industrial Growth, IT & ITES, SME.

INTRODUCTION

HISTORY

"Clustering" as an engine of growth was noticed internationally in the well-networked clusters in developed countries especially in Italy. This realization has led to increase interest and research in clustering as well as attend to replicate through planned intervention in the developing countries including India.

The concept of cluster must have emerged from the well known maxim "birds of same feather, flock together". The process of clustering envisages coming together and acquiring some sense of economies of scale as well as acquisition of competitive advantage**. Clusters** are agglomerations of interconnected companies and associated institutions. Firms in a cluster produce similar or related goods or services and are supported by a range of dedicated institutions located in spatial proximity, such as business associations or training and technical assistance providers. Cluster is a sector and geographic concentration of MSMEs faced with common opportunities and threats. The genesis of cluster development was brought into limelight by Govt of India, who constituted an Expert Committee on Small Enterprises in 1996 headed by Prof Abid Hussain. He therefore, propagated the concept of clusters as it would be the centrepiece of the new approach wherein the public private partnership would provide strong support systems for small scale enterprises.

The Ministry of Small Scale Industries, Government of India through its successful collaborative effort with UNIDO and also independently on its own initiated and completed a series of cluster development initiatives with a holistic approach all over the country. Keeping in view this Ministry had started with the adoption of 21 clusters across the country under "Small Industries Cluster Development Programme". The objectives of the cluster approach is to cover a comprehensive range of issues related to technology upgradation, quality improvement, improvement on productivity, product diversification, skilled upgradation, market development, export market etc.

In both industrialized and developing countries there is increasing awareness that isolation, rather than size, is the key obstacle, preventing SMEs boost their competitiveness. Groups of firms located in close proximity (also known as clusters) have proved to be capable of rapid economic growth, sustainable leadership in export markets, significant employment generation and/or preservation of high-value-added jobs, sustained technological progress. Evidence from both developed and developing countries testifies to the unique opportunity that SME cluster development provides for reconciling the objective of economic development, environmental sustainability and social equity.

In the many dynamic clusters to be found around the world, these features are the outcome of the co-operative linkages both between local firms and among local firms and business partners (such as suppliers of plant & machinery, producers of raw materials, testing laboratories, financial institutions, industrial associations; technical and management consultancy organisations, training institutions and local government agencies).

Unfortunately, in many developing countries, cooperation within clusters is hard to find. Very low levels of trust, latent conflicts, and absence of suitable discussion foray are the unequivocal markers of an "under-performing" cluster. Reverting under-performance requires prolonged efforts (sensitisation, trust building, conflict resolution, etc…) that the private sector will not undertake without some outside facilitation and support from government. The external assistance of a development institution, based on public-private sector partnership, can therefore greatly facilitate the organization and development of "underachieving" SME clusters.

The competitiveness of firms not only depends on the functioning of suppliers and buyers within a cluster, but also and often most importantly, on the entire chain at the national and global level. The value chain approach helps to identify all the enterprises that contribute to the production of a good or service within and beyond a cluster and shows which actions are needed to support these enterprises.

Against this background, UNIDO has developed since 1993 an approach to help governments and the private sector to co-operate in the design and implementation of programs to support "underachieving" SME clusters. The program draws lessons from the experience of successful clusters and UNIDO's technical co-operation projects in many developing countries such as India, Pakistan, Thailand, Honduras, Jamaica, Mexico, Nicaragua, Morocco, Nigeria, Senegal, Tunisia and Zimbabwe.

SME – SMALL & MEDIUM ENTERPRISE & CLUSTER - DEFINITONS & CONCEPTS

Micro, Small and Medium Enterprises Development Act 2006 (India) defines Micro, Small and Medium Enterprises based on:
(a) Investment in Plant and Machinery in respect of manufacturing enterprises, and
(b) Cost of equipments in respect of Service Enterprises

CLASSIFICATIONS	MFG / SERVICE	INVESTMENT IN PLANT & MACHINERY / EQUIPMENTS
MICRO LEVEL – I	MANUFACTURING	Up to Rs.5 lacs
	SERVICE	Up to Rs.2 lacs
MICRO LEVEL – II	MANUFACTURING	Rs.5 lacs to Rs.25 lacs
	SERVICE	Rs.2 lacs to Rs.10 lacs
SMALL ENTERPRISES	MANUFACTURING	Rs.25 lacs to Rs.500 lacs
	SERVICE	Rs.10 lacs to Rs.200 lacs
MEDIUM ENTERPRISES	MANUFACTURING	Rs.500 lacs to Rs.1000 lacs
	SERVICE	Rs.200 lacs to Rs.500 lacs

CLUSTERS IN INDIA

A cluster is a sector targeted geographical concentration of micro and/ or small & medium enterprises (MSMEs/MSMEs), service providers and institutions faced with common opportunities and threats. In other words, a cluster of MSMEs is a concentration of economic enterprises, producing a typical product/service or a complementary range of products/services within a geographical area. The location of such enterprises can span over a few villages, a town or a city and its surrounding areas. Thus a cluster of MSMEs, hereafter referred to as "cluster", is identified by the 'product/service' that the micro and small enterprises produce and the 'place' where the enterprises are located. Foundation for MSME Clusters assists institutions in undertaking cluster based local area development, effectively and inclusively in developing and transition economies.

FEATURES OF CLUSTER

- Give rise to collective benefits, for example through the spontaneous inflow of suppliers of raw materials, components and machinery or the availability of workers with sector specific skills.
- Favour the creation of providers of specialised technical,administrative and financial services.
- Create conducive environment for the development of inter-firm co-operation as well as of co-operation among public and private institutions to promote local production, innovation and collective learning.

CLUSTERS: SOME FACTS

- Around 636 SME (industrial) and 6000 artisan/micro enterprises clusters are estimated to exist in India.
- The micro and SME clusters in India are estimated to have a significantly high share in employment generation.

INITIATIVES

There have been various initiatives undertaken by the government. One such was recently sanctioned by the Cabinet Committee on Economic Affairs (CCEA). It aimed at enhanced allocation for the implementation of the Micro and Small Enterprises-Cluster Development Programme (MSE-CDP), which has been designed for the development of SMEs in the country.

This has been given approval so as to it can facilitate small enterprises with opportunities to increase production, improve competitiveness and step-up exports.

Approval of modifications in the guidelines of the SME cluster programme will include more small enterprises for developmental interventions, thereby enabling them to raise productivity, increase turnover, besides helping them create more jobs and enhance exports," said an official statement issued after the CCEA meeting. A sum of Rs 303.63 crore has already been earmarked by the government for the implementation of the SME Cluster Development Programme in the Eleventh Five Year Plan Period (2007-12).Moreover, maximum project cost for the establishment of a Common Facility Centre (CFC) for SMEs has been increased from Rs 10 crore to Rs 15 crore, while project cost for soft interventions and infrastructure development has also been raised.

In a recent article, given in igovernment, the government of India has identified more than 3000 SME clusters of artisan-specific, village and small enterprises in the country and has taken up 1,150 such clusters for intervention and improvement

It has also been said that efforts would be made to undertake a programme for "Twinning" of Indian SME clusters with similar SME clusters in Italy. As the Micro SME sector forms an intergral part of the industrial resurgence of India the credit policy has helped in linking the Indian MSMEs with almost 55,000 bank branches and has given loan of over $55 billion.

SME IN INDIA

The number of SMEs in India is estimated to be around 13 million while the estimated employment provided by this sector is over 31 million. The SME sector accounts for about 45 per cent of the manufacturing output and over 40 per cent of the national exports of the country.

THE ROLE OF SME SECTOR IN NATION DEVELOPMENT

Small and Medium Enterprises play a vital role for the growth of Indian economy by contributing 45% of the industrial output, 40% of exports, 42 million in employment, create one million jobs every year and produces more than 8000 quality products for the Indian and international markets. As a result, MSMEs are today exposed to greater opportunities for expansion and diversification across the sectors.

The Indian market is growing rapidly and Indian industry is making remarkable progress in various Industries like Manufacturing, Precision Engineering, Food Processing, Aviation, Pharmaceuticals, Textile & Garments, Retail, IT, Agro and Service sectors. SMEs are finding increasing opportunities to enhance their business activities in core sectors.

KEY CHALLENGES TO SME SECTOR

Problems are there but if the sort out solution also is not implemented then it becomes even bigger problem. Despite its commendable contribution to the Nation's economy, MSME Sector does not get the required support from the concerned Government Departments, Banking Sector, Financial Institutions and Corporate Sector, which is a handicap in becoming more competitive in the National and International Markets and which needs to be taken up for immediate and proper redressal. MSME sector faces a number of problems - absence of adequate and timely banking finance, limited knowledge and non-availability of suitable technology, low production capacity, ineffective marketing and identification of new markets, constraints on modernisation and expansions, non availability of highly skilled labour at affordable cost, follow up with various agencies in solving regular activities and lack of interaction with government agencies on various matters.

IMPACT OF RECESSION

The Indian SME was pretty much insulated from the recession due to the fact that they did not have any capital expenditure or big spends. Nevertheless, many were affected on account of serious fall in number of customers, order quantities and values coupled with increasing difficulties in managing international customers and increased competition from other low cost producing nations during such time.

However, most industries including major SME clusters experienced serious fall in number of customers, order quantities and values coupled with increasing difficulties in managing international customers and increased competition from other low cost producing nations since the economic crisis set in late last year. Another article said some 5 lakhs units were under deep peril.

Talking about the textile industry, it was the first industry that came out of recession. The stimulus package which was announced within 72 hours during recession helped the industry to weather the storm of recession. Since this industry is labour intensive sector it gives livelihood to lakhs of workers who would have gone under BPL if the matter was not controlled.

According to a survey by Plantronics, a hardware company based in California, more than 7,000 SMEs have shut shop in Taiwan over the past two years on account of shrinking demand. Two out of three SMEs are likely to cut their financial turnover within the next six months while three out of 10 are expecting to fail by autumn 2009.

LITERATURE REVIEW

Fabio Russo, through this article talks about the importance of cluster development. According to the evidence the SME are in a better position while operating in organized clusters and have demonstrated to be particularly innovative and able to compete successfully in the global economy.Various efforts of UNIDO have been mentioned. The article focuses on cluster programme in India. It highlights and suggests the role of an "external agent" which can act as a catalyst to facilitate the emergence of cluster. The article also provides bird's eye view regarding the problem faced by these clusters and also the appropriate solutions to them.

SOURCE: Fabil Russo (July 1999) "Strengthening Indian SME Cluster UNIDO's Experience", Project: US/GLO/95/144

According to an article in tradeindia.com clusters have played a key role for the survival and excellence of small and medium enterprises. It has lead to them achieving national and international standard in cost, quality and delivery. But still there is immense scope so as to regulate the cluster development. The council had decided to give high priority to sectors such as leather and footwear, textile and garments, auto components and electronics. The core problems that were identified were the need to upgrade technology and provide them services at affordable cost. The other problem was the mounting imports from China which had increased from Rs. 9000 crores in 2003 to Rs. 125000 in the year 2007. The area of concern here was that about 75% of these imports were goods manufactured in India by SMEs.

SOURCE: Financial Express, "Clusters essential for SMEs' survival: govt."

The author of this article focuses on the key markets of the textile industry. These constitute mainly the US, UK and Europe. Due to the mounting recession the Indian SME textile were eyeing emerging markets such as Japan, South Africa and the Middle East. There had been drastic fall in the volumes of quantity ordered. These factors were coupled with the hostile trading conditions, protectionism practiced by the US and the European countries. Targeting such markets would not be a child's play as the SME would need to modify their conventional business models and aim at maintaining high quality standards to carve a niche in such emerging market.

SOURCE: MSME (2009), "Japan calling Tirupur Textile SME Exporters"

Wani, V.P. (1993) conducted a study on "Quality Consciousness in Small Scale Sector". According to him Small Scale Entrepreneurs should be quality conscious about their product. Today productivity means goods of better quality at less cost, which has less chance of rejection, good profitability with less alteration.

Chadha Vikram (1995) found that the use of outdated technology by SSI Units is the critical obstacle in the way of growth and modernization of the small industries. Small Industries can be modernized by improving productivity, enhancing quality, reducing cost and restructuring product mix through up-gradation of technology and enlarging the skill of the workers. The liberal fiscal and monetary incentive should be given to these units so that they can carry out R & D particularly in technology intensive industry.

The author in this article propagates the use of ICTs (Information and Communication Technologies), into the working of the SMEs. They are regarded as generic and very pervasive technologies. It can be used in varied activities such as inventory management, production processes, and marketing and support services.

This particular article highlights the importance of the SME sector. Shri Montek Singh Ahluwalia had rightly said that, if India wants to achieve a GDP growth of 8.5%, then focus must be towards the SME Sector. The three important factors which are infrastructure, access to Capital and skill development needs prime attention in order to empower and support the SME which are the backbone of the Indian Economy. SMEs play an important role as a growth engine of the Indian economy by putting efforts to achieve 9% growth, contribute 40% of the total industrial output, 34% of the export and employ 30 million people and adding 1 million jobs in year. The government has been working to provide the additional capacity of power. Talking about access to capital, there has been a surge in modes of disbursements of funds. There are a number venture capital funds and private equity operations available including investors from abroad. A regulated capital market also shows that the Indian fundamentals are on a strong footing. Government has also taken initiatives to set up "Skill Development Council", which will provide assistance in enhancing the skills.

SOURCE: Conclave on "Empowering India SME's for 2020 - Opportunities and Challenges" - August 23, 2008

D & B SME Cluster Series – 2009 (Bengaluru) –(Survey report)

D & B SME Cluster Series along with IDBI – 2008 and also Report of 2009 (PUNE) –(Survey report)

NEED FOR STUDY

SME is one such vehicle which covers a huge geographic spread and includes many people under its gamut. Stating some facts, the number of SMEs in India is estimated to be around 13 million which provides employment to over 31 million people. The SME sector accounts for about 45 per cent of the manufacturing output and over 40 per cent of the national exports of the country. As SME is an integral part of our economy, through this study attempts will be made to highlight the growth and also contribution of the SME with specific reference to the clusters. The study pertaining to the Emerging trends in this sector in India need more emphasis as this sector if given push can contribute further to growth and intensification of Industrial output as well. The study can bring in new areas where SME & cluster development so that further boost in terms of policy framework and better understanding to focus on for future growth scenarios.

RESEARCH OBJECTIVE

- To get an insight into the working of the SME through the cluster development. This approach has been adopted from Italy as they were the pioneers.
- To study the impact of recession on the Indian SME- how they were affected and the measures taken up by them to counter this problem
- Various initiatives undertaken by the Government to enhance and develop the Indian SME and also towards cluster development.
- To study about Pune – SME Cluster of Automotive industry and IT/ITes – Bangalore Cluster

DATA AND METHODOLOGY

DATA COLLECTION

The report has been compiled using of the secondary data. No primary source was used due to the nature of the research done. Data was gathered using different sources out of which internet formed the major source. Various government websites along with research papers were referred.

METHODOLOGY

The methodology involved the extensive study of the Indian SME along with the cluster development approach which was incorporated. Attempts have been made to study two different clusters pertaining to different sectors, spread across different geographic area.

It is viewpoint based and Analytical study

In IT/ITes we have studied the Bangalore, Karnataka (State)

- Role of state government in boosting this sector
- Nature of the type of companies setting up their facilities – BPO/KPO/LPO & so on

Coming to the auto components cluster, Pune cluster was chosen for the study and it consists of-:

- Overview of the SME auto component sector
- Pune Cluster with details on different parameters.

LIMITATIONS

- Only few clusters upcoming / growing sectors could be examined
- No personal interaction with the cluster studied as the report was drafted using primarily the secondary source of data
- Unavailability of the latest statistics

SCOPE FOR FURTHER STUDY

- In order to get in an in-depth knowledge more clusters across varied sectors should be studied
- An analysis of the Indian SME should be done vis-à-vis global context & specially other Emerging markets comparison is again further required

BANGALORE IT/ITes CLUSTER OVERVIEW

Bengaluru is situated in south east Karnataka and is the capital of the state. It is the fifth largest metropolitan area in India and is also known as the IT capital of India. In 1986, the state government bifurcated Bengaluru district into Bengaluru urban and Bengaluru rural for better administration and governance. Bengaluru urban area is spread across 2190 sq km and the latter is spread across 5815 sq km. In FY07, the GDP of Bengaluru at Rs. 591.23 billion accounted for 29.4% of the GDP of the state, which was Rs. 2009.22 bn. The population of Bengaluru, which was 6.53 mn in the Census 2001, is expected to reach 8.9 mn by 2011.

TABLE 1: BENGALURU – BASIC STATISTICS

	Population	Literates	Literacy Rate (%)
Male	3426599	2663055	87.92
Female	3110525	2119510	77.48
Total	6537124	4782565	82.96

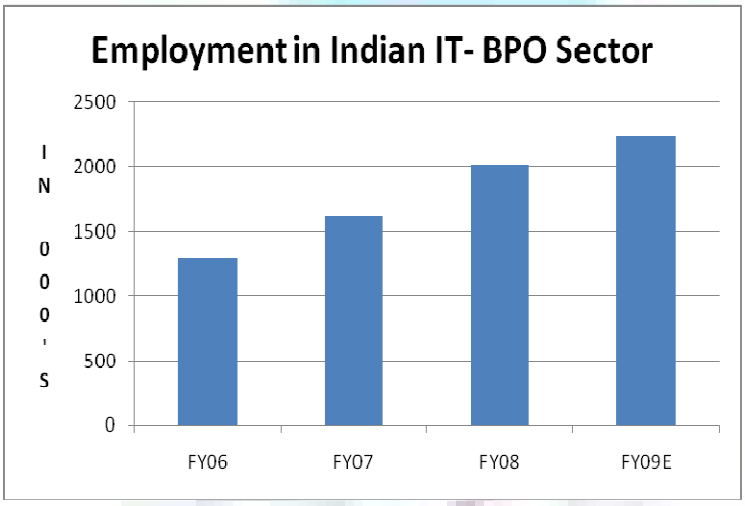
Source: census 2001

EMPLOYMENT STATISTICS

Acceding to the fifth economic Census 2005 data on employment, Bengaluru employed 1.29 mn persons across various sectors and accounted for 19.66% of the total persons employed in the state.

The number of persons employed in the Indian IT – BPO sector grew from 1.3 mnn in FY06 to 2.0 mn in FY08 at a CAGR of 24.7% and this number is expected to grow up to 2.2 mn in FY09, according to NASSCOM. According to the Department of IT, BT, and S&T of the Karnataka government, Bengaluru employs 550000 IT professionals, who form 1/3 rd of the total IT professionals in India. Further, the potential for employment in the IT sector of Karnataka is expected to reach 1 mn by 2010, according to these departments.

CHART 1



Source: NASSCOM

GOVERNMENT INITIATIVES

Karnataka was the first state to announce an IT Policy in 1997, and this initiative acted as an important catalyst for the growth of the IT industry in the state and particularly in the city. The government undertook the following initiatives under this policy:

- Incentives were offered in areas of cost of land, registration charges, FAR zonal regulations for companies that created employment in the IT industry. New companies that provide employment to more than 250 persons in Bengaluru and 100 persons in other areas are also eligible for these concessions.
- Some other state level incentives were: entry tax exemption, power tariff concession and quick clearance from the Pollution Control Board.
- The government established the STPI, Electronic City and ITPL at Whitefield. This nodal agency for the software industry provides ready office space for IT industries.
- In the State Budget 2009-10, Rs 30 bn was allocated for the development of Bengaluru city.

KARNATAKA INDUSTRIAL POLICY 2009-2014

In 2009 the Karnataka government came out with a new industrial policy for 2009 -2014. Under this policy, Bengaluru district was divided into four zones: Anekal, Bengaluru (North), Bengaluru (South), Bengaluru (East) for administering packages of incentives and concessions. Some important policy measures announced by the government under this policy are:

- Development of sector –wise industrial zones for optimal utilisation of local naturals and human resource to minimise migration of people to urban centres.
- To provide world class infrastructure to investors like all weather road, uninterrupted power supply, adeqaute water, warehouse and logistics facilities, and connectivity through railways/ports. This sort of ready to use infrastructure enables investors to operate on a plug and play concept.
- Simplification of land acquisition procedures with emphasis on inclusive development.
- Initiatives of the investors in developing private industrial areas/ estates either in PPP mode/ individual entrepreneurs/ companies/ co-operatives will be encouraged with a supportive package.

SPECIAL ECONOMIC ZONES: CATALYST OF GROWTH

SEZs have played a major role in the development of small industries across all sectors in the country. As on June 2009 there were a total of 322 notified SEZs, 578 formally approved SEZs and 146 SEZs having in principle approval in India. The IT/ ITeS sector accounted 61% of the formally approved SEZs.

These SEZs have created innumerable benefits to the industry in terms of bringing in more exports, creating employment and ensuring infrastructure development. The total exports of the IT/ITeS SEZs in Karnataka are estimated at Rs. 18.39 mn for FY09 as compared to the actual export revenue of Rs. 12.45 bn in the previous year. As on March 2008, the total employment (includes direct and indirect) in the IT/ITeS SEZs was 49878 and accounted for over 90% of the total persons employed in SEZs across all sectors in the state. The various incentives offered by the central and the state government to set up units in SEZs are as follows:

- Duty-free import/domestic procurement of goods for development, operation and maintenance of SEZ units.
- 100% income tax exemption on export income for SEZ units for the first 5 years; 50% for the next years thereafter, and 50% of the ploughed back export profit for the next 5 years.
- Exemption from minimum alternate tax.
- ECB by SEZ units up to US$ 500mn in a year without any maturity restriction through recognised banking channels.
- Reinvestment Allowance to the extent of 50% of ploughed back profits.

CLUSTER TRENDS

Here we understand with the functioning of the small and medium enterprises (SME) in the ITes industry in Bangalore and the operational structure and business practices of these SMEs. The IT/ITeS Industry in Bangalore is considered to be the headquarters of the Indian IT/ITeS industry and most of the industry majors like Infosys, Wipro, Accenture, IBM are present in the city.

In line with the vision to make Bangalore the Silicon Valley of the East, the Karnataka government has provided good infrastructure to the global IT and ITeS players by establishing IT parks such as STPI, the ITPL and Electronic city. Bangalore based ITeS companies provide a whole gamut of services from voice and non-voice customer support and verification to high-end research and analytics work.

CLUSTER DYNAMICS

The following key reasons ensure Bangalore's popularity as the IT/ITeS hub:

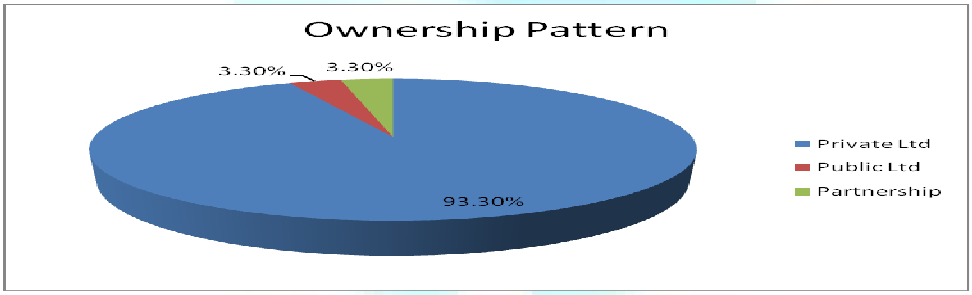
1. Abundance of good quality higher education institutes
2. An intelligent and young population & very techie skilled population
3. Good infrastructure in terms of road and power supply
4. Well established IT parks to set up business – SEZ benefits
5. State government initiatives - Business friendly government policies
6. Well established presence of Indian and global IT companies in the city

(D&B Survey Report – SME Cluster series 2009) As mentioned above the information on this part of study pertaining to the IT/ITes & BPO SME sector of Bangalore, Dun & Bradstreet (D&B) conducted a sample survey of 30 companies that earned a total income of less than Rs10million in the year ended March 2009.

OPERATIONAL HIGHLIGHTS

Most SME companies in the ITes/BPO sector in Bengaluru that participated in the survey invest limited capital in plant and machinery; according to the surveyed companies have investments below Rs. 1 mn in machinery, as most offices use computers and other facilities on a long-term lease basis to keep their operational costs low.

CHART 2



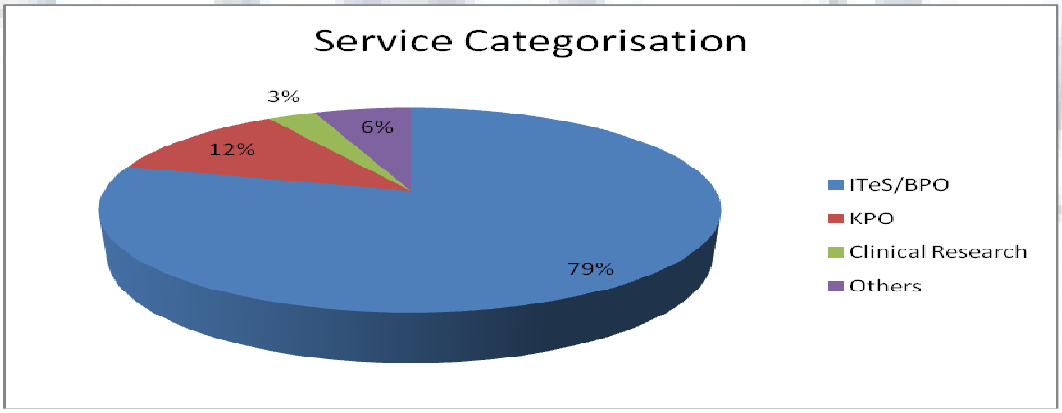
Source: D&B Survey Report – SME Cluster series 2009

Over 93% of the companies operating in Bengaluru in the SME ITeS/BPO sector are private limited companies. A majority of these companies were started by first-time businessman. Further, over 95% companies had a total income below Rs 5mn as on March 2009.

QUALITY CERTIFICATIONS

Quality certifications play an important part in the ITeS/BPO industry, however, the survey revealed that majority of the participatory companies were yet to be accredited with any quality certification; in fact, only 33% companies had met the certification requirements such as the Health Insurance Portability and Accountability Act(HIPAA) and ISO.

CHART 3

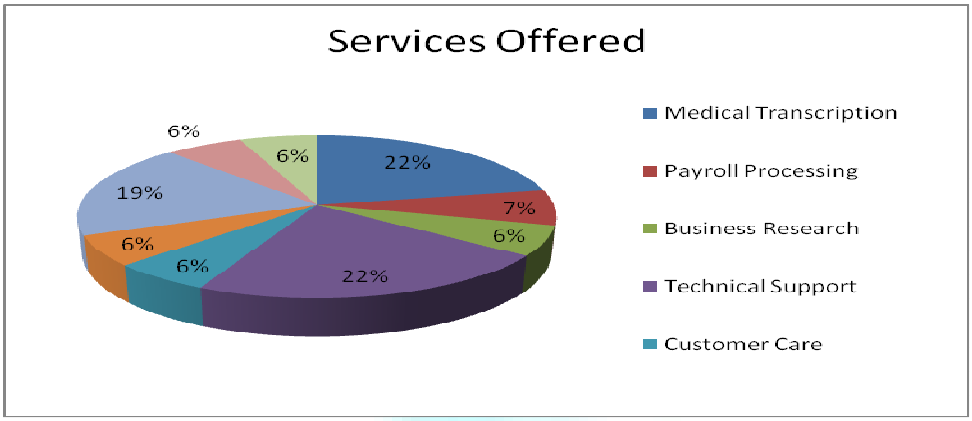


Source: D&B Survey Report – SME Cluster series 2009

Traditional BPO services emerged as the most popular service line (79%share) in the total range of services offered. These include medical transcription, technical support. Document management, payroll processing and customer care. KPO (12% share) and clinical research (3% share) are the other prominent

services. Due to increasing competition and the constant pressure on margins, analytical work, such as KPO and clinical research, have gained popularity as these services are offered at substantially higher price points.

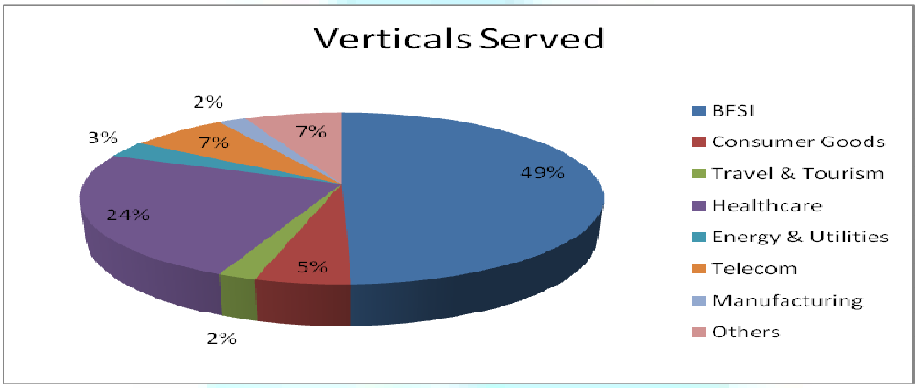
CHART 4



Source: D&B Survey Report – SME Cluster series 2009

On a cumulative basis, medical transcription and technical support services turned out to be the most sought after services offered by the ITeS/BPO SMEs (22% of the surveyed companies provided these services) and document management services emerged as the second most sought after19%.

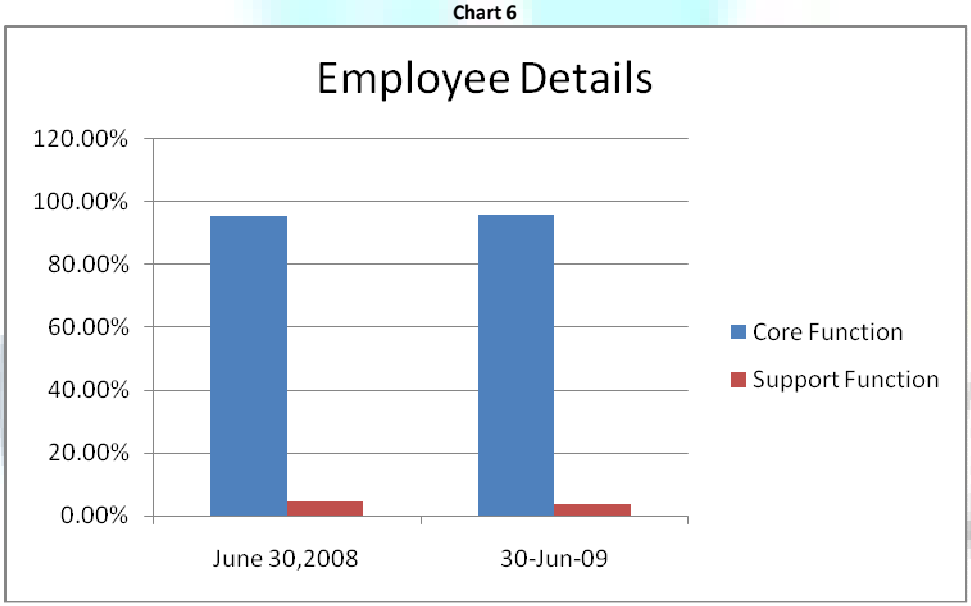
CHART 5



Source: D&B Survey Report – SME Cluster series 2009

The BFSI vertical emerged as the most favoured vertical as it had a 49% share among all the verticals served by the surveyed companies. The healthcare and telecom sectors, which have been growing at an impressive rate, are fast emerging as the other favoured verticals.

Chart 6



Source: D&B Survey Report – SME Cluster series 2009

The economic recession & downturn for the Indian IT seemed to have affected employees deployed in support departments such as HR, finance and IT more than the ones employed in core ITeS functions. The strength of employees in the support staff decreased by a remarkable 14.0% which is alarming to know.

AUTO INDUSTRY STRUCTURE – INDIA AS A WHOLE

The robust growth in the overall GDP rate can easily be related to the industrial output growing at a faster pace in which we understand the contribution of auto & its components remains as huge. The total turnover of the Indian auto components industry grew at a CAGR of 27.23% during FY03-FY08 and reached US$ 18 bn by FY08. This growth was achieved due to the increase in the standard of living and income levels, and reduction in tariff on imports. Another major reason for the growth was the rising demand from the automobile industry, which has a direct relationship with the auto components industry. The turnover of the auto components industry grew rapidly in the past 6 years. After growing at a CAGR of around 27.23% during FY03-FY08, the industry is expected to register a

turnover of US$ 18.7 bn by FY10. The Indian auto components industry is extensive and highly-fragmented, diversified & heterogenous depending on the needs of each disperse geographical area. According to the Department of Heavy Industries, there are more than 400 large firms in the organised segment of the industry who cater largely to the OEMs and there are another 10,000 firms in the unorganised segment of the industry that operate in a tier-format — the firms in this segment operate in low-technology products and cater to tier I and tier II suppliers apart from the replacement market.

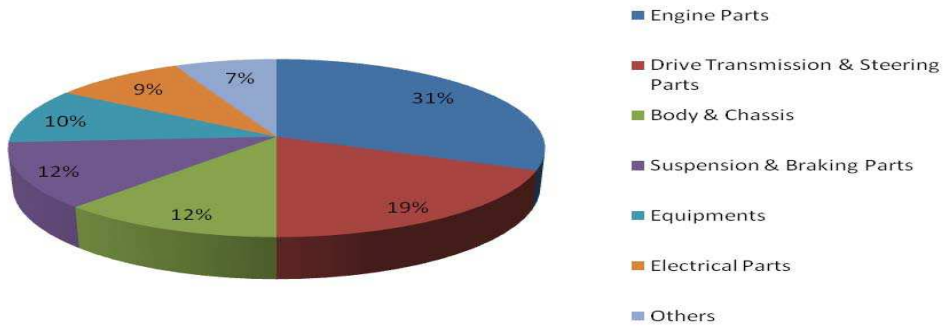
PUNE SME CLUSTER - AUTOMOTIVE COMPONENTS

STRUCTURE

The Indian auto components industry has evolved over a period of time from being a domestic supplier of low-value auto components to a sought-after hub for a variety of critical and high-end auto parts. Today, India has the potential to manufacture nearly 20,000 kinds of auto components ranging from engine parts, fasteners to brakes. According to the Auto Component Manufacturers Association of India (ACMA), the Indian auto components industry, currently worth US$ 10 billion, has the potential to grow to a US$ 40 billion industry over the next decade.

PRODUCT SEGMENTATION

CHART 7



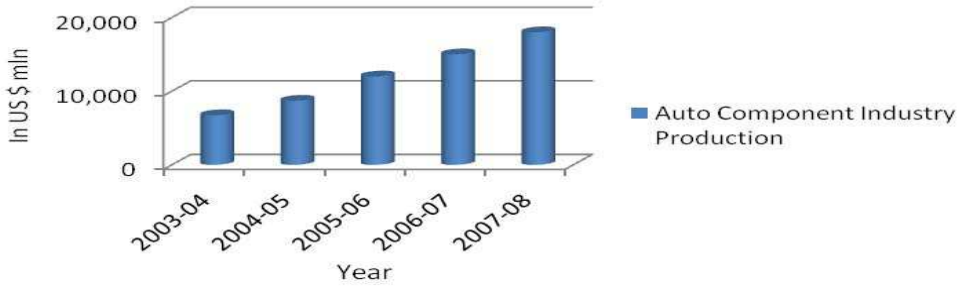
Source: ACMA - Auto Component Manufacturers Association of India

FEATURES

The auto components industry is dominated by SMEs which are largely grouped together in clusters, notably in Indore in Central India, Jamshedpur-Kolkata in the East, Pune in the West, Manesar in the North and Chennai in South India.

AUTO COMPONENT INDUSTRY

CHART 8



Source: ACMA - Auto Component Manufacturers Association of India

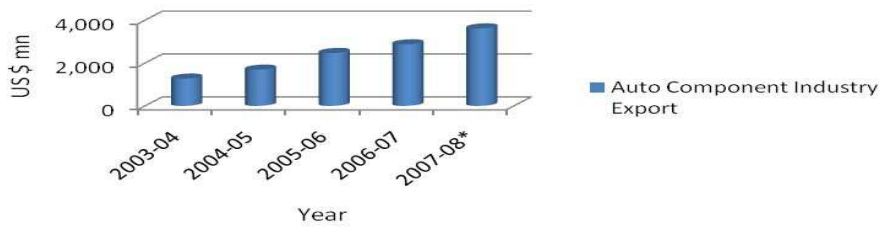
PRODUCTION

The SMEs no longer have an India-centric approach, adopted in the early years of liberalisation, but have started collaborating with foreign players for technology and skills, while also looking for potential overseas markets.

- North India is emerging as an important hub for SMEs and accounts for almost 35 per cent of exports of this sector.
- The Pune Auto cluster, in particular, is projected to export goods worth US$ 8 billion by 2015.
- According to the Commerce Ministry, almost 50 per cent companies in this sector have achieved a 95 per cent increase in inventory turnover ratio, aided by Kaizen driven cost-effective measures.
- During the 2000 to 2005 period, the rate of growth of exports stood at 25 per cent. It is expected to go up to a CAGR of 34 per cent during the period from 2006 to 2014.
- Lack of proper infrastructure and insufficient IT-enabled units are hampering the growth of the sector. Therefore, India accounts for only 0.4 per cent of the global auto components trade of US$ 185 billion.

AUTO COMPONENT INDUSTRY EXPORT

CHART 9



Source: ACMA - Auto Component Manufacturers Association of India

GOVERNMENT (NATIONAL & MAHARASHTRA) POLICY INITIATIVES

The National Strategy for Manufacturing, drawn by NMCC, has identified the automobiles and auto components sector as one of the areas for priority action. The Department of Heavy Industries and Public Enterprise of the Government of India aims to make India a preferred destination for the design and manufacture of automotives and auto components. 'Automotive Mission Plan 2006-16' seeks to double the contribution of the automotives sector in the GDP from 5 per cent in 2006 to 10 per cent by 2016; offer additional employment to 25 million people and take the output of this sector to US$ 145 billion by 2016. The government allows 100 per cent foreign direct investment (FDI) through the automatic route.

Apart from this, the government's Industrial Infrastructure Upgradation Scheme offers a grant of up to 75 per cent of the total project cost or a maximum of US$ 12 million (whichever is lesser) on a one-time basis to chosen clusters for improving industrial infrastructure through private-public partnership. Special Purpose Vehicle (SPV), formed by the industry/cluster association at the specific cluster level has the authority to implement the scheme. One of the first to benefit from this scheme was the Pune Auto cluster, which was granted a total project cost of around US$ 14.41 million during 2004-5, of which the centre was scheduled to contribute nearly US$ 12.02 million.

Recognising the growing importance of clusters in the Indian auto component industry, the Department of Heavy Industries and Public Enterprises of Government of India plans to:

- Strengthen the export, communication and transportation infrastructure in and around important clusters.
- Set up relevant governmental Institutes, research and educational facilities to serve the growing requirements of the auto components sector.
- Create a National Level Specialized Education and Training Institute for Automotive Sector during the Eleventh Five-Year Plan period.

FUTURE OPPORTUNITIES

India now ranks amongst the most preferred destinations for most of the major global car manufacturers. The country holds huge potential in the automobile sector and the automobile component sector due to the technical, cost and manpower advantage it offers. The country has inexpensive but skilled manpower, local availability of most raw materials, expansive coverage of institutional and credit facilities across the country and industry-favourable government policies. Apart from these, the growing purchasing power of a rapidly-expanding Indian middle class is driving up the demand for automobiles, thus boosting the prospects of auto component SMEs.

According to Nasscom, to attain sustainable growth, the auto component firms should enhance productivity throughout the manufacturing value chain via continuous technological innovation, upgradation and best-of-breed manufacturing practices. The Indian auto components sector is poised to vroom ahead.

According to ACMA, in North India alone, SME sector covers over 63 percent of the entire industry. The important clusters in automotive sector are:-

TABLE 2

SL No.	Cluster Location	State	Product Segment
1	Vijayawada	Andhra Pradesh	Auto Components
2	Chennai	Tamil Nadu	Auto Components
3	Ahmednagar	Maharashtra	Auto Components
4	Adityapur	Jamshedpur, Jharkhand	Auto Components
5	Faridabad	Haryana	Auto Components
6	Gurgaon	Haryana	Auto Components
7	Ludhiana	Punjab	Auto Components
8	Pithampur	Amravati, Maharashtra	Auto Components
9	Pune	Maharashtra	Auto Components
10	Ahmedabad	Gujarat	Auto Components
11	Coimbatore	Tamil Nadu	Diesel Engines
12	Kolhapur	Maharashtra	Diesel Engines
13	Phagwara	Kapurthala Punjab	Diesel Engines
14	Rajkot	Gujarat	Diesel Engines

Source: ACMA

BACKGROUND OF STATE (MAHARASHTRA) & CITY (PUNE) STATISTICS

Pune's development can be mainly attributed to the auto sector. . Auto sectors and auto component sectors gather around 50% of the total investments coming into this region. The Pune auto components cluster consists of around 500 SMEs. Of these, 25% firms are exporters, while 10% firms fall under the medium enterprise category. The cluster caters to both the Original Equipment Manufacturers (OEM) as well as the replacement market. The annual turnover of the cluster is around INR 10,000 crores (Excluding automobile majors like Bajaj Auto, Bajaj Tempo, Kinetic Engineering & Tata Motors.) The key competitive strength of the Pune auto components cluster is the Pune-Mumbai knowledge corridor and the presence of established automobile manufacturers at Pune, Nashik, Aurangabad and Nagpur. Besides, the strong presence of the engineering sector, and local availability of large skilled labor base adds to the cluster's economic strengths.

The major products from the Pune cluster are clutch components, gear components, brake components, shafts, axles, valves, engine components, electrical components, etc. The cluster uses raw materials like rubber, plastic and metals. There are many support institutions for the cluster from educational sector, research sector, IT sector and more.

Through the following data attempts have been made to understand how the small and medium enterprises (SME) operate in the auto components and electronic goods in the Pune cluster; likewise, it attempts to chart the operational structure, and the business practices of SMEs.

Pune is a manufacturing hub for auto components besides being a preferred destination for the IT sector. The cluster has been able to attract investments due to its proximity to Mumbai, its availability of well-qualified, talented professionals and abundant, skilled IT manpower.

In fact, the Pune cluster is often referred to as the Detroit of the East, considering the concentration and growth of the automobile and auto ancillary industries in the cluster. Many important global majors like General Motors, Volkswagen, JCB and Ford (to name a few) are present within this cluster

The Government of Maharashtra has decided to construct a six-lane highway to connect Talegaon, Chakan and Ranjangaon with Pune to improve the city's infrastructure.

CURRENT STATUS OF INFORMATION COMMUNICATION AND TECHNOLOGY

It has been observed that Tier I suppliers at the Pune cluster are providing greater emphasis on e-business intervention in their business planning through demand Planning & management, engineering design, and procurement and are into heavy investments to support their e-business plans. However, ICT absorption for Tier II & III suppliers is generally low end with computers used for Accounts, Stores & Order acceptance and delivery related activities. The existing ERP systems supplied by the local ISVs were found unable to meet the emerging changes in the market by most players, who are therefore now looking to upgrade their ERP. It has been found that ICT awareness among units in the cluster is quite high. Most office computers are networked and internet connectivity easily available with many ISPs offering broadband services.

ACTION PLAN

The action plan to improve the ICT engineered competitiveness of the cluster includes action at two fronts, i.e., improving the overall software eco system at the cluster level, and secondly, firm level initiatives in order to induce the SMEs for a higher level absorption. There has been huge demand for the ICT because of the important role it provides in terms of improving information sourcing related to technology/ market, improving customer relations, reducing communication time, research and development, improving production efficiency & quality, and reducing product delivery time to the market. The general consensus in the cluster is that considering emerging market developments, functional automation and cross functional process integration is the need of the hour.

INSTITUTIONAL SUPPORT

There are a quiet a few support institutions present in the cluster. They come from various technical aspects such as education, management, computer technology and applications, research institutes, and associations. A list of the same is given below:

- Auto Cluster Development and Research Institute limited
- Maharashtra Industrial Development Corporation
- Software Technology Park of India
- Centre for Development of Advanced Computing
- Maharashtra State Financial Corporation (MSFC)
- City and Industrial Development Corporation Of Maharashtra Limited (CIDCO)
- Maharashtra Small Scale Industries Development Corporation Ltd. (MSSIDC)
- Maharashtra Centre For Entrepreneurship Development (MCED)
- Vehicles Research & Development Establishment, Ahmednagar

CHALLENGES

The major problem that the cluster faces is that of infrastructure. Lack of proper power facilities is a big constraint faced by the cluster.

There are a few issues which restrain India from attaining the status of other global players. Despite being around 60 years old, the domestic auto industry lags behind other countries like South Korea, Brazil and Mexico in terms of production and sales. This makes it difficult for companies to invest extensively in R&D, a key competitive tool in the global market.

Countries like China and Thailand might put a spanner in the domestic industry's wheels as they are capable of beating India at its own game, that of low cost. The growing number of FTAs (Free Trade Agreements) that are being signed by India with countries like Thailand, Singapore, China etc is likely to hurt the domestic players as they pay a relatively higher duty of around 25% as compared to 1%-10% being paid by its Asian counterparts. Other reasons include higher tariffs and resistance to IT.

PROJECT VIKAS INITIATIVES

Project Vikas has planned a number of initiatives to tackle these challenges. Under the project, sensitisation programs are being conducted to help enterprises understand how the challenges before them can be well addressed through use of ICTs.

Project Vikas is also in the process of setting up an e-Readiness Centre in the cluster. Training programmes for the local independent software vendors are being conducted. Workshops for the CxOs and Directors of enterprises on ICT training are also being conducted. Workforce training programmes are also planned.

To enable business development of the enterprises, Project Vikas has envisaged a Web portal which would enable these businesses to connect with other business, and help them find customers as well.

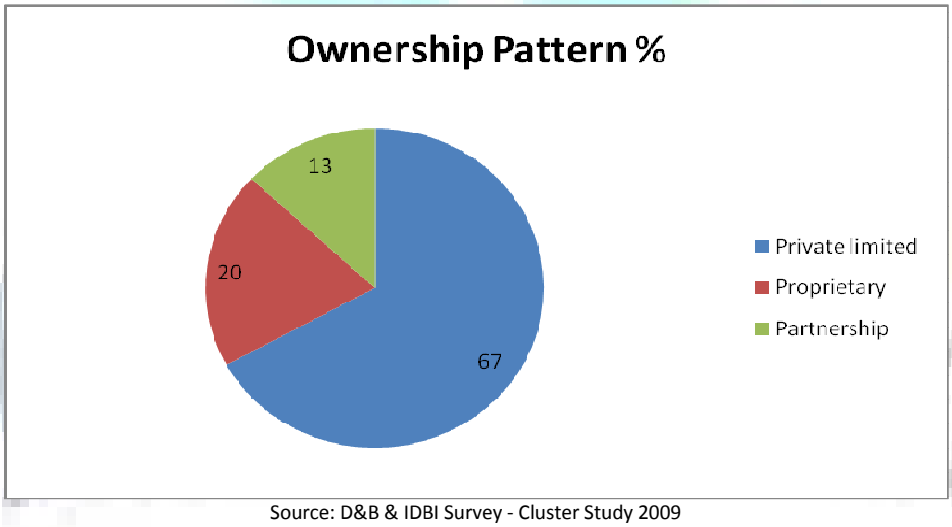
KEY FINDINGS

Some major highlights from the study of auto component companies based in Pune are as follows:- (This is a Survey of SMEs and related associations by local representatives of IDBI Bank servicing the Pune cluster conducted along with D&B: Undertaken through in depth interviews) - **D&B & IDBI SME Cluster Series 2009- PUNE**

OWNERSHIP PATTERN

The ownership pattern of Pune-based auto component companies is largely dominated by private players forming 67% of the entire sample, followed by proprietary and partnership firms that accounted for 20% and 13%, respectively.

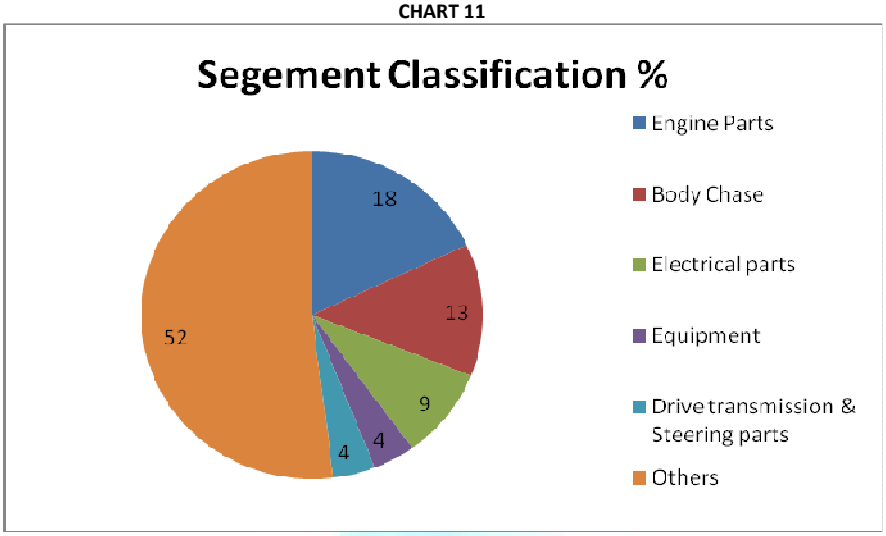
CHART 10



Source: D&B & IDBI Survey - Cluster Study 2009

The ownership pattern when compared to the IT/ITes of Bangalore it was 93% private where as the Pune cluster has substantial public participation as well. Further, there is a high concentration of auto components manufacturing companies in the cluster that cater to both OEMs and replacement markets. While around 55% of private limited companies cater to OEMs, 66% of proprietary firms are vendors for both OEMs and the aftermarket segments.

CHART 11



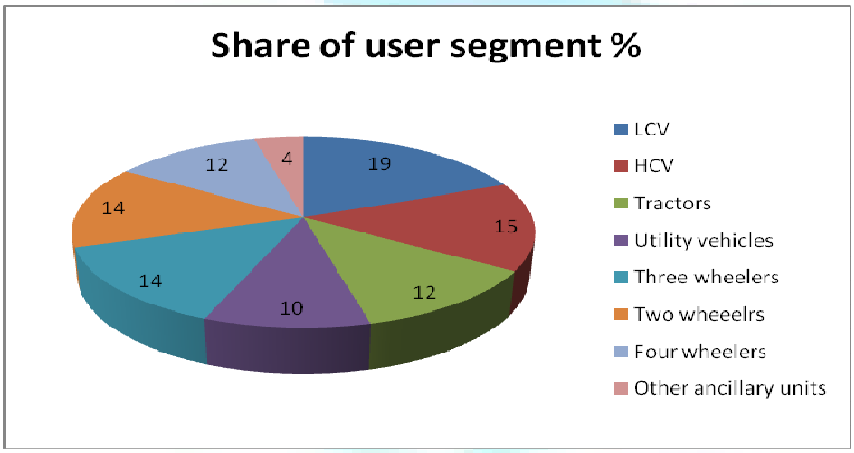
Source: D&B & IDBI Survey - Cluster Study 2009

We try to look at the diverse types of offerings in the automotive sector. It is highly heterogeneous when it comes to Pune, due to the diverse type of automotive manufacturer's bases in this location which are leading global players. More than half of the companies studied produce components like hydraulic power and pneumatic clamping parts, lighting system for automobiles, air induction system and many more. OEMs account for majority of the demand for body chassis and engine parts; among the companies that produce engine parts, almost 50% cater to OEMs while the remaining 50% serve both OEMs and the replacement market.

USER SEGMENTS

Auto components companies in the Pune cluster have slowly transformed from being a supply destination for low-value auto components, to being a hub for a variety of critical and high-end auto parts that cater to multiple sub-segments of the auto industry. A look into the segments served, revealed that LCVs have a 19% share in the total target market served by the companies, followed by HCVs that have a 15% share. Both three-wheelers and two-wheelers have 14% share each.

CHART 12

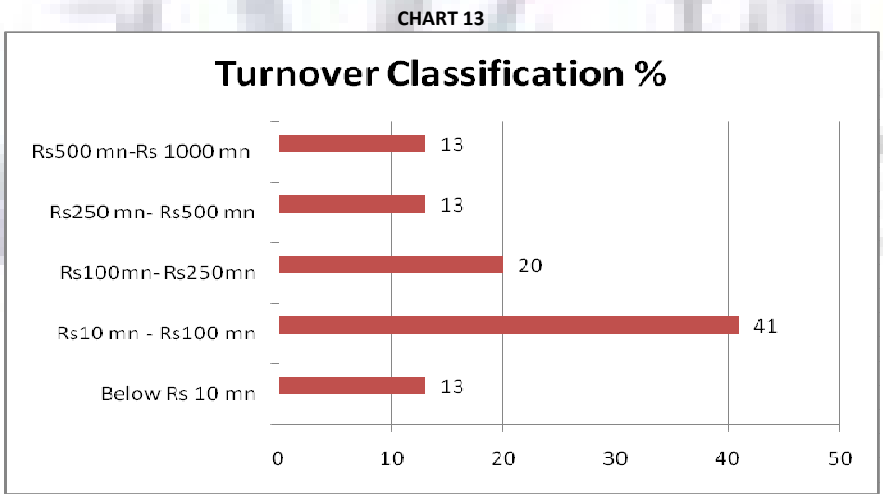


Source: D&B & IDBI Survey - Cluster Study 2009

TURNOVER CLASSIFICATION

From the chart below it can be seen that, around 41% of the surveyed companies registered a turnover in the Rs 10 mn - Rs 100 mn range and 20% had a turnover between Rs 100 mn–Rs 250 mn.

CHART 13

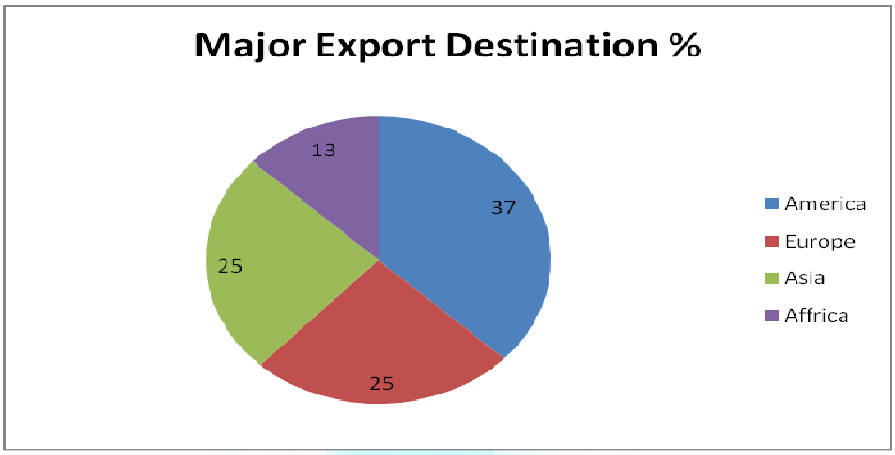


Source: D&B & IDBI Survey - Cluster Study 2009

EXPORTS

Almost 27% of the companies in the study were engaged in exports. Majority of the companies export to the American countries; Europe and Asia (excluding Middle East) is the second most popular export destination.

CHART 14



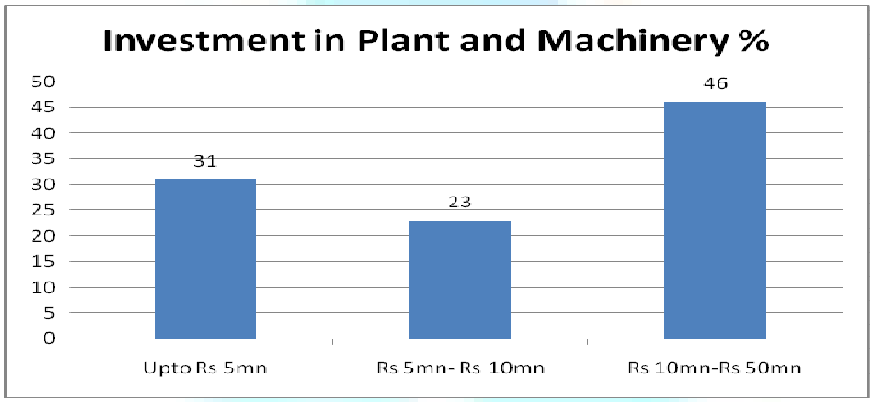
Source: D&B & IDBI Survey - Cluster Study 2009

PRODUCTION DETAILS

Majority of the auto components companies in Pune use automatic and semi-automatic machines for their production processes.

Investments in Plant & Machinery:- It was found that, 46% of the auto components companies in the cluster invest between Rs 10 mn - Rs 50 mn in plant and machinery.

CHART 15



Source: D&B & IDBI Survey - Cluster Study 2009

IT ADOPTION AMONG SMEs

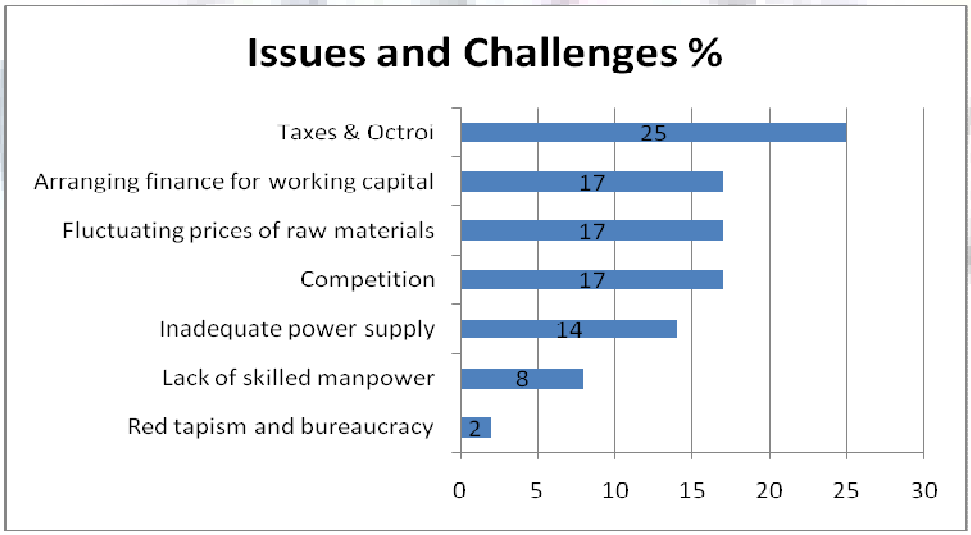
From the study it was understood that IT adoption was gaining wide acceptance among the auto components manufacturers that were operating across Pune and about 80% of the surveyed SMEs implemented IT processes in their businesses.

Hardware especially desktops, printers and scanners had a majority share in the IT budget of the SMEs. Software applications like ERP, accounts software and CNC were a few of the widely-adopted IT applications among auto components producers.

Going forward, SMEs need to focus on establishing a prompt delivery culture with the help of technology to achieve long-term, sustained growth and to combat tough competition from other clusters and from global players. In the coming years, most auto components manufacturers expect to reasonably increase their IT budgets. The need of the hour is to focus on competitiveness by aligning the IT expenditure with the business objectives.

ISSUES AND CHALLENGES

CHART 16



Source: D&B & IDBI Survey - Cluster Study 2009

Tax evasion becomes very common when it comes to SMEs because of their smaller earnings levels and non availability of funds. In terms of challenges confronting the industry, the auto components industry in Pune is found to be mostly affected by the taxes and octroi charges levied by the government, which hike up the companies' operational costs.
In terms of the competitive landscape, China comes as major competition, as it has an edge over the Indian industry with its good infrastructure and cheap raw materials and most important now leading the entire globe with it high penetration in all sectors. s
Another difficulty that the players in the cluster is the time taken for arranging working capital funds, which leaves almost no room for strategic planning and for building growth avenues.

AUTO COMPONENT CLUSTER

The various factors that have led to the spurt in the growth of the auto components industry are:-

- Economic upward trend, due to increasing purchasing power of the mass & class.
- Increasing demand for vehicles.
- Stable economic policies adopted by successive Governments.
- Availability of low cost skilled manpower.
- High quality standards, requirements.
- Proximity to key markets of the world.
- Growth forecasts as per Automotive Mission Plan.

PROBLEMS

- Increasing competition if it is healthy then it increases productivity but at the SME level it ruins the market share for smaller participants.
- The cluster faces main problem in the taxes and octroi charges levied by the government, which results in increasing the operational cost.
- Another major challenge that it possess is the severe competition from China, as the latter has an edge in terms of cheap raw materials.
- Lack of proper infrastructure and also poor power facilities.
- Since India imposes high duty of around 25% compared to its Asian counterparts, the Indian SMEs are at a competitive disadvantage.

SUGGESTIONS

- Government should contribute more subsidies and funding should be properly disbursed to reach grass root level SMEs.
- State government can provide better infrastructure so that more & more global players can come start funding these cluster SMEs
- FDI/FII investment in this sector can bring robust growth
- IT/ITes & Auto Sector specific most important suggestion is providing more conducive environment to the global players for venture capital funding in these clusters - like reduction of bureaucratic structures, government procedures to be simplified, some state /municipal level assistance can augment these sectors
- Sperate stock exchange for SME (already in pipeline) should be well brought into full swing to get better funding
- Subsidies / grants can be better mode to give a push to this sector
- Labour friendly laws, implementation and finally direct state involvement like including in priority sector in bank for funds availability and also unions strikes & other problems can be avoided
- Joint network building by state governments , cooperatives and companies can be better way to have common platform for networking and functioning
- Regulatory & mandatory disclosure can helped this to be more standardised & structured.
- Auto component industry has main problem on octroi & taxes being on higher side which manifest further to tax evasion. So there should be some consideration like banking sector gives in terms of Priority sector lending. Government should have some specific well structured tax system for SMEs.
- The sick companies growing in SME & SME cluster base being on higher side their should be some better rehabilitation process which is faster and better to restructure & revive the sick SMEs.
- Lastly but not the least the process of rehabilitation should be closely monitored to avoid hostile acquisitions of the SMEs

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NEED FOR CREDIT SCORING IN MICRO-FINANCE: LITERATURE REVIEW

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ABSTRACT

Poverty alleviation has been one of the most important objectives of development planning in India. Various approaches to alleviate poverty have been undertaken by the Government of India since independence especially from Fourth Five Year plan (1969-74) onward. The approach has been mainly dominated by many subsidy linked credit for income generating activities to poor. Lending to poor involves various risks and in particular risk of default. Credit risk is one of the most important risks to be addressed by any lender. An effective method of credit scoring and information sharing can greatly increase the speed of loan processing and reduce the cost & delinquency of microloans. The paper draws insight on various factors affecting recovery of microloans and highlights benefits & issues of implementing credit scoring system & credit information bureau.

KEYWORDS

Credit, Micro-finance, Poverty alleviation.

INTRODUCTION

POVERTY ALLEVIATION SCHEMES

Growth with social justice has been the basic objective of development planning in India since independence. There have been several initiatives to tackle the problem of poverty since the early 1950s [1]. Formulation of specific programmes for poverty alleviation began from the first Five-Year Plan period in the 1950s. A majority of rural development programmes introduced up to 1979 in India were, piecemeal, target driven or sectoral in nature. With a view to overcoming these drawbacks a comprehensive and holistic self-employment programme, called the Integrated Rural Development Programme to bring poor people above poverty line was introduced for the first time in the country in 1979.

The strategies & approaches for poverty alleviation deployed over the period are summarized in the Table 1 below:

TABLE 1: POVERTY ALLEVIATION STRATEGIES ACROSS TIME [2]

Period	Dominant Development Paradigm	Poverty Alleviation Strategies & Approaches
1950s	Growth through industrialization	Community development Programme
1960s	Agriculture intensification, Human capital development	Trickle-down Approach
1970s	Redistribution with growth	Basic needs, Integrated Rural Development Programme
1980s	Structural adjustments, private	Growth, human resource development, safety nets, Non Governmental Organizations (NGOs) driven
1990s	Human development, growth	Labour-intensive growth, human resources development of the poor, targeted programmes and safety nets
2000s	Pro-poor economic growth	Facilitating opportunity, promoting empowerment, enhancing security

Many studies have reported that the evil of corruption has become deeply entrenched in the Integrated Rural Development Programme (IRDP). Even the late Rajiv Gandhi, during his tenure as the Prime Minister, had observed that out of every rupee spent on rural development, only 15 paise reached the intended beneficiary [2]. The proportion of people below the poverty line (BPL) declined perceptively in the late 1970s and 1980s from 51% in 1977-78 to 39% in 1987-88. Yet there are 267 million poor who lived below a dollar a day in 2005. It is not just income growth alone that has brought about poverty reduction through the trickle down process. There have been direct interventions too in a major way for poverty alleviation in India [3]. Although growth is important for reducing chronic poverty, targeted anti-poverty programmes have a crucial role in reducing risk and vulnerability and increasing incomes of the chronic poor [4].

Considering the capital as scarce resource, the Indian economy has pursued planned approach to achieve overall development. One of the major goals was to achieve minimum level of living standard and to make available the basic needs, be it financial, social or physical. The poverty alleviation programme, thus, became integral part of the Government Policy. The Government launched a drive to reduce poverty by introducing various programmes viz. IRDP, Development of Women and Children in Rural Areas (DWCRA), Training of Rural Youth for Self Employment (TRYSEM) etc. Later, implementing the recommendation of S. R. Hashmi Committee report, IRDP and its five allied programmes were restructured and redesigned into single micro-finance driven self-employment programme called SGSY (Swarnajayanti Gramin Swarozgar Yojna) on April 1, 1999. The programme design of SGSY emphasizes the linkages between banks and SHGs (Self Help Groups) with the subsidy as enabling element. With the implementation of SGSY the micro-finance has become synonymous with SHGs linkages with the banking. However it was much earlier during 1987, when an action research project on SHGs was started by MYRADA (Mysore Resettlement and Development Agency) with NABARD(National Bank for Agriculture and Rural Development) providing a research and development grant. Encouraged by the action research NABARD launched in 1991-92 a Pilot Project for linking 500 SHGs with banks [5]. Since then micro-finance in India has grown many-folds.

MICRO-FINANCE

During 1976, Muhammad Yunus, an economics professor in Bangladesh, dispensed a total of $27 in small loans to 42 impoverished people caught in the clutches of moneylenders. He formed Grameen Bank in 1983. Since then the bank has disbursed $66.4 billion till 2009 in microloans to people too poor, remote, or uncollateralized for traditional banks. Yunus didn't invent the field of micro-finance. Social cooperatives, credit unions, and other forms of collective lending had already existed in society. But he helped change the goal of what is now called as micro-finance. The goal became to help reduce poverty by providing credit and other financial services to the poor, and to do so commercially - that is, at a profit so that the overall enterprise could be financially sustainable.

Micro-finance is defined as provision of thrift, credit and other financial services and products of small amount to the poor in rural, semi-urban and urban areas for enabling them to raise their income levels and to improve their living standard. The basic idea of micro-finance is simple: if poor people are provided access to financial services they may be able to start or expand a micro-enterprise that will allow them to break out of poverty [6]. According to the Noble Committee, micro-finance can help to break out of poverty, which in turn is seen as important prerequisite to establish long lasting peace [7].

Given the rapid expansion of micro-credit, innovative tools like credit-scoring of borrowers along with information and communication technology (ICT) may help MFIs (Micro Finance Institutions)/ Banks to develop efficient credit delivery system so as to contribute as a change agent in the process of development in better, faster and economic ways.

CREDIT SCORING

Recovery of loan is a future event and has uncertainty associated with it and so is the case with loan default. Prediction of loan default has practical value and appears to be of paramount interest to every lender, especially if the ticket size of loan is small and the number of loans is quite large. Credit scoring is a statistical tool to analyze the characteristics and credit history of prospective borrowers to predict the performance of future loans. The credit scoring model helps micro-finance industry in the following manner:

i) Informed decision making for lending
ii) Inbuilt quantitative assessment
iii) Brings objectivity in pre-sanction appraisal
iv) Improved speed of disposal of loan applications
v) Reduces cost and facilitates risk based pricing

A credit rating is a summary indicator of risk for banks' individual credit exposures. Traditionally, most financial institutions relied mainly on subjective analysis or the so-called banker expert system to assess the credit risk of borrowers. Bank loan officers used information on various borrower characteristics like character of borrower (reputation), capital (leverage), capacity (volatility of earnings), collateral, and condition (macroeconomic cycle).

OBJECTIVE OF THE STUDY

- To study the factors affecting recovery in microfinance.
- To study the benefits of implementing credit scoring in microfinance.

LITERATURE REVIEW

Generally poverty is defined as an income (or more broadly welfare) level below a socially acceptable minimum and micro-finance as one of a range of innovative financial arrangements designed to attract the poor as either borrowers or savers [8].

Improvement in access to a broad range of financial services to manage price and other risks, with ease and at reasonable prices can have a strong welfare impact on the very poor. These financial services allow participants to smooth consumption across time and help them tide over the impact of adverse shocks during their life cycle and allow the participants to invest in and benefit from their skill sets [9]. Poor households that do join a microcredit program tend to have better access to insurance smoothening devices than those who do not. However the vulnerable poor may either choose not to join or they may be excluded by micro credit program due to higher default risk [10].

Access to affordable financial services - especially credit and insurance - enlarges livelihood opportunities and empowers the poor and aids to social and political stability. One of the ways in which access to formal banking services has been provided very successfully since the early 90s is through the linkage of Self Help Groups (SHGs) with banks. SHGs are groups of usually women who get together and pool their savings and give loans to members [11]. SHGs helped poor women to cultivate banking habits [12].

Though micro-finance encompasses all the services required by the poor people, till now excluded from the formal financial system, may it be credit , savings, insurance or other services, the term micro-finance has become a generic term for micro credit.

The exclusion of large numbers of the rural population from the formal banking sector may be for several reasons from the supply side, such as: persons are un-bankable in the evaluation/perception of bankers, loan amount being too small, distances are too long for servicing and supporting the accounts, high transaction costs , lack of collateral security, inability to evaluate and monitor cash flow cycles and repayment capacities, human resources related constraints , adverse security situation prevailing , lack of banking habits and credit culture, information-shadow geographical areas, and inadequacy of extension services which is crucial to improve the production efficiency of the farmers leading to better loan repayments. From the demand side, there are several reasons for the rural poor remaining excluded from the formal banking sector, such as : high transaction costs at the client level , documentation, lack of awareness, lack of social capital, non-availability of ideal products, very small volumes / size of transactions which are not encouraged by formal banking institutions, hassles related to documentation and procedures in the formal system, easy availability of timely and doorstep services from money lenders/informal sources and prior experience of rejection by/indifference of the formal banking system [13].

The dominant models of micro credit are:

- The SHG-bank linkage programme and
- The NGO/MFI model.

Other models include the cooperative model and the recent innovation of banks lending with the NGO/MFI as the administrative partner with risk sharing. An analysis of the trends in the SHG-Bank Linkage programme reveal that NGOs and other Self-Help Promoting Institutions (SHPIs) are gradually playing less of a financial intermediation role and limited to social mobilization which in turn affects their commercial effectiveness. Holistic approach of NGOs/MFIs are lacking for socio-economic development of borrowers. The emergence of MFIs and NGOs willing to facilitate financial intermediation presents an important opportunity for the accelerated delivery of insurance [14].

In order to reduce default rate i.e. credit risk, the borrowers as well as their project must be assessed in terms of credit worthiness & business risk. Assessment of the borrower may be on the basis of quantitative parameters or by subjective appraisal by the lender. The delivery models can be broadly classified into two categories- **group lending and lending to individual**. Individual lending needs more attention in selection of borrowers as the credit risk is dependent on the sole borrower. This risk sought to be minimized with the available collateral. Micro-finance borrowers in general lack collateral therefore group lending is preferred over individual lending. The role of collateral, as an asset whose potential loss motivates the borrower to proper behavior, is replaced by the reputation of the borrower as a solvent debtor [15]. Joint liability addresses four main problems namely **adverse selection, moral hazards, costly audits and enforcements**. The group lending has two opposite effects on repayments. The advantage is that they allow a member whose project yields very high returns to pay of the loan of a partner whose project does very badly. The disadvantage is that a moderately successful borrower may default on her own repayment because of burden of having her partner's loan. With sufficient social capital, a group enforces repayment better than would take place with individual liability [16].

Ahlin and Townsend [17] empirically found the support for the fact that repayment performance is negatively associated with higher levels of relatedness and sharing within groups and with higher levels of joint liability and is positively associated with the strength of local sanctions and with higher correlations between borrower return. They also found that social ties between group members are not necessarily positive in promoting repayment. Wydick [18] found evidence that the social ties within groups reduce pressure, the members put on each other to repay loans. If the members are more homogeneous they have lower incentives to screen, monitor and enforce each other and/or may start to collude against the program. Sharma and Zellar [19] show that repayment problems increase when there are more relatives in the same group. The findings of Karlan [20] show that peer lending programs can be more effective if groups are more concentrated geographically and have similar cultural background. However, complete homogeneity might result in collusive activities or may make punishment more difficult.

Theoretical models of group lending and peer pressure predict that peer monitoring will lead to more effective borrower-side sorting and higher borrower effort [21]. Since the borrowers are not required to put up collateral, the creation of joint liability is relied on to induce fairly subtle sanctions from fellow villagers that help to discipline borrowers. While it has advantages when serving the very poor, group lending is clearly not the only way for micro-finance to succeed in transition economies. The ability to secure collateral helps the individual-based programmes and the success of micro-finance programme in general, and of individual programme in particular, is also linked to particular methods of gathering information, monitoring loans and enforcing contracts [22].

Individual lending is feasible provided monitoring costs are not too large. The group lending has the risk of under-monitoring by group members. Thus though peer monitoring is cheaper, the borrowers may not monitor each other at all. Therefore, group lending should involve either sequential financing, or a combination of lender monitoring and joint liability [23].

Gine and Karlan [24] conducted a randomized control trial in which no difference in repayment of group borrower and individual was found. The existing literature on micro-finance focuses almost entirely on group lending, without paying much attention to individual-lending. In the light of the current move to individual-based lending system (even the most well-known examples of group-based lending, the Grameen bank and Bancasol now use individual-based models) this is bit surprising. However, until now there has been no systematic and rigorous comparison about performance of group-based versus individual-based micro-finance institutions [25].

Most models focus on explaining so-called joint liability group lending and its implications for reducing information asymmetries. Yet, there are only a few empirical studies investigating whether and how micro-finance helps to reduce existing information asymmetries in spite of the abundance of theoretical literature. There is a lack of systematic empirical analyses on the nature and determinants of the trade-off between financial sustainability and outreach of micro-finance programmes [7].

Scoring is another new (to microcredit) way to judge repayment risk. It detects historical links between repayment performance and the quantified characteristics of loan applications, and then—based on the characteristics of current applications—forecasts future repayment risk. Microlenders currently judge risk with subjective scoring and forecast repayment behaviour based on their quantified knowledge and qualitative characteristics of the client. Statistical scoring ignores everything but quantified characteristics, while subjective scoring focuses mostly on qualitative characteristics. In micro-credit statistical scoring and subjective scoring both complement each other. The benefits of scoring include reduced loan losses, greater client loyalty, and ability to adjust interest rates and fees according to risk (risk-based pricing). Most important, scoring can reduce time in collections and introduce the microlender to explicit, quantitative analysis as an aid to decision making by managers [26]. Scoring improves the efficiency of loan evaluations, recovery of arrears, and customer retention, frees staff to spend more time on the subjective "gray areas" of decision-making and offers a basis for variable pricing by including individual client risk in lending decisions [27]. Predictive power increases with the number of characteristics available. The output of scoring is a percentage, the predicted risk that a loan will go "bad" before it is repaid. Scoring can only work on average for a large group of loans [28].

For customers, good performance means repeated use. The repeated nature of the interactions and the credible threat to cut off any future lending when loans are not repaid can be exploited to overcome information problems and improve efficiency, whether lending is group-based or individual-based. [29]. Micro-finance clients at all poverty levels face frequent and wide ranging risks. The risk of default and losing access to a valued financial service can be compounded by the loss of self-esteem, confidence, and social assets [30]. Regardless of the client's poverty level, if the MFI does not take repayments seriously, borrowers certainly will not repay. as long as the problem clearly stems from an inability, rather than an unwillingness, to repay [31]. Luders and Osborne [32] (1996) looked into the issue of SHG longevity and the causes of group failure, while APMAS, a NGO [33] (2003) examined the differences between older and younger groups and found a cyclical pattern in group performance with groups younger than 4 years or older than 7 years displaying better performance in saving and credit behaviour than the middle-aged groups [34]. The characteristics of strong groups are homogeneity in economic status, affinity, migration & additional factors- trust building, ownership & autonomy, transparency & accountability and literacy [35].

Imperfect information about clients is all the more problematic that the poor lack credit history, track record and sometimes identification papers. Fighting loan delinquency is also a problem since the poor often lack collateral, are dispersed and remotely located [36]. Instead of relying on collateral, microlending primarily depends on good loan analysis of a client's character and capacity to repay, positive incentives for on-time repayment, and effective supervision and collections procedures [37]. Some publicly observable characteristics such as drinking habits, involvement in gambling etc. help predict creditworthiness. Formal lenders may be able to profit from the fact that informal lenders consider females to be creditworthy. This is inferred because informal lenders are good judges of creditworthiness and because females borrow informally more than males do [39]. One advantage of the village money lender is that he knows the reputations of his clients and can monitor their activities much more easily and cheaply than potential competitors [39].

Credit reporting, at some level, is a critical part of the financial system in most developed economies; in developing countries it is often much weaker, if not altogether absent. This is because repayment discipline in credit transactions typically happens through oft-repeated transactions between a borrower and a single familiar lender in Less Developed Contries, whereas repayment incentives in developed countries are typically enforced via threats to a borrower's credit rating [40].

Non-availability of information about credit-worthiness of potential clients, adverse selection and moral hazard can lead to negative effects on the performance of MFIs' loan portfolios and increased over-indebtedness of clients. Local-level micro-finance administrators consider qualitative lifestyle information to be more important. In contrast, there are indications that national-level practitioners prefer quantitative data. Financial models using quantitative data would more accurately calculate the optimal loan size, interest rate, etc., given a potential borrower's profile. However, perhaps local-level administrators realize that this quantitative data is hard to find and often not accurate. Unlike commercial sector borrowers, micro-finance clients do not have credit cards, phone bills or other quantitative indicators of cash flow that would be useful in optimizing loan administration [41].

The development of credit information about micro-finance customers has three main benefits: raises overall quality of loan portfolios and profitability of MFIs; incentives existing financial institutions, e.g. banks, to offer micro-finance products; and enables poor borrowers to build a credit history, facilitating their graduation to the formal financial sector [42].

In the Indian context, study by N. Jayaseelan suggests that even though the SHG lending is outside the purview of the individual credit risk rating framework right now and only the portfolio approach is adopted, as the bank's exposure in SHG lending is on the increase day by day, all the banks have necessarily to be ready with a roadmap for managing both the credit risk and the operational risk in micro-finance. However like NABARD and individual banks the credit risk rating tool as suggested by N. Jayaseelan [43] puts emphasis on composition and discipline of the group.

Credit scoring is proven tool for individual loans, scoring for group loan considers group characteristics and its attributes only without giving much emphasis on individuals. Often group loans are recorded at group level and partial repayments are not encouraged to enforce joint liability contract.

ISSUES AND CHALLENGES

The issues and challenges faced by the micro-finance industry in India are as under:

- Micro Finance Industry has grown at exponential rate and as on 31st March 2010 total 69.53 lakh SHGs have been linked to the banks for their savings. This figure does not include micro-finance borrowers who have been financed by Non Governmental Organizations/ Micro Finance Institutions (MFI) and other local players. Collecting the data of these borrowers is mammoth task.
- As the micro-finance borrowers are scattered and their characteristics as well as their financial requirements may vary, it is a very difficult task to develop a parametric model which is universally acceptable.
- Most of organizations disbursing microcredit are small in numbers and operate at local levels. For them credit scoring and credit reporting should not only be applicable but also affordable as the margins are low in this sector.
- Developing training modules as well investing in training infrastructure for competent manpower to perform the job of credit scoring & credit reporting are major challenges.

The paper basically focuses on need of a credit scoring model to improve effectiveness in micro-credit delivery processes.

NEED FOR ROBUST CREDIT SCORING APPROACH IN MICRO-FINANCE

Implementation of credit scoring in micro-finance is not only important but inevitable considering large volume of clients, as it helps in improving credit processes. The micro-finance institutions need to have a proven lending methodology which can differentiate between lower risk and higher risk clients. Scoring predicts the future based on the past behavior and characteristics of the prospective borrower. As against middle and upper class where clients do possess documentary proof of income, residence, employer and collaterals etc, in micro-finance most clients are self-employed, own small businesses, work in informal sector and have neither records of their income nor credit history. Therefore, in micro-finance more variables may be required to build a robust credit scoring system. The implementation of credit scoring models will essentially involve the following steps:

I. DATA COLLECTION

To develop a credit scoring model which can predict the credit risk of client, micro-finance institutions may require client's characteristics along with loan characteristics. Data has to be captured from the application blank; a prospective borrower is going to fill. Application form has to be designed in such a manner that captures all the variables required for developing credit scoring model without sacrificing the ease of filling the form. Client characteristics may include demographics, asset holding as well as repayment record if any.

Usually the profile of clients vary from institution to institution, it will be disastrous to use credit scoring methodology developed by other institution without validating it with its own clients.

II. **SYSTEM DEVELOPMENT**

Once the data on associated variables is collected within the framework of credit scoring model, a system should be put in place where this data can be stored for sufficient period. The system should be able to facilitate the process of retrieval and it should also be able to perform analysis as per the policy framed by the institution.

III. POLICY DEVELOPMENT FOR SCORING

Credit scoring filters bad clients from good ones by assigning number to each borrower. Credit policy of the micro-finance institution should aim for minimum possible level of Type-I (rejecting a good borrower) and Type-II (accepting a bad borrower) errors both. A sound credit policy should establish the risk level below which applicants (borrowers) qualify as excellent risks and the risk level above which applicants qualify as unacceptable risk.

IV. ROLL OUT, MONITORING & VALIDATION

Once the scorecard is developed as per the credit policy of a micro-finance institution, it can be rolled out for statistical analysis. Statistical scoring is built on the quality of data and the span of time over which the data has been collected. It is of utmost importance to collect the relevant & reliable data. The data so gathered will help in testing & retesting the score card developed. The score card has to be continuously monitored to find out delinquencies which could not be predicted by the credit scoring.

ADVANTAGES OF CREDIT SCORING MODEL

Scoring offers number of benefits that can improve microcredit efficiency & effectiveness. These are:

- Reduced Delinquency
- Improved consistency in decision making
- Objectivity & transparency in credit appraisal process
- Implementation of risk-based pricing
- Improved processing speed of loan application
- Improved risk management

CONCLUSIONS

Credit risk is the largest risk faced by micro-finance institutions. Though microcredit on an average may not have reached saturation level, asymmetric penetration has posed threat to the sector where borrowers have availed loans from multiple micro lenders. The situation has not only posed problem of loan default to micro lenders but has also put the borrowers under severe stress. Credit Scoring and credit information sharing will reduce these types of incidences. Given the significant advantages that credit scoring can bring to the lending process, it is essential that micro lenders begin to use credit scores in their lending processes.

Micro-finance Institutions must innovate which would enable them to improve their efficiency without mission drift. New efforts should make best use of available technologies to push out productivity frontiers without overloading loan officers. One of such innovation may be use of credit scoring.

SUGGESTIONS

Considering the enormous cost in setting up a nationwide credit registry and diverse composition of micro-finance industry in terms of their financial capability, it is necessary to start implementing the culture of credit information sharing at lower level. This process can be initiated at district level through District Consultative Committee. The cost can be borne by regional rural banks and other commercial banks (public and private sector banks) for setting up of the credit information system and other small players like NGOs and Section 25 companies may be allowed to access services by charging fee. These district level registries then can be linked to national level registry. This stepping up approach would help in overcoming some of the challenges faced by the sector in implementing credit scoring system and credit information bureau for micro-finance.

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FULFILMENT OF MERGER MOTIVES - EVIDENCES FROM MERGERS AND ACQUISITIONS IN THE INDIAN BANKING SCENARIO

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ABSTRACT

The Government of India has adopted the route of mergers among others with a view to restructure the banking system. Mergers and Acquisitions are considered to be the fast track for increasing the size, expanding branch network and enlarging business operations. This study makes a probe into the fulfillment of motives as vowed in the merger deals of the nine select merged banks. The study uses Summary Statistics, Wilcoxon Matched Paired Signed Rank Test and 't' test for analysis and interpretation of data pertaining to the five pre and post merger periods each. The result indicates that there has been only partial fulfillment of the motives as envisaged in the merger deals.

KEYWORDS
Merger, Acquisitions, Banking.

INTRODUCTION

Mergers and acquisitions in banking sector have become familiar in majority of the countries in the world. A large number of international and domestic banks all over the world are engaged in merger and acquisition activities. The phenomenon of mergers and acquisitions among Indian banks is not restricted to the post reform era of the Indian Banking System. Between 1961- 2004, there have been 71 mergers among various banks in India (Lakshminarayanan, 2005). Of these, 55 mergers occurred during the pre-reform period of 1960-1990. It is important to note that many mergers during the pre-reform period were instituted by the Government in an effort to restructure ailing banking units. Market driven mergers, which are on a gradual rise, are thus, outcomes of the post reform period, driven by the change in the competitive landscape of the Indian banking system which forced many of the incumbent banks to restructure themselves and boost their efficiency in an attempt to ensure long-term profitability and survival.

OBEJCTIVE OF THE STUDY

- To identify the motives of mergers
- To evaluate pre and post-merger performance of the merged banking companies vis-à-vis motives variables

METHODOLOGY AND ANALYTICAL TOOLS

This study covers a period of ten years, five years before the merger and five years after the merger. The year of merger has been excluded to have consistency in evaluating post merger performance of the acquirer banks. Mergers in India have assumed great significance with the advent of the policy of deregulation initiated in the year 1991. Hence, for the selection of the merger cases, M&As that occured post 1991 have been considered. The basic premise was to select those mergers which have the financial coverage of the acquirer banks in database related to the study period. Accordingly, of the 18 merger deals, the following nine mergers (Table 1) were selected for the study.

TABLE 1: LIST OF SELECTED BANK MERGERS

S.No	Target Banks	Acquirer Banks
1	Benares State Bank Ltd	Bank of Baroda (BOB)
2	Global Trust Bank Ltd	Oriental Bank of Commerce (OBC)
3	Nedungadi Bank Ltd	Punjab National Bank (PNB)
4	Kashinath Seth Bank	State Bank of India (SBI)
5	Sikkim Bank Ltd	Union Bank of India (UBI)
6	Times Bank Ltd	HDFC Bank Ltd (HDFC)
7	Bank of Madura	ICICI Bank Ltd (ICICI)
8	The British Bank of Middle East	Hongkong Shangai Banking Corporation (HSBC)
9	ANZ Grinlays Bank	Standard Chartered Bank (SCB)

The present study is based on the secondary data. The required data for the study were obtained from the Prowess, the corporate database software of CMIE and CAPITALINE, the database software developed by Capital Market Publishers Private India Ltd. For the analysis and interpretation of the data, Summary Statistics, Wilcoxon Matched Pairs Signed Ranks' Test (Z Statistic) and't' test were used. For the purpose of the analysis, the following null hypothesis has also been formulated and tested:

H_0: There is no significant difference between pre-merger and post-merger financial performance of the banks measured in terms of: Profitability, Growth, Leverage, Risk Reduction (Diversification) and Tax Consideration.

EMPIRICAL ANALYSIS AND RESULTS

All the sample merger schemes have been scrutinized to unfold the motives mentioned therein. Based on the type of mergers the motives identified as outlined in the scheme are Profit Maximisation, Growth, Leverage, Risk Reduction (Diversification) and Tax Consideration. In order to empirically analyze the performance of sample merged banks over time (i.e., pre and post-merger period) to assess if merger motives as avowed in the merger schemes have been fulfilled or not,

the values of relevant performance appraisal variables have been computed for five pre-merger years and same number of post-merger years along with their means of respective periods. The sample statistic "Mean" of all the variables for both the pre and post-merger periods has been compared and presented.

EFFECT ON PROFITABILITY

Achieving profitability being the major cause of merger, the ratios like Return on Assets (ROA), Return on Capital Employed (ROCE), Return on Net Worth (RONW), Profit Margin and Total Income to Total Assets (Asset Utilization) have been computed for the merged banks and their mean ratios of both pre-merger and post-merger periods are presented in Table 2.

TABLE 2: EFFECTS OF MERGER ON PROFITABILITY (Mean Ratios in Percentages)

Banks	ROA		ROCE		RONW		Profit Margin		TI to TA	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Public Sector Banks										
BOB	7.16	5.11	7.62	5.35	13.42	13.26	7.23	10.08	10.28	8.07
OBC	8.31	6.45	8.56	6.69	19.94	9.98	10.96	8.45	6.31	5.30
PNB	7.47	5.36	7.90	5.67	20.35	17.23	7.71	12.28	11.11	8.44
SBI	6.34	7.05	8.05	8.42	10.97	14.99	2.60	6.97	10.73	10.38
UBI	7.26	6.48	7.56	6.73	12.99	17.56	6.42	9.42	10.61	9.58
Private Sector Indian Banks										
HDFC	6.70	5.59	7.20	6.29	14.45	17.69	16.33	15.78	9.00	8.11
ICICI	8.04	5.47	8.52	5.92	16.23	13.37	12.75	12.23	10.68	7.84
Private Sector Foreign Banks										
HSBC	7.70	6.03	8.42	6.85	10.97	11.20	9.74	10.15	11.95	9.60
SCB	8.02	6.55	8.66	7.30	12.43	23.17	9.59	20.65	13.64	9.90

Source: Compiled and calculated from the annual reports of the banks

As reported in Table 2, Return on Assets had higher mean value in the pre-merger period compared to the post-merger period, indicating that, on an average, the profitability of the select acquirer banks has declined in the post-merger period except for State Bank of India. The same trend was noted in case of ROCE. More than 50% of the select acquirer banks such as, SBI, UBI, HDFC, HSBC and SCB were able to improve profitability in terms of post-merger RONW which is evident from the mean ratios in the post-merger period.The post-merger mean ratio of Profit Margin of the select public sector banks like BOB, PNB, SBI and UBI and the private sector foreign banks were greater in the post-merger period than the pre-merger period. OBC, HDFC Bank and ICICI Banks were not able to improve their profit margin in the post-merger period. None of the sampled banks have succeeded in improving their post-merger mean ratio of Total Income to Total Assets which is indicative of the fact that the banks could not utilize their assets more profitably after merger. The significance of these ratios were tested through Z statistic and given in Table 3.

TABLE 3: RESULTS OF WILCOXON MATCHED PAIRS SIGNED RANKS' TEST (PROFITABILITY)

Select Ratios	Z Statistic	Increased after Merger		Decreased after Merger	
		No.of Banks	Percent (%)	No.of Banks	Percent (%)
ROCE	-2.547*	1	11	8	89
	(-0.01)				
ROA	-2.547*	1	11	8	89
	(-0.011)				
RONW	-0.77	5	56	4	44
	(-0.441)				
Profit Margin	-1.599	6	67	3	33
	(-0.11)				
Total Income/Total Assets	-2.666**	0	0	9	100
	(-0.008)				

* denotes significance at 5% level. ** denotes significance at 1% level.

Note: The figures in parenthesis are estimated probabilities.

Results of Matched Pairs Signed Ranks' Test as reported in Table 3 revealed that the decline in profitability in terms of ROCE, ROA and Burden to working fund were significant at 5% level and in terms of Total Income to total assets and Spread to Working Fund were significant at 1% level. For other measures of profitability, however, the decline is not significant. Though, ratios like Profit Margin and Total Income to Total Assets had increased in the post-merger period in majority of the sampled acquirer banks, this increase is not found statistically significant.

EFFECT ON GROWTH

For the analysis related to fulfilment of merger motives, the growth indicators like Deposits, Advances, Total Assets and Total Income were considered. Analysis of impact on growth in respect of select parameters of growth as per Table 4, indicated substantial growth in the size of deposits for HDFC and ICICI bank at 15 and 20 times respectively. ICICI bank recorded a whopping growth of 48 times and HDFC bank at 21 times in their advances during post M & A period. Similar trend has been noticed in the case of total assets also.

TABLE 4: EFFECT OF MERGER ON GROWTH

The private sector foreign banks involved in mergers could achieve three to five fold increase in terms of the various growth parameters. The public sector banks

Indicators / Banks	Deposits			Advances			Total Assets			Total Income		
	Pre (Rs.)	Post (Rs.)	Pre (Rs.)	Pre (Rs.)	Pre (Rs.)	Inc. in Times	Pre (Rs.)	Post (Rs.)	Inc. in Times	Pre (Rs.)	Post (Rs.)	Inc. in Times
Public Sector Banks												
BOB	50177.03	104982.58	2.09	24717.00	65847.05	2.66	58185.78	123182.22	2.12	5954.14	9769.39	1.64
OBC	28149.33	80523.49	2.86	13983.56	55955.32	4.00	31771.20	92925.64	2.92	3443.92	7942.02	2.31
PNB	48737.70	123417.02	2.53	23063.59	79672.58	3.45	55351.46	147113.90	2.66	6081.24	12273.20	2.02
SBI	67282.31	170096.77	2.53	43822.44	83186.55	1.90	100928.77	227160.80	2.25	10783.70	23227.75	2.15
UBI	20898.10	46364.01	2.22	8509.50	26786.90	3.15	23389.87	53034.85	2.27	2478.87	4984.69	2.01
Private Sector Indian Banks												
HDFC	1542.70	23690.22	15.36	648.03	13303.21	20.53	2676.32	32760.97	12.24	216.77	2565.91	11.84
ICICI	4128.70	82652.99	20.02	1653.54	80067.04	48.42	5054.57	151872.67	30.05	481.26	11936.56	24.80
Private Sector Foreign Banks												
HSBC	4727.64	13675.27	2.89	2193.73	7761.84	3.54	6396.60	21845.63	3.42	749.25	2058.63	2.75
SCB	4420.17	19235.47	4.35	2884.28	15559.55	5.39	6712.16	33141.37	4.94	908.09	3202.58	3.53

involved in M & A activity achieved two to three-fold increase in the growth indicators barring total income which increased around 2 times only. This growth in all the indicators were also tested through't' test and given in Table 5.

TABLE 5: RESULTS OF 'T' TEST (GROWTH VARIABLES) Rs. in crores

Sl.No.	Growth indicators	Pre Merger Period		Post Merger Period		t-value
		Mean (Rs.)	S.D	Mean (Rs.)	S.D	
1	Deposits	25562.63	24569.81	73848.65	53252.73	4.44*
2	Advances	13497.30	14611.25	47571.11	31573.42	4.27*
3	Total Assets	32274.08	33422.70	98115.34	69768.23	4.21*
4	Total Income	3455.25	3552.16	8662.30	6724.62	3.82*

* Significant at 5% level of significance (Table Value is 1.860, DF - 8)

It is observed from the results of 't' test given in Table 5 that the impact of merger on growth is found to be significant in all the merger deals, in terms of all the growth indicators. Hence, the null hypothesis that there is no significant difference in the growth between pre and post merger period is rejected.

EFFECT ON LEVERAGE

Leverage imbalance being a cause of merger, mean of the leverage ratios for merged bank in the pre-merger has been compared with the leverage ratios in the post-merger period. Capital Adequacy Ratio (CAR) and Debt-Equity Ratio (DER) have been used to analyse the effect of leverage on mergers and the resultant mean ratios are specified in Table 6.

TABLE 6: EFFECT OF MERGERS ON LEVERAGE (Mean Ratios in percentages)

Banks	CAR		DER	
	Pre	Post	Pre	Post
Public Sector Banks				
BOB	12.31	12.98	17.15	15.13
OBC	12.81	12.16	16.20	13.44
PNB	10.17	13.02	22.45	15.63
SBI	12.32	12.71	46.41	19.94
UBI	10.25	11.75	18.26	19.19
Private Sector Indian Banks				
HDFC	12.86	11.99	6.19	12.90
ICICI	14.95	11.61	11.52	13.01
Private Sector Foreign Banks				
HSBC	10.85	13.99	8.76	10.47
SCB	10.26	10.22	9.30	10.41

Source: Compiled and calculated from the annual reports of the banks

According to the norms of the RBI, each bank in India has to maintain 9% of their risk-weighted assets as capital. All the sampled banks were able to maintain adequate capital adequacy ratio. However, it could be noted from Table 6 that growth of Capital Adequacy Ratio declined in the post-merger period in case of OBC, HDFC Bank, ICICI Bank and SCB. The Debt Equity Ratio (DER) of all select public sector banks except UBI got reduced during the post-merger period indicating lesser dependence on debt capital over the pre-merger period. Where as, the DER of both Indian and Foreign Private sector Banks indicated more dependence on debt capital by registering increased ratio in the post-merger period. In order to test this statistically, Wilcoxon Matched Pairs Signed Ranks' Test was applied and shown in Table 7.

TABLE 7: RESULTS OF WILCOXON MATCHED PAIRS SIGNED RANKS' TEST (LEVERAGE)

Sl.No.	Select Ratios	Z Statistic	Increased after Merger		Decreased after Merger	
			No.of Banks	Percent (%)	No.of Banks	Percent (%)
1	Capital Adequacy Ratio	-0.42 (-0.674)	4	50	4	50
2	Debt Equity Ratio	-0.652 (-0.515)	5	56	4	44

* denotes significance at 5% level. ** denotes significance at 1% level.

Note: The figures in parenthesis are estimated probabilities.

The Results of Wilcoxon Matched Pairs Signed Ranks' Test in Table 7 revealed insignificance for both the ratios taken for analyzing leverage. But this is not an adverse effect; rather it indicates greater protection to the creditors and depositors.

EFFECT ON TAX CONSIDERATION AND RISK REDUCTION

The effect of tax variable on merger is measured as difference between pre-merger and post-merger effective tax rate of the merged firm. The effective tax rate is calculated as the ratio of tax paid to profit before tax. Variation in profits is a commonly used estimate of risk of profits. The measure of risk for the purpose of this analysis has been taken as coefficient of variation of gross operating profit. The results of these measures are put into Table 8.

TABLE 8: EFFECTS OF MERGER ON TAX CONSIDERATION AND RISK REDUCTION (Mean Ratios in Percentages)

Banks	Effective Tax Rate		Risk Reduction	
	Pre	Post	Pre	Post
Public Sector Banks				
BOB	33.97	31.44	23.36	21.83
OBC	36.50	31.84	45.68	23.92
PNB	26.69	32.91	28.39	17.91
SBI	35.53	38.09	27.03	16.45
UBI	20.72	22.21	25.28	39.06
Private Sector Indian Banks				
HDFC	30.94	31.40	78.62	41.88
ICICI	21.29	11.77	69.93	48.61
Private Sector Foreign Banks				
HSBC	59.28	53.20	13.85	33.21
SCB	20.68	32.89	44.90	29.15

Source: Compiled and calculated from the annual reports of the banks

An examination of the figures given in Table 8 shows that the risk in terms of variations in operating profit has been reduced for all the select acquirer banks except for UBI and HSBC which witnessed higher percentage variations in operating profit during the post-merger period over the pre-merger period. Likewise, many of the select acquirer banks like BOB, OBC, ICICI and HSBC had reduced tax burden in the post-merger period as is evidenced from their effective tax rate, revealing tax benefits. Further, the significance of the variations are statistically tested and presented in Table 9.

TABLE 9: RESULTS OF WILCOXON TEST (TAX CONSIDERATION AND RISK REDUCTION)

Sl. No.	Select Variables	Z Statistic	Increased after Merger		Decreased after Merger	
			No. of Banks	Percent (%)	No. of Banks	Percent (%)
1	Effective Tax Rate	-0.28 (-0.779)	4	50	4	50
2	Risk Reduction	-1.481 (-0.139)	2	22	7	78

As per the results of Wilcoxon Matched Pairs Signed Ranks' Test shown in Table 9, differences in the mean ratios between the periods before and after merger as regards risk reduction and tax advantages were insignificant, proving the hypothesis.

CONCLUSIONS AND POLICY RECOMMENDATIONS

As regards fulfillment of merger motives, all the select merged private sector banks achieved manifold increase in deposits, advances and size of assets. As regards profitability, the post merger performance of all the select acquirer banks was dismal with a decline in ROA and ROCE except for SBI. However, return on networth improved in the case of all the merged banks other than BOB, OBC, PNB and ICICI. Stability of the banks as reflected by leverage ratios exhibited required capital adequacy, and Debt-Equity Ratio declined for BOB, OBC, PNB, and SBI. HSBC could reduce tax burden and risk reduction motive was achieved by all the select banks except UBI and HSBC. Hence, it could be concluded that there has been partial fulfillment of merger motives in case of select merger deals.

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SERVICE QUALITY SATISFACTION IN INDIAN ORGANIZED RETAIL INDUSTRY - A CASE STUDY OF DELHI & NCR

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ABSTRACT

Retail service is a comprehensive term that includes all those activities which contribute to the satisfaction of a customer so as to establish a long term relationship with the customer. The quality of the retail services by the retailer influence the customer's judgment about the retailer so retailer should pay special attention to the retail services provided to the customer. The retailer provide the various services to the customers like wise accessibility of location, convenience of timing, choice of products, information about the products, convenience of size, credit facilities, home delivery, parking facility, complaint redressal, goods return facility, special facility to senior citizen etc. The Indian retail industry is flourishing like anything and it is at the 4th position in the Global retail development index. So, to sustain the growth of Indian retail industry, the customer should be satisfied with the services provided to them by the retailer. So, the researcher has aimed to analyze the preference of the customers about the various services dimensions provided by the Indian organized retailers and determining the customers' satisfaction from those services. Researcher also tried to find out the various services dimension on which organized retailers need to work to provide the best services up to the expectation of the customers.

KEYWORDS
Service quality, Retail Industry, Delhi.

INTRODUCTION

RETAILING
Retailing is the concept of marketing in which retailer provides the goods and services produced by the producers to the final consumers. It not only provides the product to the final customer but it's the only chain which interacts with the customer and provides all the services related to the product. ***Retail service is a comprehensive term that includes all those activities which contribute to the satisfaction of a customer so as to establish a long term relationship with him.*** The quality of the retail services by the retailer influence the customer's judgment about the retailer so retailer should pay special attention to the retail services provided to the customer.
Retail services is a highly subjective concept as it is difficult to set the absolute level of services for all the customer as every customer may be satisfied with different level of services. The level of service depends upon the:

- Type of outlet
- Target audience
- Type of merchandise
- Profile of the customer
- Goodwill of the retail chain
- Competition

The various services provided by the retailer to their customers include:

- Accessibility of location
- Convenience of timing
- Choice of products
- Information about the products
- Convenience of size
- Credit facilities
- Home delivery
- Parking facility
- Complaint redressal
- Goods return facility
- Special facility to senior citizen

SERVICE QUALITY SATISFACTION:
Satisfaction is the key factor in determining the success of any organization. More satisfied customers lead to the double success of the organization. So, to get the success, an organization should try to achieve maximum customer satisfaction. Customer satisfaction can be created by providing good products and best services to the customers. Therefore, it is also necessary to find out the various services which affect the satisfaction. Customer satisfaction can not be created but it should be generated which is possible when customers appreciate the services and when they are made to feel that they are special. It happens when they get customized services especially for them or for people like them.

LITERATURE REVIEW

A Comparative analysis of Retail chains based on SERVQUAL Model: Cases of Apparel & Grocery Stores has been done by some students under the guidance of Mr. Shashank Mehra (Faculty of Marketing Research) Center for Retail Management, FDDI but it has not studied service quality satisfaction of Indian retail industry in Delhi and NCR.

A typology analysis of service quality, customer satisfaction and behavioral intentions in mass services authored by Festus Olorunniwo, (Department of Business Administration, College of Business, Tennessee State University, Nashville, Tennessee, USA), Maxwell K. Hsu, (Department of Marketing, College of Business and Economics, University of Wisconsin-Whitewater, Whitewater, Wisconsin, USA), it has not even studied the Indian scenario of retail industry.
A comparative study of service Quality of D'Mart and Apna Bazaar authored by Ranjith P V and Rajesh Nair but it has only included two retail stores of Mumbai of organized retail industry which is not sufficient to analyze the service quality of the whole organized retail industry.
A Review of the Service Quality Scales of Retail Stores authored by WANG Shucui School of Medicine and Health Management, Hangzhou Normal University, P.R.China which is again a study of service quality analysis of retail stores in china and doesn't explain the scenario in India.
Factors influencing the choice of Domestic Airlines in Chandigarh- An Empirical Study authored by Pardeep Bawa of GNA Institute of Management and Technology, Phagwara, Punjab has studied the various factors which affects the choice of customers in choosing the airline. It explains that customer service and experience is based upon the customer service primarily. Marketing strategies should be adopted in such manner that it should enhance the customer satisfaction.
Retail Service Quality: A Customer Perception Study authored by S.P. Thenmozhi Raja, Dr. D. Dhanapal & Dr. P. Sathyapriya explained that the most critical challenge for a business is the improvement of service and product quality. They also explained that perception of retail service quality varies across different cities, the retailers can meet the customer expectations based on the factors drive them.
Consumer attitude towards FMCGs: A comparative study of private labels and national brands authored by Nilesh Neelmani explained that growth in the retail sector has made the consumer to experience private labels. With the approval of 51% foreign direct investment by government of India in single brand retail showrooms, foreign retail majors like Wal-Mart, Tesco etc, are set to enter into the Indian market who are well known for their private label brands. They found out that consumers are accepting the private labels as the gap between consumers' attitude towards private label and national brands become narrower. So, from the study, it can be concluded that consumers are not strict to traditional method of retailing but they are adopting the changes.
Some other studies have also been made on service quality but those studies are for other sectors of Indian economy and not in Indian Retail industry. Researcher has determined that today to provide better services to the customers is the essential element of Indian retail industry so researcher has studied the service quality satisfaction in context of Indian organized retail industry.

RESEARCH METHODOLOGY

Research Methodology for the proposed topic "Service Quality Satisfaction in Indian Organized Retail Industry (A case study of Delhi and NCR)" has been considered as both sources of information for collection of information or data.
The relevant data for the study has been collected from both primary and secondary sources. Primary data was collected through field survey with structured questionnaires and personal interviews by taking convenient sampling. Use of secondary data has been made wherever it was available and necessary.

OBJECTIVE OF THE STUDY

To Study the preference of the customers of the Delhi and NCR to the various selected services in the study.
1. To study the satisfaction of the customers of the Delhi and NCR for the various selected services in the study.
2. To know the weighted service quality satisfaction of a customer of Delhi and NCR.

LIMITATION OF THE STUDY AND SCOPE FOR FURTHER STUDY

The area of study is limited to Delhi and some cities of NCR (which includes only four cities of NCR i.e. Faridabad, Gurgaon, Ghaziabad, Noida) only. The study can be extended for consumers across greater geographical area. In this study, only some service dimensions are included. The demographic variables also affect the customer satisfaction from the product and services which have been excluded from the study.

HYPOTHESIS OF THE STUDY

1. All the service dimensions under the study affect the customer service satisfaction.
2. There is a significant association between servicing & repair, complaint redressal and goods return facility.
3. There is a significant association between home delivery and parking facility.
4. There is a significant association between display facility and discount display facility.

DATA COLLECTION

This study is based mainly on primary data collected through well designed questionnaires and personal interviews. Use of secondary data has been made as per availability or requirement.
1. **Primary data:** The primary data are collected with the help of the self-developed questionnaire to know the customers' satisfaction in the organized retail sector. Information from customers was collected through personal interviews and telephone interviews from shopping malls, discount stores, retail stores, houses, telephone booths and offices, as it was the easily approachable method to reach the customers. **In this study 250 customers are taken as a sample.** Convenient sampling method is being used as sample technique for the study. In convenience sampling, population elements are selected for inclusion in the sample based on the ease of access. It has been tried that samples are selected to cover all classes of people and of different age groups as the sample size.

TABLE 1: NO. OF CUSTOMERS UNDER STUDY

Area of Study	No. of Customers
Delhi	125
Faridabad	80
Gurgaon	15
Ghaziabad	15
Noida	15
Total	250

Source: Primary Information

2. **Secondary Data:** In the study secondary data has been used wherever it was necessary & available but the use of secondary data is very much limited. These are collected from the magazines, journals, newspapers and internet. Some published research papers related to different aspects of this study are also considered for framing this study. Various libraries have been visited to collect the various magazines and journals which were of great use for the significant source of collection for the knowledge and topics under study.

DETAILS ABOUT QUESTIONNAIRE FOR CUSTOMERS

Various questions on the age, educational qualification, income, frequency of visit, satisfaction of customer from services and their quality of these organized retail stores are considered. Questions in the schedule were closed-ended and open-ended. The objective of the questionnaire was to determine the customers' satisfaction on the various topics touched under the questionnaire.

TOOLS AND TECHNIQUES

Data has been collected through structured questionnaires separately for customers, which has also been used as an interview schedule.

DATA FACTS AND FINDINGS

TABLE 2: ONE SAMPLE T TEST

Parameters	Mean	Sig. (2 tailed)	Std. Deviation	T
Credit facilities	5.80	.000	3.196	3.945
Home Delivery	6.90	.000	2.873	10.477
Servicing & Repair	5.72	.000	2.631	4.307
Complaint redressal	5.54	.001	2.621	3.273
Parking facility	5.36	.038	2.740	2.088
Packaging	5.44	.002	2.202	3.139
Goods return facility	4.93	.687	2.560	-.403
Display facility	5.98	.000	2.676	5.807
Discount display	5.93	.000	2.830	5.199
Special facility to senior citizen	3.41	.000	2.942	-8.553

Source: Primary Information

From the above table, we conclude that:

1. Respondents are considering home delivery, display facility and discount display facility as an important factor in deciding where to shop.
2. Parameters which plays less important role in deciding the respondent preference of shopping are servicing and repair, credit facility, complaint redressal, packaging and parking facility.
3. Respondents are giving least preference to goods return facility and special facility to senior citizen.

TABLE 3: PAIRED SAMPLE CORRELATION

		N	Correlation	Sig.
Pair 1	Servicing & Repair & Complaint redressal	250	.295	.000
Pair 2	Home Delivery & Parking facility	250	-.153	.015
Pair 3	Complaint redressal & Goods return facility	250	.068	.283
Pair 4	Display facility & Discount display	250	.511	.000

Source: Primary Information

From the above table, it can be concluded that:

1. Respondents believe that the retail stores should provide proper servicing and repair to the products with the availability of complaint redressal.
2. Respondents also consider that with the availability of home delivery facility they don't need parking facility as they are getting the products at their place.
3. Respondents consider that the retail stores should also return the goods if respondent find any difficulty or problem in the product.
4. Respondents considers that the retail stores should provide display facility with the proper discount display as the respondents find problem in the discount display of the retail store as the discount display is outdated or little bit confusing so the respondents prefer that it should be clear and be updated.

TABLE 4: SHOWING SCORES PROVIDED BY THE CUSTOMERS TO THE VARIOUS SERVICES PROVIDED BY THE ORGANIZED RETAIL STORES

Score						
Parameter	Faridabad	Delhi	Ghaziabad	Noida	Gurgaon	Average
Credit facilities	7.2	6.8	6.5	6.5	6.6	6.7
Home Delivery	7.0	6.5	4.5	5.3	6.7	6
Servicing & Repair	6.8	6.5	3.9	6.2	5.7	5.8
Complaint redressal	6.9	6.5	3.9	5.1	7	5.9
Parking facility	6.9	6.9	8.3	7.1	7.3	7.3
Packaging	7.3	7.1	8.3	6.7	7	7.3
Goods return facility	6.7	6.4	4.5	6.2	6	5.9
Display facility	7.3	7.2	8.6	6.6	7.4	7.4
Discount display	7.2	7.0	8.1	5.7	6.6	6.9
Special facility to senior citizen	5.9	6.0	3.5	4.6	6	5.2

Source: Primary Information

From the above table, we can conclude that:

1. People of Faridabad are more satisfied with the credit facilities, home delivery, servicing & Repair and goods return facility provided by the organized retail stores as compare to other cities.
2. People of Gurgaon are most satisfied with the complaint redressal as compare to people of other cities
3. People of Ghaziabad are most satisfied with the parking, packaging, display and discount display facility provided by the organized retail stores as compare to the people of other cities and least satisfied with the special facility to senior citizen.
4. People of Delhi are least bothered about the special facility to senior citizen and also most satisfied with whatever services provided to the senior citizens by the organized retail shops.

TABLE 5: SHOWING WEIGHTED AVERAGE SERVICE QUALITY ANALYSIS

S.No.	**Parameter**	Weights	Score	Weighted score
1	Credit facilities	5.6	6.7	37.52
2	Home Delivery	6.6	6.0	39.60
3	Servicing & Repair	5.9	5.8	34.22
4	Complaint redressal	5.3	5.9	31.27
5	Parking facility	5.1	7.3	37.23
6	Packaging	5.7	7.3	41.61
7	Goods return facility	4.9	5.9	28.91
8	Display facility	5.9	7.4	43.66
9	Discount display	5.9	6.9	40.71
10	Special facility to senior citizen	4.0	5.2	20.80
		54.9		355.53

Service Quality Analysis = Weighted Average Score = 64.76 %

From the above table, we can conclude that:

Customer satisfaction index has been calculated for all parameters taken together. Total customer satisfaction index for organized retail stores is found to be 64.76% (approx).

This study has research the service quality analysis based on several dimensions. The broad research questions formed on this exploratory research are:

1. How do the customers assume the service parameters in retailing?
2. Do the service parameters influence the customer satisfaction?
3. What are the service dimension towards which the organized retail industry should give the attention to provide better customer satisfaction as in today's world it is lesser expensive to maintain the satisfied customer as compare to creating new satisfied customer?

ANALYSIS

Customers are giving maximum importance tothe free home delivery of the products but they are not maximum satisfied with this facility of the organized retail stores where as they are maximum satisfied with the display facility of the organized retail stores as it is the concept given to the customers in the retailing industry.

Customers are least satisfied with the services provided to the senior citizens. Customers also assumes to get best servicing and repair facility from the organized retailer for the consumer durable products to visit the same organized retail stores again and again.

Customers give their preference to the various dimensions of services in the study of which the sequence of their preference towards various service dimensions is as follows:

1. Home Delivery
2. Discount display
3. Servicing & Repair
4. Display facility
5. Packaging
6. Credit facilities
7. Complaint redressal
8. Parking facility
9. Goods return facility
10. Special facility to senior citizen

The customers are satisfied from the services provided by the organized retail stores in Delhi and NCR as their satisfaction index is 64.76% but they are not equally satisfied with all the services dimensions provided by the organized retailers. So, the sequence of services by which customers are most satisfied is as follows:

1. Parking facility
2. Credit facilities
3. Goods return facility
4. Discount display
5. Home Delivery
6. Packaging
7. Servicing & Repair
8. Display facility
9. Complaint redressal
10. Special facility to senior citizen

From the above sequence we can find out the area to develop more and increase the customer satisfaction.

RECOMMENDATIONS & SUGGESTIONS

1. It is suggested to the organized retailer to provide better free home delivery facility to its customer to improve its service quality and customer satisfaction.
2. Organized retailers should also improve the display facility to improve the service quality of their retail shops. Some of the customers suggested that the list of racks of products should be displayed at the entrance of the retail shop.
3. If customers find any problem in the product, then it should also be repaired at the earliest and if possible should be replaced.
4. Packed goods should also be properly stocked so that the products in the packing should not be spoiled and get breakdown.
5. A more effective complaint redressal system should be adopted to provide better service and if there is any loophole in the services or products then through effective complaint redressal system, organized retailers have the chance to fill those loopholes.

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BASEL I NORMS: BOON OR BANE TO INDIAN PUBLIC SECTOR BANKS - A PRELUDE TO BASEL II NORMS

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ABSTRACT

The Basel capital accord (Basel I) had its major objectives of strengthening of the international banking system. The Indian public sector banking is not an exception. This study attempts to assess the outcome of implementation of the Basel I norms in case of the public sector banks in India. The outcome has been studied in terms of three parameters, namely, operating, efficiency and profitability, each with four variables adding to a total of twelve variables. Wilcoxon test has been used to assess the difference in parameters over the two periods all the four variables considered under the head 'operational performance' show significant improvement between the periods. Second, among the four variables studied under the head 'efficiency' the NPA/advances have reduced in period 2.Deposits/employee, advances/employee and net income/employee have increased in the second half. Third, scrutiny of the profitability condition shows moderate improvement due to better operation and efficiency. Out of the 12 variables 11 variables (excluding interest earned/total assets) exhibit highly significant improvement in the second half. Multiple correlation matrixes used to see the association between the variables and multiple regressions to find the linearity between the variables.

KEYWORDS
Basel norms, efficiency performance, Operational performance, Profitability, Performance.

HISTORY OF BASEL

The Basel Committee was constituted by the Central Bank Governors of the G-10 countries in 1974. The G-10 Committee consists of members from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Spain, Sweden, Switzerland, UK and US. These countries are represented by their Central Bank and also by the authority with onus for the prudent supervision of banking business where this is not the central bank. The Committee's Secretariat is located at the Bank for International Settlements in Basel, Switzerland. This committee meets four times a year. This committee on banking supervision provides a forum for regular cooperation on banking supervisory matters. Its objective is to enhance understanding of key supervisory issues and quality improvement of banking supervision worldwide. This committee is best known for its international standards on capital adequacy, the core principles of banking supervision and the concordat on cross-border banking supervision. Ever since its inception, the 1988 Accord was subject to extensive criticism, most of it directed at its "one hat fit all" approach.

In view of the idea dissatisfaction with Basel I, the Basel Committee proposed a New Capital Adequacy Framework (popularly referred to as Basel II) in June 1999 incorporating three major elements: (a) minimum capital requirements, based on weights intended to be more closely aligned to economic risks than the 1988 Accord; (b) supervisory review, which set basic standards for bank supervision to minimize regulatory arbitrage; and, (c) market discipline, which envisages greater levels of disclosure and standards of transparency by the banking system. Much of the concern about the Basel II stems from the first pillar of minimum capital requirements.

IMPORTANCE OF THE STUDY

The Basel Capital Accord of 1988 (Basel I) had its major objectives the strengthening of the international banking system, by promoting convergence of national capital standards, with a view to ironing out competitive inequalities among banks across countries. The reasons for the unquestioned acceptance of the Basel I norms by advanced as well as less developed countries, lay largely in the fact that it arrived on the scene precisely when most countries were seriously contemplating comprehensive financial sector reforms. In India too, the Narasimham Committee Reports I and II saw in the Accord a convenient peg, whereby to hang the entire agenda for the envisaged reforms in the banking sector. The following are the some of the policies implemented by the Basel committee under the head Basel I Norms in order to strengthen international banking:

1992 December	A Frame work for measuring and managing liquidity
1993 April	Supervisory treatment of market risks and interest risk
1994 July	Amendment of Capital Accord in July 1998
1995 April	Treatment of potential exposure Basel capital
1995 November	Public disclosure of the trading and derivative activities of banks and securities of the firms
1998 October	Sound practices for loan accounting credit, credit risk disclosure and related matters
1999 January	Sound practices for banks interactions with highly leveraged institutions
2000 September	Principles for the Management of credit risk

The Basel committee recommends the above policies to strengthen the international banking sectors. All banks have to introduce the Basel II norms with effect from 1st April 2009. This study has made an attempt to assess whether the policies implemented by the Basel I committee made any effect on the public sector banks in India and whether the public sector banks are ready to take over the challenges against the Basel II norms. The study is not on the basis of any particular policy implemented by Basel I norms but it covers the overall performance of the bank as a whole in view of the Basel I norms.

OBJECTIVES OF THE STUDY

The following are the main objectives of the study:

1. To analyze and compare the operational, efficiency and profitability conditions of the public sector banks after implementation of Basel I norms.
2. To study how far the three parameters are associated with one another in the study periods.
3 To analyse and identify the variables best predicting the ROA of public sector banks.

METHODS AND DATA

To study the above said objectives the data collected from various sources were subjected to analysis. The following parameters were taken to analyze the data:

OPERATIONAL PARAMETER

The following ratios were taken to evaluate the operational performance

1. Deposits/Total assets
2. Advances/Total assets
3. Advances/Deposits

4. Operating cost/Total assets

EFFICIENCY PARAMETER

To evaluate the efficiency of the banking sector the following ratios were used

1. Non-Performing Assets/Advances
2. Deposits per Employee
3. Advances per Employee
4. Net Income per Employee

PROFITABILITY PARAMETER

To compare the profitability positions between these two periods the following ratios were used:

1. Interest earned/total assets
2. Non interest income/total assets
3. Net income/equity
4. Net income/total assets

SAMPLING TECHNIQUE

Out of the State Banks of India and its associates, 5 banks were taken for the study and of the 19 nationalised banks, 14 were taken for the study. The selection of sample units was purely based on the availability of data after privatisation of public sector banks. The present study covers a total of 13 years starting from 1995-96 to 2007-08, divided into two sub-periods namely pre-Basel 1 starting from 1995-96 and ending with 2000-01 and post-Basel I norms from 2001-02 to 2007-08. Altogether there are 19 banks studied over a period 13 years adding up to 247 observations. To see the differences in different parameters in the two periods, Wilcoxon test was used. To study the extent of association among the different parameters for the whole period, multiple correlation matrixes were used. To study the linearity between ROA and other impendent variables, multiple regressions were used. The study uses only secondary data, which were collected from CMIE (Centre for Monitoring Indian Economy Private Ltd.) prowess package. The data collected from this source have been used and complied with due care as per the requirement of the study. SPSS16 software package is used for statistical analysis.

The following hypotheses are tested in the present study.

HYPOTHESES

1. There is no differences in the operating performance in view of Basel I norms
2. The mean difference of efficiency parameter variables does not show any significant difference in view of Basel I norms
3. The variables taken under the head 'profitability parameter' did not show differences in view of Basel I norms
4. There is no association between operating ratios and efficiency ratios
5. There is no association between operating ratios and profitability ratios
6. There is no association between ROA with net interest income to total assets, non-performing assets to advances, net income per employee, interest earned to total assets, advances per employee, deposits per employee, operating cost to total assets
7. There is no linear relationship between ROA and the independent variables like NPA/advances, net income/equity, advances/total assets, advances/deposits, operating cost/total assets and interest earned/total assets.
8. The coefficient of all independent variables are equal to zero

DISCUSSION ON OPERATING PERFORMANCE

TEST OF NORMALITY

HYPOTHESIS

Ho: The operating performance variables are not different from a normal distribution

H1: The operating performance variables are different from a normal distribution

Test: Kolmogorov-Smirnov test

Significant level: 95%

Conclusion: Significant at 0.000

It is good practice, once we have entered data, to test for normality of distribution. In this way we can be sure that our data has achieved an important assumption for parametric testing. Kolmogorov-Smirnov test is a more suitable test of normality of distribution if n>50. These types of tests essentially test your data for goodness of fit against pre-calculated normally distributed values.

TABLE-1: TEST OF NORMALITY FOR OPERATIONAL VARIABLES

Parameter	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Deposits/Total Assets	.229	133	.000
Advances/Total Assets	.121	133	.000
Advances/Deposits	.192	133	.000
Op.cost/Total Assets	.157	133	.000

a. Lilliefors Significance Correction

The table-1 shows that all the four variable values are less than 0.05 in the significance column of the output table stating that the data are not normally distributed data and has filled that requirement of non parametric test. Since the data are not normally distributed we use the non parametric test Wilcoxon test. It is equivalent to paired t-test in the case of parametric test.

HYPOTHESIS

Ho: There is no difference in the operating performance in view of Basel I norms

H1: There is difference in the operating performance in view of Basel I norms

Test: Wilcoxon test

Significance level: 95%

Conclusion: Significant at .000

TABLE-2: WILCOXON TEST FOR OPERATIONAL VARIABLES Test Statistics[c]

	Deposits/Total Assets	Advances/ Total Assets	Advances/Deposits	Op.cost/Total Assets
Z	-5.900[a]	-7.840[a]	-5.112[a]	-10.031[b]
Asymp. Sig. (2-tailed)	.000	.000	.000	.000

The Wilcoxon test, which evaluates the difference between mean of different variables for two different periods is highly significant. Deposits/Total Assets (z) = -5.9, p<001, Advances/Total Assets z= -7.84, p<.001, Advances/Deposits z= -5.112, p<.001, and Operating cost/Total Assets z= -10.031, p< .001. That is, the result indicates significant difference between the two periods. Based on the results produced from the table-2, the operating performance results shows significant different between two periods. The Wilcoxon test conducted to evaluate the above four variables rejects the null hypothesis.

DISCUSSION ON EFFICIENCY

HYPOTHESIS

Ho: The efficiency parameter variable values follow uniform distribution

H1: The efficiency parameter variable values do not follow uniform distribution

Test: Kolmogorov-Smirnov

Significant level: 95%

Conclusion: Significant at 0.000

TABLE-3 TEST OF NORMALITY FOR EFFICIENCY VARIABLES

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
NPA to Advances	.262	133	.000
Deposits/Employee	.172	133	.000
Advances/Employee	.181	133	.000
Net income/Employee	.226	133	.000

a. Lilliefors Significance Correction

Before we conduct any parametric test, we need to check that the data values come from an "approximately normal distribution." Hence the variables are tested with the help of Kolmogorov-Smirnov test. Table-3 shows high significance in all the efficiency variables - NPA to Advances, (p<0.001), Deposits/Employee (p<0.001), Advances/Employee (p<0.001), Net income/Employee are significantly different from normal (p<0.001). Since all the values are lesser than 0.05 in the significance column of the output table, it implies that the null hypothesis is rejected, accepting the alternative hypothesis stating that the data are not normally distributed. Hence we have applied Wilcoxon test.

HYPOTHESIS

Ho: The mean differences of efficiency parameter variables do not show any significant difference in view of Basel I norms

H1: The mean difference of efficiency parameter variables show significant difference in view of Basel I norms

Test: Wilcoxon test

Significance level: 95%

Conclusion: Significant at .000

TABLE-4: WILCOXON TEST FOR EFFICIENCY VARIABLES Test Statistics[c]

	NPA to Advances	Deposits/Employee	Advances/ Employee	Net income/Employee
Z	-8.448[a]	-10.031[b]	-10.031[b]	-10.031[b]
Asymp.Sig.(2-tailed)	.000	.000	.000	.000

a. Based on positive ranks

b. Based on negative ranks

c. Wilcoxon Signed Ranks Test

A Wilcoxon test was conducted to evaluate whether the following four variables showed greater concern on impact of Basel I norms. NPA to Advances z=-8.448, p<0.001, Deposits/Employee z=-10.031, p<0.001 Advances/Employee z=-10.031 p<0.001 Net income/Employee z=10.031, p<0.001. The above values reject the null hypothesis stating that all the four variables showed significant difference in view of Basel I norms.

DISCUSSION ON PROFITABILITY

Hypothesis

Ho: The profitability parameter variable values follow the assumed distribution

H1: The profitability parameter variable values do not follow the assumed distribution

Test: Kolmogorov-Smirnov

Significant level: 95%

Conclusion: Significant at 0.000

TABLE-5: NORMALITY TEST FOR PROFITABILITY VARIABLES.

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Interest earned/ Total assets	.312	133	.000
Non interest income/ Total assets	.233	133	.000
Net income/equity	.188	133	.000
Net income/total Assets	.194	133	.000

a. Lilliefors Significance Correction

Before applying the hypothesis test the data to check for normality. Hence we applied Kolmogorov-Smirnov test. According to this test all four variables showed df 133, P<0.001. It rejects the null hypothesis and accepting alternative hypothesis.

HYPOTHESIS

Ho: The mean difference of profitability parameter variables do not show differences in view of Basel I norms

H1: The mean differences of profitability parameter variables show differences in view of Basel I norms

Test: Wilcoxon test

Significant level: 95%

Conclusion: Significant at .000 (except interest earned/total assets)

TABLE-6: WILCOXON TEST FOR PROFITABILITY VARIABLES Test Statistics[c]

	Int.earned/total Assets	Non int. income/Total asst	Net income/equity	Net income/total Assets
Z	-1.818[a]	-10.030[a]	-10.031[b]	-10.031[b]
Asymp. Sig. (2-tailed)	.069	.000	.000	.000

a. Based on positive ranks.

b. Based on negative ranks.

c. Wilcoxon Signed Ranks Test

The above Wilcoxon test which evaluated difference between mean of different variables for two different periods is significant. Interest earned/total Assets z=-5.9,p,<001, Non interest income/Total assets z= -7.84, p<.001, Net income/equity z=-5.112, p<.001, and Net income/Total assets z= -10.031, p< .001. That is, the results indicate significant differences between the two periods.

MULTIPLE CORRELATIONS

When we have ratio level data we use correlation to measure associations between variables. The following table measures the degree of linearity between two variables.

OPERATIONAL VS. EFFICIENCY

H0: There is no association between operating ratios and efficiency ratios

H1: There is an association between the operating ratios and efficiency ratios

Test: Correlation

Confidence Level: 99%

Conclusion: The null hypothesis is rejected. All the operational ratios are associated with efficiency ratios at 1% significant level.

TABLE-7: MULTIPLE CORRELATIONS MATRIX: OPERATIONAL VS. EFFICIENCY

	Deposits/Total Assets	Advances/Total Assets	Advances/Deposits	Op.cost/Total Assets	NPA to Advances	Deposits/Employee	Advances/Employee	Net income/Employee
Deposits/Total Assets	1.000	.002	-.096	-.404**	-.578**	.544**	.363**	.488**
Advances/Total Assets		1.000	.294**	-.243**	-.235**	.244**	.262**	.222**
Advances/Deposits			1.000	-.755**	-.606**	.716**	.879**	.727**
Op.cost/Total Assets				1.000	.636**	-.953**	-.904**	-.957**
NPA to Advances					1.000	-.753**	-.771**	-.668**
Deposits/Employee						1.000	.937**	.961**
Advances/Employee							1.000	.929**
Net income/Employee								1.000

Table 7: Multiple correlation matrixes show the relationship between the operational and efficiency ratios of public sector banks in India. The banks' operational performances are measured by Deposits/Total assets, Advances/Total assets, Advance/Deposits and Operating cost/ Total assets. The efficiency of public sector banks is measured by non-performing assets to advances, deposits per employee, advances per employee and net income per employee. Deposits by total assets is moderately associated with non performing assets (r. =-.578, p<0.001), deposits per employee (r =.544, p<0.001), advances per employee(r =.363, p<0.001) and net income per employee (r. =.488,p<0.001) which is a good indication of increasing efficiency. Though the advances to total assets is associated with NPA negatively (r. =-0.235, p<0.001) and positively with advances per employee(r =.262, p<0.001) and net income per employee(r. =.488, p<0.001), the degree of association is very low. Operating cost to total assets is very strongly associated with deposits per employee(r =-.953, p<0.001), advances per employee (-.904, p<0.001) and income per employee (-.957, p<0.001). The above associations are significant at p<0.01 indicating strong evidence to support the alternative hypothesis stating that there is strong evidence for association. As a whole, the public sector banks' efficiency has improved during the study period.

OPERATIONAL VS. PROFITABILITY

H0: There is not significant association between operating and profitability ratios

H1: There is a positive association between operating and profitability ratios

Test: Correlation;

Confidence Level: 95%

Conclusion: It rejects the null hypothesis.

TABLE-8 MULTIPLE CORRELATIONS MATRIX: OPERATIONAL VS. PROFITABILITY

	Deposits/Total Assets	Advances/Total Assets	Advances/Deposits	Op.cost/Total Assets	Int.earned/total Assets	Non int. income/Total asst	Net income /equity	Net income/total Assets
Deposits/Total Assets	1.000	.002	-.096	-.404**	-.086	-.270**	.727**	.663**
Advances/Total Assets		1.000	.294**	-.243**	-.108	-.151*	.068	.123
Advances/Deposits			1.000	-.755**	-.334**	-.463**	.149*	.325**
Op.cost/Total Assets				1.000	.266**	.634**	-.612**	-.736**
Int.earned/total Assets					1.000	-.531**	-.299**	-.418**
Nonint income/Tot asst						1.000	-.168**	-.201**
Net income/equity							1.000	.976**
Net income/total Assets								1.000

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

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

Table 8: Multiple correlation matrix shows association between operational performance and profitability improvements is measured by four ratios namely interest earned/total assets, non-interest income/total assets, net income/equity and net income/total assets. Deposits are the main sources for the bank to lend loans and advances to their customers in order to earn more interest income but it is negatively associated with interest income (r =-.086, p> 0.005) and non interest income is also moderately associated (r= -.270, p<0.001)are the main concern to the public sector banks. Deposits/Total Assets is strongly related with net income to total assets (r. =.663, p<0.001) and net income to equity (r. =.727, p<0.001). The operating cost to total assets is low association with interest income to total assets (r. =.266,p<0.001) and moderately associated with non interest income(r =.634,p<0.001). This is also a great concern to public sector banks. They depend more on non-interest income rather than interest income. This may be due to competition after entering the global economy. The above table shows in many cases the variables are significant at one percent (p<0.001). This means there is a strong association between operations and profitability.

EFFICIENCY VS. PROFITABILITY

H0: There is not significant association between Efficiency and Profitability

H1: There is significant association between Efficiency and Profitability

Test: Correlation;

Confidence level: 95%

Conclusion: Reject the null Hypotheses

TABLE-9: MULTIPLE CORRELATION MATRIX: OPERATIONAL VS. PROFITABILITY

	NPA to Advances	Deposits/Employee	Advances/Employee	Net income/Employee	Int.earned/total Assets	Non int. income/Total assets	Net income/equity	Net income/total Assets
NPA to Advances	1.000	-.753**	-.771**	-.668**	.399**	.348**	-.455**	-.534**
Deposits/Employee		1.000	.937**	.961**	-.224**	-.639**	.643**	.744**
Advances/Employee			1.000	.929**	-.292**	-.593**	.479**	.610**
Net income/Employee				1.000	-.326**	-.530**	.732**	.834**
Int.earned/total Assets					1.000	-.531**	-.299**	-.418**
Nonint income/Tot asst						1.000	-.168**	-.201**
Net income/equity							1.000	.976**
Net income/total assets								1.000

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

Table 9: Shows the relationship between the efficiency and profitability of the public sector banks. From the above analysis, it has been found that there is significant correlation among the variables. NPA to advances shows very low association with interest income(r =.399, p<0.001), non interest income(r=.348,p<0.001) and moderate relation with net income to equity (r =-.455,p<0.001) and net income to total assets(r =-.534,p<0.001). Deposit per employee is associated at very low level with interest earned to total assets (r =-.224,p<0.001), moderately with non-interest income to total assets (r =-.639,P,0.001), net income/enquiry(r =.643, p<0.001) and net income to total assets(r=-.534,p<0.001).

INTERPRETING THE MULTIPLE REGRESSION

In the previous tables, we saw that it is possible for variables to have strong associations. In the forthcoming tables, we analyze how one can use data to predict relationship**.** The main reason that financial research is highly regarded in the financial profession is that manager's need assistant with predicting the future. After all, any manager can spend crores of rupees on operating expenditure. Imagine if you could tell a manager that if he or she spends X amount of rupees on operating cost, then the company will earn Y amount of profit, you would probably be promoted in your position. Here multiple regression is used to test the linearity between ROA and other independent variables and all so to see how for the independent variables are related with ROA. From this type of analysis one can ascertain what are the variables taking more importance to contribute to increase income and what are variables showing less importance. This will be very helpful for management decision making.

The following tables illustrate the outcomes of the multiple regressions.

TABLE 10a: MODEL SUMMARY[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.999[a]	.997	.997	.01513	.223

a. Predictors: (Constant), Int.earned/total Assets, Advances/Total Assets, Net income/equity, Advances/Deposits, NPA to Advances, Op.cost/Total Assets

b. Dependent Variable: Net income/total Assets

The strength of a correlation is assessed on a scale from -1 to +1. The model summary table shows the correlation and the coefficient of determination. The correlation between ROA with net-interest income to total assets, non-performing assets to advances, net-income per employee, interest earned to total assets, advances per employee, deposits per employee and operating cost to total assets is 0.999 **(under the R)**; thus, this is a very strong positive relation. This means that almost 99% of the changes in unit of ROA can be attributed to interest earned to total assets, deposits to total assets, advances to deposits, non-performing assets to advances, total income to total assets, net-income per employee are taken together.

The next column shows a value of **R square**, which is a measure of how much of the variability in the outcome, is accounted for by the predictors. Its value is 0.997, which means that all predictors accounts for 99.7% of the variation in ROA.

The **adjusted R square** gives us some idea of how well our model generalizes and ideally we would like its value to be the same, or very close to, the value of R square. In the above table shows a difference for the final model is a fair fit (0.999-0.997 =0.002 or 0.02%). This shrinkage means that if the model were derived from the population rather than sample it would account for approximately 0.02% less variance in the outcome.

The ANOVA table indicates whether there is a linear relationship between the predictors and the dependant variable. Therefore I propose the following hypothesis:

HO: There is no linear relationship between ROA and the independent variables

HI: There is a linear relationship between the ROA and the independent variables.

Test: ANOVA

Confidence level: 95%

Significant factor: .000, reject the null hypothesis, stating that there is linear relationship between ROA and independent variables.

TABLE 10b: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.034	6	3.506	15308.191	.000[a]
	Residual	.055	240	.000		
	Total	21.089	246			

a. Predictors: (Constant), Int.earned/total Assets, Advances/Total Assets, Net income/equity, Advances/Deposits, NPA to Advances, Operating cost/Total Assets

b. Dependent Variable: Net income/total Assets

The next part of the outcome contains an analysis of variance (ANOVA) that tests whether the model is significantly better at predicting the outcome than using the mean as a "best guess". Specifically, the F ratio represents the ratio of the improvements in prediction that results from fitting the model (labeled "Regression" in the table), relative to inaccuracy that still exists in the model (labeled "residual" in the table). If the improvement due to fitting the regression model is much greater than the inaccuracy within the model, then the value of F will be greater than 1 and SPSS calculates the exact probability of obtaining the value of F by chance. In the ANOVA table, F-ratio is 15308.191, which is very unlikely to have happened by chance ($p<0.001$). Since the ANOVA table indicates that there is linear relationship between net income to total assets and predictor variables, researcher proceeds with interpreting the model. The coefficient table provides partial coefficient for the constant, interest earned to total assets, deposits to total assets, advances to deposits, non-performing assets to advances, total income to total assets and net income per employee.

TABLE 10c: COEFFICIENTS[a]

Model	Unstandardized Coefficients		Stand. Coeff.	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.439	.037		11.838	.000		
Op.cost/Total Assets	-.041	.002	-.168	-20.307	.000	.159	6.288
NPA to Advances	.019	.002	.040	8.483	.000	.481	2.080
Net income/equity	.044	.000	.848	144.170	.000	.314	3.188
Advances/Total Assets	4.132E-5	.000	.005	1.349	.179	.908	1.102
Advances/Deposits	.002	.000	.057	7.751	.000	.204	4.913
Int.earned/total Assets	-.037	.001	-.116	-30.143	.000	.731	1.369

a. Dependent Variable: Net income/total Assets

The coefficient of Operating cost/Total Assets is -0.041, NPA to Advances is 0.019, net income to equity is 0.044, advances/total assets is 4.132E-5, advances/deposits is 0.002, and interest earned/total assets is -0.037. Before you can place it into a linear equation, you must check its corresponding t value and significant level. For a variable to be valid, the significance level must be between .00and.0499. We can test the following hypothesis:

Ho: The coefficient of all independent variables is equal to zero

Ha: The coefficient of all independent variables is not equal to zero

Test: T-test

Confidence level: 95%

Significance factor: .000 (all independent variables except advances/total assets) accept the null hypothesis.

The new equation is then:

ROA = .439 – .041 (operating cost/total assets) + .019(NPA to advances) +.044(Net income/equity) +4.132E-5(advances/total assets) +.002(advances/deposits)-.037 (interest earned to total assets)

From the Table10c**,** it is very clear that the slope of NPA/advances, net income/equity, advances/total assets, advances/deposits is positive, thus we have an upward line, indicating that when all these variables increase, the ROA will also increase. The slope of operating cost/total assets and interest earned/total assets is negative, thus we have a downward line indicating that when the average operating cost/total assets and interest earned/total assets decreases, the ROA increases. Note also the value in the column headed **standardized co efficient or beta**. This beta value is a measure of the strength of each predictor variable.

VIF stands for Variation Inflation Factor. "VIF" number is a measure of **Collinearity statistics**. A rule of-thumb is that the number should be less than 10 or 0.10 in Tolerance value. If it is greater than 10, that means your independent variables are highly correlated with one another. As a result, we should remove the variables with the large VIF from the analysis and perform new regression. Thus when all the variables are included in the regression, the variables like deposits/total assets, deposits/employee, advances/employee, net income/employee and non-interest income/total assets showed strong relationship with other independent variables resulting in multicollinearity (VIF is more than 10 and the tolerance value is less than 0.1); therefore all these variables are excluded in the regression.

FINDINGS

1. The variables are not normally distributed when scanned with normality test, Kolmgrov test. Therefore non-parametric test (Wilcoxon test) has been used to test the hypothesis.
2. Four variables (Deposits/Total assets, Advances/Total assets, Advances/Deposits, Operating cost/ total assets) included in the operating performance of the public sector banks showed very strong evidence for improvement of operating performance in view of Basel I norms.
3. All the four variables included in the efficiency parameter showed strong evidence for improvement in view of Basel I norms.
4. Out of the four variables, three variables alone showed strong evidence for improvement in profitability in view of Basel I norms.
5. There is strong evidence that the performance of the public sector banks is associated with efficiency
6. All the operational variables are negatively associated with interest income and non-interest income but positively related with income to total assets. From this observation, it is clear that higher ROA is not because of increased interest income but because of decreased operating cost.
7. The three variables considered to test the employee efficiency show negative association with interest income and non-interest income but positive relation with ROA and income/equity.

8 operating cost/total assets, NPA to advances, Net income/equity, advances/total assets, advances/deposits, interest earned to total assets is good predictors of ROA

CONCLUSION

Three parameters namely operational, efficiency and profitability are taken in the study in order to see the overall performance between the two periods, association between parameters for the whole period and how the predictors predict the dependent variable. In each and every parameter four ratio level data are taken to assess the effectiveness of the public sector banks.

All the four variables considered under the head 'operational performance' show significant improvement between the periods. Three of the four variables namely deposits/total assets, advances/total assets and advances/deposits have increased after period 1. Operating cost/total assets has decreased from period 1 to period 2. This clearly indicates that the operating performance has improved in the second period.

Among the four variables studied under the head 'efficiency' the NPA/advances has reduced in period 2. This is because of the implementation of Basel I Policy in April 1993 regarding supervisory treatment of market risk and interest rate risk. Deposits/employee, advances/employee and net income/employee had increased in the second half. The increased efficiency is directional proportional to the operations.

Third, scrutiny of the profitability condition shows moderate improvement due to better operation and efficiency. The main source of income to the public sector bank is interest income. But it is negatively related, though not significant, to the net income. This is not a good prognosis for the public sector banks. This negative relationship may be due to increased competition and resulting fall in spread. On the other hand, non-interest income has showed a hike during the second period.

From the above one may imply that the bankers are concentrating on the non-interest income when the interest income has reduced. Though the interest income does not show any improvement, income/equity, and income/total assets show significant changes. This is because of lower operating costs. As a whole, taking 12 variables in the study period, 11 variables have shown highly significant changes over the two periods. If this trend continues in future, the public sector banks would acquire a position stable enough to challenge the Basel II Norms. In multiple regression, operating costs are related with income negatively at high significance. This is a good sign of good performance of the public sector banks. The outcome of the analysis shows consistency in the entire statistical test used in the study.

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CORPORATE SOCIAL PERFORMANCE THROUGH VALUE ADDED REPORTING - A CASE STUDY OF HINDUSTAN PETROLEUM CORPORATION LTD.

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ABSTRACT

The primary objective of financial management of any business enterprise is the maximization of shareholders' wealth. But there has been a considerable interest among other stakeholders like employees, government, supplier and the general public who are looking at the performance of an enterprise from a broader socio-economic perspective. This increasing interest among the other stakeholders made the management to redesign the corporate objectives as well as the reporting practices. One of the important contributions of a business enterprise to the society and to improve the standard of living of the society is the value addition through its business operations. Therefore, for measuring and reporting the socio-economic objectives of the business, the value added reporting has emerged as a new reporting measure of corporate performance. Value added is an important measure of corporate performance rather than conventional measure based on traditional financial accounting. It can be particularly useful for highlighting employees' oriented approach which will allow more fruitful and objective assessment of business enterprises in terms of productivity and profitability. This paper makes an attempt to make an empirical study of Hindustan Petroleum Corporation Ltd. (HPCL) for measuring the performance from 1999-2000 to 2009-10 through generation of value added, application of value added, various ratios relating to value added reporting and with the help of some statistical techniques. The analysis of this study clearly signifies that the management of the company has not only improved its profitability but has also fulfilled its responsibility towards the society at large.

KEYWORDS
Value Added, Value Added Reporting, Generation and Application of Value Added and Value Added Ratios.

INTRODUCTION

Value added is an important measure to judge the performance of an enterprise. It indicates the net wealth created by the firm during a specific period of time. No enterprises can survive and grow, if it fails to generate wealth. An enterprise may exist without profit, but cannot survive without adding value. Value added is meaningful measure of corporate performance than conventional measures based on traditional financial accounting information. It can be particularly useful for highlighting employees' oriented approach which will allow more fruitful and objective assessment of business enterprises in terms of productivity and profitability. The value added is a basic and broad standard comprises investment made by shareholders, debentures holders, creditors and specialized financial institutions. If such investment does not create wealth or does not add value for the stakeholders, it indicates the misuse of public funds. Therefore the concept of value added has a direct relationship with the concept of social responsibility of the business. Value added can be particularly useful to management in comparing the performance of business within group or companies' performance with its industry as a whole. Financial reporting has traditionally concentrated on the needs of shareholders and creditors but value added statement is important for stakeholders as well as employees point of view (*Singh, 2008*).

PURPOSE OF THE STUDY

This study is based on the following objectives:

1. To understand the conceptual framework of the value added reporting.
2. To assess the performance of the selected company with the help of generation of value added, application or distribution of value added as well as the value added ratios.
3. To examine how value added reporting is better measure as compared to traditional technique of reporting.
4. To recommend some suggestions for the implementation of value added in the selected company.

DATA SOURCE AND METHODOLOGY OF THE STUDY

The study is mainly based on secondary sources of information. The required data have been collected from published Annual Reports of the Hindustan Petroleum Corporation Ltd. (HPCL) and also from the published Annual Reports of the Public Enterprise Survey by the Ministry of Heavy Industries & Public Enterprises, Govt. of India over the period of eleven years i.e. 1999-2000 to 2009-10. For collecting relevant data for the purpose of conducting this study internet surfing has also been made for obtaining the requisite and latest information. Editing, classification and tabulation of the financial data collected from the above mentioned sources have been done as per requirement of the study. For the analysis of value added reporting data are analyzed with the help of value added statement and some ratios based on such value added statement. In order to assess the behavior of the data simple statistical techniques i.e. Mean, Coefficient of Correlation, Growth Rate and Regression Analysis has been used and also statistical test like 't'-test has been applied in the appropriate places.

PROFILE OF THE COMPANY

HPCL was incorporated on 5th July, 1952 under the Companies Act, 1913 as Standard Vacuum Refinery Co. of India Ltd. It was renamed as ESSO Standard Refining Co. of India Ltd. in 1962 under Companies Act 1956. Through the Lube India and ESSO Standard Refinery Co. of India Ltd. Amalgamation Order, 1974, it was changed to the present name Hindustan Petroleum Corporation Limited and after nationalization, ESSO undertakings were vested in it. In the year 1976, Caltex and in 1979, Kosangas Co. Ltd. were also merged with HPCL. The main objective of the company is to delight customers by superior understanding and fulfilling their stated and latent needs with innovative product and services in the petroleum sector as also to be highest performer in rate of growth and return on investment by working faster than its competitors in the most cost effective way. HPCL is a Schedule – 'A' / Navaratna PSE in Petroleum sector under the administrative control of M/o Petroleum and Natural Gas with 51.11% shareholding by the Government of India. Its Registered and Corporate Offices are at Mumbai, Maharashtra. It is engaged in crude oil refining and marketing of petroleum products. It has two refineries at Mumbai in Maharashtra, and

Visakhapatnam in Andhra Pradesh. The company also owns three multi-products cross country pipelines viz., Mumbai-Pune-Solapur pipeline; Visakh-Vijaywada-Secunderabad pipeline and Mundra-Delhi pipeline. The company has 9 joint ventures in the field of exploration & production, refining and marketing with shareholding ranging from 16.95% to 50%. The turnover of Rs. 131,802.65 crore in the 2008-09 but it came down to Rs. 114,888.63 crore in 2009-10 i.e 12.83% decreased as compared to the year 2008-09. Its overall ranking position of all the CPSEs was 3rd during 2009-10 on the basis of net sales. The value added by HPCL during 2009-10 was Rs. 7,588.25 crore while it was Rs. 6,867.83 crore in the year 2008-09 followed by a gradual increase of 10.50% over the year 2008-09.

HYPOTHESIS OF THE STUDY

The following three hypotheses are studied for this study:

1. Whether the generations of value added and application of value added are even and similar during the study period.
2. Whether there is any significant relationship between the amount of value addition and the amount of sales.
3. Whether the Value Added Reporting is better method for measuring the corporate performance of the selected company during the last 11 years.

LIMITATIONS OF THE STUDY

The study has the following limitations:

1. This study is a micro-nature based research work on the selected company
2. This study is based on 11 years (i.e. from 1999-2000 to 2009-10) financial and social performance of the selected company.
3. In order to analyze the financial data, data's are grouped and sub-grouped as per the requirement.

RATIONALE OF THE STUDY

Value Added Reporting is a part of corporate social reporting which shows the value addition made by firm during a specific period of time and their distribution among different stakeholders i.e. employees, Government, providers of capital and retained by the firm himself for the development and expansion activities of the firm. According to the company's act 1956, financial statements are prepared by every firm to find out their operating profit along with their disposal. But it will make a significant discloser about the creation of wealth (i.e. value addition) because financial statements are prepared only for the interest of shareholders and creditors, not for the interest of the society i.e. for social wealth creation point of view. As the norms of disclosure and transparency of the accounting process increases their importance has been increases especially after globalization and WTO agreements, now it become necessary for both the society and the employees' point of view. Therefore, a new reporting statement i.e. value added statement will need to prepare to show the generation of wealth by the firm and their application into different stakeholders. Considering the significance of the measure of value added reporting techniques, the increasing number of enterprises in Western Countries are presenting the value added statement in their annual reports. But this practice has yet to be set in India. Presentation of value added statement in annual reports is neither statutory nor obligatory for companies in India. Now for better discloser and transparency of accounting process some companies have started presenting the value added statement in their annual reports.

CONCEPTUAL FRAMEWORK OF VALUE ADDED REPORTING

a) CONCEPT OF VALUE ADDITION

The concept of 'value addition' basically comes from the very manufacturing process wherein the firm's raw materials are converted into finished goods. A manufacturing firm begins with a certain quantum of raw materials, and then engages itself in a conversion process to yield a product with new utility and market value which is different from the original cost of materials. The excess of such market value over the cost of materials is defined as 'value added' (Chakraborty, 1979). However in practice, materials in value added calculations include all items purchased from outside and actually processed. Thus, power, fuel and stores are the other items that are added to materials before deducting the latter from the sale value. Therefore, the value added by a firm during a period can be stated as follows:

Value Added = Sales (net of excise duty) – Cost of items bought from outside and processed.

But in a period of zero sales with high production, the above equation would show a 'negative value added figure'. So, we may take 'value of production' instead of 'actual sales value'. Therefore, the value added may be calculated in the following way:

Value Added = Value of production – Cost of materials, power etc.

The Annual Survey of Industries (ASI) defines "value added as that part of the value of the products which is created in the factory and is computed by deducting the gross value of input from the gross ex-factory value of output" (C.S.O., 1966). Symbolically, it can be expresses as follows:

Value Added (VA) = (Gross ex-factory value of output) − (Gross value of Input)

Where,

Output = Aggregate value of products + work done for customers + Sales value of goods sold in the same condition as bought ± stock of semi-finished goods and

Input = Gross value of materials, fuel etc, work done by other concerns for the firm, non-industrial services bought, depreciation and purchase value of goods sold in the same condition as bought.

But the generally accepted definition of value added is that "the difference between what a company is paid for its products and the cost of bought-in materials and services". In other words, it is an excess of turnover plus income from services over the cost of bought-in materials and cost of services. Simply, it is the difference between the sales revenue and the cost of purchase of materials and services. It also represents the total return of the firm earned by all providers of capital plus employees and government. It includes earnings and the return to shareholders plus other components as the returns to other stakeholders, government, bondholders and employees.

b) CONCEPT OF VALUE ADDED REPORTING

The primary objective of any business enterprise is the maximization of shareholders' wealth. In order to change the objective of maximization of shareholders' wealth to other objectives of the firm, the business enterprises are now being evaluated in terms of their contribution to the welfare of the society. One of the important contributions of a business enterprise to the society and to improve the standard of living of the society is the value addition through its business operations. Realizing this new requirement, the corporate reporting practices have changed to reflect the performance of the company in terms of creation of value in a given society. Therefore, for measuring and reporting the socio-economic objectives of the business, the value added reporting has emerged as a new reporting measure of corporate performance in addition to the traditional financial reporting practices.

c) OBJECTIVES OF VALUE ADDED REPORTING

The following are the objectives of preparing and reporting of value added:

1. To disclose the amount of value addition made by a firm during a specific period of time.
2. To evaluate the performance of a firm through the generation of value added.
3. To show the different patterns of distribution of value added by different stakeholders i.e. employees, providers of capital, government and the owners.
4. To help the government to collect huge revenues by levying taxes on value added by the enterprises rather than on the net profits (Aravanan, 2005).

d) VALUE ADDED STATEMENT (VAS)

The formal recognition of the Value Added Statement(VAS) was first made in a discussion document entitled "The Corporate Report" which was published by the Accounting Standards Steering Committee of the UK in 1975 (*Basu, 1992*). According to the Corporate Report, the value added statement is to be prepared on the assumption that the business is a partnership which is made up of the employees, providers of capital, government and the enterprise itself. The statement is designed to disclose how much wealth (i.e. value) the enterprise has generated as a result of the joint efforts of its partners (*ASSC, 1975*). David

Pendril defines it as "The statement which shows the income of the company as an entity and how that is divided between the people who have contributed to its creation" (*Pendril, 1977*). In India, value added statement is a voluntary corporate supplementary statement, which provides the information in such a manner that would easily be understood by a layman and that shows a broad measure of performance of a corporate entity. The ASC report is concerned with the specification of income attributable to employees, government, and the providers of capital. It is thus, an extension of the income Statement, regarding the earnings of profits in business as a cooperative effort (*Rao, 2001*). The following are the definition of VAS has been defined by different authors:

Value Added Statement may be defined as a statement which shows the size of the 'value added cake' and how the 'cake' has been divided amongst the various stakeholders (Sizer, 1979).

Value Added Statement may be defined as the performance of an organization to what extent the enterprise has added value during a particular period to the providers of capital, employees, government and reinvestment of the growth and expansion (Agarwal, 1993).

Value Added Statement is a report which shows the amount and the sources of value added during some specified period of time. In other words, it is also described as extra wealth created by selling goods and services to the customers. So it is entitled as 'wealth generated and distributed' (Rao, 1999).

e) ASSUMPTIONS OF VAS

The assumptions underlying the preparation of value added statement, as may be envisaged, are mentioned as follows:

1. VAS is not a substitute but a supplement to the profit and loss account.
2. VAS is based on items and figures obtained in the profit and loss account and the accounting concept remain the same in the preparation of VAS.
3. It is different from profit and loss account to the extent, the latter contains the non-value added debits and credits like provisions, non-trading losses, appropriations as well as non-trading incomes like profit on sale of scrap, interest on securities, dividend etc. (*Nandi, 2005*).

f) FAVOURABLE ASPECTS VALUE ADDED REPORTING

In order to evaluate the performance of corporate sector, the value added reporting is a new method and concept in Indian corporate reporting. Its significance not only for external purposes but it is also equally important for internal purpose. The following are the favourable aspects of value added reporting:

1. Value Added Statement provides a better way of describing the performance of business undertakings in terms of labour productivity and capital productivity. Labour productivity can be measured in terms of value added per employee in order to help in wage settlement and the capital productivity can be measured in terms of value added per rupee of capital employed to find out the effective utilization of capital employed in the business.
2. The preparation of VAS is most important from the view point of Nation, as in the contribution made by a firm to the wealth of nation is to be measured in terms of value added by it.
3. The optimize added value is more meaningful than optimize profit because added value determines reward for employees as well as providers of loan capital. Therefore, VAS is very much useful for the company to introduce "productivity incentive schemes based on added value".
4. It leads to an improvement in the team spirit in the company.
5. At present, the both Central and various State Governments use VAS to determine and collect tax on value addition by an enterprise in its process of production.

g) UNFAVOURABLE ASPECTS OF VALUE ADDED REPORTING

The value added reporting system has the following drawbacks:

1. One of the important limitations of VAS is that its presence in the corporate annual report may lead to information overload and confusion. An ordinary employee reading his company's corporate annual report may no be able to match the Value Added Statement with earnings statement. Similarly, a non-accountant employee or shareholder reading the annual report of his company, may get confused if he observes that the value added was rising while earnings were falling and more so if value added was positive but earning were negative.
2. Although profit is a part of value added, the maximization of value added does not necessarily lead to maximization of profit. A business enterprise can maximize value added by adopting a number of inefficient policies but it cannot maximize profits in such a way.
3. Value Added Statements can be used as a supplementary to financial statements. These statements cannot be used in place of Traditional financial statements. These are not published in a standard format. Sometimes the calculation of value added statements is complicated because such calculation is also based on historical values and therefore, it may be misleading.
4. The inclusion of VAS in the Annual Report of a company involves extra cost and work. So it may create delay in annual reporting.
5. Retained earnings are shown as the fund for future expansion of the company and it implies that every one of the team have a claim on it. But in reality, it does not hold good.

h) FORM OF VALUE ADDED REPORTING STATEMENT

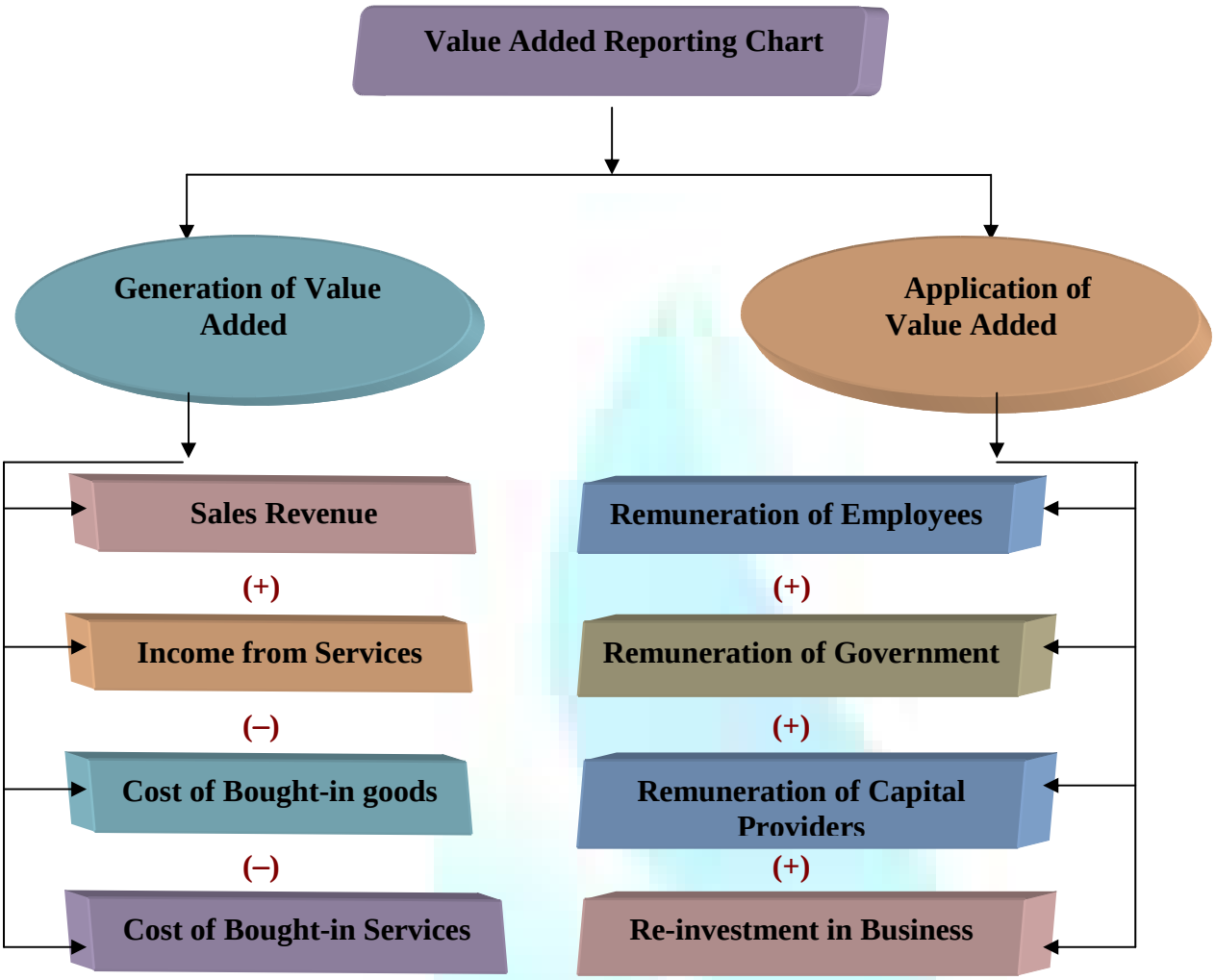
In case of value added reporting, the accounting procedure will be divided into two parts. (1) Generation of Value Added and (2) Application of Value Added.

1) GENERATION OF VALUE ADDED

The generation of value added may be regarded as the excess of sales revenue (SR) plus income from services (IS) over the cost of bought-in-goods & services from outsiders (CBGS). It may be shown in equation form: VA = (SR + IS) – (CBGS). Here sales revenue means net of sales returns, rebates, trade discount, commission and brokerage etc. but gross of excise duty and sale tax because excise duty and sales tax are to be recovered from customers; income from services includes the services rendered by a company which consists of dividend from subsidiary company, rent, compensation, royalty, interest and other income etc., cost of bought-in-goods includes raw materials, semi finished goods, stores and spares, power, fuel and water, damage and shortage in goods, repairs and maintenance and packaging materials and exclude cost of self-generated power and cost of bought in services include repairs and maintenance, power and fuel, advertising and publicity, postage, telephone & telegram, printing & stationery, audit fees, rent & rates, traveling expenses, legal charges, carriage outwards, entertainment expenses etc.

2) APPLICATION OF VALUE ADDED

The application value added is the aggregate amount of remuneration of all the stakeholders i.e. remuneration of Employees (RE), remuneration of Government (RG), remuneration of capital providers (RCP) and the amount re-invested in the business (RIB). It can be written as VA = (RE + RG + RCP + RIB). Here remuneration of employees includes the amount of salaries and wages, payment of bonus, contribution to provident fund, ESI and other benefits, staff welfare expenses, payment of gratuity, director's remuneration etc., remuneration of government includes the amount of excise duty, customs duty, local taxes, sales tax, octroi duty, rates and taxes, other direct taxes (e.g. income tax, wealth tax) etc. In some cases amount of export incentives, subsidies received, refund of any duty or taxes like duty draw backs, excess of provision of taxes are granted by the government and are deducted from Government's share. Providers of capital include the parties from whom the firm borrows money in the form of debentures or in the form of equity share capital and preference share capital. Interest is paid to debenture holders while dividends are paid to shareholders. Amount re-invested in business includes the amount transfer to various types of reserves, statutory or non-statutory including retention, and depreciation. Both the generation of value added and the application of value added can be shown in the chart given below.



NOTE: There are two debatable items regarding their treatment while computing the generation and application of value added. These items are discussed below:

i) NON-VALUE ADDED ITEMS: Non-value added items refer to expenses incurred and income earned which are not directly related with the business unit. In case of preparing Profit and Loss Account the non-value added items are to be included but to prepare the Value Added Statement, the non-value added items are to be adjusted with the net value added. The non-value added items are classified into two parts: Non-value added Debit items and Non-value added Credit items.

a) Non-value added debit items include Loss on sale of Assets, Provision for doubtful debts, Prior period charges, Preliminary expenses written off, Donations and like nature of expenditure, Previous Years' Charges (Dr), Miscellaneous Expenses etc. and

b) Non-value added credit items include Profit on sale of Assets, Interest on securities and deposits, Dividend on trade investments, Previous Years' Charges (Cr), Proceeds from sale of scrap etc. There are four alternative ways for treating the above non-value added debit items and credit items. At the time of preparing the value added statement the 4th alternative is applied by many business units. These four alternatives are:

1. The amount of non-value added credit items is deducted from sales volume.
2. The amount of non-value added debit items is added with the bought-in-materials and services.
3. The amount of all debit items and credit items are mutually adjusted.
4. The amount of all debit items and credit items are treated separately and adjusted with net value added finally.

ii) DEPRECIATION: In respect of depreciation the following three alternative treatments are possible:

1. To show it in the application of value added under the head either 'retained profit' or 'growth and expansion';
2. To include it under the Bought-in-services and ascertaining directly the net value added;
3. To deduct from the gross value added separately.

The third method distinctly specifies the amount of depreciation and helps to establish direct linkage with gross value added in order to find out net value added.

FINDINGS OF THE STUDY

ANALYSIS OF VALUE ADDED REPORTING

Value added statement is new concept in Indian corporate environment for financial reporting. A typical statement of added value is prepared as routine part of management information system. The value added statement is largely a rearrangement of information contained in income statement. That rearrangement provides a better means of understanding an enterprises contribution to the society. Value added statement of HPCL revels that way by which the company has generated value added for the various segment of the society.

i) GENERATION OF VALUE ADDED

The generation of value added and the disposal of value added are shown in Table-1. It is found from Table-1 that the amount of sales and income from operations have increased throughout the study period (i.e. from Rs. 33830 crore in the year 1999-2000 to Rs. 131802 crore in the year 2008-09) excepting in the years 2001-02 and 2009-10 respectively. The value of gross output also increased from Rs. 36127 crore in the year 1999-2000 to 129966 crore in the year 2008-09 showing a growth of 100% to 359.75%. The sales indices show a growth of 100% to 389.69% during the period under study. The total value addition is

significantly increases from Rs. 2127 crore in the year 1999-2000 to Rs. 5815 crore in the year 2009-10 with some fluctuation and the value added indices have reached 273.39% in 2009-10 from the base year 1999-2000 (takes as 100%). The fluctuation in the amount of value added is mainly due to both fluctuations in the value of output and also the cost of bought in goods and services over the years.

ii) APPLICATION OF VALUE ADDED

Application of value added is very important for the view point of social objective. Under application of Value added major segments are payment to employees, payment to government, payment to capital provider and amount which are retained by the company.

a) **PAYMENT TO EMPLOYEES:** It is observed from Table-1 that the amount of contribution to employees gradually increases from Rs. 400 crore in 1999-2000 to to Rs. 1617 crore in the year 2009-10 with the exception of the year 2005-06 but the percentage of contribution to employees based on total value added is highest in the year 2005-06 (i.e. 35.78%) then is followed by 2009-10 (27.81%), 2007-08 (24.42%) and the lowest percentage of contribution is computed at 13.53% in the year 2003-04.

b) **PAYMENT TO GOVERNMENT:** It is found from Table-1 that out of total disposal of value added the contribution to government made by HPCL was 10.11% in 1999-2000 and then it gradually increased and reached at 25.55% in 2003-04. During the last six years of the study period the contribution for the government is very low but in the last year it increased up to 14.17%.

c) **PAYMENT TO PROVIDERS OF CAPITAL:** It is observed from Table-1 that in case of interest paid to money-lenders, the interest liability has been fluctuating in respect of both amount and percentage of total disposal of value added. The highest amount of Rs. 2084 crore paid in the year 2008-09 showing 42.43% of total value added. This fluctuating trend in terms of percentage of total value addition indicates that the company cannot redeem the long-term loans significantly and also it doesn't indicate the good sign of liquidity and solvency. So far as the shareholders point of view, the amount of dividend also fluctuated throughout the study period. Initially the percentage of dividend based on total disposal of value addition vary from 15.28% to 18.75% but in the last four three years it was very low. It clearly indicates that the profits are not available for the shareholders due to interest liability increases during the last four years of the study period.

d) **REINVESTMENT IN BUSINESS:** It includes retained earnings and depreciation. The retained earnings are very much important for growth and expansion of business. From table-1 it is found that retained earnings shows a fluctuating trend over the periods under study with highest amount of Rs. 1061 crore in the year 2003-04. It is also found that the depreciation has marked a rising trend throughout the study period. It was Rs. 304 crore in 1999-2000 which increases continuously and reached up to Rs. 1168 crore in the last year of the study period. But the percentage of depreciation based on total value addition is fluctuated from 14.41% to 38.50%. As the amount of depreciation increases it clearly indicates a good sign of liquidity. But from the view point of percentage of depreciation with respect to total value addition it shows a significant contribution by the company towards the society.

TABLE-1: VALUE ADDED STATEMENT OF HPCL FOR THE PERIOD FROM 1999-2000 TO 2009-10 (Amount in Crore Rupees)

Particulars	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
A. Generation of Value Added											
Sales/Income for Operation	33830	48505	44458	54165	57511	65218	76920	96918	112098	131802	114890
*Sales Indices**	(100)	(143.38)	(131.42)	(160.11)	(170.00)	(192.78)	(227.37)	(286.49)	(331.36)	(389.60)	(339.61)
Add: Increase/(Decrease) in Stock	2297	-368	-258	1188	357	35	1408	245	2359	-1,836	3250
Gross Output	36127	48137	44200	55353	57868	65253	78328	97163	114457	129966	118140
*Gross output Indices**	(100)	(133.24)	(122.35)	(153.22)	(160.18)	(180.62)	(216.81)	(268.95)	(316.82)	(359.75)	(327.01)
Less: Cost of Bought in Material & Services purchased from Outsiders											
i) R/M Consumption	28527	40247	35296	44531	45496	54529	67940	83036	100627	114830	101185
ii) Other Costs	5473	5221	6303	7136	8160	7630	8596	10302	10234	10224	11140
Value Added	2127	2669	2601	3686	4212	3094	1792	3825	3596	4912	5815
*Value Added Indices**	(100)	(125.48)	(122.28)	(173.3)	(198.03)	(145.46)	(84.25)	(179.83)	(169.06)	(230.94)	(273.39)
*B. Application of Value Added***											
1. Payment to Employees	400	528	553	546	570	712	641	730	871	1135	1617
	(18.81)	(19.78)	(21.26)	(14.81)	(13.53)	(23.01)	(35.78)	(19.08)	(24.42)	(23.11)	(27.81)
2. Payment to Government (Income Tax/Fringe Benefit Tax)	215	232	435	875	1076	363	-121	396	-26	137	824
	(10.11)	(8.69)	(16.72)	(23.74)	(25.55)	(11.73)	(-6.75)	(10.35)	(-0.72)	(2.79)	(14.17)
3. Payment to Providers of Capital:											
i) Interest on Borrowing	150	387	295	153	56	82	176	423	766	2084	904
	(7.05)	(14.50)	(11.35)	(4.15)	(1.33)	(2.65)	(9.82)	(11.06)	(21.30)	(42.43)	(15.55)
ii) Dividend	325	374	339	757	842	580	116	709	119	208	474
	(15.28)	(14.01)	(13.03)	(20.54)	(19.99)	(18.75)	(6.47)	(18.54)	(3.31)	(4.23)	(8.15)
4. Reinvestment in Business:											
i) Retained Profit	733	714	449	780	1061	697	290	863	1016	367	828
	(34.46)	(26.75)	(17.26)	(21.16)	(25.19)	(22.53)	(16.18)	(22.56)	(28.85)	(7.47)	(14.24)
ii) Depreciation	304	434	530	575	607	660	690	704	850	981	1168
	(14.29)	(16.27)	(20.38)	(15.60)	(14.41)	(21.33)	(38.50)	(18.41)	(23.64)	(19.97)	(20.08)
Value Added	2127	2669	2601	3686	4212	3094	1792	3825	3596	4912	5815
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)

Source: Computed and Compiled on the basis of information available in Annual Reports of HPCL from 1999-2000 to 2009-10.

Note: i) * In case of Sales, Gross Output and Total Value Added, figures in brackets indicate the year wise indices based on the year 1999-2000 and

ii) ** In case of Application of Value Added, figures in brackets indicate the percentage distribution of disposal of value added.

ANALYSIS OF TREND (TIME SERIES ANALYSIS)

By using the time series data from Value Added Statement of HPCL relating to total Value Added we can fit a straight line trend equation with the help of least square method then from the straight trend line equation of total Value Added we can determine the estimated amount of total Value Added (i.e. Trend Values) for the given points of time (i.e. past period) and also for future time points simply by putting the x-values correspond to the different time points (either past or future periods). The trend values relating to total Value Added on different given points of time are depicted in Table-2 and Table-3 respectively.

The fitted trend line equation of total Value Added is:

$y = 3484.45 + 256.86x$ ..... *(1)*

From the above equation total Value Added figures can easily be determined for any future periods. Now if we want to know the total Value Added for the year 2011-2012. Then we can calculate the estimated amount of Value Added ($y_{11\text{-}12}$)= Rs. (3484.45 + 256.86 × 7) crore = Rs. 5282.47 crore by putting x=7 in equation-1 from which we can forecast about employees' share, dividend payable to shareholders, interest payable to lenders, and retained earnings & depreciation reinvested in business unit for further growth and expansion in future. This analysis gives us the idea about the future contribution by the business unit towards different stakeholders of the company and also targeted profit of the company in future.

TABLE - 2: TREND VALUES OF VALUE ADDED OF HPCL FOR THE PERIOD FROM 1999-2000 TO 2009-2010

Years	x- values	Value Added (y)	x^2	xy	Trend Values
1999-00	-5	2127	25	-10635	2200.15
2000-01	-4	2669	16	-10676	2457.01
2001-02	-3	2601	9	-7803	2713.87
2002-03	-2	3686	4	-7372	2970.73
2003-04	-1	4212	1	-4212	3227.59
2004-05	0	3094	0	0	3484.45
2005-06	1	1792	1	1792	3741.31
2006-07	2	3825	4	7650	3998.17
2007-08	3	3596	9	10788	4255.03
2008-09	4	4912	16	19648	4511.89
2009-10	5	5815	25	29075	4768.75
	$\sum x = 0$	**$\sum y = 38329$**	**$\sum x^2 = 110$**	**$\sum xy = 28255$**	----

Source: *Table-1*

ANALYSIS OF CORRELATION AND REGRESSION

The coefficient of correlation between Sales (x) and Value Added (y) is calculated at 0.691 (from Table-3) that shows a moderate degree of correlation between sales and value addition. This coefficient of correlation is statistically significant or not, Student -'t' test has been applied by taking the following two hypotheses: Null Hypothesis (H_0) that there is no significant relationship between sales and value added *($p = 0$)* and Alternative Hypothesis (H_1) that there is significant relationship between sales and value addition *($p \neq 0$)*.

Here the calculated value of 't' is greater than the tabulated values of 't'. Hence we reject the null hypothesis that means there is significant correlation between sales and value addition during the study period.

Based on the data compiled in Table-1, we are interested to make regression analysis to find out the relationship between Value Addition and the amount of Sales. For this purpose we construct Table-3 in which necessary calculations are made. On the basis of the calculations contained in Table-3 the following regression equation is found with the help of least square method: y = 1562.815 – 0.02528x [i.e. Regression equation of VA (y) on the amount of Sales (x)]

From the above equation it is found that the regression coefficient is negative (i.e. -0.02528) which indicates that for one rupee increase in sales the amount of value addition is decreased by Rs. 0.02528. With the help of above regression equation the estimated amount of Value Addition have computed and shown in Table-3. From the estimated Value Addition figure it is observed that there is a clear decreasing trend of value addition with the increase in amount of sales.

TABLE-3: REGRESSION EQUATION OF VALUE ADDED (Y) ON SALES (X) DURING 1999-2000 TO 2009-10

Years	Value Added (y)	Sales (x)	x^2	xy	$y_e = (1562.815 - 0.02528x)$
1999-00	2127	33830	1144468900	71956410	707.59
2000-01	2669	48505	2352735025	129459845	336.61
2001-02	2601	44458	1976513764	115635258	438.92
2002-03	3686	54165	2933847225	199652190	193.52
2003-04	4212	57511	3307515121	242236332	108.94
2004-05	3094	65218	4253387524	201784492	-85.90
2005-06	1792	76920	5916686400	137840640	-381.72
2006-07	3825	96918	9393098724	370711350	-887.27
2007-08	3596	112098	12565961604	403104408	-1271.02
2008-09	4912	131802	17371767204	647411424	-1769.14
2009-10	5815	114890	13199712100	668085350	-1341.60
	$\sum y = 38329$	**$\sum x = 836315$**	**$\sum x^2 = 74415693591$**	**$\sum xy = 3187877699$**	----

Source: *Table-1*

Note: *i) Correlation co-efficient between sales and value added is 0.691,*

ii) Calculated value of 't' = 3.963

iii) Formula for calculating the value of 't' = $\frac{r \times \sqrt{(n-2)}}{\sqrt{(1-r^2)}}$ with (n – 2) d. f.

iv) Tabulated values of 't' at 1% and 5% level of significance with (11-2) d. f. are $t_{0.01} = 3.25$ and $t_{0.05} = 2.26$ respectively for both-tailed test.

ANALYSIS OF VALUE ADDED RATIOS

Ratio analysis is one of the important tools for measuring the financial performance but traditional ratios are not relevant for the analysis of value addition by the company. Therefore, some value added ratios are considered for appraising the performance and for judging the productivity of HPCL and also to signify the value added reporting in modern era. The ratios which have been selected are discussed below. All these ratios are computed on the basis of data available from 1999-2000 to 2009-10 and are shown in Table-4.

i) ***GROSS MARGIN RATIO:*** This ratio is calculated to identify the earnings capacity of the company instead of gross profit ratio. It is ascertained by dividing the amount of value addition by the amount of sales. Greater the ratio more will be the efficiency of an enterprise to add value through sales. It is observed from Table-4 that gross margin ratio marked a fluctuating trend during the study period. It ranges from 2.33% in 2005-06 to 7.32% in the year 2003-04. On an average, it is computed at 4.98% which reflects that the value addition will be significant especially in the first five years and also the last year of the study period and in the remaining years company's earnings capacity will not be effective.

ii) ***CAPITAL PRODUCTIVITY RATIO:*** It reflects the efficiency of capital utilization in generating the quantum of value added. The main purpose of computing this ratio is to find out how much value is added per rupee of capital employed. The higher the ratio, the better will be the capital productivity of business unit and greater wealth creation in terms of value added. This ratio is recognized more significant than traditional ratio of 'Net Profit to Capital Employed' as an index managerial efficiency. It is calculated dividing value added by the capital employed (Nandi, 2010). From Table-4 it is found that capital productivity ratio of the company has almost an increasing trend over the study period. the capital productivity of HPCL has been increasing from 19.54% in 1999-2000 to 45.90% in the year 2007-08 and thereafter it decreased up to 31.86%. It indicates the efficient utilization of capital for the generation of value added. Overall average of capital productivity is 27.66%. It reveals that during first half of the study period, this ratio is less than the average whereas in the second half of the study period it is more than the average of this ratio.

iii) ***LABOUR PRODUCTIVITY RATIO:*** This ratio expresses the relationship between the amount of value added and the number of employees. It indicates value generated per employee and labour productivity. When the ratio becomes high, it signifies that the enterprise is highly efficient in terms of labour productivity and is highly effective in manpower management. As compared to traditional ways of computing labour productivity employees would attach much importance to this ratio as they are better indicators of their efficiency and effectiveness. One of the significant uses of the concept of value added is its incorporation in company incentive schemes or bonus schemes. Table-4 exhibits that the labour producitivity ratio of HPCL registered an upward trend

throughout the study period with some fluctuations. It is 0.18 crore per employee in 1999-2000 that increased up to 0.38 crore per employee in 2003-04. Then it started decreasing up to 2005-06 and thereafter it increases up to 0.52 crore per employee in the last year of the study with average of 0.31 crore per employee. This increasing trend indicates that the efficiency of the company has increased considerably over time in terms of labour productivity.

iv) ***STOCK TURNOVER RATIO:*** It indicates the operating efficiency of the company. It is calculated by dividing the amount of gross output by the year end value of stock. Higher the ratio, more will the operating capacity of the firm and vice-versa. It is highlighted from Table-4 that the stock turnover ratio of the company has been fluctuated from 9.39 times to 14.78 times with average of 11.45 times. This fluctuating trend in stock turnover ratio suggests that the operating efficiency of the company has not been satisfactory during the period under study.

v) ***FIXED ASSETS TURNOVER RATIO:*** This ratio expresses the relationship between the amount of value addition and the amount of fixed assets. It is computed by dividing the amount of value added by the amount of fixed assets. It indicates how effectively the operating assets are being employed in generating the value added. Greater the ratio, higher will be the efficiency of the enterprise in terms of capital productivity. It is seen from Table-4 that the fixed assets turnover ratio marked a fluctuating trend. It varied from 13.29% in 2005-06 to 36.41% in the year 2003-04 with average of 25.38% during the study period. It is seen that during the first five years of the study period this ratio is more than the average of this ratio which clearly indicates that the utilization of operating assets to increase the value addition is better and in the remaining years of the study period the operating assets are not effectively utilized for generating the value added.

vi) ***RATE OF INVESTMENT:*** It is one of the most important value added based ratios which show utilization of capital expenditure per employees. It expresses greater availability of capital resource per employees. It is computed by dividing the amount of capital expenditure by the number of employees worked in financial years. It is observed from Table-4 that the rate of investment for the first five years is very low as compared to the remaining years of the study period. The average rate of investment during the study period is computed at 0.18 crore per employee. The study of rate of investment reveals that the availability of capital resources per employee in the second half of the study period is far better than the first half of the study period for the development and expansion of activities.

TABLE - 4: VALUE ADDED RATIOS OF HPCL FOR THE PERIOD FROM 1999-2000 TO 2009-10

Years	Gross Margin Ratio (%)	Capital Productivity Ratio (%)	Labour Productivity Ratio (Rs. Crore per Employee)	Stock Turnover Ratio (in times)	Fixed Assets Turnover Ratio (%)	Rate of Investment Ratio (Rs. Crore per Employee)
1999-00	6.29	19.54	0.18	11.13	25.23	0.13
2000-01	5.50	19.68	0.23	13.92	29.12	0.09
2001-02	5.85	19.97	0.23	12.19	25.39	0.07
2002-03	6.81	18.25	0.33	10.81	34.27	0.05
2003-04	7.32	21.89	0.38	10.71	36.41	0.08
2004-05	4.74	27.60	0.29	11.48	25.07	0.13
2005-06	2.33	31.76	0.17	10.03	13.29	0.25
2006-07	3.95	33.07	0.35	12.00	24.46	0.38
2007-08	3.21	45.90	0.33	9.52	18.38	0.28
2008-09	3.73	34.79	0.44	14.78	24.31	0.21
2009-10	5.06	31.86	0.52	9.39	23.27	0.33
Mean	**4.98**	**27.66**	**0.31**	**11.45**	**25.38**	**0.18**

Source: *Computed and Compiled from Annual Report of HPCL from 1999-2000 to 2009-10*

Our first hypothesis that the generation of value added and application of value added are even and similar during the study will not be proved, because as per table-1 during the study period generation of value added varies from 100% (base year) to 273.39% due to changes in the various segment of sales revenue and cost of brought in material and services. The main reason is behind that the company increases their production and lunch new product in global market as well as outsourcing of human resources which will increases the cost of production especially in last five years. Our second hypothesis that there is significant relationship between the amount of value addition and the amount of sales revenue is proved true. Our last hypothesis that value added reporting is better method of reporting will be proved by table-1 because in simple income statement will not able to show generation and application of value added towards society, government, employees and reinvestment point of view but value added statement shows it in a better way, even in value added ratios are also support our hypostasis.

CONCLUSION

Based on the above analysis it may be concluded that the generation of value addition made by HPCL has increased continuously with slight fluctuation during the study period only due to increase in sales revenue and operational efficiency. So far as the disposal of value added is concerned it is found that the payment to the employees has been increases significantly that indicates social contribution by the company in way of excise duty, custom duty and other taxes. Interest liability has been fluctuated regularly which indicates that the company's liquidity position and management of long-term debt has not been quite sound. But from the view point of shareholders, it is found that the dividend policy adopted by the company was not satisfactory throughout the study period. The company's re-investment in business in the form of retained earnings and depreciation was sufficient over the study period. On the basis of above interpretation it can be concluded that the management of HPCL has served to the society about 66.68% of total value added has been distributed among the employees, Government, financial institutions, banker and shareholders and the remaining 33.32% of the total value added is re-invested in the form of retained earnings and depreciation that is an appropriate amount of investment for the development, growth and expansion of the business. The analysis of study clearly signifies that the management of the company has not only improved its profitability but has also fulfilled its responsibility towards the society at large.

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TRENDS IN FDI INFLOWS IN INDIA

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ABSTRACT

The article discusses the trends in Foreign Direct Investment (FDI) since the initiation of reform process in India i.e. since 1990-91. It starts with the policy of the government towards foreign capital, discusses the advantages and disadvantages of FDI and then finally it analyzes the trends in FDI by using graphical method as well as least squares method.

KEYWORDS
FDI, Finance.

INTRODUCTION

Since Independence India started with planned economic development for the overall and balanced development of the country but Indian planners were apprehensive of foreign capital. Foreign capital was looked upon with suspicion. The aim of planning was to achieve a Socialistic pattern of society. Public sector expanded by leaps and bounds and private sector was supposed to play a limited role. Our trade policy was also inward looking. We followed the policy of Import substitution and then slowly moved towards Export promotion.

The push towards liberalization, privatization and globalization in India came in eighties when India faced severe balance of payments crisis. To this crisis fuel was added by oil shocks, which pushed up import bill significantly while exports lagged behind. This led to considerable increase in trade deficits. Remittances from gulf countries also flattened out. The problems multiplied by gulf war in 1990-91. FOREX reserves declined to $1.1 billion in June 1991, which was hardly sufficient for two weeks of import requirement. During this period government had no option but to take loan from IMF, which comes with its conditionalities. One of the condition was external sector liberalization and relaxing restrictions on international flow of goods, services, technology and capital, which is considered as globalization. Thus we started with giving increasing emphasis to foreign capital. The foreign direct investment was allowed under the new regime in almost all sectors of the economy. The economy was opened up to bring it in tune with the global economy. And changes were effected in industrial and trade policies which were substantially liberalized .In the liberalized atmosphere the change in the attitude of the government was inevitable.

Foreign investments can be of two types direct and Portfolio. The direct foreign investment which is also known as **FDI** and includes investments from non-Resident Indians and Overseas Corporate Bodies (OCB) These are parts of the government efforts to supplement the domestic resources for the economic development of the country. Now FDI is permitted in all sectors including service sector with some sectoral caps. Even foreign investments are allowed in the SSI sector. Similarly such investments are allowed for trading activities with a cap. There are other modes of FDI like Global Depository Receipts, American Depository Receipts, Foreign Currency Convertible Bonds etc. Although India is endeavouring to catch up with China in attracting foreign capital but it is still way behind it.

FDI VERSES OTHER FLOWS OF FOREIGN CAPITAL

FDI is defined as a form of long term international capital movement made for the purpose of productive activity and accompanied by the intention of managerial control or should not be confused with portfolio investment which does not seek management control, but is motivated by short term speculative profits.

To quote the --report "FDI flows to developing and transition economies in 1998 declined by about 5% from the peak in 1997, a modest reduction in relation to the effects on other capital flows of the spread of the Asian Financial Crisisto global proportions. FDI flows are generally less volatile than portfolio flows." FDI is considered as superior to other types of flows for following reasons:

- Foreign direct investors have longer term perspective when investing in host country. Hence they are less volatile and easier to sustain even during times of crisis.
- Other types of foreign capital may finance consumption rather than investment in the host country while FDI is used more productively.
- FDI provides more than just capital. Foreign direct investors bring with them internationally available technologies and management know-how

ADVANTAGES OF FDI

FDI is universally accepted as an essential element for achieving sustainable development. FDI provide a strong stimulus to income growth in host country. Developing countries are strongly advised these days to rely on FDI in order to supplement national savings by capital inflows and thereby promote economic development. FDI has following benefits for the host countries:

1. **Increasing the Level of Investment**: In less developed countries since incomes are low, savings are also very low, therefore, foreign investment can fill the gap between required investment and locally mobilized savings. Local capital markets are often not well developed. Besides access to hard currency needed to purchase investment goods for development purposes may not be locally available. Foreign investment can give a push to domestic investment through both forward and backward linkages
2. **Upgradation of Technology:** FDI normally comes with managerial experience, organizational and technological skills etc. Along with machinery and equipment required foreign direct investors also bring with then advanced technological knowhow. Industries in under developed countries use old and out dated technology and therefore their product will not be competitive in global markets. FDI solves this problem because it comes with advanced technologies.
3. **Improvement in Export Competitiveness**: FDI increases competition in the domestic market and thus domestic companies will have to improve quality and therefore it will promote efficiency. It can help host country improve export competitiveness as well. Export competitiveness will also improve with improvement in technology. Thus it will also lead to increase in exports.
4. **Employment Generation:** Foreign direct investment increases employment opportunities in the country. Foreign investors employ local people in large number of jobs and therefore more and more employment opportunities are created in the economy. In the host country mainly developing countries it also provides training to entrepreneurs in the operation of new businesses.
5. **Resilence Factor:** FDI has proved to be resilient during financial crisis. FDI was significantly stable during currency crisis in South East Asia.
6. **Economic Development of the host country:** FDI through all the above mentioned advantages helps in overall economic development of the country. It increases employment opportunities, increases national and percpita income, increases investment and capital formation and hence accelerates the economic development of the country.
7. **Helps In Improving The Balance Of Payments Situation:** FDI helps in improving Balance of Payments position and increases the FOREX reserves in the host country.

8. **Revenue to the Government:** FDI also increases the government's tax revenues also because profits generated by the foreign companies contribute to corporate tax revenue.
9. **Benefits to the consumers:** Finally consumers also gain through increased availability of world class consumer goods at competitive prices.

DISADVANTAGES OF FDI

1. Crowding out of domestic industry may take place.
2. It has been observed that the contribution by foreign firms to government tax revenue will be very negligible because of liberal tax concession given to in order to attract them.
3. They are responsible for creating dualistic socio economic structure in udder developed countries. They also increase inequalities in income in the economy. They create a class of highly paid executives. They also create imbalance between rural and urban areas.
4. In long run they may lead to outflow of Foreign Exchange Reserves in the form of repatriation of profits and dividends by the investors.
5. They exploit natural resources and cause environmental damage.

TRENDS IN FDI AND FPI SINCE THE REFORM PROCESS IN INDIA

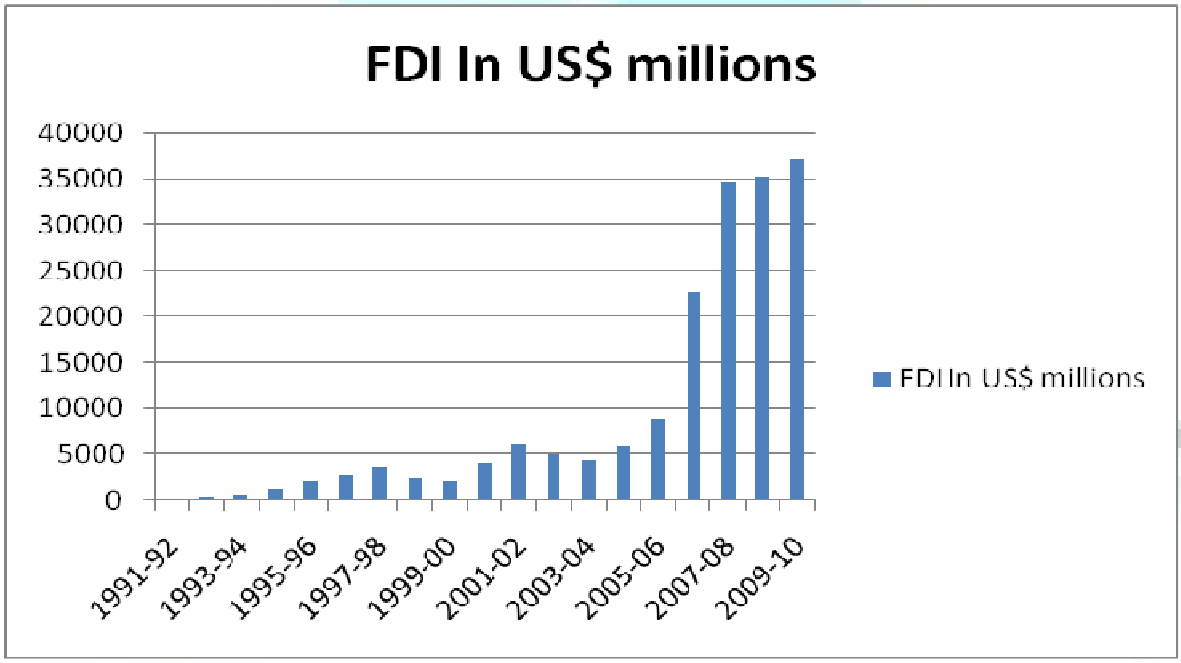
As per the UNCTAD's World Investment Report 2010 India is projected as to become second most attractive destination for FDI by 2010-12. The projection is based on the survey conducted among Trans National Corporations. As per the new FDI policy of the Government of India FDI upto 100% is permitted under automatic route in large number of sectors. Table 1 shows inflows of FDI in US$ millions from 1990-91 onwards.

The table shows that FDI inflows are increasing by leaps and bounds in the country. Starting with just 129 million dollars in the 1991-92 it increased to 37182 million dollars by 2009-10. The increase is approximately 28723.26% in period of 20 years. This is remarkable indeed.

TABLE: 1

Foreign Direct Investment in India					
Year	Foreign Direct investment		Year	Foreign Direct investment	
	US $ million	Annual Rate of growth		US $ million	Annual Rate of growth
1991-92	129		2001-02	6130	52.1469
1992-93	315	144.186	2002-03	5035	-17.863
1993-94	586	86.0318	2003-04	4322	-14.161
1994-95	1314	124.232	2004-05	6051	40.0046
1995-96	2144	63.1659	2005-06	8961	48.0912
1996-97	2821	31.5765	2006-07	22826	154.726
1997-98	3557	26.09	2007-08	34835	52.6111
1998-99	2462	-30.784	2008-09	35180	0.99038
1999-00	2155	-12.47	2009-10	37182	5.69073
2000-01	4029	86.9606			
Source: RBI Website- www.rbi.org.in					

The following diagram shows increase in FDI over the years.



The diagram clearly shows the increase in FDI in India after the reform process. The average annual rate of growth of FDI is around 46.7%. This is remarkable indeed.

LEAST SQUARES ANALYSIS OF FDI AND FPI

The results of linear trend for FDI as dependent variable and time as independent variable are given below:

R	R Square	Adjusted R Square	Std. Error of the Estimate
.801	.642	.622	7707.533

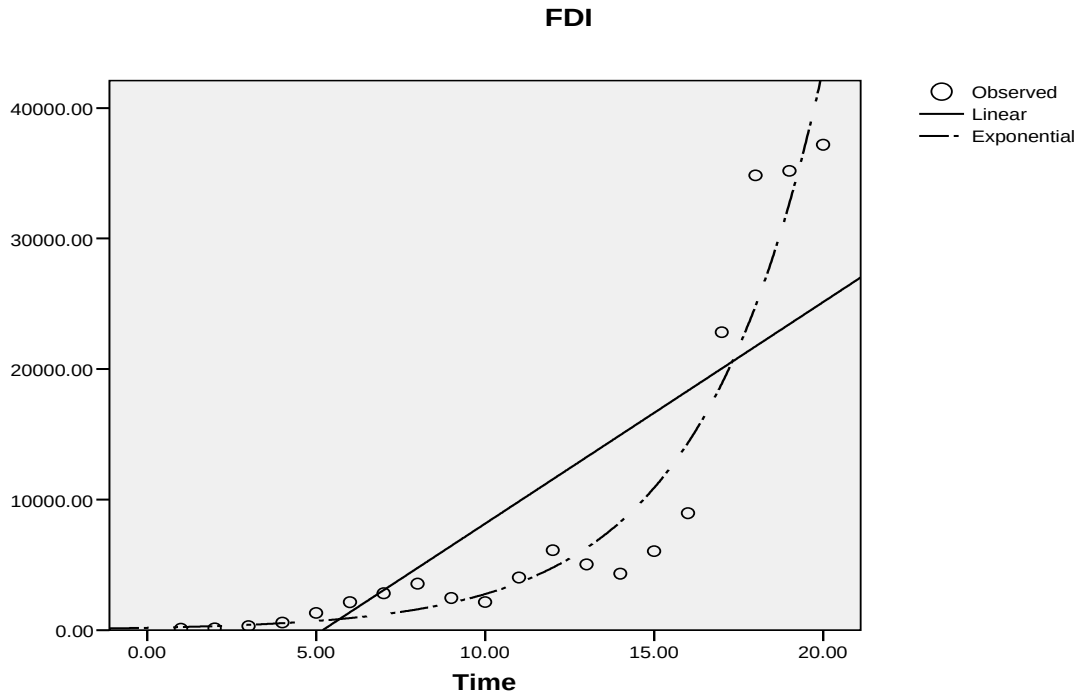
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
Time	1697.336	298.885	.801	5.679	.000
(Constant)	-8815.479	3580.391		-2.462	.024

For linear trend R^2 is only 0.642 and adjusted R^2 is 0.622 almost equal. The results of exponential trend are given below:

R	R Square	Adjusted R Square	Std. Error of the Estimate
.950	.902	.897	.550

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
Time	.275	.021	.950	12.878	.000
(Constant)	177.511	45.330		3.916	.001

For exponential trend R^2 is good it is 0.902 and adjusted R^2 is 0.897. This suggests that FDI is growing exponentially during this period. The diagram given below also shows that exponential curve is good fit for the data.



In the diagram the dotted curve is exponential fit it is closer to observed values which are circles. It implies that FDI inflow is growing exponentially in the country.

CONCLUSION

Thus to conclude we can say that India is the most attractive destination for Foreign Direct Investors. The reasons are many and the most important are a wide market and low labor costs. Increasing FDI has helped the country in solving the problem of deficits in the balance of payments. It has also lead to increase in the growth rate of the economy. Now India is one of the fastest growing economy, next only to China. It has also helped in technological up gradation in the country. Our exports are also increasing by leaps and bounds and the composition of exports is also changing.

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CONCEPTUAL FRAMEWORK ON DESIGNING RURAL COMMUNICATION STRATEGY AND MARKETING OF PRODUCT: A MODEL BASED APPROACH TO STUDY RURAL MARKET

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ABSTRACT

The paper reviews the state of rural marketing in India and examines the difficulties which company face in establishing distribution network and running communication programme in rural India. It also exhibits the dilemma which company faces in crafting rural communication program. In Present paper researchers had examines the paradigm shift which had been in rural market, designed strategies for effective rural communication for rural managers and concludes with some further questions on how the future need of rural people can be addressed. The tempt of rural India has been the theme of vibrant discussion among corporate, researcher and academician. And there is a superior reason too. With urban markets getting saturated for several categories of consumer goods and with rising rural incomes, marketers are running and discovering the strengths of the large rural markets as they try to enlarge their markets. In the vein of any market that has seen a demand and awareness boom, rural India has been seen significant changes in purchasing power and brand recognition. Shift in consumption patterns and easiness to medium of communication have made the rural market a vital mechanism in the churning sales, especially with demand for many categories increasing in the urban markets. The proposed framework can help contribute to the theoretical development of strategic issues of participant who are operating in market under different modalities and norms in present system. It may also provide insights communication gap and challenges in present rural market structures.

KEYWORDS
Rural Market, Rural Communication Framework and Strategies, Rural Consumer, Purchasing Power Framework.

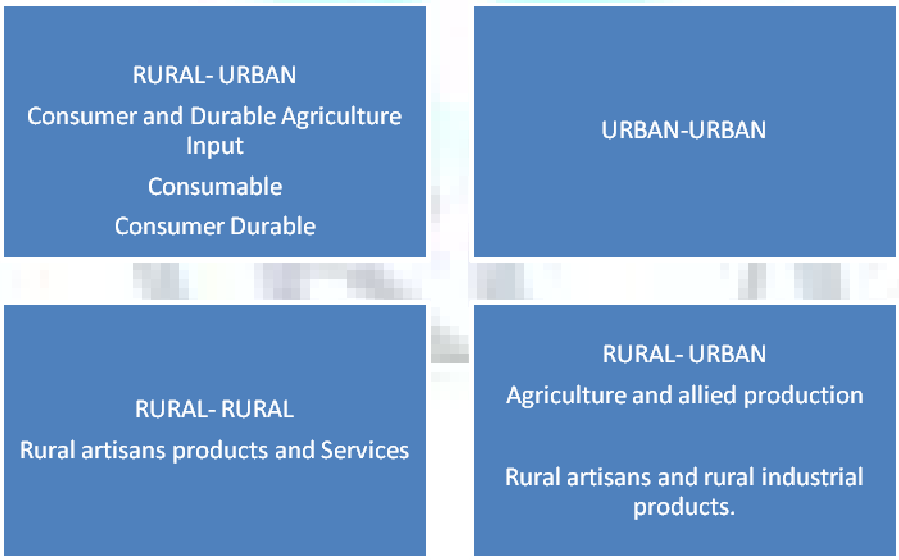
DEFINING THE TERM RURAL

The Current acceptable definitions are those given in the Census of India 2001. It defines 'Rural' as any habitation with a population density of less than four hundred per sq km. where at least 70% of male working population is engaged in agriculture and where there is no Municipality or Board. Most companies in the FMCG sector define 'rural' as a place where population is up to 20000 Persons. Most durable and agri-input companies would consider any town with a population below fifty thousand as 'Rural' (Pradeep kashyap & siddharth Raut – The Rural Marketing: 2006)

With the census definition as above, the 2001 census inform us of Rural Population of 743 million in the total population of India of 1029 million(2001). Thus 72.2% of the Indian population is in the rural areas.

DOMAIN OF RURAL MARKETING

FIG: 1



Source: (Pradeep kashyap & siddharth Raut – The Rural Marketing: 2006)

Rural marketing is thus a two way marketing process (other than internal aspect). Its content now encompasses inflow of product into rural areas for production or consumption purposes, and also outflow of product to urban areas.

DEMAND AND AWARENESS BOOM, RURAL INDIA

This market is not only large, but also geographically scattered. It exhibits linguistic, regional, cultural diversities and economic disparities, hence can be considered as more complex than the total market of a continent. Rural consumers represent a heterogeneous lot- a complex mosaic of mind-sets, cultures & lifestyle and this is depicted in their unique demands and preferences on how the product is designed and how the brand is positioned and promoted, and this calls for a methodical study and conscientious research of the rural consumers, their psyche, needs, buying patterns and their problems.

FIG: 2 RURAL MARKET & ITS FUNCTIONARIES

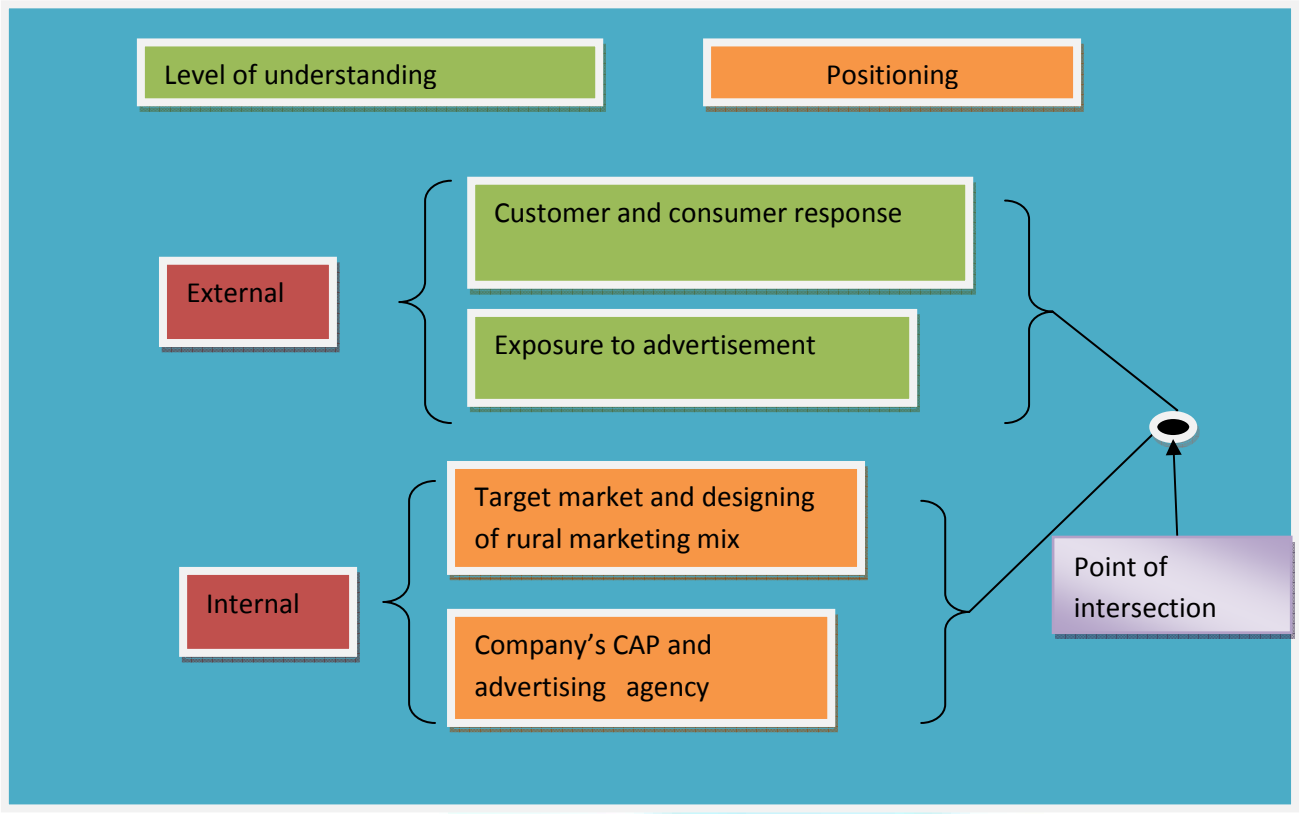
Enhanced access to quality roads, power and water supplies remains a pipedreams, despite all the promises made by successive governments (Pothik Ghosh, 2005)1. Living conditions (from kutcha houses to semi-pucca and pucca structures, from biomass to LPG for cooking, etc) in rural India seem to have been improving in recent years, as highlighted by the recent NSSO Survey (59th Round).

Rural areas in developing countries suffer from poor market access. As urbanization grows, the increased demand for processed food favors production areas with more favorable agricultural conditions. The Common Minimum programme (CMP) should be seen as a package that promises to make growth more sustainable by addressing a key variable – rural demand. After a decade and a half of reform, we seem close to arriving at the right growth-welfare mix (Editorial, The Times of India, and 30th May 2005).

PURCHASING POWER AND BRAND RECOGNITION

The framework for increasing purchasing power for rural market can be understood by pyramidal structure.

FIG: 3. PURCHASING POWER FRAMEWORK: MODEL 1



Where CAP is a acronym for

C= Cost to Rural Consumer

A = 4A's

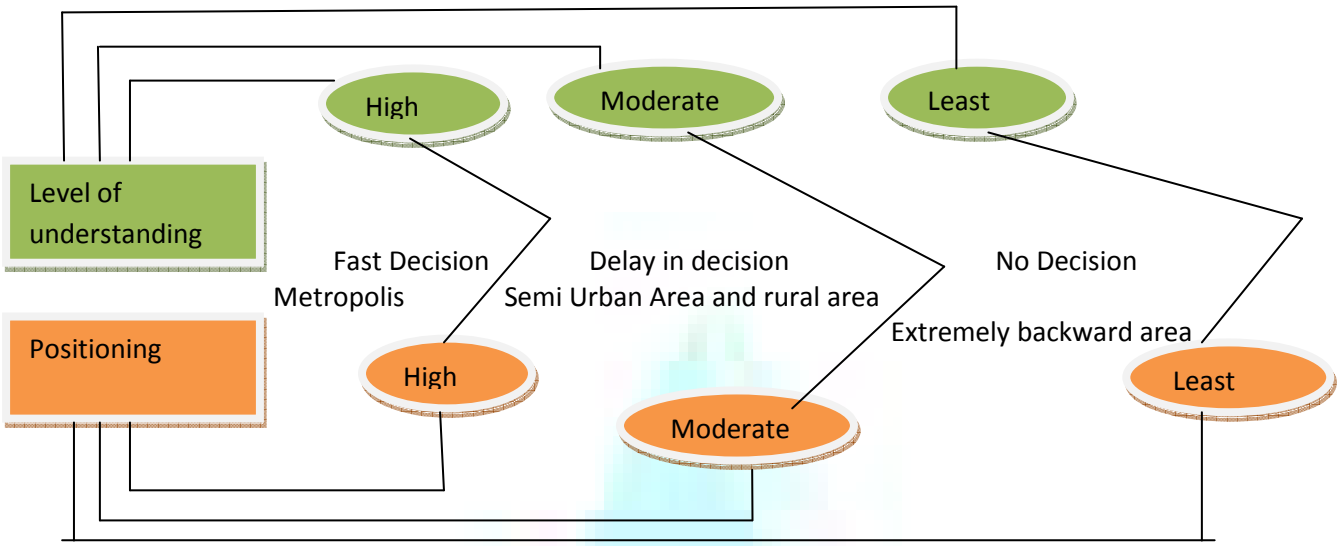
P = Purchasing Power

Here CAP is a new acronym which is being introduced by researcher after analyzing the concept of rural marketing and researcher objectively places CAP as the starting ladder towards the purchasing power and brand recognition process because it forms the integral and internal part of organization's strategy towards development of rural market.

COST TO RURAL CONSUMER

It relates to at what price the rural customer is ready to pay for certain benefits. It largely differs from urban purchase to rural purchase as because of primal aspect of differentiation in various categories of which prime one is income and culture and environment. There should be different cost strategy while moving from urban to rural and vice versa .product re-engineering would be one way to redefine product's value relative to benefits and cost. The point of intersection basically is known as decision point. Hence the decision point may be diagrammatically be shown as

FIG: 4. PURCHASING POWER FRAMEWORK: MODEL



- Metropolis=Tier 1 with high per capita income City.
- Semi Urban and rural area=tier 2 city with moderate per capita Income and population range 15,000-20,000
- Extremely Backward Area=With Least per capita Income

Focus should be on with moderate- moderate combination.

4A's

The alphabet A recognizes the most charismatic part of marketing strategies in churning out the various dimensions of rural customer as it requires a serious thought to be given by organization who are seeing to make their presence in untapped rural environment It stands for affordability, availability acceptability and awareness. The matrix form showing the relevancy of A is shown below.

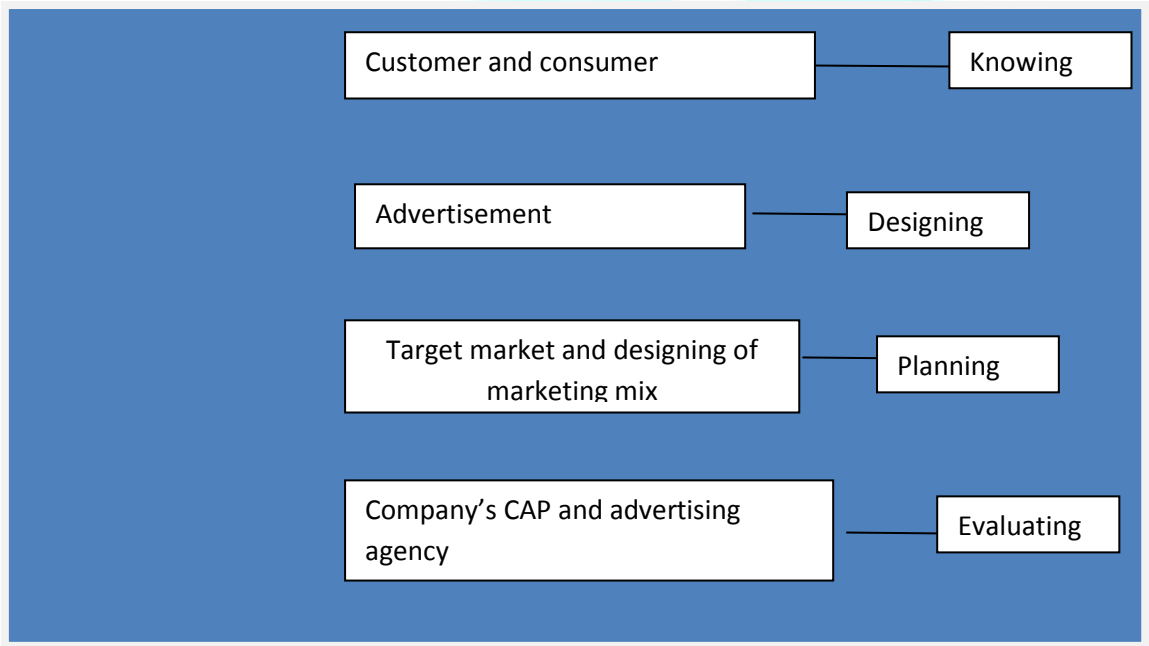
TABLE 1: 4 A'S

	Affordability	Acceptability
Availability	Product Positioning occurs	Cost evaluation
Awareness	Evaluation of product occurs-pre and post behavioural aspect	Demand flow is good

	Affordability	Acceptability
Availability	Where	When
Awareness	What	How

PURCHASING POWER TO RURAL CONSUMER

FIG: 5. EPDK (EVALUATING, PLANNING, DESIGNING, KNOWING) FRAMEWORK



Hence purchasing power of a rural customer can be analyzed through EPDK circle (researcher's own idea) of evaluating company's own strength and potentials where as planning, designing and knowing are action oriented part.

RURAL CONSUMER

India being a very vast geographically, consumer here are naturally scattered over a vast territory. As the country is also marked by great diversity in climate, religion, language, literacy level, custom and almanac, lifestyles and economic status, here consumer present a complex and bizarre group. The heterogeneity hold many implication for a marketer, especially to those going in national marketing (Ramasamy and Namakumari, 2002, p.34)

The buying behavior of the rural consumers is influenced by several factors such as socio-economic conditions, customs, cultural environment, literacy level, occupation, superstitions, geographical location etc. Usage of various forms (like cartoons etc) of religious gods or symbols in advertisements – Rural consumer is more religious and has a great depth of belief in God. When they see their gods have been used as say cartoon characters in any advertisements they feel highly offended. Marketers need to be very careful in this aspect while designing advertisements which are specially targeted for rural customers.

The launch of non durable into the market can be use demonstration and sampling to educate the consumer and create conviction. Demonstration and sampling for a new brand helps to create brand awareness and pushes the product through the channel. The marketer of an existing non durable brand can use reminder advertising and sales promotion to retain the loyalty of the rural consumer.

RURAL COMMUNICATION & MARKETING OF PRODUCT FRAMEWORK

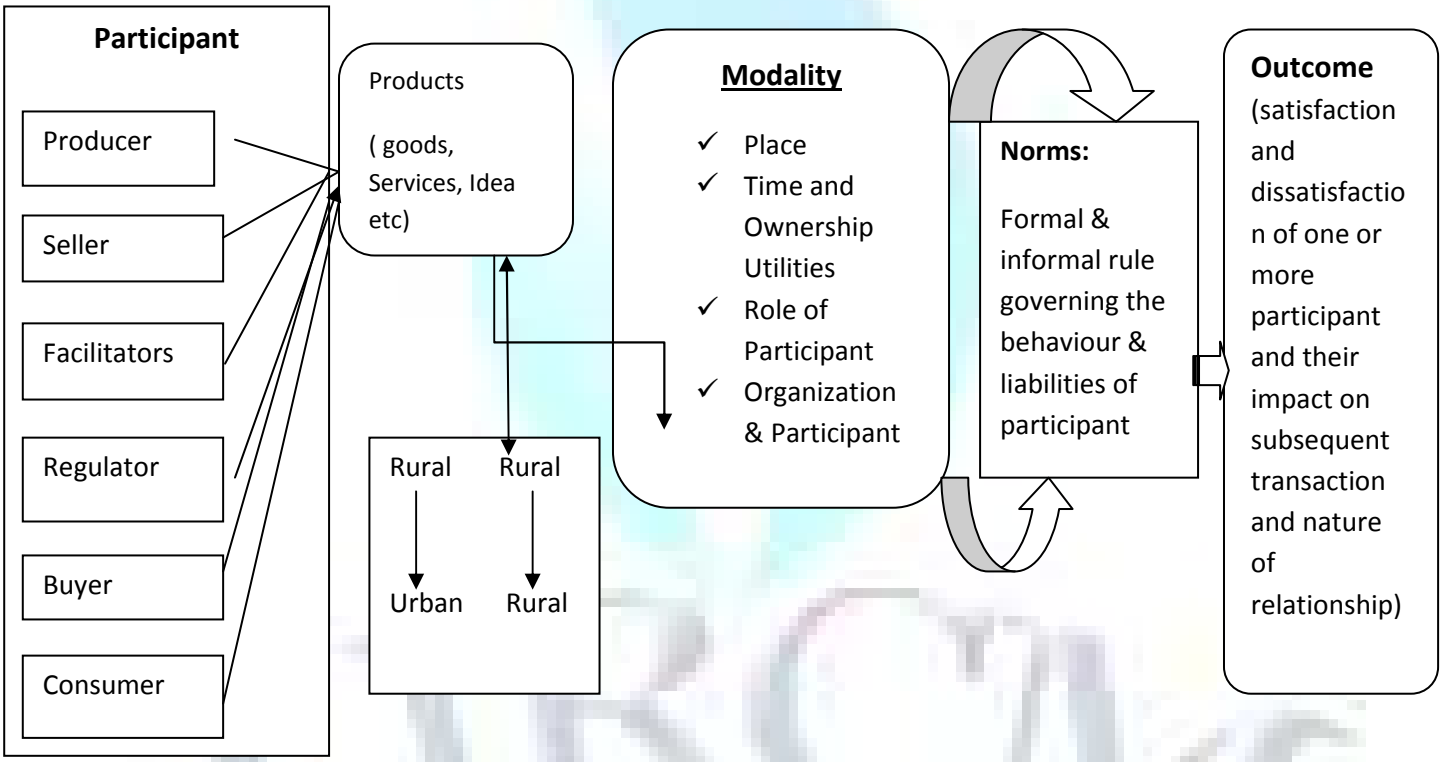
Rural communication is an interactive process in which information, knowledge and skills, relevant for development are exchanged between farmers, extension/advisory services, information providers and researchers either personally or through media such as radio, print and more recently the new "Information and Communication Technologies" (ICTs). In this process all actors may be innovators, intermediaries and receivers of information and knowledge. The aim is to put rural people in a position to have the necessary information for informed decision making and the relevant skills to improve their livelihoods. Communication in this context is therefore a non-linear process with the content of data or information. (Castello & Braun, 2006)

FRAMEWORK FOR MARKETING OF PRODUCT CAN BE DESIGNED BY TAKING IN CONSIDERATION FOLLOWING PARAMETER

- Participant: (producer, seller, facilitator, regulator, buyer and consumer) with their utility functions.
- Product: (goods, services and ideas)
- Modality : (Place, time and ownership utilities, roles of participants, the organization of participants, and terms);
- Norm: formal and informal rule governing the behavior of participants and liabilities of the participants); and
- Outcome (satisfaction and dissatisfaction of one or more participant and their impact on subsequent transaction and nature of relationship)

We can combine the two framework, domain of rural marketing and dimension of transaction (the core concept of marketing

FIG. 6: CONCEPTUAL FRAMEWORK FOR MARKETING OF PRODUCT



COMMUNICATION CHALLENGES IN RURAL MARKETING

The situation concerning communication in rural areas of developing countries especially in the case of country like India is characterized by the following. (Castello & Braun, 2006)

1. Lack of information (absence of source and of confined communication content) leading to lack of local knowledge, local flavor and local connection
2. Contrary messages (difficult to know about the appropriate/correct information for a specific rural area) as same message can be interpreted differently in different regions
3. A fragmented market for information with many individual clients or client groups
4. Spread & heterogeneity f rural markets: different regions need different communication strategies as one suit does not fit all due to the vast heterogeneity of rural areas.
5. Relatively few clients scattered over a large area makes the task of rural communication hectic and costly
6. Structural transformations leading to constantly changing channels and content and a lack of the necessary skills for communication is a major challenge
7. A lack of well developed ICT infrastructure and low levels of ICT skills pose threats against effective and advanced modes of communication.
8. Readiness and involvement: The rural environment has a lot of influence on the receiver and therefore he or she may not receive the intended message for any of the following four reason:

a. Selective attention: where the consumer may not notice the stimuli provided;

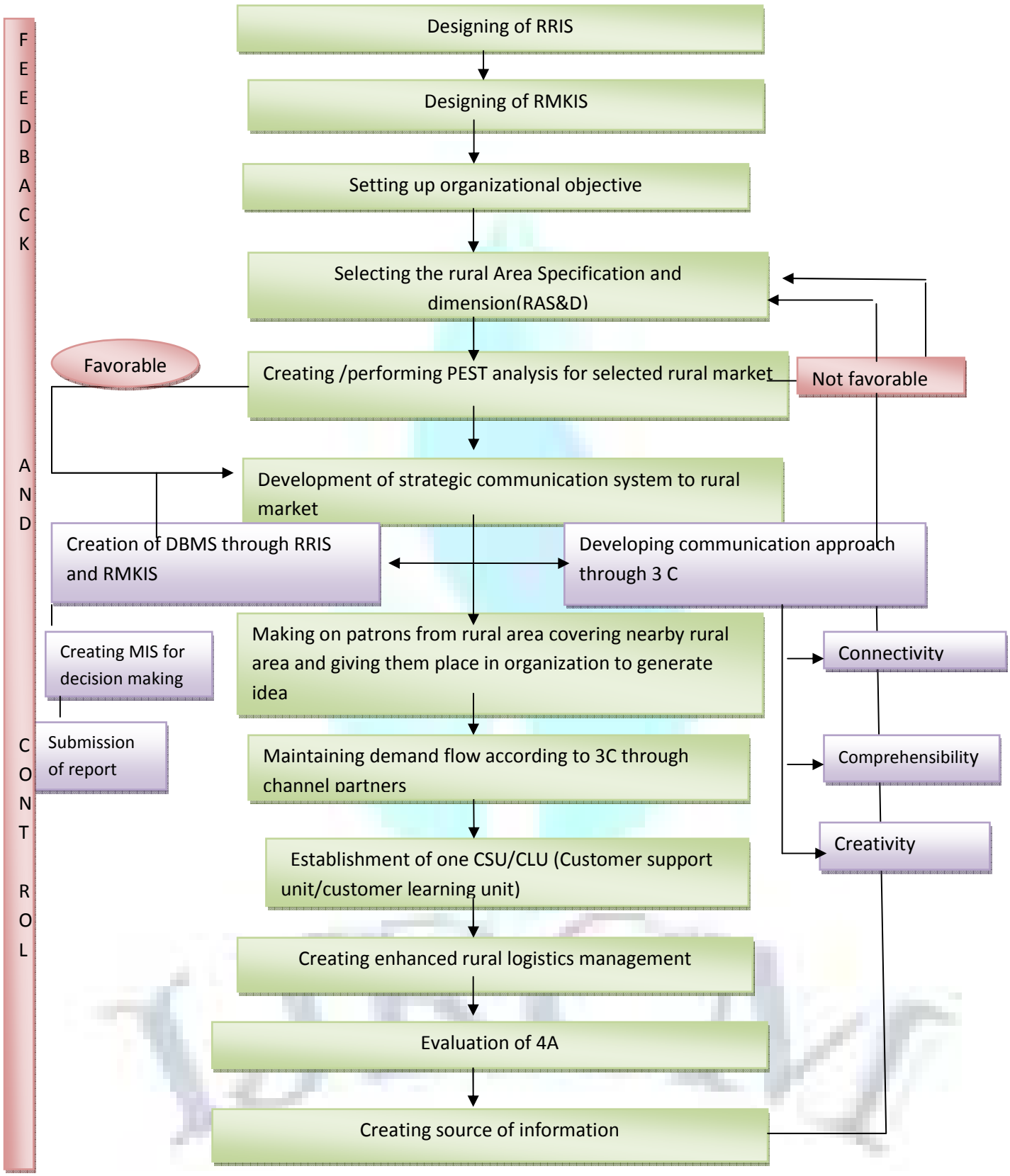
b. Selective distortion: where the message is twisted to hear what the consumer want to hear.
c. Selective recall: where the consumer permanently retain only a small fraction of the message that reach him/her.
d. Selective comprehension: Comprehension of message is therefore a critical problem In Indian rural markets.

RURAL COMMUNICATION FRAMEWORK MODEL

The organization's most crucial part of managing resources is development of sustainable strategy for long term advantage on how to make product and services available at affordable cost and price. In this context it becomes ostensible to narrate the importance of adapting to various communication styles for fast changing market and market dimension. Once they diversify from urban to rural relative of same brand with different positioning and communication strategy then it will create sustain and competitive advantage for the business organization. Indian market and its taxonomy is widely diversified into spectrum of sectors vis a vis primary, secondary and tertiary and majority of population resides in rural area comprising nearly 70% of total population which requires a different outlook to be persuaded in terms of benefit consumption and value maximization.

This is a closed loop and iterative cyclical anatomy which gives a holistic and analytical approach towards development rural market. The structural but hierarchical framework which researcher suggest is indeed a way to gain strategic competitive advantage on the basis of organization's core competence towards various brands and extent of brand image in the urban and sub urban area, over the period of time.

FIG: 7: CONCEPTUAL FRAMEWORKS ON RURAL MARKETING COMMUNICATION

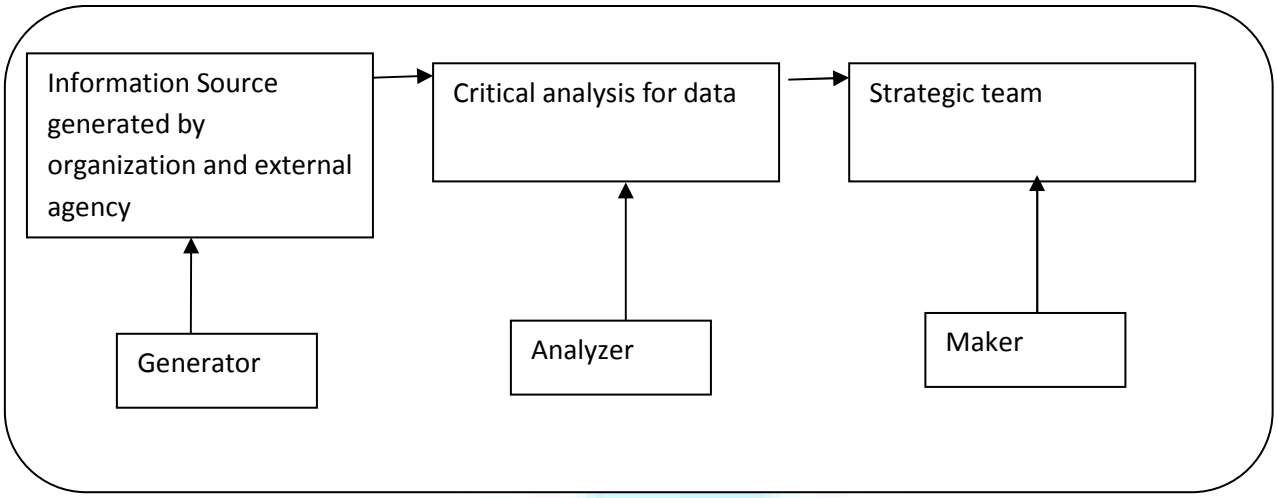


Acronyms

RRIS –Rural research information system,
RMKIS –Rural Marketing Information System
RAS&D-Rural area Specification and dimension,
PEST-Political, Environmental, Sociological and Technological
4A-Awareness, Availability, Affordability and Acceptability,
3C-connectivity Creativity Comprehensibility

The first building block towards rural persuasion /affiliation which every organization should look for is generation of information system through research which the researcher has acronym as RRIS i.e. rural research information system. It has three internal blocks that will work in coordination with each other and is depicted here.

FIG: 8 PROCESS INFLOWS



Here the last block is of strategic team which will comprise of middle level management to take and proliferate a policy and approach for reaching rural market and preparing a decision and control mechanism both internally and externally. This would comprise an empirical way of data collection in the domain of psychology, anthropology and geography.

The next building block in a loop is rural marketing information system abbreviated as RRIS. The prime objective of this block will comprise of evaluation of frequency of buying habit, trend analysis, motives of purchasing and valuation of influence of media and its acceptability among rural consumer and customer.

The RMIS is based on the concept of creating ,exchanging and recording the information relative to various marketing tools and techniques for rural consumer and develop a liaison between internal and external environment so that the product and services can be offered in a creative way to vernacular group of consumer .In This direction the organization must carry his product positioning objective with an analysis of PEST which forms uncontrollable and external factor to be considered which shows a wide extent of dynamism in context of political, economical, sociological and technological in which only subscription for organization is to understand this and work smartly and precisely. The Pest analysis also enunciates the understanding of macro and micro economics which includes government policy, subsidization of agro-products, increasing infrastructural factors, connecting rural to urban. Another part of this is analysis at which rural segment is growing ie monitoring rural CAGR (compounded annual growth rate) and evaluating factors responsible for rural CAGR. In this case the organization should carry out their operation to niche marketing by deciding the rural area specification and testing its feasibility on the ground that if any two factors from PESTAL analysis comes to be favorable then it demands for implementation of strategic planning and action.ie to say

PEST factor	Favorable	unfavorable	Strategy
Political and economical	1	0	Product variation and product re-engineering, Adopting to blue ocean strategy, building communication approach
Sociological and technological	1	0	

PEST: Political, Economical, Sociological, Technological.

PEST FACTOR

PEST factor	Favorable	unfavorable	Strategy
Political and Economical	0	1	Preparation of team, research work, rural learning network
Sociological and technological	0	1	

Further it can be expressed mathematically as

MAXIMIZE CONSUMPTION THROUGH MEDIA AND COMMUNICATION

$I=n$

$\sum \beta_i x_i \quad i=1,2,3.....n$

$I=1$

β =constant

X_i= Media and communication variable

Subject to

$\sum x_i > 0$

$P_i + E_i > .50\ P_i=P_1,P_2,P_3.....P_n; E_i=E_1,E_2,E_3.....E_N$

$S_i + T_i > .50\ S_i=S_1,S_2,S_3.....S_n; T_i=T_1,T_2,T_3.....T_n$

P_i=Political Variable, E_i=economical Variable

S_i=sociological Variable and T_i=technological Variable

And non negativity condition $x_1,x_2,x_3 > o$

It can further analyzed through models of multiple regression and correlation.

The development of systematic approach to communication system through 3C is yet another blend of communication strategy which is done in order to maximize the consumption. These three C stands for connectivity, comprehensibility, creativity

- Connectivity through Psychology and emotional, cultural and behavioral connectivity
- Comprehensibility through learning theories like classical conditioning and cognitive theory
- Creativity through simplicity in conveying message as it is dependent upon language and level of understanding, there must be proliferation of creativity in s simple and their language through which they feel much comfortable in decoding the message conveyed through any promotional medium and can decipher the brand image of organization.

Once the communication approach through 3C has been designed then is the task of designing of enhanced logistics management

- Creation of proximity
- Minimum gap between demand and supply
- Warehousing

- Channel partners
- Making product available at pick up centers.
- Evaluating PERT/CPM for designing shortest path.

After designing logistics management there is strong affirmation for 4A.

Each Company is making their way to Rural India. Most of them have studied the market and analyzed the things over there and ready to stand and compete at rural India. There are some of the companies which have already written their success stories in rural market. Companies like HUL, ITC, LG, and M &M have given a new format for rural marketing. They have done a great job. So, the marketing is always having the difference in Urban and rural, which makes the companies to think over the Marketing mix. Marketing mix is such an element in rural market which gives the sense to think of marketing activities. This 4A model is similar to the 4P model of marketing mix; the difference it shows is main streamline and rural market. 4A perceived to be more customer oriented. The 4A's are Affordability, Availability, Awareness, and Acceptability.

HOW TO COPE UP WITH THIS COMMUNICATION CHALLENGES

- Tie-ups with NGOs, Self Help Groups
- Setting up of Regional rural banks
- Improving the physical infrastructure.
- Stimulating the flow of market information,
- Promoting competitive conditions, monitoring prices, and the meeting of quality and food safety standards.
- Strengthening the institutional environment

This framework proposed in context of understanding the rural market and placing the offerings through sustainable approach in order to gain competitive advantage strategically and innovatively. These different variables are put together by developing taxonomy of communication strategies for rural market. These brands are the market leader in their target market.

CONCLUSION

The attitude towards growing rural market should be that of an investor. The approach is to be of 'market seeding'. The marketer has to develop a separate marketing programme and information system which can tracks sales to different markets as well as identify market potential to meet the customer needs. With knowledgeable and discriminating rural buyer, the suitable approach is to have product variants, differentiation and multiple brands. A marketer has to identify region specific media and develop regional messages. This is to be implemented by developing region and area wise budget for promotion. Marketers also need to research the audience state of readiness and information search behavior for their products for effective promotion.

Therefore, companies need to understand the social dynamics and attitude variations within each village though nationally it follows a consistent pattern. As a general rule, rural marketing involves more concentrated personal selling efforts compared to urban marketing. Marketers have to counter a number of challenges as well – understanding the pulse of rural consumers, physical distribution of products and services as well as communicating to a heterogeneous rural audience.

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EXPORT OF COIR AND COIR PRODUCTS FROM INDIA: AN ANALYSIS

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ABSTRACT

India, one of the top producers and exporters of coir in international market. The Indian Coir Products are in great demand in the international market because of their special attributes like fitness, price, craftsmanship, quality ,attractiveness and Eco-friendly, biodegradable renewable natural resources, non-pollutant, usage of the product is up to the expected level when compared to plastic and other environment pollutant item. The trend in the overall volume of sale of coir and coir products significantly changed from the sixties when more than 50 percent of the production used to be exported. Export trade is dominated by private merchants and manufacturers who control about 90 percent of export trade. A few Government companies and some large co-operatives account for the remaining 10 percent. The exports of coir and coir products are mostly to Western Europe and USA with Japan and West Asia. The Central Government and State Governments, Coir Board and NGOs should take necessary steps to increase the coir and coir products exports from India by improving the quality of coir products with International standards, and also conduct export campaign. The present paper attempts to analyze the value-wise and volume – wise of Coir and Coir products exported from India. Primary objective of the paper is to highlight the trend in exports of Coir and Coir products from India both in terms of volume and earnings.

KEYWORDS
Coir, Export, Market, Value, Introduction.

INTRODUCTION

The Coir Industry is one of the traditional cottage industry in India and is primarily located in Southern States, namely Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharastra, Goa, and other states Orissa, Assam, Andaman & Nicobar, Lakshadweep and Pondicherry. The Coir Industry utilizes ago wastes of coconut plantations and the development coir industry has all along been in areas where there is concentration of coconut cultivation and availability of coconut husks.

Coir, popularly known as the "Golden Fibre" is a natural fibre extracted from fibrus husk of the coconut sell and is used to make a wide range of products such as ropes, mats, mattresses, baskets, brushes, brooms etc.

India accounts for more than two-thirds of the world production of coir and coir products. Kerala is the home of the Indian coir industry, particularly white fibre, accounting for 61 per cent of coconut production and over 85 per cent of coir products. Not more than 50 per cent of the coconut husk is used in the coir industry. The Coir sector in India is very diverse and involves households Co-operatives NGOs manufacturers and exporters is one of the important.

EXPORT OF COIR AND COIR PRODUCTS

India, one of the top producers and exporters of coir in international market. The Indian Coir Products are in great demand in the international market because of their special attributes like fitness, price, craftsmanship, quality ,attractiveness and Eco-friendly, biodegradable renewable natural resources, non-pollutant, usage of the product is up to the expected level when compared to plastic and other environment pollutant item.

Even India is one of the leading exporters it could not top the list and there seems to be several reasons for India's unsatisfactory and poor performance in Coir and coir products exports. The present paper attempts to analyze the value-wise and volume – wise of Coir and Coir products exported from India. Primary objective of the paper is to highlight the trend in exports of Coir and Coir products from India both in terms of volume and earnings.

The trend in the overall volume of sale of coir and coir products significantly changed from the sixties when more than 50 percent of the production used to be exported. Presently the domestic consumption has increased significantly to absorb about 85 percent of total production. While export volume has been increase the domestic market has became much more prominent.

Coir products face stiff competition in markets aboard especially from products exported from other coir producing countries and other natural and synthetic products like jute, sisal, abacca, rubber, PVC etc. Vigorous promotional efforts are to be undertaken to sustain the existing markets and to enter into the new markets. The high incidence to freight on the FOB value of export from India renders the products often uncompetitive in price sensitive markets. A wide range of coir and coir products are exported from the country. These inter alia include coir yarn, coir pith, coir fibre, coir rope coir rugs, handloom mats, handloom mattings, powerloom mats, rubberized coir curled coir coir geo-textiles and coir other sorts. Coir products are exported to 105 countries in 2008-09 from 97 countries in the year 2007-08.

It is estimated that more than 90 percent of Indian Coir export revenue comes from value added products. The industry set an ambitious target of achieving Rs.1500 crore worth of exports by 2012.

Export trade is dominated by private merchants and manufacturers who control about 90 percent of export trade. A few Government companies and some large co-operatives account for the remaining 10 percent.

Most exporters from India are exporting coir products to various destinations in the world market. USA continues to be the major importer of coir and coir products from India with a share of 26.51 % in total quantity and 39.34 % in total value. The Coir Board as system to regulate and control the export trade such as registration, minimum export prices etc., to avoid unhealthy competition and exploitatation by foreign businessmen.

PERIOD OF THE STUDY

Generally, for analyzing the data in social research by using the tools such CAGR and Trend analysis minimum period of 10 years is required, Hence the secondary data for 10 years from 2000-01 to 2009-10 have been taken into consideration

METHODOLOGY

The present study based on secondary data. The secondary data has been collected from annual reports of Coir Board, journals, magazines, news papers and from related published materials. Data from different websites also have been collected. To analyze exports of Coir and Coir products in terms of volume and earnings trend value and percentage were computed.

The obtained data have been analysed with the help of Compound Annual Growth Rate and Trend analysis. The Coir and Coir Products exports volume and value have been analysed with the help of Compound annual growth rate. Trend analysis is used to find out the Coir and Coir products exports trend for a period of 10 years. For findings out the trend values and compound annual growth rate, the following formulae have been used.

Trend Value - $Y_c = a + bx$

Compound Annual Growth Rate: $- 1 + r = \frac{\log A - \log B}{N}$

INDIA'S EXPORT OF COIR AND COIR PRODUCTS, SEGMENT WISE, IN VALUE

The volume of export of coir and coir products in various segment from 2000-01 to 2009-10 are presented table 1. Total export increased by 7.45 percent from Rs 62,928.85 lakhs in 2008-09 to Rs. 80,208.73 lakhs in 2009-10. The segment "Hand loom Mats' dominates coir exports even though there is a marginal increase of 7.57 percent in 2009-10. Segments registering a significant growth during the period 2008-09 and 2009-10 are coir fibre (24.54 percent), geo-textiles (9.67 percent), handloom mats (7.57 percent), curled coir (8.54 percent), tufted mat, coir yarn (27.94 percent),and (2.18 percent). On the other hand, segments showing a steep decline between 2008-09 and 2009-10 hand loom mattings (83.03 percent), rubberised coir (60.72 percent), coir rugs and carpets (60.10 percent) and power loom mat (5.06 percent)

It also shows compound annual growth rate the highest for coir fibre (51.98 percent), This rate is only -31.37 for coir rugs and carpet which is the negative growth among the export products.

TABLE:-1 SEGMENT WISE INDIA'S EXPORTS OF COIR AND COIR PRODUCTS DURING 2000-01 AND 2009-10 IN VALUE (Rs. Lakhs)

Year	Handloom mats	Tufted mat	Coir Pith	Coir Yarn	Hand loom mattings	Geo-Textiles	Coir Fibre	Rubberised Coir	Coir rugs and carpets	Curled Coir	Power loom mat	Powerloom Mattings	Total
2000-01	15,917.69	2,104.17	752.79	14,607.30	4,287.86	625.38	148.17	267.24	1,958.64	80.33	442.72	284.04	41,192.29
2001-02	17,009.85	4,112.38	1,014.30	3,728.59	2,921.04	780.13	122.15	350.38	1,039.76	80.63	458.19	226.10	31,617.40
2002-03	20,711.79	3,434.71	1,493.01	2,996.76	3,191.44	985.23	103.81	403.43	932.42	80.05	585.52	111.9	34,918.17
2003-04	22,133.69	6,359.52	1,975.92	3,498.71	2,838.66	1,184.74	142.44	334.67	1,071.36	14.02	672.13	215.44	40,225.86
2004-05	25,129.27	9,499.05	3,042.41	3,358.16	2,334.04	1,049.76	186.03	340.57	1,002.64	11.97	931.16	138.92	46,885.06
2005-06	26,698.73	11,605.96	3,872.60	3,019.00	1,913.38	1,140.56	196.05	377.05	730.38	00.00	1,027.10	128.89	50,580.81
2006-07	27,370.67	18,213.02	5,382.07	3,161.57	2,534.63	1,335.22	1,075.80	697.86	328.55	208.34	168.84	85.11	60,476.57
2007-08	24,299.85	19,910.98	6,384.77	2,666.90	1,879.33	1,444.65	1,224.14	825.19	134.40	152.06	52.69	88.30	58,974.96
2008-09	23,637.63	22,598.15	8,462.30	1,925.92	1,716.58	1,691.06	1,390.89	1,174.77	67.63	223.86	40.06	85.09	62,928.85
2009-10	25,428.01	25,351.24	12,347.06	2,461.21	1,425.28	2,023.77	9,742.03	713.39	45.38	668.33	2.03	3.04	80,207.73
PERCENTGE INCREASE IN 2009-10 OVER 2008-09	7.57	2.18	5.90	27.94	-83.03	9.67	24.54	-60.72	-60.01	8.54	-5.06	-3.57	
CAGR (%)	4.80	28.26	32.38	-16.31	-10.43	12.46	51.98	10.32	-31.37	23.60	-41.64	-39.60	

Source: Annual Reports of Coir Board, Kochi

TABLE - 2 SEGMENT WISE INDIA'S EXPORTS OF COIR AND COIR PRODUCTS DURING 2000-01 AND 2009-10 IN QUANTITY (IN TONES)

Year	Handloom mats	Tufted mat	Coir Pith	Coir Yarn	Hand loom mattings	Geo-Textiles	Coir Fibre	Rubberised Coir	Coir rugs and carpets	Curled Coir	Power loom mat	Powerloom Matting	Total
2000-01	24,716.44	3,835.44	9,926.97	14,607.30	6,323.37	1,402.29	1,053.98	385.64	2,720.44	533.57	606.97	410.71	66,523.12
2001-02	26,147.89	7,129.54	13,725.65.	13,206.90	44.23	17.52	10.10	454.64	1,329.97	572.23	686.50	274.04	49,873.56
2002-03	33,058.75	6,429.03	21,064.20	114,482.47	47.72	21.40	10.36	535.22	1,327.08	492.37	954.85	183.18	178,606.63
2003-04	36,303.99	11,772.20	29,179.35	12,364.43	45.45	25.99	11.20	461.78	1,694.56	76.54	1,026.28	309.04	93,270.81
2004-05	40,128	16,503	43,420.54	10,988.59	3,519.00	2,324	1,351.00	476	1,728	69	143.32	188.94	120,839
2005-06	42,516.42	19,671.49	53,444.48	9,852.52	2,915.91	2,512.32	1,552.98	536.50	1,242.70	0.0	160.90	155.95	134,562.17
2006-07	42,986.07	29,017.02	67,152.99	9,691.17	3,642.27	3,044.51	9,356.64	947.31	488.31	1,804.03	246.21	104.75	168,481.28
2007-08	40,917.35	33,950.35	83,613.24	8,407.09	3,013.71	3,364.72	11,101.64	1,120.35	178.14	1,279.99	75.06	115.82	187,137.46
2008-09	35,553.43	33,689.27	96,996.32	5,335.09	2,368.45	3,251.25	19,443.54	1,222.59	63.83	1,438.38	54.21	87.52	199,503.88
2009-10	36,297.71	36,991.21	1,31,916.67	6,108.35	1,832.24	3,754.44	73,074.93	629.78	46.17	3,365.70	2.84	2.41	162,105.78
Percentage increase in 2008-09 over 2007-08	1.78	1.09	1.36	1.14	-0.77	1.15	3.75	-0.51	-0.72	2.33	-23.89	-2.76	
CAGR%	3.33	17.90	25.39	-7.42	**45.12**	71.04	**143.19**	3..31	-28.54	19.39	**-42.23**	-42.21	

INDIA'S EXPORT OF COIR AND COIR PRODUCTS, SEGMENT WISE, IN VOLUME

India segment wise export of coir and coir products in terms of quantity is represented in table-2. During 2009-10 there was an increase in the export of handloom mats, tufted mat, coir pith, coir yarn, coir fibre, geo-textile and curled coir. However, the export of rubberized coir decreased to 46.17 tonnes in 2008-09 from 63.83 tonnes in 2009-10, indicating 0.72 percent in quantity, and 7.25 percent in value. It is also revealed that the Compound Annual Growth Rate highest for coir fibre (143.19 percent). This rate is only 3.33 for rubberized coir which is the lowest among the products and the highest negative CAGR power loom mat 42.23 percent

TABLE-3: THE COIR AND COIR PRODUCTS EXPORTS FROM 2000-01 TO 2009-10 (QUANTITY)

Year	Quantity (in Metric tones)	Increase or Decrease	Percentage of Increase/Decrease	Trend Value
2000-01	67,493	-	-	67,493
2001-02	71,335	3842	5.69	51,000
2002-03	84,183	12,848	18.01	71,000
2003-04	1,02,253	18,070	21.46	88,000
2004-05	1,22,927	20,673	20.21	1,05,000
2005-06	1,36,027	13,100	10.65	1,22,027
2006-07	1,68,755	32,728	24.05	1,39,750
2007-08	1,87,567	18,812	11.14	1,56,560
2008-09	1,99,924	12,357	6.50	1,73,920
2009-10	2,94,508	94,584	47.30	1,90,000
CAGR%	15.87			

Source: Annual report Coir Board, Kochi.

The volume of Coir and Coir exported from India from 2000-01 to 2009-10, the absolute as well as percentage increase or decrease over the previous years and the trend value are presented in Table-3.

It is observed from table-3 that export of Coir and Coir Products from India, significantly increased from 67493 metric tones in 2000-01 to 2,94,508 metric tonnes in 2009-10. This table also shows compound annual growth rate exports 15.87 percent, and trend values for coir and coir products export decreased from 67,493 tonnes in2000-01 to 1,90.000 tonnes in 2009-10 showing an decreasing trend over a period of 10 years.

TABLE- 4: THE COIR AND COIR PRODUCTS EXPORTS FROM 2000-01 TO 2009-10 (VALUE)

Year	Value (crore)	Increase or Decrease	Percentage of Increase/Decrease	Trend Value
2000-01	313.66	-	-	313.60
2001-02	320.58	6.92	2.20	204.00
2002-03	352.70	32.12	10.01	289.00
2003-04	407.49	54.79	15.53	374.71
2004-05	473.40	65.91	16.17	459.50
2005-06	508.45	35.05	7.4	544.45
2006-07	605.17	96.72	19.02	629.00
2007-08	592.58	-12.59	-2.08	714.00
2008-09	639.97	47.39	7.99	799.00
2009-10	804.05	164.08	25.63	889.00
CAGR %	9.87			

Source: Annual Reports of Coir Board, Kochi

INDIA 'S EXPORTS EARNINGS FROM COIR AND COIR PRODUCTS

The value of Coir and Coir Products exports from India during 2000-01 to 2009-10, the percentage of increase or decrease over the previous year and trend values are shown in Table-4. It is observed from Table-4 that the value of Coir and Coir Products exported from India was the maximum of Rs.313.66 crore in 2000-01. The value increased from Rs. 592.58 crore in 2007-08 to Rs.639.97 crore in 2008-09 registering annual growth rate of 7.99 percent. In 2009-10 Rs. 804.05 crore increase of export registered a record annual growth rate of 25.63 percent over its previous years. This Substantial increase in the growth rate.

It is also observed that value of export declined in Rs. 592.58 crore in 2007-08 making negative annual growth rate. The reasons attributed to decrease in value of export was the severe competition from other coir producing countries and other natural and synthetic products like jute, sisal, abacca, rubber, PVC etc. It is also revealed that the trends values for coir and coir products exports increased from Rs. 313.66 crore to 2009-10 Rs.889 crore showing an increasing trend over a period of 10 years.

TABLE - 5: INDIA'S EXPORTS OF COIR AND COIR PRODUCTS TO MAJOR COUNTRIES DURING THE PERIOD 2004-05 AND 2008-09 (Rs. Crore)

Segment	2004-05	2005-06	2006-07	2007-08	2008-09	Percentage increase in 2008-09 over 2007-08
USA	186.25	204.70	221.98	200.50	196.60	(-) 1.96
UK	49.42	48.46	55.39	49.50	52.35	5.75
Germany	30.11	38.15	45.92	42.00	52.87	25.96
Netherlands	36.57	35.40	41.95	49.54	48.14	(-) 2.82
Italy	24.19	21.30	26.29	28.16	26.92	(-) 4.41
Spain	18.49	19.47	25.39	24.23	19.85	(-) 18.07
Canada	10.10	12.91	19.66	20.49	20.47	(-) 0.11
France	19.62	17.93	17.15	19.69	18.99	(-) 3.56
Australia	10.73	9.63	15.10	17.28	19.08	10.43
Belgium	9.03	10.52	10.04	9.78	15.14	54.86
Total (incl others	**473.40**	**508.45**	**605.17**	**461.17**	**470.41**	**2.00**

Source: Coir Board, Kochi

India's Exports-Country wise: Country wise export trends, as may be seen from Table 5, show that USA continues to be the largest market for Indian coir and coir products in terms of rupee value. Exports to USA during 2008-09 registered marginal decline of 1.96 percent. Countries to which exports from the coir industry increased during the year were: Belgium (54.86%) Australia (10.43%), Germany (25.86%) and UK (5.75%). On the other, the countries showing a declining trend during the period 2008-09 comprised: Canada (-0.11%), Spain (19%), Italy (4.41%), Netherlands (2.82%), Spain (18.07%) and France (3.56%).

CONCLUSION

The Coir Industry has been significantly export oriented and a valuable foreign exchange earner. India is one among the leading exports of coir in the world. It is estimated that more than 90 percent of Indian Coir export revenue comes from value added products. The industry set an ambitious target of achieving Rs.1500 crore worth of exports by 2012. Both in terms of volume and value of coir and coir exports India occupies an importance place. The Central Government and State Governments, Coir Board and NGOs should take necessary steps to increase the coir and coir products exports from India by improving the quality of coir products with International standards, and also conduct export campaign. The Coir Board has sought higher allocation in the Indian budget to overcome the prevailing economic slowdown and the resultant impact on coir product exports, and the Board has taken a few steps to achieve that. Among them is the declaration of 2009 as the 'Year of Natural Fibre'.

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DEVELOPMENT OF CREDIT RISK MODEL FOR BANK LOAN RATINGS

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ABSTRACT

Credit rating is an opinion about future ability and obligation of the issuer to make timely Payments of principal and interest on a specific fixed income security. Traditionally the scope of rating was limited up to fixed income securities. Today, the credit rating agencies started rating of almost all types of instruments. The bank loan market is much larger than the bond market. Banks lend to various entities, many of whom have not felt the need for or do not have the ability to pay, therefore BLR is essential. Now, however, with the advent of Basel II regulations, which encourage banks to better calibrate the credit risk on their books, BLR's are more important. The bank loan rating can be at the request of the borrower or the lender. The ratings strengthen the banks' confidence in their borrowers. The present study aims to develop model for reliable bank loan ratings after investigate the relationship between financial ratios and rating scales. The model is developed for long-term bank loan ratings with the help of multiple regression. The model is developed with the help of financial data and rating information of 32- sample companies. The developed model will serve the banking sector to evaluate the credit-worthiness of the borrowers.

KEYWORDS

Credit Risk, Bank Loan, Finance, Credit Rating.

INTRODUCATION

CREDIT RISK

Credit risk associated with each rating, or "risk bucket," is a probability of default that is derived from historical observations of the default behavior of companies within each ratings class. As such published ratings clearly contain significant information concerning the quality and marketability of various fixed income issues; it is of little surprise that credit ratings are considered a primary source of investor information in investment decision-making.

In India, four primary rating agencies namely Credit Rating Information Services of India, Ltd ("CRISIL"), Investment Information and Credit Rating Agency ("ICRA"), Credit Analysis and Research ("CARE") and FITCH provides such credit ratings to the public. The importance of the services of these agencies in the Indian debt market cannot be under estimated. Their role becomes doubly important in Indian financial market, where information relevant to determining creditworthiness may not be publicly available.

The basic problem of the Indian credit rating agencies may lie within the rating process itself, where different opinion is given by two rating agencies for same class of rating instruments. Past research has also shown that the ratings provided by the two bond rating agencies, are becoming extremely variable over time[i]. The consistency of determinant financial ratios between rating classes also points to probable weakness in rating methodologies. To avoid such variability it is extremely important to have a model, which avoids such complexities. Here models are developed targeting Bank-Loan Rating (BLR) segment.

BANK -LOAN RATING (BLR): AN INTRODUCTION

The bank loan market is much larger than the bond market. Banks lend to various entities, many of whom have not felt the need for or do not have the ability to pay, therefore BLR is essential. Now, however, with the advent of Basel II regulations, which encourage banks to better calibrate the credit risk on their books, BLR's are more important. The bank loan rating can be at the request of the borrower or the lender. The ratings strengthen the banks' confidence in their borrowers. Such rating gives an opinion of the timely payment of principal and interest, it also give an opinion on the extent of recoverability of the loan post-default. The bank loan rating provides a uniform benchmark for credit and pricing decisions in the bank loan market. Loan ratings focus on both the risk of default, and the likelihood of ultimate recovery in the event of default. Bank loan ratings are widely accepted and extensively used globally. Standard and Poor's rated 1,350 company bank loans aggregating $982 billion[ii]. BLR supports Indian banks in the implementation of the Basel II accord, by providing an independent opinion on loan-specific risk. This is used by banks for risk pricing, capital allocation and portfolio management.

The bank loan rating methodology is broadly divided in to two parts: long-term rating and short-term rating. Under long-term rating agencies use various symbols like, AAA, AA, A, BBB, BB, B, C and D grades are assigned based on credit quality of ratee, while grades like $P_1/PR_1/F_1/A_1$, $P_2/PR_2/F_2/A_2$, $P_3/PR_3/F_3/A_3$, $P_4/PR_4/F_4/A_4$ and $P_5/PR_5/F_5/A_5$ are assigned for short-term ratings. Apart from above ratings grades plus (+) and minus (-) signs are used to determine sub-grading.

METHODOLOGY ADOPTED FOR DEVELOPMENT OF RATING MODELS

The models are developed to determine the creditworthiness of corporate. It is developed purely based on financial information (Financial ratios). The models development is broadly divided in to two parts. The first section of the study examines the extent of the association between the ratings published by credit ratings agencies and the sample financial ratios of companies. The purpose of such an investigation is to determine which ratios, if any, are closely correlated with the ratings of the credit agencies' so that they can subsequently be used in the development of a new ratings model.

Second section discusses about development of rating model through multiple regressions. Here, ratings assigned by rating agencies are taken as independent variable, while ratios selected after correlation analysis in first parts are dependent variables. To have uniformity in rating models, the rating data are taken for all four rating agencies' bank loan ratings. The researcher had selected at least one company from each rating class rated by each rating agency. 32 -sample companies are considered for total eight rating scales of all four rating agencies. Here sub-gradings like AAA-,AA-,A-,BBB- etc. are not considered to avoid the complexities in the model. The General form of multiple-regression model is discussed below:

Equation: Multiple regressions equation[iii]**.....1**

$$Y^{\wedge} = a + b_1X_1 + b_2X_2 + \ldots + \ldots + b_kX_k$$

Where : $Y^{\wedge}$	=	Estimated value corresponding to dependent variables
a	=	Y^- Intercept value (Constant value)
$b_1, b_1, , b_k$	=	Slopes associated with dependent variable like X_1, X_2, X_k
X_1, X_2, X_k	=	Value of dependent variable.

Where' is the predicted score, X_1 is the score on the first predictor variable, X_2 is the score on the second, X_k is the score for k variables etc. The Y intercept is a (Constant value). The regression coefficient b_1, b_2, b_k etc. are analogous to the slope in simple regression.

DATA COLLECTION

The long-term ratings published after 31st March, 2008 for samples companies are considered for this model. The Five years financial information is collected form leading financial software like; Capitaline, Ace analyzer and Prowess.

SAMPLE COMPANIES

A list detailing the sample for this study, along with the long-term and short-term rating of the companies' and the name of concerned rating agency is shown below:

TABLE 1: LIST SAMPLE COMPANIES FOR RATING MODELS

Name of company	Long- Term Rating Scale	Short-term Rating Scale	Rating Agency
20 Microns Ltd.	BBB	PR3	CARE
ACC Ltd.	AAA	P1+	CRISIL
Arvind Ltd.	D	P5	CRISIL
Asian Granito India Ltd.	A	PR1+	CARE
B H E L	AAA	F1	FITCH
Bharat Electronics Ltd.	LAAA	A1+	ICRA
Bharat Gears Ltd.	BBB	P2	CRISIL
Cipla Ltd.	AAA	PR1+	CARE
Compton Greaves Ltd.	AA	F1+	FITCH
DCM Ltd.	LD	---	ICRA
Duncan Industries Ltd.	LC	A5	ICRA
Dynamic Industries Ltd.	BB	P3+	CRISIL
Escorts Ltd.	BB	F4	FITCH
Ginni Filaments Ltd.	D	F5	FITCH
Godrej Consumers Products Ltd.	LAA	A1+	ICRA
Hester Biosciences Ltd.	C	P4	CRISIL
Hind Industries Ltd.	LBB	A4	ICRA
Hindalco Industries Ltd.	AA	P1+	CRISIL
Balmer Lawrie & Company Ltd.	LAA	A1+	ICRA
JP Hydropower Ltd.	A	F1	FITCH
KLG Systel Ltd.	A	P1	CRISIL
MMTC Ltd.	AA	PR1+	CARE
CCS InfoTech Ltd.	BB	P4	CRISIL
Nagarjun Fertilizers & Chemicals Ltd.	BB	PR4	CARE
Nitin Spinners Ltd.	C	PR4	CARE
NKG Infrastructure Ltd.	LBBB	A2	ICRA
Quintgra Solution Ltd.	LB	A4	ICRA
Soma Textiles & Industries Ltd.	D	PR5	CARE
TV 18 India	BBB	F2	FITCH
Unitech Ltd.	B	F4	FITCH
Wockhardt Ltd.	C	F5	FITCH
XL Telecom & Energy Ltd.	B	PR4	CARE

The data is collected from the Rating Scan (Monthly journal on credit quality, published by CRISIL), BLR Connect (Monthly update on bank loan rating) and rating updates on websites of each rating agency. For the shake of uniformity in the models, the companies rated by each rating agency are incorporated in the data base.

Sample companies for long-term rating includes at least one ratee from eight rating classes like AAA, AA, A, BBB, BB, B, C and D rated by all four rating agencies, while for short-term rating includes at least one ratee from five rating classes like; $P_1/PR_1/F_1/A_1$, $P_2/PR_2/F_2/A_2$, $P_3/PR_3/F_3/A_3$, $P_4/PR_4/F_4/A_4$ and $P_5/PR_5/F_5/A_5$ rated by all four rating agencies.

The thirty two companies are taken from each rating class. Here, each rating agency assigns one or more same rating symbol in case of long-term rating scale. In short-term rating, the different rating symbols are assigned to each rating class by each rating agency. Sample companies are selected from various industries like cement, cotton, textiles, pharmaceuticals, metal, television, power, consumer care, infrastructure, energy, bio-science etc.

SAMPLE FINANCIAL RATIOS

The financial information is collected from leading financial software namely Capitaline, Ace analyzer and Prowess[iv]. The financial ratios shown in ***Table: 7.2*** for last five years periods (Pre-rating period) are used to develop rating models. The correlation between these sample financial ratios and rating scales are measured to identify the contributory ratios in rating. The sample financial ratios considered in model are shown below;

TABLE 2: SAMPLE FINANCIAL RATIOS FOR RATING MODEL

D/E = Debt-equity ratio	ROE = Return on equity
RONW = Return on networth	IT = Inventory turn over ratio
S/NA = Sales/Net Assets	DT = Debtors turnover ratio
IC = Interest coverage ratio	APATM = Avg. profit after tax margin (%)
LD/E = Long-term debt/equity	CPM = Cash profit margin (%)
PBDIT/S = Profit before depreciation, interest and tax /Sales	P/CE = Price/Cash EPS
CR = Current ratio	P/E = Price-earning ratio
ROCE = Return on capital employed (%)	P/B = Price-book value ratio
	MCAP/S = Market capitalization/Sales

The data of above mentioned financial ratios for the period of 2003-04,2004-05,2005-06, 2006-07, 2007-08 are considered for all sample companies for developing rating models. The five-year average of above financial ratios is considered for all sample companies to develop a long-term rating model.

CORRELATION BETEEN FINANCIAL RATIOS AND CURRENT RATINGS

The ratios available from financial statements are the most important source of information concerning the creditworthiness of a corporation. It is important to measure correlation between ratios of above sample companies to develop reliable rating models. The ratios which have significant correlation with the rating grades/scales are important predictors for ratings of a company.

CORRELATION: LONG-TERM RATING SCALES AND FINANCIAL RATIOS

The correlation is measured at 1% and 5% significant level. The ratios, having significant correlation at 5% level, means at 95% confidence levels are selected for developing rating models. The ratios, which are not having significant correlation with rating scales at 95% confidence levels, are excluded from the rating model.***(See Analysis: A)***

For this model, the ratios are selected considering 95% confidence level. The ratios are which are significant at 5% level (p-value < 0.05) includes Debt-equity (D/E), Return on net worth(RONW), Interest coverage (IC), Long-term debt-equity (LD/E), Return on capital employed (ROCE), Return on equity (ROE) and Price-Book value (P/B). ***(See Table: 3)***

TABLE:3 : CORRELATION BETWEEN FINANCIAL RATIOS AND LONG-TERM RATING SCALES

Financial Ratios	Prior sign of correlation	Correlation	p- Value	Significant at 1% level	Significant at 5% level
Debt-Equity Ratio (D/E)	-	-0.477	0.002	Yes	Yes
Return on Networth (RONW)	+	0.360	0.021		Yes
Sales/Net Assets (S/NA)	+	0.198	0.139		
Interest Coverage Ratio (IC)	+	0.542	0.001	Yes	Yes
Long-term Debt/Equity (LD/E)	-	-0.453	0.005	Yes	Yes
PBDIT/Sales	+	0.237	0.096		
Current Ratio (CR)	-	-0.131	0.238		
Return on Capital Employed (%)	+	0.472	0.003	Yes	Yes
Return on Equity (ROE)	+	0.359	0.022	Yes	Yes
Fixed Assets Turnover (FAT)	+	0.166	0.182		
Inventory Turnover Ratio (IT)	+	0.126	0.246		
Debtors Turnover Ratio (DT)	+	0.235	0.098		
Avg. PAT Margin (APATM%)	+	0.273	0.065		
Cash Profit Margin (CPM%)	+	0.255	0.079		
Price/Cash EPS	+	0.223	0.110		
Price- Earning ratio (P/E)	-	-0.041	0.411		
Price-Book Value Ratio (P/B)	+	0.357	0.022		Yes
Market Capitalization /Sales	+	0.188	0.152		

The ratios like; Sales/Net Assets (S/NA), PBDIT/Sales, Current Ratio (CR), Fixed Assets turnover (FAT), Inventory turnover (IT), Debtors turnover (DT), Average Profit after tax margin (APATM%), Cash Profit Margin (CPM%), Price/Cash EPS (P/CEPS), Price-earning ratio(P/E) and Market Capitalization /Sales (MCAP/S) are not significant at 5%. These ratios do not contribute in rating determination, therefore excluded while developing model. The table shows selected financial ratios for developing rating model for long-term rating scales;

TABLE: 4: SELECTED FINANCIAL RATIOS FOR LONG-TERM RATING MODEL[v]

D/E = Debt-equity ratio	ROCE = Return on capital employed (%)
RONW = Return on net worth	ROE = Return on equity
IC = Interest coverage ratio	P/B = Price-book value ratio
LD/E = Long-term debt/equity	

The debt-equity ratios has negative correlation with long-term rating scales, because when debt proportion is more, the ability to pay may adversely affects and it downgrades an organization. The RONW is having positive correlation with rating scales, which shows the return relationship with grading scales.

The interest coverage ratio has positive correlation with rating scales, which shows interest paying ability of an organization. Long-term debt/equity is also having negative correlation. The ROCE and other two valuation ratios namely ROE and P/B ratio are having positive correlation with rating scales.

SELECTION OF CONTRIBUTORY FINANCIAL RATIOS FOR MODELS

The final inclusion of financial ratios from the potential list of significant ratios is dependent on prediction power as proven in correlation analysis. The selected ratios are having prediction power for long-term rating scales.

As stated earlier, the ratios, which are significant at a 5% level for long –term ratings are Debt-equity (D/E), Return on net worth(RONW), Interest coverage (IC), Long-term debt-equity (LD/E), Return on capital employed (ROCE), Return on equity (ROE) and Price-Book value (P/B). The correlation matrices in ***Analysis: A*** ,shows ratios like; Debt-equity (D/E), Return on net worth(RONW), Interest coverage (IC), Long-term debt-equity (LD/E), Return on capital employed (ROCE), Return on equity (ROE) and Price-Book value (P/B) are all highly correlated with one another; nearly all of these correlations are significant at a 5% significance level. As a result, these ratios are well present the long-term rating scales.

DEVELOPMENT OF CREDIT RATING MODELS:

The model is developed based on multiple regression as stated in ***Para:.2***. The ratings are taken as independent variables, while all contributory ratios selected after correlation analysis are dependent variables. The model provide numerical rating, which are converted in to symbolic rating scales by applying average grade difference between higher and lower values. The model is developed by applying multiple regression equation. The model development is divided in to various stages. At initial stage beta values (Slope) is calculated between long-term rating scales and all selected financial ratios. Analysis of Variance (ANOVA) is tested. Here F-calculated value is < F-Table value at (6, 25) degree of freedom, means F falls in acceptance region. It shows equality of population means with sample means, when population standard deviation is not known. ***(See Analysis:.B).***

The third stage is all bout goodness of fit of the model. Under this stage R, R^2, adjusted R^2 and p-value are calculated. R shows multiple correlation coefficients. It is correlation between the observed and predicted values of the dependent variable. The values of R for model produced by the regression procedure range from 0 to 1. Here the value R is 0.9354. The R^2 Value helps us to determine which model is best. The values of R squared range from 0 to 1. Here value of R^2 is nearer to 1 i.e. 0.8749, so, we can say that independent variables are highly correlated with dependent variables. Adjusted R^2attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Use of R^2 helps us to determine which model is best. Here value of R2 is 0.7231, means it shows the model best fits to determine rating ***(See Analysis: C).***

The p-value shows, whether significant relationship exist with independent variables or not. Here p-value is 0.0221< 0.05, means significant relationship exist between dependent and independent variables. The RONW is selected after correlation analysis, but it is rejected because of its low tolerance, which contributes little information to a model, and can cause computational problems. It means RONW is not fit for the model at each step. The figure below shows new developed model for long-term rating scales.

Equation: Developed Model to Determine Long-term Rating Scales (LRM)…… 2.

Rating Scale Y^ = 4.1040 -(0.4080 * D/E + (0.0265 *IC)- (0.0865 *LD/E) – (0.0424* ROCE) – (0.0257*ROE) +(0.0595 *P/B)

Where Y = Est. Numerical rating scales D/E = Debt-equity ratio ROE = Return on equity

ROCE = Return on capital employed IC = Interest Coverage ratio LD/E = Long-term debt/equity P/B = Price-Book value ratio

(b_1 = - 0.4080, b_2 = 0.0265, b_3 = - 0.0865, b_4 = - 0.0424, b_5 = -0.0257, b_6 = 0.0595,are beta (Slope) for ratios considered significant for the model)

ASSUMPTIONS OF THE MODEL

1. Model considers only financial ratios (quantitative data). Here qualitative information like political situation, business environment, management qualities, economic conditions in which company is located etc. are ignored.
2. Model is based on five-year average financial performance of the sample companies. The long-term performance of an organization may not state the clear picture because of worst performance of an organization in past year due to poor economic condition.
3. Model provides only numerical rating scales like 1,2,3 etc., which are converted in to Lettered rating scales like AAA,A,A,BBB,BB,B,C,D.

4. The sub-grading like AAA-, AA-,A-, BBB-, etc are ignored to avoid complexity. There is a further scope to develop new model with sub-grading.
5. The model is developed only for long-term rating scales, further model can be developed considering short-term rating scales also.

CONVERSION OF NUMERICAL RATINGS IN TO LETTERED RATINGS

The developed model provides ratings in numeric, therefore it is necessary to develop method to convert numerical rations in to alphabetical one. The ratios that contribute to Long-term rating model (LRM) tend to fall within a general range of possible values. At the initial stage the numerical values are calculated using new developed model, and higher and lower range is determined. The grade difference values are calculated by dividing total range difference by total number of grades. These grade difference values are subtracted from higher grade and determined the value of next grade and so on.

The ***Analysis: E,*** shows the calculated numerical rating scales using new developed formula. The higher value of numerical rating is 6.9009, while lower value of numerical rating is -3.0611. The numerical rating falls within the range of -3.0611 to 6.9009, which shows the range of 9.9620 (-3.0611-6.9009). The total value difference between each grade is calculated 1.2453 (9.9620/ 8 grades). Grade difference 1.2453 shows the difference between each grade, say AAA-AA. The each grade is determined subtracting the grade difference value from its upper grade. The ***Analysis-F,*** shows the conversion of numerical rating in to lettered rating scales. The table given below shows the conversion of numerical values in to lettered rating scales:

TABLE 5: CONVERSION OF NUMERICAL RATING IN TO LONG-TERM LETTERED RATINGS

Rating Scales	Range of Numerical rating	The grade range is calculated by following:
AAA	5.6556 & Above	AAA = Higher num. rating i.e 6.9009 – Range difference i.e. 1.2453 = 5.6556 & above
AA	4.4103 TO 5.6555	AA = 5.6556 – 1.2453 = 4.4103 TO 5.6555
A	3.1650 TO 4.4102	A = 4.4103 – 1.2453 = 3.1650 TO 4.4102
BBB	1.9197 TO 3.1649	BBB = 3.1650 – 1.2453 = 1.9197 TO 3.1649
BB	0.6744 TO 1.9196	BB = 1.9197 – 1.2453 = 0.6744 TO 1.9196
B	-0.5709 TO 0.6743	B = 0.6744 – 1.2453 = - 0.5709 TO 0.6743
C	-1.8162 TO -0.5710	C = -0.5709 – 1.2453 = -1.8162 TO – 0.5710
D	-3.0615 & Below	D = -1.8162- 1.2453 = -3.0615 and Below

SUMMARY

The model will be useful to bank to determine creditworthiness of the clients and investors, brokers and professionals to determine the ratings of unrated entities. The 32 -sample companies are selected for these two models. The first section of this study examined the extent of the association between the ratings published by credit ratings agencies and the financial ratios of companies within a sample set. The second section is all about model development through multiple regressions. The model is developed to determine long-term rating scales based on selected financial ratios after correlation analysis. The third section of this chapter is all bout conversion of numerical ratings in to lettered rating scales.

As a result of this study, I find that these models are good means of determining credit scores for companies that are un-rated by any of the primary credit ratings agencies of India. The variables *(Financial ratios)* which are selected to develop these models are true measures for creditworthiness of rated company. The models exclude qualitative data like economic condition, political situation, management qualities etc. Model are developed without considering the sub-grading between two main grades like AAA^-, AA^-, BBB^-, BB^-, B^- etc. so; there is a further scope to develop a model with sub-grading.

ENDNOTES

[i] Article by: Sanjay Sehgal & Mamta Arora, "*Bond Rating Variability and Methodology: Evidence from the Indian Bond Market"*, IIMB Management review, Volume No: 16 , September 2004.

[ii] CRISL Begins Bank Loan Rating', "*The Hindu Business Line"*, Financial daily form The Hindu group of Publications, Tuesday, July 19,2005.

[iii] Richard I. Levin and David S. Rubin, "*Statistics for Management*", Seventh edition, New Delhi: Prentice-Hall of India, 1999, pp: 720-728.

[iv] Capitaline and Prowess are financial software developed by Capital Market Pvt. Ltd., Mumbai and Centre for Monitoring Indian Economy Pvt. Ltd, Mumbai respectively. While Ace analyzer is developed by Accord Fintech Pvt. Ltd. These software provides up-to-date database of around twelve thousands companies.

[v] The correlation is measured 1% and 5% significant level. The ratios which are having p-value < 0.05 are selected for rating model. The model ratios are selected considering 95% confidence level.

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DATA BASE SOFTWARE

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- Prowess: Data base Software developed by Centre for Monitoring Indian Economy provides detailed information on over 23,000 firms in organized form.
- ACE Analyzer: Software developed by Accord Fintech Pvt. Limited, Provides financial and non-financial information of companies & sectors, Equity Markets, Commodities Markets and other Economic Data.

ROLE OF MONETARY AND FISCAL POLICY IN INDIA'S DEVELOPMENT PROCESS

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ABSTRACT

The study examine the immediate aftermath of the fiscal reforms was essentially brought about through cut in investment expenditure, as rise in committed revenue expenditure could not be curtailed. Within a short span, it became increasingly obvious that the Indian approach to fiscal correction was not sustainable. While reduction in investment spending affected future growth prospects with consequent slowdown in revenue receipts, the interest payments and public debt continued to grow, resulting in reversal of fiscal consolidation process in the latter half of the 1990s.

KEYWORDS

Economic Growth, Economic Reforms, Fiscal Policy, Monetary.

INTRODUCTION

Economic stability and economic development are always intertwined. One of the essential prerequisite for growth of the country as well as for sustaining it in this era of highly globalised world is existence of the price stability. Of course, there are chances of occurrence of fluctuations in the economy. To overcome these fluctuations; we need monetary and fiscal policies. The main objectives of the monetary policy are price stability, providing adequate credit to productive sectors and financial stability. India has always emphasised on price stability and growth within broad context of controlling the inflation. The four key channels of monetary policy transmission are interest rate, credit aggregates, asset prices and exchange rate channels. 'Expectation' has emerged recently as the fifth channel of the transmission mechanism of monetary policy.

Fiscal policy aims to increase the rate of growth and employment rate as well. Also, government tries to control fluctuations in aggregate demand through fiscal policy measures. By definition fiscal policy is "The government's attempt to influence the economy by varying its purchases of goods and services and taxes to smooth the fluctuations in aggregate expenditure; use of the government budget to achieve macroeconomic objectives such as full employment, sustained long-term economic growth and price level stability"[1]. The Active pronouncement of fiscal policy came in to existence after Great Depression period with J.M.Keynes's interventionist approach. He emphasised on aggregate demand and role of government intervention in the economic activity. According to him fiscal adjustments in any period are in the direction of stimulus or restraint and these adjustments take place through government purchase of goods and services, transfer payments and taxes.

The study begins with evolution of monetary and fiscal policies in India. The next section takes the brief review of performance of Indian economy so far. In the third section study reviews the literature, especially the recent literature available on role of monetary and fiscal policies in economic growth and transmission mechanism channels operating in India. Further, it attempts to evaluate the achievements of the monetary and fiscal policies in the context of economic growth, poverty reduction, employment and development of the country

MONETARY & FISCAL POLICY: AN INDIAN PERSPECTIVE

The Reserve Bank of India was set up in 1935. An active role by the Reserve Bank of India in terms of regulating the growth in money and credit became evident only after 1950s. During 1950s monetary growth was extremely moderate and there was an increasing dependence on market borrowing and deficit financing. These became pronounced in the 1970s and thereafter. Current revenues of the central government exceeded current expenditure so that there was a surplus available to finance in part the deficit on capital account, a deficit that is normal for a developing country. This means that the government had to borrow at home and abroad, not only to finance its investment as would normally be the case in a developing country, but also its current consumption.

In 1983-84 out of $22.8 billion of public and publicly guaranteed external debt, roughly 17 per cent was owed to private creditors. On the eve of the macroeconomic crisis in 1990-91, external debt had tripled to $69.3 billion, of which around 30 per cent was owed to private creditors. Thus, debt to private creditors grew five-fold in seven years. The balance of gross fiscal deficit, after taking into account the domestic and external borrowings, small saving, and provident funds, was monetized through the sale of ad hoc treasury bills to the Reserve Bank. For example, in 1988-89 and 1989-90, before the crisis year of 1991, gross fiscal deficits of the centre and states together was rupees 35,668 and 45,196 crores respectively, and nearly 17 to 25 percent of these sums, namely 6,244 crores and 10.911 crores respectively, were financed by the issue of ad hoc treasury bills . **(Srinivasan, 2001)**

Since the onset of the reforms process, monetary management in terms of framework and instruments has undergone significant changes, reflecting broadly the transition of the economy from a regulated to liberalized and deregulated regime. While the twin objectives of monetary policy of maintaining price stability and ensuring availability of adequate credit to productive sectors of the economy to support growth have remained unchanged; the relative emphasis on either of these objectives has varied over the year depending on the circumstances. Reflecting the development of financial markets and the opening up of the economy, the use of broad money as an intermediate target has been de-emphasised, but the growth in broad money (M 3) continues to be used as an important indicator of monetary policy. The composition of reserve money has also changed with net foreign exchange assets currently accounting for nearly one-half. A multiple indicator approach was adopted in 1998-99, wherein interest rates or rates of return in different markets (money, capital and government securities markets) along with such data as on currency, credit extended by banks and financial institutions, fiscal position, trade, capital flows, inflation rate, exchange rate, refinancing and transactions in foreign exchange available on high frequency basis were juxtaposed with output data for drawing policy perspectives. Such a shift was gradual and a logical outcome of measures taken over the reform period since early nineties. **(Y.V.Reddy, 2002)**

A Liquidity Adjustment Facility (LAF) has been introduced during June 2000 to precisely modulate short-term liquidity and signal short-term interest rates. The LAF, in essence, operates through repo and reverse repo auctions thereby setting a corridor for the short-term interest rate consistent with policy objectives. It has emerged as a tool for liquidity management and signaling of interest rate in the market. The RBI has also been able to use open market operations effectively to manage the impact of capital flows in view of the stock of marketable Government securities at its disposal and development of financial markets brought about as part of reform.

METHODOLOGY

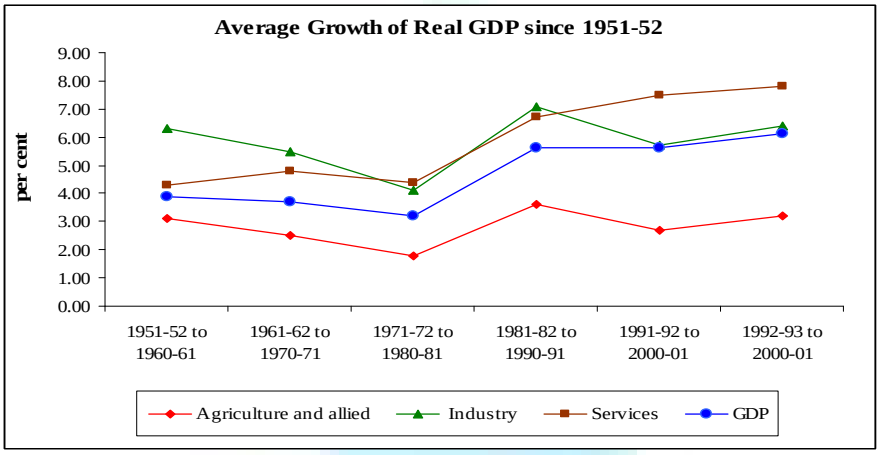
The study draws on the secondary data from Reserve Bank of India, Central Statistical Organisation and Finance ministry, Government of India. The study takes an overview of Indian economy since 1950s. But while evaluating the performance of fiscal and monetary policies in India, it has considered the time period during 1990 to 2006.

OVERVIEW OF INDIAN ECONOMY

Before evaluating the performances of monetary and fiscal policies in the Indian context, it is necessary to review overall performance of Indian economy. **Figure 1** presents the India's growth performance since 1951-52. The three decades from 1950-51 to 1980-81 saw average growth of 3 per cent per year. During this period, growth of per capita GDP was hardly 1.5 per cent a year. In other words, average living standards increased painfully slowly in India during these three decades. The economy geared up in 1980s with the improved performance of all three sectors, agriculture, industry and services. Per capita growth was increased to 3.4 per cent per annum. A growth rate of above 8 per cent was achieved by the Indian economy during the year 2003-04. Though GDP of India has improved steadily since 1979, in comparison to East Asian Countries and other developed countries India has a long way to go.

The growth rate for 2004-05 (7.5 per cent) is less than that of 2003-04; it is still among the high growth rates seen in India since independence. Many factors are behind this performance of the Indian economy in 2004-05. High growth rates in Industry & service sector and a benign world economic environment contributed to its growth to the extent. However, share of agriculture sector to GDP has declined considerable since independence. One of the obstacles in the way of agricultural progress is bad monsoon. Thus, there is a paramount need to move Indian agriculture beyond its centuries old dependency on monsoon. This can be achieved by bringing more area under irrigation and by better water management.

FIGURE 1



Source: Central Statistical Organisation, Government of India.

India has become one of the highest saving rates in the world. It increased from 26.4 per cent in 2002-03 to 29.7 per cent in 2003-04. It further raised from 31.1 per cent in 2004-05 and 32.4 per cent in 2005-06. The rise in the savings rate in 2005-06.It has shown an uneven upward trend over the past four decades and there have been considerable changes in its composition. Historically, domestic saving has been dominated by household saving in physical assets. However, the recent increase in saving has been driven mainly due to increase in private corporate sector savings and the household savings. The third component, namely public savings, weakened in the early 1980s and continues to decline in the recent years. Though a rise in savings rate is impressive, it cannot be viewed in isolation from the investment rate. As shown in the table the decadal average growth rate of savings well as capital formation reflects the increasing trend which is good indicator for an economy.

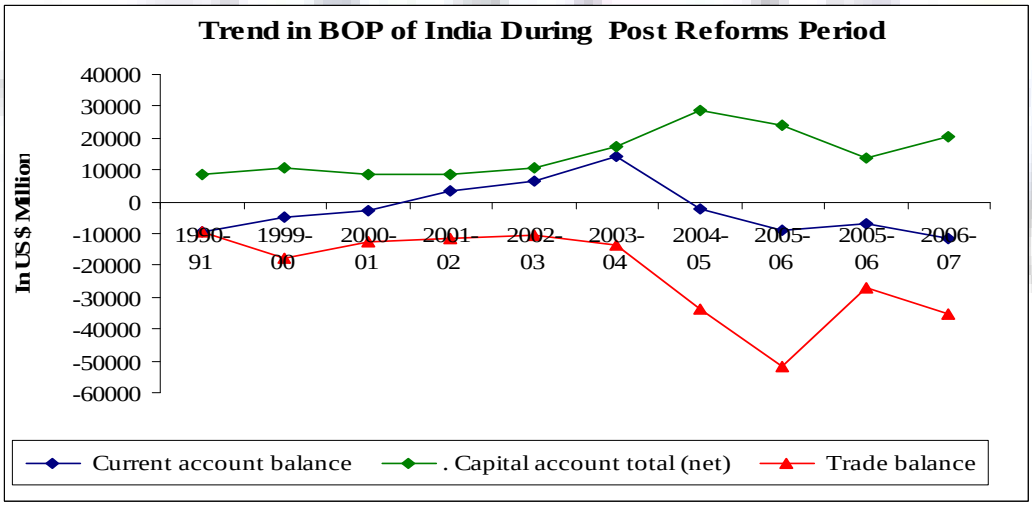
TABLE 1: AVERAGE PERCENTAGE OF GROSS DOMESTIC SAVINGS (GDS) AND GROSS FIXED CAPITAL FORMATION (1950-51 TO 2005-06) (as per cent of GDP)

	1950-51 to 1959 -60	1960-61 to 1969-70	1970-71 to1979-80	1980-81 to 1989-90	1990-91 to 1999-00	2000-01 to 2005-06
GDS	9.97	12.66	17.51	19.41	23.13	26.32
GFCF	10.55	14.02	15.84	20.22	22.28	24.10

Source: Calculations based on the data collected form Economic Survey of India, Government of India, 2006-07

India's BOP situation has strengthened since 1991 crisis. In spite of increase in current account deficit from US$2.5 billion in 2004- 05 to US $ 9.2 billion, equivalent to 1.1 per cent of GDP, in 2005-06 (US$4.4 billion), India continued to be among the top nations with high levels of reserves. These reserves provide an opportunity towards deepening of trade reforms and other administrative measures. With a growing trade balance the current account surpluses during 2001-2002 turned into a current account deficit in 2004-5. These trends seem to be continuing in 2006-007 with pressure on BOP due to movements in oil prices on one hand and the increase inflows of foreign investments including remittances non-resident Indians maintains balance in BOP on the other. **Figure 2** shows the BOP situation in brief. On the background such performance of external sector, the recommendation of three- phase strategy of moving towards fuller capital account convertibility is under consideration.

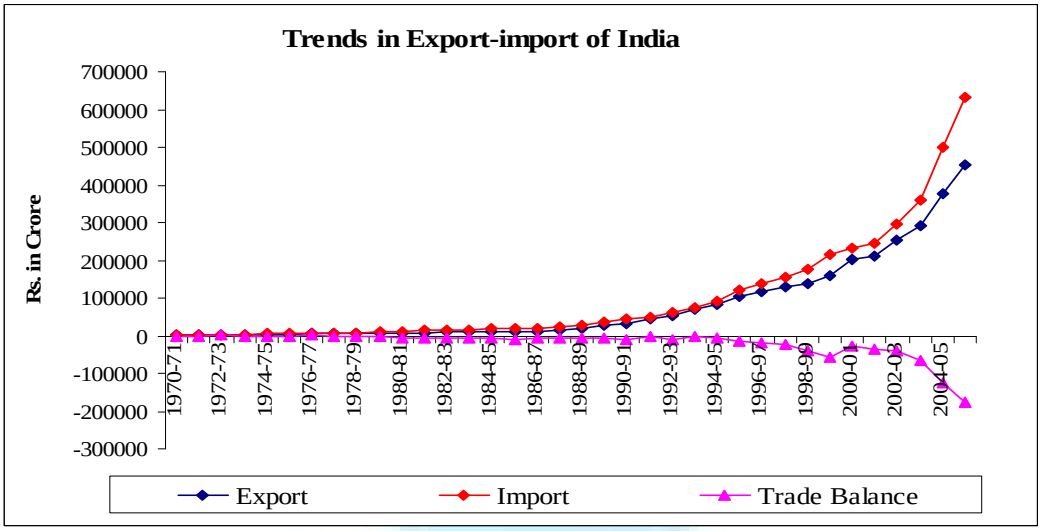
FIGURE 2



Source: Directorate General of Commercial Intelligence and Statistics. Government of India.

India persuaded inward-looking trade strategy for three decades since independence. Only with the reforms of 1991, deliberate efforts towards integrating India with the world economy. Prior to the oil shock of 1973, the volume of world exports grew at an annual average rate of about 7.85% per year during 1951-73. India's exports grew at a much slower rate of 2.66% per year and the ratio of exports to GDP declined from 7% in 1951-1952 to around 4 % in the early seventies. The two oil shocks of the seventies, on the one hand, put pressure on balance of payments because of a steep rise in the cost of oil imports.During1973-86 period of oil shocks and recovery, world exports grew only at 2.7% per year, but Indian exports grew at 4.4% per year. During 1986-1997, world export growth (in volume) recovered to 6% per year, and Indian exports grew even faster at 11.7% per year. India's share in the value of world merchandise exports, which stood at 2.1% in 1951, declined to 0.4% in 1980 and has recovered since to 0.6% in 1999. **(Srinivasan, 2001).**

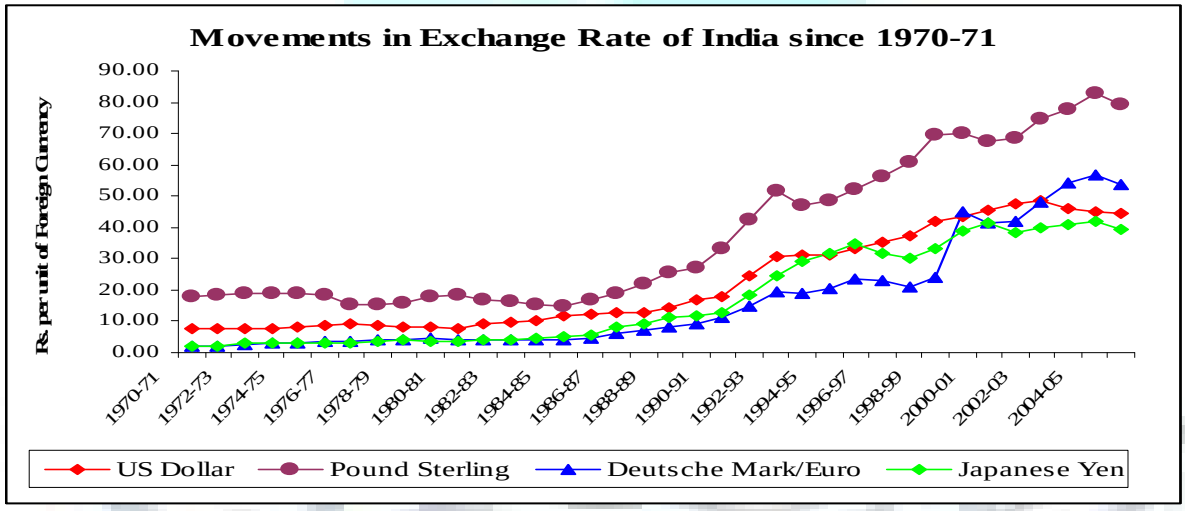
FIGURE 3



Source: Directorate General of Commercial Intelligence and Statistics. Government of India.

Indian foreign trade during post reform period has been growing continuously. Trade in services has been growing faster than merchandise trade, and the share of services in total external trade increased from 25.8 per cent in 2004-05 to 27.4 per cent in 2005-06 whereas share of agricultural trade has declined. The exchange rate system in India has transited form fixed exchange regime to market- determined exchange rate regime. Indian economy experienced rise in capital inflows during 1993-94, 1994-95 and the first half of 1995-96 which was accompanied by export growth exerting upward pressure on rupee. The rupee came under pressure during 1995-96 due to sudden and sharp reversal of market sentiments and expectations. The period of 1997-2000 witnessed adverse effects of Asian Financial crises and hardening of oil prices on rupee. Except for a brief period of instability on account of border tensions in May 2002, the period onwards 2002 was marked by appreciating trend of rupee against dollar.

FIGURE 4



Source: www.rbi.org.in

Though among developing countries India's inflation performance can be considered as satisfactory prices are rising more than twice as fast as in China, India's chief rival. Prices are also increasing considerably faster than in industrialised countries. Thus, inflation remains a one of the main concerns for Indian policy makers. During 1950s, the average decadal rate of inflation was very low at 1.7 per cent which increased to 6.4 per cent during 1960s. The average inflation rate during 1970s was still higher at 9.0 per cent. The maximum inflation recorded in the year 1974-75 at 25.2 per cent was mainly attributed to the failure of kharif crops in 1972-73 and hike in oil crude oil prices. During 1980s, the decadal average of inflation rate was 8 per cent while period of 19991 to 1997 again experienced the two digit inflation rate ranging form 10 to 15 per cent. The point to inflation during 1999-2000 was less than 4.78 which was recorded in previous year. The average point to pint inflation was 3.2 per cent during 2000-01. It was maintained below 5 per cent till the date except for the years 2003-04 (5.7 per cent) and 2004-5 (6.3 per cent).

REVIEW OF LITERATURE

This section reviews the literature dealing with selected issues like growth, transmission mechanism, institutional arrangement and policy interface. A study titled with *'The Fiscal Policy and Growth'*[5] has mainly focused on the role of Fiscal Policy in Economic growth in India. This study looks at the contribution of the 'Currency and Finance Report (2000-01)', especially at the chapter on 'the Role of Fiscal Policy Reinvigorating growth'. The study has covered time from 1991 to 2001 and by using econometric tools like dummy variable model and unit root test it replicates a couple of the equation in the report. The two questions raised in the study are whether fiscal policy can play a significant role in the revival of the economy and whether the creation of deficits in order to revive the economy is likely to have an adverse effect on economy. By taking Maharashtra as example, the author has found that deficit harm the growth. The study concludes that earmarking taxes for socially desirable expenditure such as investment in physical and social infrastructure useful in making the government's budgetary announcements more credible.

In addition to the fiscal policy and growth there is another study titled with *"Fiscal correction for Economic growth-Data analysis and suggestions'*[6]. This study mainly concentrated on relationship between fiscal policy and growth in terms of fiscal correction as well as rapid fiscal deterioration both at central and state levels. This study covered time period from 1980 to 2000. It begins with an overview economic situation across country especially with respect to India and china. Then the study examined central and state finance performance from 1980s. It reveals that fiscal situation of both the central and state governments is unsustainable and poses a grave threat to economic growth. Due to there is a lack of relation between public borrowing and public expenditure and inappropriate investment in infrastructure. To overcome this problem the study suggested that by reducing debt service payment and expansion of tax. Lastly, it concludes that India's growth in the future is the continuing fall in public investment at both centre and state levels so the key solution is increase charges on public services and privatization.

As per as issue of growth is concerned, monetary policy also plays an important role in the growth. 'Science *of Monetary Policy- Some Perspectives on the Indian Economy'*[7] is good example of above study which exposits the monetary policy design problem within the limits of an empirical framework for the Indian economy. The paper first looks at a few theories that have been advanced to explain the stylised facts of economic fluctuations. Further, it examines the main features of business cycles in the Indian economy over the past 50 years. In the process, it presents forecasts of aggregate economic activity for 2002-03 and 2003-04. Second, it empirically measures the threshold rate of inflation within the framework of growth-inflation trade-offs and derives the optimal rate of monetary expansion needed to smooth out fluctuations and stabilise the inflation rate at its threshold level. Third, it specified a theoretical model (linking growth, inflation, interest rates and money supply) capable of deriving an optimal fiscal deficit which maximises the real growth rate and applies it within the Indian context to measure the desired amount of fiscal consolidation. Finally, it provides estimates of a comprehensive macroeconomic conditions index which can very effectively be incorporated into a simple Taylor-type interest rate rule (reaction function) for monetary policy. The RBI governor Mr. Y.V Reddy[8] gives his opinion on the above that "The conduct of monetary policy will continue to provide support to agricultural growth, infrastructure development, fiscal consolidation, building social infrastructure areas by creating an appropriate atmosphere of macro-economic stability, especially price and financial stability; which will, undoubtedly, facilitate accelerated growth".

There is a recent study titled *'Monetary Transmission in India'*[9], which covers various aspects like objectives, framework and instruments of monetary policy. Alongside the evolution of institutional development which were to have a fundamental bearing on the monetary policy transmission. The time period of the study is from 1980 to 2005. It has examined the monetary transmission channels, operating procedure. Further, it asses the monetary policy impulses impact output and prices through interest rates and exchange rate movements in addition to the traditional monetary and credit aggregates. As per as monetary transmission concerned there is a need to maintain an adequate level of foreign exchange reserves and this in turn both enables the conduct of monetary policy. A key lesson is that flexibility and pragmatism are required in the management of the exchange rate and monetary policy in developing countries rather than adherence to strict theoretical rules.

Interest rate channel is important factor for monetary transmission mechanism in India. There is study titled *'Does Higher Fiscal Deficit Lead to Rise in interest Rate- An Empirical Investigation'*[10], which discusses the role of interest rate in fiscal policies. The study has taken time period from 1991 to 2004 and VAR model has used to find the causality between fiscal deficit and interest rate for empirical evidence. According to this study funding of government requirements through market borrowings would not only induce rise in interest rates, but the increased funding cost in turn would also contribute to the rise in fiscal deficit. In the Indian context, the empirical investigating results that growing fiscal gap put upward pressure on interest rate. Rise in interest rates and likely crowding out of private initiative as a result could be avoided by easy condition by an accommodating monetary policy.

The same issue has prescribed in different that proposition of an increase in the fiscal deficit, financed by government borrowing, necessarily raises the real rate of interest and thus 'crowds out' private investment. The existence of a definitive positive relationship between real rates of interest and the fiscal deficit-GDP ratio is tested empirically for India and for a number of other countries in the world. The study find out that interest rates do not necessarily depend on the fiscal deficit and that policies based on this understanding are erroneous[11]. Inflation also another factor comes under transmission mechanism which is related to interest as well as fiscal deficit. Interest rate and inflation rates would depend critically on both the size of the deficit and, equally important, on the respective shares of monetisation and market borrowings in this overall deficit which implies that interest rate targeting as well as inflation control are ultimately both monetary and fiscal policy issues[12].

Policy interface is a last issues of review literature, regarding this there is study titled *'Fiscal and Monetary Policy Interface-Recent Developments in India'*[13], which explains a broad frame work for appreciating the interface between monetary and fiscal policy. The study gives brief background about two policies then explains existence of both policies in pre-reform. It shows the evidence of impressive growth performance of the 'eighties' with reasonable stability should be assessed in the light of severe macro-economic imbalances, partly attributable to the fiscal monetary interface. Consequently, the reform measures are initiated in the nineties, which were relevant to the fiscal monetary policy interface. Lastly, in the part of outlook on the policy mix, we came to know that monetary and fiscal policy was established in the place of system of Ways and Means Advances (WMA). However, the interface between fiscal and monetary policy leads positive impact on debt policy, management interaction and coordination. He concludes that though India has good record on account of performance of the policies faces a challenge of economic stability, especially price and financial stability in this era of market integration.

CRITICAL EVALUATION OF MONETARY AND FISCAL POLICY IN INDIA

APPRAISAL OF FISCAL POLICY

The external payments crisis of 1991 was, to a large extent, an inevitable consequence of the deteriorating fiscal situation during the 1980s. The 1980s, especially the second half, was marked by high and persistent fiscal deficits, accompanied by large revenue deficits. This had led to a significant enlargement of the debt-servicing obligations. In order to contain the burgeoning debt-service obligations, Government tapped financial surpluses of the household sector

[5] Ajit Karnik 2001
[6] Rakesh Mohan 2000
[7] M.J.Manahor Rao 2003
[8] Address by Dr. Y. V. Reddy, Governor, Reserve Bank of India at the Bank of Greece, Athens, Greece on April 2, 2007.
[9] Rokesh Mohan, 2006
[10] Rajan Goya, 2004
[11] Surjit Das, 2004
[12] Manohar Rao M.J, 2000
[13] Y.V.Reddy, 2000

through statutory pre-emptions from financial intermediaries at below market clearing interest rates. This gave rise to a degree of financial repression. At the same time, increased financing of the Government deficit through automatic monetisation compromised the effectiveness of monetary policy and fuelled inflation. Against this background, when the Indian economy faced an unprecedented macroeconomic crisis in 1991, not surprisingly, fiscal consolidation constituted a major plank of the policy response. The role of fiscal policy is inducing growth but stresses the costs of fiscal deficits. Although the present stream of public financing cannot be sustained any longer, the State will be failing in its duty if it absolves of its responsibility by binding itself to inflexible fiscal rules that can be obeyed only at the cost of much needed public investment (Bagchi, 2001).

The primary objective of the fiscal reforms as announced in the Union Budget 1991-92, was essentially to achieve a reduction in the size of deficit and debt in relation to GDP. It was envisaged that this would be achieved through revenue enhancement and curtailment in current expenditure growth while enlarging spending on investment and infrastructure so as to provide momentum to the growth process. Accordingly, fiscal reforms in India were initiated in three distinct but interrelated areas: i) restoration of fiscal balance[14]; ii) restructuring of public sector[15]; and iii) strengthening of the fiscal-monetary co-ordination. Contemporaneously, the steps towards improving fiscal-monetary coordination encompassed deregulation of financial system, elimination of automatic monetisation, and reduction in pre-emption of institutional resources by the Government.

Before the fiscal reforms there was apparent in India during the late 1980s, as there was rapid deterioration in Government finances. During this period, the expenditure of the Central Government rose much faster than its revenue leading to a steep rise in the Centre's fiscal deficit to GDP ratio. For the States, given the restrictions on their capacity to borrow, the increase in expenditure was relatively aligned to the corresponding rise in revenue. Reflecting these developments, there was a sharp increase in the outstanding liabilities of both Central and State Governments as ratio to GDP from 41.6 per cent and 16.7 per cent, respectively, in 1980-81 to 55.3 per cent and 19.4 per cent, respectively, in 1990-91. The fiscal performance during the reform period, however, was characterised by a clear divide in the mid-1990s in the attainment of fiscal targets. There was evidence of the successful fiscal correction during 1991-92 to 1996-97 (except for 1993-94) in terms of a significant fall in the fiscal deficit and in public debt as a proportion of GDP. The revenue deficit has not only persisted, but has grown in size during this period. The resultant dissaving arising from the revenue deficit has reduced the aggregate saving and investment capacity in the economy. Consequently, there was a steady fall in the share of capital expenditure, impacting on the infrastructure investment and thereby threatening the growth potential of the economy. Several pointers indicate a reversal of the fiscal consolidation process in the recent years. These include decline in tax to GDP ratio, downward rigidity in current expenditure, steady deterioration in public investment in productive sectors, slow progress of Public Sector Undertakings (PSUs) restructuring and faster accumulation of public debt.

While a move towards fiscal adjustment was discernible in the pronouncements made as a part of long-term fiscal policy announced in the mid-1980s, a comprehensive fiscal reform programme at the Central Government level was initiated only at the beginning of the 1990s as part of the economic adjustment programme initiated in 1991-92. Fiscal reforms at the Centre covered tax reforms **(Appendix.1),** expenditure pruning, restructuring of PSUs, and better coordination between monetary and fiscal policies. Corrective measures on the fiscal front initiated at the beginning of the 1990s produced some promising results during the first half of the decade. Expenditure growth could be curtailed leading to a decline in the fiscal deficit and the outstanding liabilities of the Government to GDP ratio. During 1990-91 to 1996-97 (excluding 1993-94), the reduction in total expenditure to GDP ratio by more than 3.5 percentage points narrowed the fiscal gap by 3 percentage points and reduced the debt-GDP ratio by over 5 percentage points. However, the fiscal consolidation even during the first half of the 1990s was brought about primarily through curtailment in capital expenditure. Decline in consumption expenditure was relatively small. From 1997-98, expenditure started rising once again, and by the year 2001-02, all the major fiscal parameters, *viz.*, revenue deficit, fiscal deficit, and public debt rose to levels higher than those prevalent at the beginning of the reform process **(Table: 2).**

TABLE 2: MAJOR FISCAL INDICATORS OF THE GOVERNMENT SECTOR* (in Per cent)

Item	1981-82 to 1989-90		1990-91 to 1996-97		1997-98 to 2001-02	
	Average Growth	Ratio to GDP	Average Growth	Ratio to GDP	Average Growth	Ratio to GDP
Revenue Receipts	16.14	19.01	14.17	18.57	11.64	17.72
Total Expenditure	16.21	28.84	13.12	27.01	14.62	27.68
Capital Expenditure	12.93	8.23	6.59	4.81	16.29	3.96
Revenue Expenditure	17.78	20.62	14.61	22.20	14.43	23.73
Gross Fiscal Deficit	17.83	8.03	11.60	7.38	21.48	9.13
Revenue Deficit	31.39	1.65	19.93	3.63	31.48	6.07
Development Expenditure	15.59	18.11	11.00	15.32	13.43	14.33
Non-Developmental Expenditure	17.23	10.45	16.13	11.69	16.03	13.35

Note: * Government sector refers to finances of Central and State Governments.

Source: Union and State Governments' Budgets.

The efficacy of tax reforms for augmentation of tax revenue, expenditure correction, restructuring of public sector, public debt management policies and institutional reforms appears to be rather limited so far. Tax reforms have generally led to a rise in tax revenue to GDP ratio across countries (Shome, 1992; Shome, 1995). In the Indian context, the expected increase in tax buoyancy *a la* 'Laffer curve effect' did not occur. Since the onset of tax reforms, the tax-GDP ratio of the Central Government has suffered a persistent decline. This has been a major drag on the reform process. The tax-GDP ratio declined from an average of 9.9 per cent during the 1980s to 9.7 per cent in the first half of the 1990s and further to 9.0 per cent in the second half of the 1990s. The pattern is, however, not the same across different types of taxes. Direct tax collection to GDP ratio rose steadily from 2.0 per cent in the 1980s to 2.3 per cent in the first half of the 1990s and further to 2.9 per cent in the latter half of the 1990s. On the other hand, the ratio of indirect tax collection to GDP declined from 7.9 per cent in the 1980s to 7.3 per cent and 6.1 in the first and second halves of the 1990s, respectively.

The decline in the tax to GDP ratio is explained by a combination of factors that led to a sharp fall in total tax buoyancy from 1.07 for the period 1981-93 to 0.96 for 1981-2001, implying buoyancy could be less than unity during the post-tax reform period 1994-2001. While the buoyancy of direct taxes is estimated to be higher at 1.19 for the period 1981-2001 as compared with 1.07 for the pre-tax reforms period (1981-1993), the buoyancy of indirect taxes dipped considerably to 0.88 from 1.07 in the corresponding period **(Table:3)**. The increase in direct tax collections despite a significant cut in marginal tax rates could be attributed to the combined effect of better compliance, broadening of the tax base and increase in income. The introduction of presumptive tax, adoption of economic criteria for identification of potential taxpayers and removal of some exemptions helped in base widening.

[14]The strategy for restoring fiscal balance comprised tax and non-tax reforms, expenditure management and institutional reforms.

[15] Public sector restructuring mainly involved divestment of Government ownership.

TABLE 3: BUOYANCIES OF CENTRAL TAXES

Tax	1981 to 1993	1981 to 2001
Total Tax to GDP	1.07	0.96
Direct Tax to GDP	1.07	1.19
Corporate Tax to GDP	1.02	1.13
Personal Tax to GDP	0.92	1.23
Indirect Tax to GDP	1.07	0.88
Excise Tax to Manufacturing	0.96	0.83
Excise Tax to GDP	0.97	0.84
Customs Tax to Imports	1.20	0.77
Customs Tax to GDP	1.24	0.93

Note: Separate estimates for 1994-2001 were not attempted to ensure that adequate degrees of freedom are available

Source: Computed using data on taxes from Union Budget documents and gross domestic product from National Accounts Statistics.

Non-tax revenue of the Central Government as a proportion to GDP recorded an improvement from 2.1 per cent in 1990-91 to 3.0 per cent in 2001-02. The trends in components of non-tax revenue reveal that increase in dividend and profits, and economic services, fully account for the improvement in Centre's collection of non-tax revenue, as growth in other components continued to be stagnant during the reform period. Surplus transfers from the Reserve Bank, which is a major component of dividend and profits, increased from Rs.210 crore in 1990-91 to Rs.10,320 crore in 2001-02, thereby raising its share in the total from 1.8 per cent to 15.2 per cent **(Table: 4).** The size of the transfer from the Reserve Bank, *inter alia,* grew on account of earnings from the deployment of foreign currency assets, conversion of 4.6 per cent Treasury Bills into marketable securities and discontinuation of the practice of crediting large sums to the National Industrial Credit (LTO) Fund.

TABLE 4: COMPOSITION OF NON-TAX REVENUE OF THE CENTRAL GOVERNMENT

Item	1980s	1990-91	1996-97	2001-02
Interest Receipts	68.5	72.9	67.9	52.4
Dividends & Profits *of which*	8.2	6.5	11.8	25.5
Reserve Bank Profits	4.1	1.8	4.6	15.2
General Services	3.5	4.2	4.0	4.2
Social Services	3.2	0.5	0.4	0.4
Economic Services	9.0	7.2	10.2	13.7
Fiscal Services	5.5	2.6	1.3	0.5

Source: Union Government Budgets.

As such, any programme of stabilisation-cum-adjustment, has to give considerable attention to the expenditure side of fiscal restructuring. It is important to plan expenditure reduction while improving quality of public spending to aim simultaneously at supporting growth with equity and improving fiscal balances. In India, expenditure/GDP ratio of the Centre had risen from about 12.3 per cent in 1970-71 to around 20 per cent in the latter half of the 1980s. This had placed a difficult burden on budgetary balances. With a view to narrowing down the fiscal gap, particularly by bridging the revenue deficit, a cut in current expenditure was considered essential. The steps taken to compress expenditure led to a reduction in the size of overall public expenditure as a ratio to GDP in the initial years of the 1990s. The Government expenditure of Centre as a ratio to GDP declined from 17.74 per cent in 1990-91 to 17.11 per cent in 2003.04 (RE). During 1990-91 to 1996-97, although revenue expenditure fell by 1.2 per cent, it increased again by about 1.45 percentage points between 1996-97 and 2003-04. On the other hand, there was a steep fall of 2.4 percentage points in the capital expenditure to GDP ratio between 1990-91 and 2003-04, Thus, since the beginning of the 1990s upto 2003-04, while the percentage of revenue expenditure to GDP increased from 12.93 per cent in 1990-91 to 13.09 per cent 2003-04, the capital expenditure to GDP declined from 5.59 per cent in 1990-91 to 4.02 per cent in 2003-04 **(Table.4).** The deterioration in capital expenditure contributed to the decline in the share of public investment from 9.3 per cent of GDP in 1990-91 to 6.3 per cent in 2001-02.

TABLE 5: TRENDS IN GOVERNMENT EXPENDITURE (Percentage to GDP)

Year	Revenue Expenditure	Capital Expenditure	Total Expenditure
1990-91	12.93	5.59	18.52
1991-92	12.6	4.46	17.06
1992-93	13.76	4.44	18.2
1993-94	12.59	3.92	16.51
1994-95	12.06	3.81	15.87
1995-96	11.77	3.23	15.01
1996-97	11.62	3.08	14.69
1997-98	11.84	3.4	15.24
1998-99	12.43	3.61	16.04
1999-00	12.86	2.53	15.39
2000-01	13.3	2.29	15.58
2001-02	13.21	2.67	15.88
2002-03	13.75	3.02	16.77
2003-04 (RE)	13.09	4.02	17.11

Source: Union and State Governments' Budgets.

The major contributing factor imparting a downward rigidity to the revenue expenditure relates to items of committed expenditure, of which, interest payments and expenditure on wages and salaries are prominent. Interest payments as a ratio to GDP increased from 3.8 per cent in 1990-91 to 4.7 per cent in 2001-02 for the Central Government., while for the States, the corresponding rise was steeper from 1.5 per cent to 2.8 per cent During the phase of fiscal consolidation, even though the debt to GDP ratio for the Central and State Governments fell from 61.7 per cent in 1990-91 to 56.5 per cent in 1996-97, the rise in the weighted average interest rate on Central Government and State Governments market borrowings.

Downward rigidity has also been discernible in expenditure on subsidies, which is another major constituent of the revenue expenditure. Owing to the conscious efforts made by the Government, total explicit subsidies of the Central Government, which constituted 2.14 per cent of GDP in 1990-91 were reduced to nearly 1 per cent by 1995-96. Cut in subsidies in the beginning of the reform period was brought about largely through the phasing out of export subsidies (cash compensatory support) which amounted to nearly Rs. 2,750 crore (0.5 per cent of GDP) in the year 1990-91. During the second half of the 1990s, the size of subsidies again started rising and increased to 1.36 per cent of GDP by 2001-02 **(Table: 6)**.

TABLE 6: CENTRAL GOVERNMENT EXPENDITURE ON SUBSIDIES – MAJOR HEADS (in Rs.crore)

Year	Food	Fertilizers	Interest	Exports	Total
1990-91	2,450	4,389	379	2,742	12,158
1995-96	5,377	6,735	34	318	12,666
2001-02	17,499	12,595	210	N.A.	31,207

Source: Union Government Budgets.

The downward inflexibility in the subsidies was essentially on account of the growing size of food subsidy, which recorded nearly a six-fold rise over the reform period. It has been observed that a sizeable proportion of food subsidy is due to the carrying cost of the food stock (Balakrishnan and Ramaswami, 2000). Thus, a significant part of subsidies goes to make up for the inefficiencies embedded in institutional arrangements meant for providing subsidy rather than benefiting the targeted group. There is another institutional step envisaged in this direction is Fiscal Responsibility and Budget Management Bill (FRBM), 2000. The conduct of fiscal policy during 2004-05 was shaped by the Fiscal Responsibility and Budget Management (FRBM) Act, 2003 and FRBM Rules 2004 (notified by the Central Government on July 5, 2004), which set a new beginning to the fiscal consolidation process. There has been a significant improvement in the gross tax/ GDP ratio from 8.8 per cent in 2002-03 to 9.2 per cent in 2003-04 and further to 9.9 per cent in 2004-05. A noteworthy feature is a sustained rise in the direct tax/GDP ratio to 4.3 per cent in 2004-05.

The FRBM approach deals with inter-generational equity in fiscal management and long-term macro-economic stability by envisaging complete elimination of revenue deficit by March 2006. The bill also envisages a reduction in total liabilities of the Centre to no more than 50 per cent of GDP by March 2011. At the same time, FRBM is an important step towards reforms the Indian Public finances and it reduces the fiscal deficit to low levels may be counter productive as it may fail to sustain high rates of economic growth (Bagchi, 2001).

TABLE 7: FISCAL PROJECTIONS AS PERCENTAGE OF GDP IN INDIA (in per cent)

Particulars	2005-06	2006-07	2007-08	2008-09
Gross tax revenue	9.72	10	10.33	10.7
Revenue receipts	9.36	9.31	9.32	9.42
Tax revenue, net to Centre	7.2	7.41	7.55	7.91
Non-tax revenue	2.16	1.91	1.53	1.51
Capital receipts	5.46	5.14	4.38	4.31
Recoveries of loans	0.39	0.33	0.28	0.25
Others receipts	0.12	0.1	0.09	0.08
Borrowings and other liabilities	4.96	4.71	3.8	3.98
Total receipts	14.76	14.42	13.46	13.74
Non-plan expenditure	10.04	9.65	8.98	8.84
Interest, debt servicing	4.14	4.08	3.82	3.91
Defense	2.06	2.01	1.96	1.91
Subsidies	1.28	1.13	0.92	0.82
Grants, loans to States, UTs	0.61	0.58	0.55	0.52
Others non-plan expenditure	1.95	1.85	1.76	1.67
Plan expenditure	4.72	4.77	4.47	4.89
Total expenditure	14.76	14.42	13.46	13.74
Revenue expenditure	11.91	11.63	11.2	11.02
Capital expenditure	2.85	2.79	2.26	2.65
Revenue Deficit	2.61	2.35	1.98	1.66
Fiscal Deficit	4.96	4.71	4.32	3.98

Note: GDP: Gross Domestic Product, BE: Budget Estimates, RE: Revised Estimates

Source: Report of the Task Force July 2004, Ministry of Finance, Govt. of India.

Fiscal situation in post reforms predicted that gross revenue expenditure, net tax revenue to the centre and plan expenditure are showing increasing trend. On contrary, revenue receipt, non-tax revenue, capital receipt, recoveries of loans etc are moving towards declining trend. As per the fiscal projection on Fiscal deficit will decreases from 4.96 per cent in 2003-04 to 3.98 per cent in 2008-09. At the same time Revenue deficit will also decline from 2.61 per cent in 2003-04 to 1.66 per in 2008-09. One thing is clear that adoption of FRBM will succeed in reaching in it objectives. However there is need to take more concentration on total expenditure as well as revenue expenditure as per the projection both expenditures deteriorate in future.

APPRAISAL OF MONETARY POLICY

The post reformed period was manifested with major changes in the institutional environment and monetary management in India. During 1993 and 1994, for the first time monetary policy had to deal with the monetary impact of capital inflows with the foreign exchange reserves increasing sharply from $ 9.2 billion in March 1992 to $ 25.1 billion in March 1995. In 1995-96, the change in perception with reference to exchange rate after a prolonged period of nominal exchange rate stability vis-a-vis the US dollar brought into play the use of monetary policy to stabilise the rupee – an entirely new experience for the central bank. Similar situations arose later on also. Monetary policy had begun to operate within a changed institutional framework brought about by the financial sector reforms. It is this change in the institutional framework that gave a new dimension to monetary policy. New transmission channels opened up. Indirect monetary controls gradually assumed importance. With the progressive dismantling of the administered interest rate structure and the evolution of a regime of market determined interest rate on government securities, open market operations including 'repo' and 'reverse repo' operations emerged for the first time as an instrument of monetary control. Bank Rate acquired a new role in the changed context. The 1990s paved the way for the emergence of monetary policy as an independent instrument of economic policy **(Rangarajan, 2001).**

It may be useful at this point to set out briefly the events as they unfolded in the 1990s and the response of monetary authorities. The decade of 1990s began disastrously for India. Both the fiscal and balance of payments situations went out of control. The year 1990-91 had to contend against a high fiscal deficit and a widening gap in the balance of payments triggered by the steep increase in oil prices. In 1989-90, gross fiscal deficit of the central government had touched 8.05 per cent of GDP and the inflation rate stood at 9.1 per cent. Monetary policy in 1990-91 had to be tight for all these reasons. While monetary growth somewhat moderated to 15.1 per cent in 1990-91 as compared with an expansion of 19.6 per cent in the previous year, inflation rate rose as high as 12.1 per cent.

A definitive shift in economic policy occurred in mid-1991. However, structural reforms could be introduced successfully only, if a degree of stabilisation was achieved. A major step to correct the balance of payment situation was the devaluation of the rupee effected in July 1991. However, devaluation could yield results only if it was accompanied by a monetary policy that put a lid on the expansion of aggregate demand. A tightening of the monetary policy had in fact begun even earlier in April/May 1991, with increases in interest rates and reserve requirements together with direct controls on credit and an interest surcharge of 25 per cent on import finance. The Bank Rate was raised by 1 percentage point from 10 per cent to 11 per cent in July 1991. The minimum lending rate on credit limits over Rs 2 lakh was raised by 1.5 percentage point from 17 per cent to 18.5 per cent in July 1991. The Bank Rate was further raised by 1 percentage point from 11 per cent to 12 per cent in October 1991 and the minimum lending rate for large borrowers was raised to 20 per cent. Simultaneously, interest

rates on deposits were raised up to a maximum of 13 per cent. As the balance of payments showed improvement and the inflationary pressures showed signs of abatement, the process of reducing the lending rate started from March 1992. Along side, as part of the financial sector reforms and because of the anticipated decline in gross fiscal deficit of the central government, the statutory liquidity ratio on incremental deposit liabilities was reduced to 30 per cent from 38.5 per cent.

Beginning 1992-93, a conscious effort was made to reduce interest rates in the system, as there was a deceleration in inflation and improvement in the economic situation. In 1992-93 the inflation rate as measured by the wholesale price index came down to 7 per cent. The opportunity was also taken to progressively rationalise the lending rate structure. As the macroeconomic situation further improved, the reserve requirements were brought down. The incremental Cash Reserve Ratio was discontinued in April 1992. A part of the impounded cash balances were also released. Apart from the reduction in incremental SLR, the basic level of SLR was reduced. With the restoration of stability, the stage was set for a vigorous introduction of several financial sector reforms outlined in the Narasimham Committee. An effort was also made to develop the Government Securities Market. The reform measures in this area included the introduction of 364-day and 91-day treasury bills on auction basis, auctions of dated securities and Repo auctions. The exchange rate regime underwent a significant change in March 1993, when the dual exchange rate system came to an end and a unified market came into being, with the exchange rate being determined by the forces of supply and demand.

Monetary policy in 1993-94 was formulated with the major consideration of ensuring adequate support to the banking system for the revival of output by reducing the cost of money and increasing the availability of credit. The minimum lending rate was brought down by 2 percentage points to 15 per cent by September 1993. The minimum lending rate on term loans of 3 years and above was lowered to 14 per cent. A reduction in the deposit rate was also effected. The incremental SLR was brought down from 30 per cent to 25 per cent. The year was marked by a substantial increase in the foreign exchange assets which went up by US $ 9.4 billion. As a consequence, monetary expansion became very large at 18.4 per cent in 1993-94 as against 14.8 per cent in the previous year and the inflation rate crossed 10 per cent. Open market operations were extensively used to neutralise the expansionary impact of capital inflows. This became possible only because the government securities issued in the previous two years had more or less market determined interest rates and the RBI had a stock of such securities. For the first time, external sector became the main cause of expansion in money supply. Real GDP grow by 6.2 per cent.

There was a clear improvement in the overall performance of the economy in 1994-95. The rate of growth of real GDP touched 7.8 per cent. Current account convertibility on the external account was formalised through the acceptance of Article VIII of International Monetary Fund. There was, however, a slippage in the gross fiscal deficit. Macro economic management faced problems of large capital inflow in the first half of the year, a sharp credit expansion in the second half of the year and an uneasy fiscal balance at the end of the year. An important development in the area of fiscal and monetary policy was the agreement between the government and the RBI to phase out the system of ad hoc treasury bills over a period of three years. The system, as it existed then, amounted to an automatic monetisation of the budget deficit. Monetary policy in 1994-95 had to be framed against the backdrop of a high inflation rate caused by large growth in reserve money triggered by large capital inflows. In the second half of 1994-95, the RBI undertook certain measures to moderate the inflow of capital. The foreign currency non-resident deposits were brought under the purview of CRR. In October 1994, the RBI, however, reduced the lending rates of scheduled commercial banks for credit limits over Rs 2 lakh. Further reductions in Statutory Liquidity Ratio were also made. The government long-term borrowing rate came down slightly to 12.35 per cent. In order to sterilise the expansionary impact of the surge in foreign currency assets, the CRR which had been lowered in the previous year was raised by 1 percentage point. Nevertheless, the monetary expansion was high at 22.4 per cent.

Real economic activity continued to remain buoyant in 1995-96. For the second year in succession, the rate of growth of the economy exceeded 7 per cent. Monetary policy had to act against a background of an inflation rate exceeding 10 per cent in the previous two years. Another important factor influencing monetary policy in the year was the turbulence in the foreign exchange market which started in August 1995. The nominal rupee-dollar rate which had remained totally stable since March 1993 came under pressure. Even a small variation in the exchange rate after years of total stability triggered panic reaction and precipitated a sudden drop in the value of the rupee. The exchange market intervention (net sales) by the Reserve Bank in the spot market led to the withdrawal of liquidity from the money market, leading to sharp increase in the call rates which then restored stability in the exchange market. But the stability in the exchange market was shaken again in mid-January 1996. The Reserve Bank took a number of measures in early February 1996 to accelerate receipt of export proceeds and to prevent acceleration in import payments. These measures enabled the rupee to stage a strong recovery and in fact, the Reserve Bank started purchasing foreign exchange to prevent a sharp strengthening of the rupee. Between October 1995 and March 1996 the cumulative impact of RBI foreign exchange intervention and release of resources through reduction of CRR was an injection of liquidity, though for a period of two or three months, there was a negative impact which had the effect of pushing up money market interest rates. This was also a year when there was a strong demand for funds both from the government and the commercial sector.

The raising of funds through the capital market dropped substantially in 1995-96, while investment demand continued to remain high. The mobilisation of resources from the primary market by non-government public limited companies came down from Rs 26,440 crore in 1994-95 to Rs 16,371 crore in 1995-96. As a consequence, there was a pressure on bank credit and interest rates. In fact, non-food credit by the banking sector expanded by 22.5 per cent in 1996-96, on top of a 30 per cent increase in the previous year. Even though money supply in 1995-96 showed a smaller expansion partly for the reason that the base figure was high, the expansion in bank credit was nevertheless high because the lendable resources of the system increased as a result of the reductions in CRR. In the event there was a significant drop in the inflation rate in 1995-96.

The economy continued to grow at a rate exceeding 7 per cent in 1996-97, for the third year in succession. Given the stability in prices, a major effort was made to bring down the CRR. There was a sharp scaling down of the CRR by as much as 4 percentage points to 10 per cent between April 1996 and January 1997. Capital inflows also recovered in the second half of the year. As a consequence, nominal interest rates at the shorter end declined sharply. The treasury bill rate for 91 days which stood at 12.97 per cent in April 1996 came down to 10.17 per cent in October 1996 and declined further to 7.5 per cent in February 1997. Interest rates at the longer end, however, experienced marked stickiness partly because inflationary expectations had not come down. The money supply growth rate during the year 1996-97 was 16.2 per cent and with the economy growing at 7.5 per cent, the inflation rate remained low at 5.4 per cent. Signs of the slackening of growth of the economy were visible from early 1997. The Bank Rate was reactivated in April 1997 by linking several interest rates to it. It was also the rate at which refinance was to be provided by RBI. An attempt was thus made to make the Bank Rate as the 'signal' rate. The Bank Rate was reduced from 12 per cent to 11 per cent in April 1997 and further to 10 per cent in June 1997. In October 1997 the Bank Rate was further reduced by 1 percentage point to 9 per cent. A programme to reduce the CRR from 10 to 8 per cent which was announced in October 1997 could not be fully implemented because of the East Asian crisis. Because of the series of measures introduced in relation to CRR and Bank Rate, the government borrowing rate started to decline. The trend of decline in the interest rate got interrupted in the wake of the measures to stabilise the exchange market. In January 1998 the Bank Rate was raised to 11 per cent and the CRR to 10.5 per cent. While the rupee did depreciate, the depreciation was much less than what the East Asian currencies experienced. During 1998-99 and 1999-2000 inflation rate continued to remain low. The money supply growth rate in the two years was 19.4 per cent and 13.9 per cent, respectively. The economy grew at 6.8 per cent and 6.4 per cent, respectively. With inflation rates remaining low, there was a softening of interest rates. The long-term borrowing rate of the government started declining. By April 2000, the Bank Rate was brought down to 7 per cent and the CRR to 9 per cent. During 2000-01, Bank Rate was raised and then leveled back to 7 per cent and CRR to 8 per cent. The liquidity adjustment facility (LAF) has evolved as an effective mechanism for absorbing and/or injecting liquidity on a day-to-day basis in a more flexible manner and, in the process, providing a corridor for the call money market. The CRR was reduced from 5.5 per cent to 5.0 per cent in June 2002, to 4.5 per cent in June 2003, augmenting the lendable resources of banks by about Rs.13,500 crore.

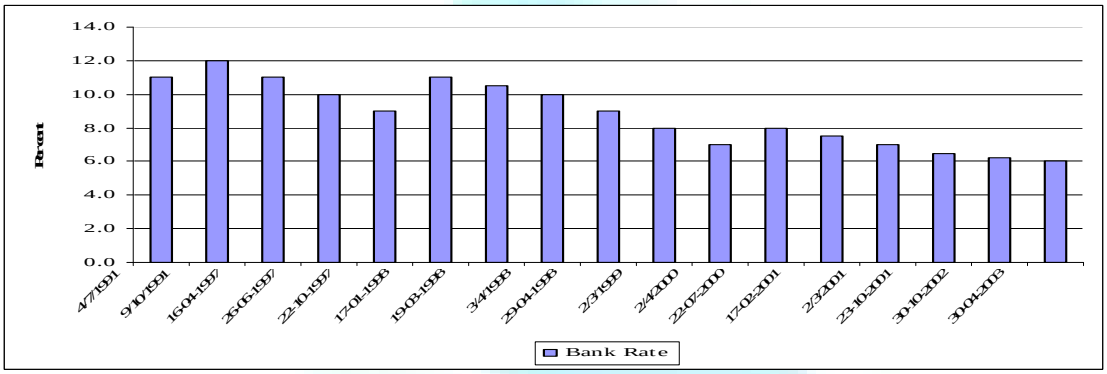
The Bank Rate and the LAF repo rate were reduced by 25 basis points each in October 2002 followed by a 50 basis point cut in the LAF repo rate on March 3, 2003. Comfortable liquidity conditions engendered by large capital inflows enabled a general reduction in market interest rates with varying sensitivity to policy signals across the maturity spectrum. Lending rates of banks exhibited, however, somewhat sluggish downward movements. The softening of interest rates was enabled by the benign inflation environment. The policy stance was reinforced by a 25 basis point cut in the Bank Rate in end-April 2003 and in the cash reserve

ratio (CRR) in mid-June, followed by a 50 basis point reduction in the LAF repo rate towards the end of August. Banks took advantage of easy liquidity conditions to cut deposit rates and lending rates. Responding to the Reserve Bank's initiative, banks switched over from tenor-linked prime lending rates (PLRs) to benchmark PLRs (BPLRs). As at end-March 2004, BPLRs were lower by 25-200 basis points than the PLRs which prevailed a year ago and Market Stabilisation Scheme (MSS) was introduced in April 2004 to strengthen the Reserve Bank's ability to conduct monetary and exchange rate management. However in 2004 there was stance that to keep adequate liquidity and adopt status quo to pursue interest rate. The fixed reverse repo rate and the repo rate increased by 25 basis points each to 5.75 per cent and 6.75 per cent, respectively, effective June 9, 2006. The stance of monetary policy during 2005-06 would depend on several factors, including macroeconomic prospects, global developments and the balance of risks. It indicates that Indian economy progressively liking to world economy. It means global inflation interest rate and investment demand have relevance effect on domestic interest rate. As per as LAF concern, it has increase by 50 points to 5.25 percent in 2006 to moderate the inflation. However, Still there is high rate of inflation at 6.5 per cent in March 2007 as compare to last three years (around 3-4 percent). To curb this inflation RBI has hiked the repo by 0.25 per cent as also the CRR by 0.5 per cent. However there is exist of new reason that "Inflation expectations loom large in most parts of the world. Therefore, many central banks have responded pro- actively to tighten liquidity so that inflation is held in check-P.Chidambaram, (2007)"[16].

USE OF MONETARY POLICY INSTRUMENTS SINCE 1991

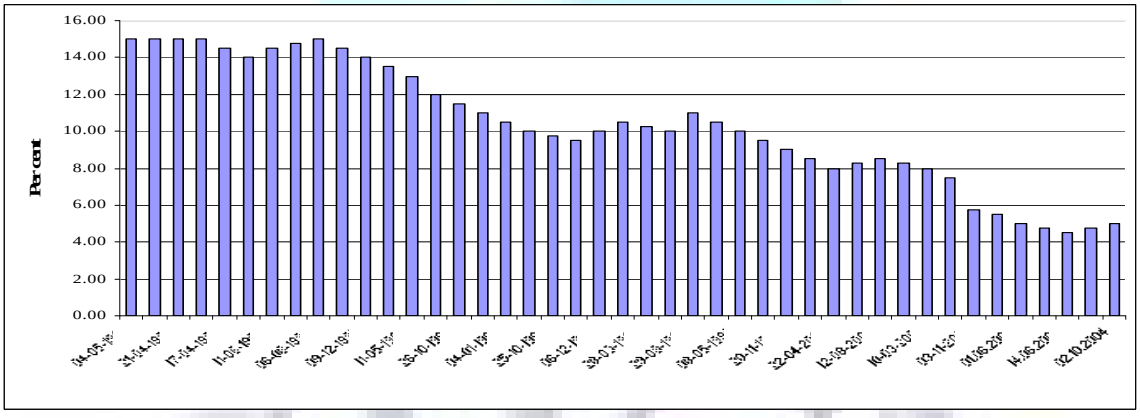
As per as instruments concern there are Bake Rate, CRR, SLR, Reverse Repo Rate and Repo Rate. Of course, these are part of interest rate instrument where it can be called quantitative instruments. To begin with the status of first instrument i.e,. Bank rate. This instrument used in the difficult time when the inflation more than one digit. Bank rate was so high in 10, September 1991**(Figure 5)**. But it has declined consistently till 2003 at around 6 per cent and it has changed more (four times) in 1998 is the highest.

FIGURE 5: PATTERN OF BANK RATE FROM 1991 TO 2003



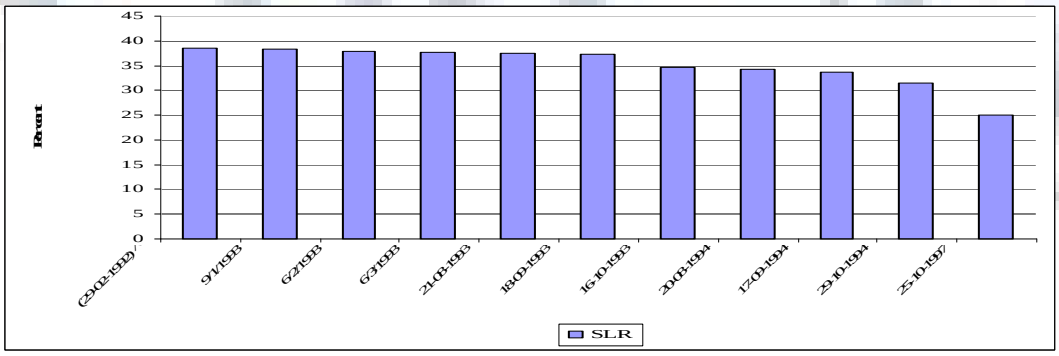
Source: www.rbi.org.in

FIGURE 6: PATTERN OF CASH RESERVE RATIO FROM 1991 TO 2004



Source: www.rbi.org.in

FIGURE 7: PATTERN OF STATUTORY LIQUIDITY RATIO FROM 1993 TO 1997



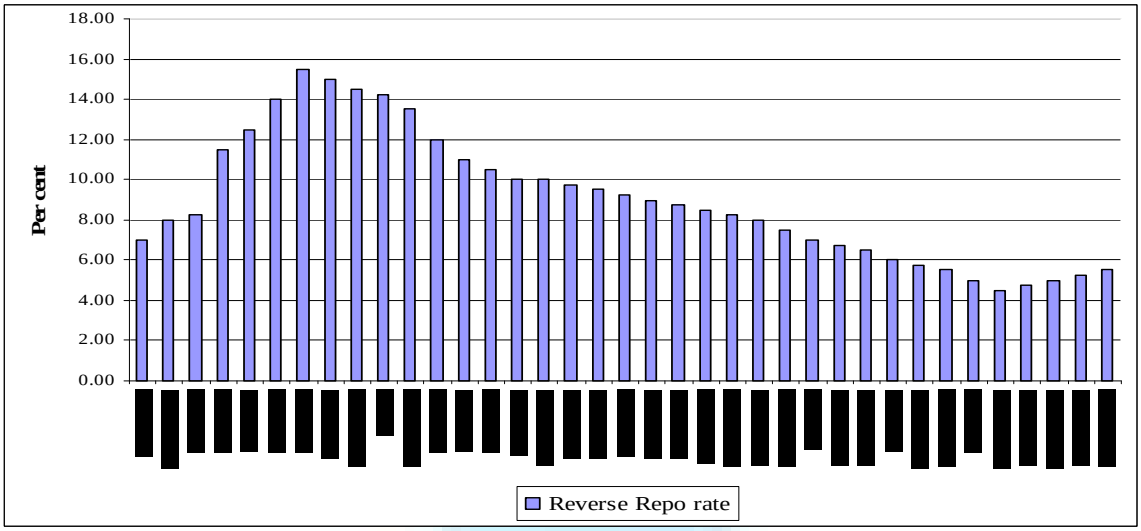
Source: www.rbi.org.in

[16] Finance Minister P.Chidamaberam gave this statement regarding inflation, published in Hindu, April, 11 2007.

Cash Reserve Ratio (CRR) is another instrument of quantitative method. As compare to Bank rate, CRR is active instrument because of quick effect on inflationary pressure. In the **Figure 5** gives the clear pattern of CRR during reform as well as post reform period. CRR was stood in between 10 to 14 per cent during the reform period. Then there was decreasing cyclical pattern from 1997 to 2004. The period from 2001 to 2004 was lowest rate was maintained because of low inflation rate.

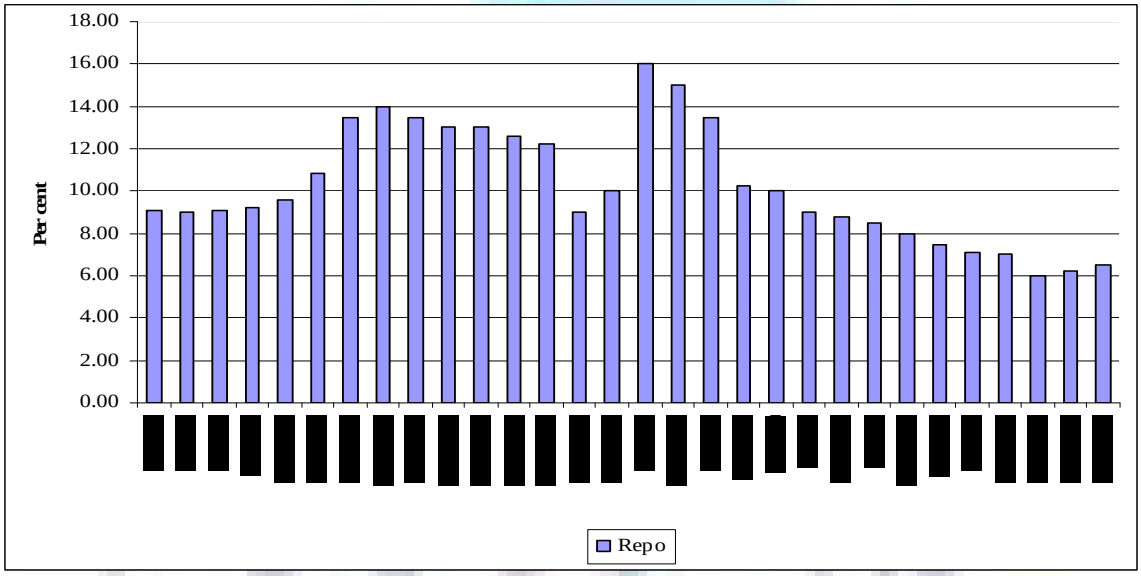
The lowest number of time adopted instrument is Statutory Liquidity Ratio. By short it known as SLR. During the reform period, SLR was kept at 38 per cent and lowest rate of SLR was 25 per cent which is still now same. The pattern of SLR shows that static downward trend. SLR was stood between 35 to 40 per cent from 1992 to 1993. After that SLR range become 25 to 35 from end of 1993 to 1997 **(Figure 7)**.

FIGURE 8: PATTERN OF REVERSE REPO RATE FROM 2000 TO 2006



Source: www.rbi.org.in

FIGURE 9: PATTERN OF REPO RATE FROM 2000 TO 2006



Source: www.rbi.org.in

Reserve repo rate and repo rate are the created under Liquidity Adjustment Facility (LAF). Of course, both rate are become integral part of the RBI as effective instruments. Reverse repo rate has started in 10th of July, 2000 **(Figure 8).** The highest rate of Reserve repo rate is 15 per cent in the same year as well as highest number of time this rate has been varied. But now it is 6 per cent after there is hike in the inflation rate.

Last but not the least, Repo rate is recent emerging monetary instrument which also comes under LAF. **Figure 9** reveals pattern of repo rate from 2001 to 2006. Like reverse repo rate this rate also used in most of time in 2001. One thing is to be clear that both rates are playing crucial role in determining liquidity in the economy. The peak rate of repo rate is 16 per cent which more than reverse repo rate. This has happened in the month of August, 2000.

CAVEATS TO MONETARY AND FISCAL POLICY

Since 1950-51, India has adopted mixed economy wherein government plays an important role in welfare of people. Hence it becomes essential to formulate policies with the focus on economic and social wellbeing of people. While formulating and implementing these policies, the policy makers come across many challenges. This is true with monetary and fiscal policy in India as well. Here we discuss some of the problems posed by gaps in formulation and implementation of monetary and fiscal policies.

- There is need for better coordination and cooperation between both the policies so that Indian economy can attain its objectives such as price stability and growth. Thus, high level of interface between both the policies is prerequisite for better performance of the economy.
- Needless to say that fiscal sustainability is another big challenge for government. There is variation in debt/GDP ratio over period of time. As the interest rate exceeds the output growth rate, the gap between the two rates increases resulting in higher debt-GDP ratio. This would require generation of adequate primary surplus equivalent to the gap between the interest rate and the rate of growth to stabilize the interest rate. But sufficient condition is that the initial debt stock equals the present discounted value of primary surpluses in the future.

- There is inflationary bias in monetary policy; therefore there is existence of a dynamic inconsistency. It can arise from number of factors such as knowledge of the changing characteristics of the economy like political pressure and state-contingent policy response. But only way is that seigniorage revenue and the incentives provided to the monetary policy to publicly credible.
- There is a mismatch between announced inflation target and public's expectations regarding future inflation which should be corrected.
- Threat from other countries economic fluctuations is also one of the challenges for Indian economy, because of increase market integration and globalization in the world. There is a record of crisis like South East Asian crisis (1997) which had spillover effect in the world. To protect the domestic economy form such type of threats there is need of analysing implications of the policy implementation.
- Threat of deflation is similar to the above caveat but it is totally in separated. Because threat of deflation comes when monetary policy revitalise the economy have taken real interest rate in various countries to levels below their real growth rates, producing what has been termed as the deflationary. E.g. Japanese experience has underscored the lower bound of monetary policy effectiveness and has brought the potential threat of inflation into forces. It increases the real debt burden casing bankruptcies and bank failures. To overcome this challenge, there should be contingency plans, emergency liquidity facilities, coordinated monetary and fiscal intervention, credible and transparent inflation targets are suggest in literature as part of the strategy to fight the deflation.
- As far as monetary policy is concerned, there is need to involve the constant rebalancing of objectives in terms of the relative importance assigned to them , the selection of instruments and operating frameworks and a search for improved understanding of the working of the economy.
- It is crucial to monitor all available information for signs of overheating with a view of keeping inflation expectations stable and ensuring that the gains from high growth are consolidated. Accordingly, sensing how close is the economy to its potential growth is the vital judgment that has to be made to set the timing and direction of monetary policy.
- The revision is consistent with the observed improvement in corporate profitability and internally generated resources that has been sustained over the period 2003-07, and to which we have been drawing attention for some time. Corporate profitability has remained strong despite a sharp rise in input costs and in interest payments
- An important challenge for the monetary policy authority is to judge the durability of the recent upsurge in growth. The current growth momentum is more cyclical than structural, the stance of monetary policy would need to reflect sensitivity to the inevitability of a downturn. On the other hand, the judgment that structural factors predominate would warrant a different policy stance.
- The monetary policy should give creative solution to problems which are in non-disruptive manner. It is in this context that prudential and other measures such as provisioning and risk weights on bank loans to specific sectors are being used so as to enhance the sensitivity to risks emanating from these sectors rather than standard monetary policy responses that address aggregate demand.
- There should be existence of effective and better tax administration because when some services are taxed and some are not, there will always an attempt on the part of service provider to label their service as belonging to the non-taxable category. More importantly, the central VAT (CENVAT) only extends into manufacturing. Tax credits are not given for services purchased by manufacturers, or manufactures purchased by service producers. This serves to break VAT chains, distorts production through cascading taxation, and increases the likelihood of evasion.
- Inadequate taxation of services has been an important weakness of the tax system. The share of the services sector in GDP has grown sharply over time. Here problem of equity arises. Because most of poor people preferred basic good and rich people prefer service goods (luxury goods). Therefore there is need for systematic tax framework.

SUMMARY AND CONCLUSION

The study conclude that the immediate aftermath of the fiscal reforms was essentially brought about through cut in investment expenditure, as rise in committed revenue expenditure could not be curtailed. Within a short span, it became increasingly obvious that the Indian approach to fiscal correction was not sustainable. While reduction in investment spending affected future growth prospects with consequent slowdown in revenue receipts, the interest payments and public debt continued to grow, resulting in reversal of fiscal consolidation process in the latter half of the 1990s. Downward rigidity in the revenue deficit, which amounts to dissaving by the Government sector, has significant implications for the growth target of 8 per cent set in the Tenth Five Year Plan. This would require an investment rate of about 32 per cent, whereas, over the years, the investment rate has stagnated at around 24 to 25 per cent of GDP. However, it may be noted that such rules generally make a clear distinction between public consumption and public investment expenditure while envisaging a complete elimination of revenue deficit. Rule based fiscal policy would facilitate the path for durable fiscal consolidation through mandatory fiscal discipline, enhanced accountability and improved transparency in fiscal operations.

With the growing globalisation and integration of economies, monetary authorities are now required to pay greater attention to external developments. The conduct of the monetary policy in India would continue to involve the constant rebalancing of objectives in terms of the relative importance assigned, the selection of instruments and operating frameworks, and a search for an improved understanding of the working of the economy and the channels through which the monetary policy operates. Over the past few years, the process of monetary policy formulation has become relatively more expressive, consultative and participative with external orientation, while the internal work processes have also been re-engineered. The stance of monetary policy and the rationale are communicated to the public in a variety of ways.

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A STUDY ON JOINT VENTURES BY THE INDIAN COMMERCIAL BANKS

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ABSTRACT

The extensive body of literature is available examining the growth and development of Indian banking, while little attention has been paid to financial services sector and in particular the cooperative attempts in the financial services sector. The present study focus on the joint venture attempts by the Indian commercial banks. Primarily the study focuses on the comparison of growth of non-interest income of the banks involved in insurance and mutual fund joint ventures. In insurance and mutual fund JVs the study attempts to identify is there any advantage of having a bank promoters. To analyses the same business generation by joint venture companies in the area of insurance and mutual fund categorizing promoters into bank promoters and others was considered. The results indicate that the bank promoted Joint ventures in the insurance sector generated higher business through bank channels than others and held more assets under management in mutual fund sector. They have also registered higher growth rate in asset under management.

KEYWORDS

Banking, insurance, mutual fund, joint ventures.

INTRODUCTION

Banking system plays a major role as a financial intermediary in any economy. Indian Banking was a highly regulated sector and experienced the highest degree of financial repression in the pre reforms period. The key feature of Indian banking is the dominance of the state ownership.Banking industry is regulated by the Reserve Bank of India and has three tier banks. These are the scheduled commercial banks, Regional Rural banks which operate in rural areas not covered by the scheduled banks, and the cooperative and special purpose rural banks. Commercial banks are further categorized as scheduled and non scheduled but for the purpose of assessment of performance Reserve Bank of India (RBI) categorizes them as public sector banks, old private sector banks, new private sector banks and foreign banks. For the purpose of study the same classification is followed. There were 93 scheduled banks, Indian and foreign as on 31st March 2009.

The contribution of banks to Indian economic growth trough Priority sector lending is remarkable. The extent of penetration of banking system in India, as measured by the proportion of bank assets to Gross Domestic Product (GDP) has increased from 50% in the second half of nineties to over 80% a decade later[1]. In Pre-independence era, 600[2] commercial banks were operating in India. The milestones in Indian Banking history is establishment of Reserve Bank of India (1934), enactment of Banking Regulation Act 1949, State Bank of India in 1955 and nationalization of banks in 1969 and 1980. During 1980-1991 regulators exercised the highest repression and social control over banks. The social thrust continued and Priority Sector Lending (PSL) target was increased to 40%.The policy of social equality has led to the inefficiencies in the Indian banking system. Indian banks were used as the medium of the government's spending policies. As Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR) and directed credit were 15%, 40%, and 40% respectively. Banks had very little freedom to utilise the deposits. The CRR and SLR saw a steep increase from 2% and 25% in 1960 to 15% and 38.5% in 1991. Regulations in India meant financial repression which refers to stringent laws, formal reserve regulations, informal controls, price fixation in banking and directed credit program. Significant progress registered by Indian Banking after nationalization were in 3 aspects- branch expansion, deposit mobilization and loan disbursements. Mass banking, social banking and less monitoring of loans has led to piling up of Non Performing Assets (NPAs) in PSBs. An internal group of RBI studied the question of priority sector credit and recommended that directed lending has to be continued with regard to small borrowers. Directed lending if continued has the potential to generate huge employment. Priority sector lending was 40%[3] of total credit and Agricultural credit occupied 18% of the total credit. Till early 1990s Public Sector Banks (PSBs) were enjoying a near monopoly status[4]. They were serving as captive market for government securities in the wake of higher level of SLR-CRR requirements and private investment restrictions.

The overall pressure on the growth of economic development increased due to Rupee devaluation, Balance of Payment (BoP)[5] deficit in late 1990s which led to the process of liberalization, privatization and globalization. As per General Agreement on Trade and Services GATS) India has agreed for Financial Services Agreement under which banking, insurance and financial services sector were opened for foreign investment.

In the Indian context diversification of banking activities is an initiation of Reserve Bank of India(RBI) to restructure banking activities, to increase the competition by allowing private and foreign investment in banking and financial services sector. Intensified competition, market determined rates in Indian banking brought the spread under the pressure. Diversification of activities gives the banks scope to earn non-interest income. Banks have ventured into different financial services such as underwriting, insurance (both life and non-life), investing, mutual funds, advisory services, Depository and trading services, Factoring etc. Joint ventures in Indian banking and financial services context is used as an expansion strategy by the local partner and as one of the entry mode by the foreign partner to enter into new markets. The JV activities were initiated due to the regulatory changes, which are discussed below.

DEVELOPMENT OF JVS AND TIE-UPS IN INDIAN BANKING

Certain reforms in the financial sector were put through even before the onset of economic reforms in 1991. These measures were taken in 1985 based on the report of an expert committee constituted by RBI. Report of Sukhmoy Chakravarthi Committee (1985), initiated the process of financial sector reforms in India. The report of Mr.N.Vaghul (1987) is a follow-up report of the Sukhmoy Chakravarthi Committee Report. In 1991 after the advent of the Economic Reforms, the recommendations of the Committee on Financial System (popularly known as Narasimham Committee) provided the impetus for further initiatives. A second report was submitted by Mr.Narasimham in the year 1987 signaled the need for the second phase of Financial & Banking Sector Reforms.1998

The financial sector reforms changed the landscape of Money market, securities market, Insurance and Mutual funds activities in India. The opening up of financial services for private and global competition has opened up the numerous investment opportunities and challenges.

The Indian banks are now operating in the financial market using the business models such as Wholly owned subsidiaries, Partly owned subsidiaries, Strategic tie ups and partnering sales and Joint venture companies. Following the same it was observed that there are two types of products/ services portfolio expansion by the Indian banks.

1. Developing their own product to capitalize an already established brand name
2. Marketing tie-ups, licensed or registered intermediary to sell other than banking products (Financial services)

The second class of expansion has taken place in all the banks as it is relatively simple. Developing their own financial product or expansion of business activities into financial services sector has happened with the help of Joint venture. The common product/service offered through JV initiatives are Insurance – both life and non life, Mutual funds , Stock broking and securities service, Merchant banking service, Cards payment service, Technology partnerships, Entry into international markets etc. Out of these Insurance and Mutual Fund JVs are commonly found.

The overall structural change in the Indian Financial services sector to open up private investments in Insurance and Mutual Fund sector witnessed increased investments in these sector. The insurance sector investments started post 2000 Mutual fund investments started post 1993.

These JVs were entered into by both Banking companies and other than banking companies in the post reform period. Indian banks floated Joint venture companies to expand their operations mainly into insurance, Mutual funds, stock broking etc. Many of the Public sector Banks had floated either fully owned or partially owned subsidiary mainly in the areas of housing finance even prior to the reforms. The other avenues ventured out through joint venture are cards, payment systems, new market entry etc. Other than banks, even conglomerates and business houses ventured into the insurance, mutual funds and stock broking business. As on March 2009 out of 21 life insurance companies, the companies floated by the banks are eight. Among 21 non-life insurance companies, the companies floated by the banks are only two. Out of 18 Mutual Fund companies 11 of them have banking promoters. In case of tie-ups many banks are selling third party products such as mutual fund insurance (both life and non-life). Hence the focus of the study is to explore the JVs in Insurance and mutual fund sector by the Indian banks. The present paper focuses on the development of joint venture and tie ups in the Indian Banking Sector, followed review of literature and the operational definitions-variables used, then presents the research design, analysis of data and conclusion. The approach is to test the impact of bank Joint ventures on banks' earnings and influence of Banks' involvements in JV firms.

LITERATURE REVIEW

Indian Banking has been a main body of study by many economists, bankers and academicians due to its profound influence on the economic development of India. In the post reform period several studies can be identified on broader issues such as productivity-efficiency in the light of regulatory and technology changes (Jayathi others 1998[6], Arunava1997[7], A.Hanson2001[8]). These comparative studies on different sectors of banks have indicated that the productivity and efficiency has increased in the deregulated market. It is also observed that the competition is increasing due to the entry new private sector banks and foreign banks which have registered many fold growth in a short span of time. Indicating at the regulatory changes the authors have identified the growing concept of universal banking.

Regulatory changes in the Indian Banks, that itself became a matter of study (Pradeep Srivastava1999[9], D.M.Nachane2000[10], Sayuri Shirai 2001[11] T. G. Arun and J. D. Turner 2002[12], Petya Kovea 2003[13], Prasad and Saibal Ghosh[14]2005, Chandrashekhar and Pal 2001[15], Richa and Bodla 2007[16], Chinmoy, John, Phani 2008[17]). While commenting on the banks' performance and the regulatory changes the above authors have indicated at the increasing competition in the banking sector and focused on the operational autonomy given to banks in the post reform period. They have indicated at the thinning difference between banking and non-banking services.

Ownership of banks is another critical issue observed (Prakash Singh 2007[18] ,Mishra and others2007[19])as Public Sector Banks (PSBs) dominate the Indian banking industry even in the reform era. In this regard many comparative studies were undertaken amongst PSBs, Foreign and Private Banks. Non Performing Assets (NPAs), Priority Sector Lending (PSL) Deregulation and competition was another interesting area of study for many researchers (Saibal and A.Das2004[20], Ramasastri and others 2006[21]). While comparing the ownership of banks and their performances the authors have indicated at the aggressive strategies of the foreign and private sector banks and observed the need for Public Sector Banks (PSBs) to be on par with them to safeguard their market standing.

Few merger studies were also observed focusing on the efficiency and the impact of merger announcements on stock performance (Adrian, Geetha, Tom and Jones[22]2006, Chinmoy Ghosh (2006)[23], Jay Mehta and Ram Kumar(2006)[24], M.Jayadev and Rudra Sen sharma 2007)[25], Manoj and Jagandeep(2008)[26]. K Srinivas(2010)[27]). The major analysis tools used are Data Envelopment Analysis (DEA) and event study analysis (using Cumulative Abnormal Returns-CAR).

The studies on Indian financial services and joint ventures were found scantly. Many studies identified the directional changes in the financial services sector (Unnithan and Swatman 2001[28], Jayanth Verma 2002[29], Rajan and Ajay2005[30]). They indicated that the regulatory changes can encourage the Indian banks to foray into other financial services sector to boost the non interest income. Studies on bancassurance, competition is focused by Karunagaran2006[31] Rakesh Mohan 2006[32], Kale and Anand 2006[33] indicated at increasing competition in the banking sector due to the entry of new gen private banks and foreign banks. These indicate at the banks' entry into financial services sector to ensure increased earnings.

A survey based study in cross selling financial products is undertaken by Richa Sharma and Nijaguna2006[34].The study compares the cross selling practices in public and private sector banks and indicates that it is easy to cross sell the financial services by the banks.

Gunita Arun Chandhok[35], have conducted an awareness survey to sell insurance amongst rural poor to explore the possibility of penetrating in the rural market. Another such potentiality study is carried out by Subhash and Deepti[36]. Mlanjana and Chiranjit[37] observed the stock market response to corporate event announcement, under which JV is covered as an event and found positive CAR due to these announcements.

In other markets the Joint venture is mainly analyzed as an entry vehicle. Many researchers have focused on JV as an expansion strategy cross border and compared it with the acquisition mode (Mehmet, Martina and Altay[38], Abhirup, Kulwant And Ishtiaq[39], Eduardo, Herbert, Mauricio and Luis[40]).

The similar study was carried out by Kimberly, Ike Mathur and Roy[41] on US banks' expansion into other markets. The same authors(2003)[42] focused on value creation to the shareholders post JV and alliances announcements in the long term. They observed significant abnormal returns to the shareholders. In 2006 Kimberly et al[43], US banks' JVs and observed that due to product and market diversification by the US banks, using acquisitions and JVs, the partners' risk has been minimised and return has increased.

The level of tie-up and cooperation to cross sell financial products and rendering other services is focused from Pak banks' perspective by Hummayoun, Amir and M. Iqbal Saif.[44] Their study indicates that the foreign banks are aggressive and used the JV strategy to expand the service portfolio followed by the few private banks. Many studies have also focused on human issues, learning perspective and resource sharing.

RESEARCH DESIGN

This section explains the objectives of the study, data sources and the analysis plan along with the explanations to the variables used for the analysis. It is an analytical study which tests the hypothesis, understanding the relationship between Joint venture attempts by the banks and its influence mainly on income generation(in banking companies) and business volumes(in JV companies).

OBJECTIVES OF THE STUDY

Motivated by the above studies the primary objective of the present study is set to focus on the growth of non-interest income of the banks engaged in JV and to compare their growth rate with other banks which are not involved in JV(as many authors indicated at the growing significance of the non-interest income in banks' statements and emphasized banks' foray into allied products).

Secondly the study focuses on Banks' influence on business generation as a JV partner with special reference to business volume generated through bank channel in insurance business and growth rates in assets held in mutual fund business.

The Hypotheses were based on the above to analyse the impact and to test whether the banks involved in JV have experienced higher growth in non-interest income and also to test whether bank as a JV partner could influence the business generation in insurance and mutual fund sector.

DATA SOURCES AND ANALYSIS PLAN

The study is based on the secondary data collected from the internal data sources such as published annual reports of the banking companies and Banking company websites. The external data sources used to collect historic data are the syndicated sources such as the reports of the regulatory bodies (IRDA and AMFI) Capitaline Database, CMIE Business Beacon database and RBI publications- Trends and Progress Reports (yearly Reports).

First part of the analysis focuses on the comparison of Banks having Joint Venture investments in the area of insurance and mutual fund with the banks having no joint venture investment. The cross selling of financial products is basically undertaken to increase the non-interest income component hence the parameters

considered for the analysis are the percentage of average non-interest income to total income and average interest income to the total income is considered for analysis.

Secondly the business generated through bank channel and other channels is identified for the various bank and non bank promoted insurers to identify the difference in the business volume generation.

Finally the analysis of mutual fund joint ventures is carried out using the Compounded Annual Growth Rate (CAGR) in the assets under management for bank promoted mutual funds and others between March 2003 and March 2009. The studen t 't' test explained above is used for analyzing the difference between bank promoters and others.

Financial year 2009 value is Future Value (FV), and financial year 2003 value is Base value (BV), the number of years considered is six.

For the Joint venture analysis the data is considered between March 2003 and March 2009. This period is selected as the activities are identified only post 1998-99. The initial years is considered as gestation period hence the analysis is focused from 2003.

The sampling method used in joint venture analysis is non probability based, convenient sampling. Since the total number of banks is 81, and the banks which have adopted the cross selling practices through Joint ventures and strategic alliance are only few. Only those banks are selected which satisfied the set parameters. The parameters considered for the selection are the completed years in Joint venture, the total income earned by the banks and the range of products expansion through JV. The year of entry is a significant parameter due to early entry into the market results overcoming the gestation period.

In case of Joint ventures by Indian Banks only five banks are selected which are actively involved in JV activity. To compare another two bank groups were identified based on the stated parameters. Three groups are identified for analysis are shown below.

BOX 1 - BANK GROUP IDENTIFIED

Banks with both Insurance and Mutual fund JV investments Group –A	Banks with Mutual fund JV investments Group –B	Banks with only strategic tie-ups Group-C
HDFC Bank	Punjab National Bank	Bank Of India
ICICI Bank	Bank Of Baroda	Uunion Bank of India
State Bank Of India	Canara Bank	Indian Overseas Bank
ING Vysya Bank	Standard Chartered	Central Bank of India
Kotak Mahindra BK	Axis Bank	Syndicate Bank

Note: Canara Bank has entered into insurance JV and the company started its operation post the analysis period

The first group contains all five banks which have both Insurance and Mutual fund Joint ventures. This group is named Group A. The second group is referred as Group B which contains only those banks having invested in mutual Fund JVs. The third group is Group C which does not have any JV investment in Insurance and Mutual funds. Both group B and C also represent five banks each.

The data considered for analysis is non-interest income to total income as a percentage for a period of six years. The starting point is March 2003 and considered up to March 2008.

The data of different bank size are normalised as the percentage of non-interest income to total income is considered and not the total non-interest income as it is. This is necessary as the data of different size banks are incomparable. The said period is considered for a reason that the JV Banks' group has completed minimum of two years after entering into JV. Thus Bank which has entered into various JV prior to 2002 is considered for the analysis. The average of non-interest income percentage to total income is considered for six years and the mean of mean is used further to calculate variance.

A *t*-test is a hypothesis test in which the test statistic has a Student's *t* distribution if the null hypothesis is true. It is applied when the population is assumed to be normally distributed but the sample sizes are small. The t-test assesses whether the means of two groups are *statistically* different from each other. The same is used to compare the means of two groups in the present study. To test the significance, the alpha level is set at 5%. The study considers unequal sample sizes, variance is unknown hence equal variance is assumed. The *t* statistic to test whether the means are different can be calculated as follows[45].

OPERATIONAL DEFINITION OF VARIABLES

Concept of non-interest income: A bank mainly recognises two types of income – Interest income and Non interest income. Interest income is the income earned on money lent by the bank. The constituents items of non-interest income are fees, commissions, Charges collected. It also constitutes the returns earned on the investments. Here investments can be categorised into following in accordance with the RBI guidelines on investment classification and valuation:

a) All investments are classified into `Held to Maturity', `Available for Sale' and `Held for Trading'. Reclassifications, if any, in any category are accounted for as per RBI guidelines. Under each classification, the investments are further categorised as (a) government securities, (b) other approved securities, (c) shares, (d) bonds and debentures, (e) subsidiaries and joint ventures and (f) others.

DATA PRESENTATION AND ANALYSIS

The banks were ranked using sales data as on March 2009, out of which it was observed that all the top 30 are into either Joint ventures or cross selling financial products. Due to cross selling the banks earn commission in case of third party products, in case of JV promoters in addition to the commission they also earn dividend income on their investment. Joint venture companies are separate entities hence their income is not reflected in the bank statements. Thus

Ho1 – There is no significant difference in growth rates of 'non –interest income (as a percentage) ***to total income' and 'Interest income (***as a percentage) ***to total income' of banks involved in Joint Ventures and others.***

To test the above Ho, the following table-1 considers two kinds of growth rates-1) growth rates of non interest income(as a percentage) to total income 2) growth rates of interest income(as a percentage) to total income. As mentioned above average of 6 years is considered.

The growth rates are compared between the three bank groups identified. Group A, are those banks having both insurance and Mutual fund joint venture companies. Group B, are those banks having any one joint venture companies. Group C, are those banks having no joint venture companies in the period under consideration. The comparison is undertaken to analyze the difference between the means of the groups.

TABLE I - PERCENTAGE OF NON INTEREST INCOME TO TOTAL INCOME

GROUP-A *BANKS WITH JV'S*	Average % non interest income to total income	Group B *Banks with MF JV*	Average % non interest income to total income	Group C *Banks with No JVs*	Average % non interest income to total income
HDFC Bank	18.88	PNB	17.02	BOI	16.73
ICICI Bank	25.06	BOB	17.27	UBI	12.79
SBI	17.66	CANARA	16.35	IOB	14.84
ING Vysya Bank	17.61	Standard Chartered	27.28	Central Bank	12.54
Kotak Mahindra	24.11	Axis Bank	20.59	Syndicate Bank	13.56
Mean	20.66	Mean	19.70	Mean	14.09
Standard Deviation(SD)	3.63	SD	4.54	SD	1.73
Variance(VAR)	13.19	VAR	20.63	VAR	2.98

Source: Computed from the Annual reports of the banks

TABLE I.A - DIFFERENCES IN MEAN OF NON INTEREST INCOME TO TOTAL INCOME

	t value	Df	Sig. (2 tailed) 2.306
Between Group A and B	0.369	8	Accept
Between Group A and C	3.670	8	Reject
Between group B and C	2.592	8	Reject

The growth rate of, percentage of non interest income to total income of Group-A is high than B and C. Group A represents the banks involved in both mutual fund and insurance joint venture. Group C's growth rate is very low compared to A and B.

The degree of freedom is (n1+n2)-2. In the analysis it is (5+5) -2=8. The two tailed test is administered having the confidence level of 5%. For the test the table value to compare is 2.306. As the t value is less than the table value in the first hypothesis the Ho is accepted only in case of A & B as there is no significant difference between A and B. Ho1 is rejected in case of A&C and B&C. It indicates that the Banks having JVs have higher growth rate of non interest income to total income

TABLE II - ANALYSIS OF INTEREST INCOME PERCENTAGE TO TOTAL INCOME

GROUP-A *BANKS WITH JV'S*	Average Interest income to Total income (%)	Group B *Banks with MF JVs*	Average Interest income to Total income (%)	Group C *Banks with No JVs*	Average Interest income to Total income (%)
HDFC	81.13	PNB	83.3	BOI	82.44
ICICI	74.91	BOB	82.68	UBI	86.67
SBI	82.42	Canara Bank	83.36	IOB	85.39
ING Vysya Bank	80.53	Standard Chartered	73.99	Central Bank	87.78
Kotak Mahindra	75.16	Axis Bank	79.19	Syndicate Bank	86.16
Mean	78.83	Mean	80.5	Mean	85.69
SD	3.53	SD	4.03	SD	2.01
VAR	12.47	VAR	16.24	VAR	4.05

Source: Computed from the Annual reports of the banks

TABLE II.A - DIFFERENCES IN MEAN OF INTEREST INCOME TO TOTAL INCOME

	t value	Df	Sig. (2 tailed) 2.306
Between Group C and A	3.78	8	Reject
Between Group C and B	3.01	8	Reject

The above table indicates that there is significant difference in the interest income earnings of JV and Non JV participating banks. The non JV participating banks have higher interest income earnings compared to JV participating banks. Thus the Ho1 is rejected.

THE ILLUSTRATION OF INSURANCE BUSINESS VOLUME GENERATION AMONGST BANKS AND NON BANK PROMOTERS IN INSURANCE

TABLE III - CHANNEL WISE BUSINESS GENERATED BY THE INSURERS AS ON '31 MARCH 2008'

Insurers	individual agents	Banks	Others	Brokers	Direct sales
LIC	98.36	1.30	0.29	0.05	0
Aviva	30.45	8.70	0.16	4.16	56.53
BALIC	64.07	3.33	26.63	0.61	5.36
Bharathi Axa	55.78	0.86	0	7.12	36.25
BSLI	64.96	27.98	2.79	4.26	0.01
Future Generale	42.69	0	0	2.63	54.68
HDFC Standard Life	54.89	40.53	1.07	0.31	3.20
ICICI Pru- Life	64.29	17.79	9.33	1.16	7.42
IDBI Fortis	21.42	78.47	0	0.11	0
ING Vysya Life	74.66	9.82	4.49	0.25	10.78
Kotak Life	48.79	21.20	19.80	5.95	4.26
Metlife	39.55	57.73	0.85	1.87	0
Max New york Life	63.49	6.11	26.73	0.97	2.69
Reliance	55.82	0.16	5.78	2.56	35.68
Sahara	99.48	0	0.52	0	0
SBI Life	57.32	41.96	0.53	0.17	0.02
Shriram Life	70.71	0	2.70	0.27	26.32
Tata AIG	53.70	34.33	5.81	4.98	1.18

Source: IRDA Annual Report March 2008.

The above data is arranged in the descending order. It indicates that the banks have utilised the bank channel to generate good volume of business. Out of top 10 insurers ranked based on the percentage of business generated through bank channel seven of them have banking promoters. Therefore banking channels can be used to cross sell the financial products.

TABLE IV- RANKING THE BUSINESS GENERATED THROUGH BANK CHANNELS

Order	Insurer	Business by bank Channel	Promoter type
1	IDBI Fortis	78.47	Bank
2	Metlife	57.73	Bank
3	SBI Life	41.96	Bank
4	HDFC Standard Life	40.53	Bank
5	Tata AIG	34.33	Non Bank
6	Birla SLI	27.98	Non Bank
7	Kotak Life	21.20	Bank
8	ICICI Pru Life	17.79	Bank
9	ING Vysys Life	9.82	Bank
10	Aviva	8.70	Non Bank
11	Max New york Life	6.11	Non Bank
12	Bajaj Allianz LIC	3.33	Non Bank
13	LIC of India	1.30	Non Bank
14	Bharathi Axa	0.86	Non Bank
15	Reliance	0.16	Non Bank
16	Future Generale	0	Non Bank
17	Sahara	0	Non Bank
18	Shriram Life	0	Non Bank

Source: Compiled and computed from IRDA reports

Ho-2** There **is no significant difference in the business generated through bank channel between the Bank promoted insurers and non bank promoted insurers.
The Ho2 is tested considering the business generated through bank channels by the various insurers. The two groups identified are the insurers promoted by the banks, which constitutes seven insurers (n1) and insurers promoted by the non banks, constituting 11 insurers (n2). The t test is administered considering the differences in means, having degree of freedom 16 and significance level of 5%.

TABLE V- PERCENTAGE OF BUSINESS GENERATED THROUGH BANK CHANNEL BY THE INSURERS AS ON 31ST MARCH 2008

% of business generated through bank channel Bank promoted JVs		% of business generated through bank channel Others	
IDBI Fortis	78.47	Aviva	8.7
Metlife	57.73	Max Newyork Life	6.11
SBI Life	41.96	Bajaj ALIC	3.33
HDFC Standard Life	40.53	LIC	1.30
Kotak Life	21.20	Bharathi Axa	0.86
ICICI Pru Life	17.79	Reliance	0.16
ING Vysya Life	9.82	Future Generale	0
		Sahara	0
		Shriram Life	0
		Tata AIG	34.33
		Birla SLI	27.98
Mean	38.21	Mean	7.52
SD	24.26	SD	12.10
VAR	588.94	VAR	146.51

Source: Compiled and computed from IRDA reports

TABLE V.A - DIFFERENCES IN MEAN OF BUSINESS GENERATION THROUGH BANK CHANNEL

	t value	df	Sig. (2 tailed) 2.120
Between bank promoted companies and other than bank promoters.	3.354	16	Reject

The above table indicates that the bank promoted insurers have generated significant business through bank channels compared to other insurers promoted by non banks. The Ho2 is rejected as the table value is less than the computed 't' value.

Ho3- There is no significant difference between the growth rates of Bank Sponsored or promoted Mutual Funds and others.
The Ho3 is tested considering the Assets with Mutual Fund companies promoted by the banks, which constitutes 11(n1) and others constituting 12(n2). The t test is administered considering the differences in means, having degree of freedom 21 and significance level of 5%.

BANKS' FORAY INTO MUTUAL FUNDS

Mutual Fund sector in India had various growth phases. The first phase was monopoly of Unit Trust of India (1964-87). In the second phase many Public Sector Funds entered the market (1987-1993). Third Phase witnessed entry of Private Sector Funds (1993-2003). Since February 2003 there was entry of many Foreign players. Total number of players in the mutual fund industry: 37 as on '31 March 2009'

BOX 2 - NUMBER OF ASSET MANAGEMENT COMPANIES PROMOTED BY BANK PARTNERS: 11

Public Sector Banks	Private sector Banks	Foreign Banks
Bank of Baroda	HDFC Bank	DBS
Canara Bank	ICICI Bank	HSBC
State Bank of India	ING Vysya bank	Axis Bank
	Kotak Mahindra Bank	Deutsche Bank

To test Ho3 the assets under management is considered for the period between 2003 and 2009. The Compounded Annual Growth Rate (CAGR) is computed for 5 years considering 2003 as the base year.

TABLE VI - ASSETS UNDER MANAGEMENT AS ON '31 MARCH 2009' - MEMBER WISE (Rupees in millions)

		Mar 2003 (Rs.)	Mar 2009 (Rs.)	CAGR (%)
Total Assets of the industry		794640	4932850	35.4
Mutual Funds promoted and sponsored by Banks				
1	BOB Asset Management Co. Ltd.	1780	11320	35.95
2	Canbank Investment Management Services Ltd.	9520	47440	30.55
3	PNB Asset Management Co. Ltd.	1410	67570	90.09
4	SBI Funds Management Ltd.	32200	263830	41.79
5	Kotak Mahindra Asset Management Co. Ltd.	29870	182040	34.99
6	HDFC Asset Management Co. Ltd.	64820	579560	43.86
7	Deutsche Asset Management (India) Pvt. Ltd.	3100	93550	76.05
8	HSBC Asset Management (India) Private Ltd.	7510	95750	52.59
9	ING Investment Management (India) Pvt. Ltd.	5940	25290	27.19
10	Prudential ICICI Asset Management Co. Ltd.	90680	514320	33.39
11	Standard Chartered Asset Mgmt Co. Pvt. Ltd.	41630	137160	21.89
	Mean			44.39
	SD			21.07
	VAR			443.97
Mutual funds promoted by private and foreign and other institutes				
		Mar-03	Mar-09	CAGR
1	LIC Mutual Fund Asset Management Co. Ltd.	29390	230920	40.8
2	Cholamandalam Asset Management Co. Ltd.	8560	10230	3
3	Escorts Asset Management Ltd.	830	1820	13.92
4	J.M. Capital Management Pvt. Ltd	26550	13460	-10.66
5	Reliance Capital Asset Management Ltd.	24200	809630	79.09
6	Sundaram Asset Management Company Ltd.	11690	92670	41.01
7	Birla Sun Life Asset Management Co. Ltd.	54880	470960	42.88
8	DSP Merrill Lynch Fund Managers Ltd.	22790	144120	35.82
9	Tata Asset Management Private Ltd.	10280	170300	59.36
10	Morgan Stanley Dean Witter Investment Management Pvt. Ltd	7050	67570	45.53
11	Templeton Asset Management (India) Pvt. Ltd.	87920	192050	13.85
12	UTI Asset Management Co Pvt Ltd	206170	487540	15.36
	Mean			31.66
	SD			25.29
	VAR			639.41

Source: AMFI updates from 2003 to 2009, compiled and computed

TABLE VI.A – DIFFERENCE IN THE GROWTH RATES OF ASSETS UNDER MANAGEMENT

	t value	df	Sig. (2 tailed) 2.08
Between Banks and others	1.249	21	Accept

The null hypothesis is accepted as there is no significant difference between the groups considered for the analysis. It indicates that the bank promoted mutual funds have registered higher growth rate but it is not statistically significant.

CONCLUSION

The leading Indian banks have forayed into Joint Venture investments to diversify into other financial products. These JV investments have helped them to grow faster. The established big banks from both public and private sector promoted JV companies by joining hands with the suitable foreign JV partner. Majority of the banks chose less complicated path of diversification to expand their operations. They chose to be channel partners to others' products, rather than developing their own product. These investments were possible due to the reforms brought in the Indian financial sector.

Considering the Compounded annual growth rate in non-interest income, it can be observed that growth rate was very high for banks involved in JV. The difference was found statistically significant between the Banks involved in JVs and Banks not involved. Similarly growth rate in interest income was found better for the Bank group which did not involve in any JV. The differences between the mean was found statistically significant.

The bank promoted Insurance companies generated higher percentage of sales through bank channels than non-bank promoted companies. Comparison of mean values indicated statistically significant difference between two groups.

In case of assets under management, the growth rate in the same was found high for the bank promoted Mutual funds compared to others. The difference between the mean was found statistically significant.

The present study focuses only on the financials drawn from the annual reports and published reports. It does not focus on the investors hence further studies can focus on the JV event study on the bank stocks to analyze the stock market reaction towards bank stocks in the event of JV announcements. The long term stock price analysis of banks involved in JV and other banks can also be carried out. The customer's perception and reaction to bank promoted financial products can be carried out to explore whether the background of JV partner influence their confidence while investing.

The Joint venture strategy can be suggested to banks to expand their products and services and to diversify the risk. It is easy for the banks to cross sell financial products as they already have established customer and branch network. They can generate higher volume of business and earn non-interest income. The banks have already gained the trust and confidence of the customers, thus makes the cross selling much easier.

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BLUE OCEANS OF URBAN AFFORDABLE APARTMENTS

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ABSTRACT

Smartly small seems to be the new big thing in today's volatile times. This where the concept of affordablility stands out in a world economy which is still rising out of the depths of recession. But the fact remains that the job creation resulting from positive growth will grow at a rate lesser than the rate of fall in the economy that was experienced. This process would take years to recover fully and mark positive growth in all sectors. The quest for the common man at the "bottom of the pyramid" to have a roof over his head will continue in spite of stagnating incomes and absence of focus of products targeted specifically to the segment. It is to address this emerging need that this paper attempts to establish "affordable apartments" as a blue ocean strategy, by trying to establish how it will cater to a new, unexplored customer base the "urban poor" and venture into uncharted territories as being done by prominent builders as a measure to get over the current slump in apartments market and in terms of creating new demand by targeting the untargeted segment hence forth.

KEYWORDS
Affordable apartments, Blue Ocean strategy, Bottom of the pyramid, Marketing Myopia, Targeting.

INTRODUCTION

Urbanization is not a side effect of economic growth; it is an integral part of the process". Even though the population of India is more rural than urban, as per statistics, only 30 % of the total population lives in urban India, this population alone generates over 70 % of the country's GDP and also accounts for 90 % of government revenues. In India, Delhi is most urbanized with 93 percent urban population followed by Union territory of Chandigarh (89.8 percent) and Pondicherry (66.6 percent).Other than these Tamil Nadu is the most urbanized state with 43.9 percent of the population living in urban areas followed by Maharashtra (42.4 percent) and Gujarat (37.4 percent). The lowest level of urbanisation in seen in Himachal Pradesh with 9.8% followed by Bihar with 10.5 percent, Assam (12.7 percent) and Orissa (14.9 percent).

The number of people living in Maharashtra alone accounts for 14% of the total Indian population, with 41 million persons mainly concentrated in urban areas and cities like Mumabi.Uttar Pradesh accounts for about 35 million followed by Tamil Nadu 27 million. This is a result of more concentration of activities in urban areas resulting in job creation for the masses. As a result the rural population migrates under the lure of better economic prospects and better lifestyle. A large section of this population comprises of the "bottom of the pyramid" workers, who ultimately end up in slums which incidentally currently accounts for around 1/ 4^{th} of the total urban apartments. Research shows that India today faces a total shortage of 24.7 million dwelling units, with more than 70 per cent of this shortage in the middle- and low-income groups.

The existing supply of urban apartments in India caters to only the top 30 % of the income level, in the form of traditional and luxury apartments. This can be termed as the Red Oceans in urban apartments, or the existing companies catering to top of the pyramid customer base. These developers and marketers have been concentrating on refining the quality and adding facilities to the extent that the basic concept of putting a roof over the head is lost, in a case of "Marketing Myopia". The developers concentrates just on the existing customer base and tries to differentiate from other players in terms of quality and value with little or no emphasis on the affordability factor of the customer. As a result, the real estate promoters find it hard to complete the project as there is no immediate demand. Confirming the trend, a World Bank study estimates that an average apartment project in India takes anything up to six years to complete as against 15-18 months in China. India also charges one of the highest levels of stamp duty in the world.

The informal agreements with banks result in giving loans irrespective of the guidelines with the objective of maximizing sales, so that the owner finds it hard to pay the debt and leads to default (a major cause for the sub- prime mortgage crisis which led to last recession).This kind of marketing myopia is a result of the real estate promoters approach where the product is first planned and then the sales team is assigned the task to "sell" he product irrespective of the market situation or annual disposable income of the customers.

The Apartments market in India has been such that the private players have been traditionally been concentrating on cities like Delhi, Chennai, Mumbai, Calcutta & Bangalore targeting the middle and high income segments. The development of urban apartments and town planning in tier 2 cities has been the responsibility of the government. The Government has always played a part of "laissez – faire 'or free hand, with no proper supervision. The rehabilitation of slums has been with such a low budget and with such low quality of building material that the buildings are abandoned by the dwellers in a short time and ultimately not fulfilling the purpose for which it was meant for.

So in the Tier 2 cities, the supply in terms of organized apartments was next to nothing for both the "top of the pyramid' and the "bottom of the pyramid" . There were very few players catering to the crème la crème of these cities. This trend was supported and further reinforced by factors like easy availability of land and the customers preferring individual houses compared to high rise buildings.

OBJECTIVES OF THE STUDY

The objectives of the study are to establish affordable housing as a viable blue ocean strategy by leveraging on the advantages of economies of scale and to analyse whether it can be a successful prelude to town planning. This paper also aims to suggest how the blue ocean strategy of affordable apartments can improve standard of ;living of the urban poor and suggest the ways to overcome the hurdles in the course with respect to factors like Planning, financials, service delivery, quality of infrastructure and environment.

METHODOLOGY

To fulfil the research objectives data has been collected from both primary and secondary sources. The secondary sources have been utilised to understand the concept of Blue Ocean strategy .The primary sources that has been used are questionnaires to reflect the perception of customers with respect to 5 factors, namely Price, Square feet area, Location, Builder reputation, Facilities.Using personal interview method the response was collected from 50 respondents and the same plotted to form the value curve of blue ocean strategy.

SIGNIFICANCE OF THE RESEARCH

In recent times, the non-availability of cheap land in urban areas coupled with and no substantial rise in income levels due to and subsequent to global recession, have led to people feeling that putting a roof above the head, the biggest dream of a common man is out of reach. It is in such a context that the concept of Affordable apartments is a concept which can revolutionize how both customers and promoters look at the idea of apartments, it can revolutionize as in a blue ocean strategy it caters to a customer base which was hitherto not addressed in the existing red oceans of apartments.

The Indian realty sector is expected to expand from $12 billion in 2005 to $90 billion by 2015. Such a figure can be achieved only if all the income segments are catered to, this kind of growth will cannot be brought forward by only the middle and high income groups in the economy.
It is in this context that this paper attempts to explore the uncharted territories and show the road ahead , the positive influence that such an innovative concept can make in people's lives, by making the 'dream home ' possible to the masses, like the local 'pan wallah' and the "bai" to areas like town planning, balanced growth and being socially responsible. The paper also highlights by identifying the efforts of major companies in the real estate sector which are catering to making this dream possible for the common man.

LITREATURE REVIEW

Blue Ocean strategy: "The market universe is composed of two oceans, red oceans and blue oceans. Red oceans represent all the industries in existence today. This is the known market space. Blue oceans denote all the industries not in existence today which is the unknown market space. Blue oceans are defined by untapped market space, demand creation and the opportunity for highly profitable growth. Some blue oceans are created well beyond industry boundaries, most are created from within red oceans by expanding existing industry boundaries. In blue oceans, competition is irrelevant because the rules of the game are waiting to be set.'
The Red ocean strategy competes in existing market space whereas the Blue Ocean Strategy creates uncontested market space as the concept of Affordable Apartments is targeted towards the low income groups as against the traditional targeting the luxury segments and being caught in a quick sand of Marketing Myopia.
The red Ocean strategy tries to beat competition whereas the blue ocean strategy tries to make competition irrelevant by targeting the three segments of non customers- First tier (customers who are willing to make the jump for better solutions) Second Tier (Who do not use the product as the product is either unacceptable or beyond the means for the target group) Third tier (Unexplored – the customers that have not been targeted till date)
The corner stone of the Blue Ocean strategy is the concept of value innovation. The value innovation is created where the company's action favourably affect both the cost structure and value proposition to buyers. The costs are reduced overtime as scale of economies kick in due to high sales volume that the superior value generates.
The four values and their relation with Affordable Apartments are

- Utility – the utility value attached to facilities
- Price – the less price value for Affordable homes
- Cost – The reduced cost as a result of low per unit area, low cost land and Economies of scale.
- Adoption – To be targeted towards the "Bottom of Pyramid'

CONCEPT OF AFFORDABLE APARTMENTS

Affordable apartments can be defined as Apartments solutions that provide more utility with lesser prices. This is possible by having lesser built up area per unit and Economies of Scale.
Economies of scale can be defined as "Reduction in cost per unit resulting from increased production, realized through operational efficiencies. Economies of scale can be accomplished because as production increases, the cost of producing each additional unit falls."The whole concept of Affordable housing rides on this concept and is commercially feasible because of the large no: of units per project. The luxury facilities which are otherwise hard to come by for this price range are made accessible through distribution of establishment costs over a large no: of units.
The lesser price would usually result in a perception that the quality and builder reputation would be less for the projects that involve Affordable Apartments, a perception that is being modified as the rules and the way business is run is being redefined in the recession free economy, considering the fact that the world economy as per various consultancies on a new beginning of new economic cycle from 2008 to 2017.
Ashutosh Limaye, Associate Director, Strategic consulting, John Long LaSalle Meghraj, says that the common features for Affordable homes or affordable homes are

- Low priced land
- Larger unit numbers to achieve economies of scale
- Smaller product sizes
- Reduction of aspiration – driven features

The apartments sector can be categorised into three categories of apartments on the basis of factors like price, location, and facilities (internal and external) location and builder / promoter reputation. The apartments or apartments as found mostly in urban apartments can be

- Affordable Homes –low price and basic utility
- Traditional homes - average to above average price and moderate utility
- Luxury homes – High Price and high utility

The key features of The Affordable Homes are that they are

- Of noticeably less price than similar units of traditional apartments
- Of noticeably less area per unit
- In large numbers per project to bring in the advantages of economies of scale
- The category where the prices are less than traditional but unit sizes are not much less; this can be targeted to middle and low income group.
- Noticeably different from the other two category of traditional homes and luxury homes on the basis of price and unit size.
- Homes are the value for money gets primary importance and the unit size and cost is the lowest possible. This can be targeted to the "Bottom of the pyramid" with the help of banks and microfinance institutions to make the Dream Home possible for every Indian.

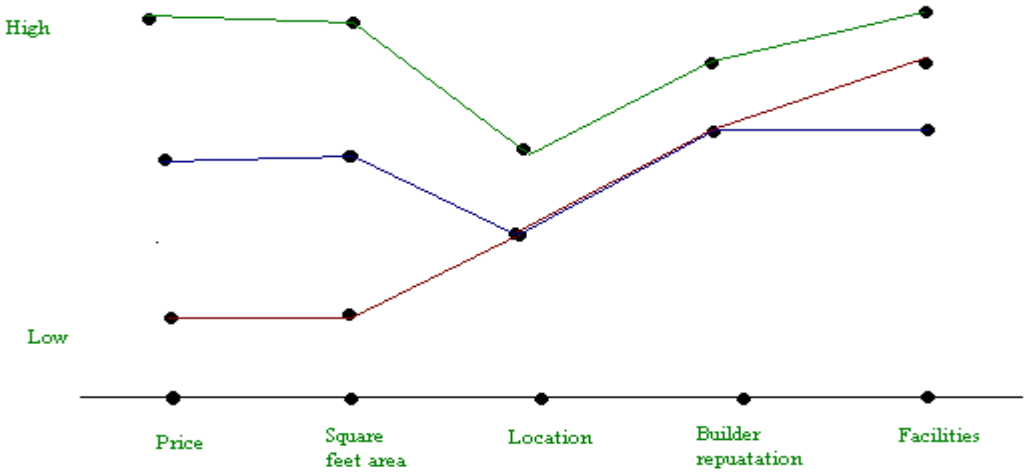
ANALYSIS & FINDINGS

PLOTTING THE VALUE CURVE – AFFORDABLE APARTMENTS AS A BLUE OCEAN STRATEGY

As a part of the study, the response was taken from 50 respondents to understand their perception about the concept of Affordable apartments. It was found that the majority of the respondents were extremely interested to know that the small and compact houses are being constructed in the price range starting from Rs. 7 lakhs. The first impression which was that the quality would suffer was soon overcome by communicating the fact that prominent builders like Brigade has been involved in this concept with a project titled "Brigade Value Homes" where the unit size for 1 BHK starts from 500 Square feet and 3 BHK till 1100 Square feet all in the price range of Rs.10 lakhs to Rs.26 lakhs and Provident apartments by Puravankara within unit sizes of 800 to 1180 square feet with prices ranging from 15 to 20 Lakhs.The first impression was that the demand potential is enormous where as the visibility and supply is limited.
The following is the value curve which reflects respondents perception of the values associated with

- Affordable Apartments
- Traditional Apartments
- Luxury Apartments

TABLE –AFFORDABLE APARTMENTS AS A BLUE OCEAN STRATEGY



Source: Primary Data

This value curve shows clearly the price differentiation aspect of the Affordable apartments to be the strongest. Based on popular advertisements by prominent builders the respondents were seen to have a perception associated with higher facilities with Affordable apartments. There has to be a trade – off between the differentiation and the low cost to create a new value curve. To create a new value curve, the following four key questions has to be answered.

Which of the factors should be eliminated?

- In case of Affordable apartments, the high cost of land is eliminated, as the construction is on low cost land.
- Low quality construction material is eliminated.

Which factors should be reduced well below industry standards?

- In case of Affordable apartments the cost of construction per unit is reduced well below industry standards as a result of low per unit area.

Which factors should be raised well above industry standards?

- The factor of luxury facility being offered at lower prices is a value created well above industry standards. The rules are being redefined as the facilities were till date unreachable for the common man.

What factors should be created that the industry has never offered?

- to answer this question, the current factor that is being created by Affordable apartments is the price differentiation, but the concept has huge scope as
  - An effective tool for town planning, and balanced growth
  - As a home for elderly with medical facilities.
  - The advantage of community living and improved facilities, the “Dream Home” for the common man.

Out of the total respondents of 50, 24 were not home owners and 26 were existing home owners. Out of the respondents, almost 50 % of the first time home buyers were seen to prefer the Affordable apartments concept with the remaining percentage of 30 % preferring Traditional apartments and 20 % preferring luxury apartments .There was some mental road block for some about the quality aspect of Affordable apartments which can be easily converted to customer with the right communication and marketing.

Out of the respondents who would be going for a second home, 70 % respondents would invest in a second home as a n investment with the remaining opting for home for the elderly with medical benefits either for themselves or for their parents. Out of these respondents, going for a second home, 90 % were open to the concept of Affordable apartments as the risk was less for them, as the purpose was investment. They were open to the idea as the popular perception was that the rent received would be equal to the monthly home loan payout making it easier to invest.

SUGGESTIONS

The critical issues to be addressed to make an effective town planning will be as follows

- Poor local governance from
- Weak finances available to the customers
- Inappropriate planning that leads to high costs of apartments and office space; in some Indian cities costs are among the highest in the world
- Critical infrastructure shortages and major service deficiencies that include erratic water and power supply, and woefully inadequate transportation systems
- Rapidly deteriorating environment

The current challenges which are being faced are related to

PLANNING

- Many urban governments lack a modern planning framework
- The multiplicity of local bodies obstructs efficient planning and land use
- Rigid master plans and restrictive zoning regulations limit the land available for building, constricting cities’ abilities to grow in accordance with changing needs.
- Policy, planning, and regulation deficiencies lead to a proliferation of slums.

FINANCIALS

- Building regulations that limit urban density - such as floor space indexes – reduce the number of houses available, thereby pushing up property prices.
- Outdated rent control regulations reduce the number of houses available on rent – a critical option for the poor.
- Poor access to micro finance and mortgage finance limit the ability of low income groups to buy or improve their homes.
- Weak finances of urban local bodies and service providers leave them unable to expand the trunk infrastructure that apartments developers need to develop new sites.

SERVICE DELIVERY

- Most services are delivered by city governments with unclear lines of accountability
- There is a strong bias towards adding physical infrastructure rather than providing financially and environmentally sustainable services
- Service providers are unable to recover operations and maintenance costs and depend on the government for finance
- An independent regulatory authority that set tariffs, decide on subsidies, and enforce service quality is generally absent.

QUALITY OF INFRASTRUCTURE

- Most urban bodies do not generate the revenues needed to renew infrastructure, nor do they have the creditworthiness to access capital markets for funds
- Urban transport planning needs to be more holistic – there is a focus on moving vehicles rather than meeting the needs of the large numbers of people who walk or ride bicycles in India's towns and cities.

ENVIRONMENT

- The deteriorating urban environment is taking a toll on people's health and productivity and diminishing their quality of life.
- Measures should be taken to provide adequate green cover in developing affordable homes.

CONCLUSION

The Affordable Apartments concept can be the light at the end of the tunnel as it can lead to balanced development as the projects are gaining more prominence in the so called Tier 2 cities. The concept leads to balanced development in metros as the low cost land is available only in the suburbs and the projects has to be in suburbs to reduce the per unit cost. Moreover the large no: of units and the facilities that go into it result in effective town planning.

Affordable homes are a "Dream come true" for the common man as it provides Quality living at affordable price. And makes the hitherto unthinkable facilities associated with luxury apartments within easy reach of the common man. The Affordable apartment concept is a breakaway from traditional concept where the private players concentrated only on the luxury segment and affordable apartments was a government monopoly, often with limited life span of the projects and poor quality. Affordable apartments were always limited to the concept of rehabilitation of the slum dwelling.

The concept of Affordable apartments is also being socially responsible with all these factors as effective planning and making facilities within reach of the common man, and also this concept can be related to the concept of "reverse mortgage" where the existing houses of senior citizens are mortgaged for a monthly payment. If this concept is further extended to providing Affordable apartments for senior citizens with in house medical facilities against the mortgage of the existing house of senior citizens, it will revolutionize the concept and make it a blessing with a much appreciated need for community living and being cared for in the sunset days or empty nest life stages of senior citizens.

If the migration from villages to cities continues at the same pace, in 3 to 4 years time, there would be a paradigm shift from the current imbalance of the urban population as a small pie in the population of India to a more equitable distribution of urban and rural population. This would indeed shift the focus to the urban India more, with regard to the political establishment and the governance. If 5 out of 10 people live in the cities the importance given to town planning should be substantiated by the government and this could become a powerful political mandate. This is where the concept of Affordable apartments would gain popularity; more value at affordable prices would become as important a political mandate as providing infrastructure.

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FOREIGN DIRECT INVESTMENT IN INDIA AND ITS ECONOMIC SIGNIFICANCE

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ABSTRACT

This paper investigates the impact of foreign direct investment and policies on generation of equity capital in various sectors of the economy by considering factors affecting FDI, and includes comparative analysis with the help of statistics relating to sectors attracting highest FDI equity inflows for the financial years 2008-09 to 2010-11. Share of top investing countries FDI equity inflows for the financial years 2008-09 to 2010-11, and state wise FDI equity inflows for the financial years 2008-09 to 2010-11. Here we have made an attempt to find out the economic significance of FDI. One of the most liberal policies for foreign investment and technology transfer is followed by India. Foreign investment gives the Indian industry a chance for technological up gradation, access to global managerial skills and practices, optimum utilization of human capital and natural resources, and to compete efficiently in the international market. FDI is vital for India's integration with the universal production chains that are engaged by various multinationals across the world.

KEYWORDS
Economy, foreign direct investment, multinationals, policies, sector.

INTRODUCTION

The Government of India recognizes the significant role played by foreign direct investment in accelerating the economic growth of the country and thus started a swing of economic and financial reforms in 1991. India is now initiating the second generation reforms intended for a faster integration of the Indian economy with the world economy. As a consequence of the introduction of various policies, India has been quickly changing from a restrictive regime to a liberal one. Now FDI is also encouraged in most of the economic activities under the automatic route.

Studies about Western firms propose that market size and expected growth are the most essential determinants of FDI into the area. Political and economic stability is also an important factor affecting FDI. Over the past 30 years, there have been various studies done on the impact of outbound and inbound activity of multinationals on the growth and fiscal restructuring of the economies that they operate in (Dunning and Narula, 1996). These studies suggest that this is dependent on three main variables; the type of FDI taken on, the composition of the local resources and capabilities of the country, and the economic and organizational policies followed by governments. Firms employ FDI in order to best utilize or manage more efficiently the existing competitive advantages.

LITERATURE REVIEW

DETERMINANTS OF FDI POLICIES IN INDIA

In a newspaper article, International Herald Tribune, 2007, India's commerce minister, Kamal Nath said that the foreign direct investment into India in the fiscal year 2006 – 2007 reached $ 16 billion, which is nearly triple the amount of $ 5.5 billion from the year earlier. This excludes the billions of dollars coming into the stock and bond market. The gush to India's economic boom and rising ease of rules related to foreign investment in recent years attributes to this rise in FDI. FDI flow accounts for 6.8% of the total investment compared to 0.5% three years ago.

Some recent studies have recognized technology, labour skills and infrastructure as determinants of foreign investment. If these determinants are not recognised, it will be difficult to explain some of the patterns in the geographical structure of FDI at the world capita income, in relation to outbound as well as inbound FDI (Hummels and Stern, 1994).

The huge range of government incentives should also be taken into consideration together with the other determining factors in corporate strategies of international location. Institutional, historical and cultural factors should not be ignored as they influence the investor's location related decisions (Martin and Velazquez, 1997).

The study conducted by Aqeel and Nishat (2004) tests if tariff rate, exchange rate, tax rate are significant for FDI. It states that these policy variables draw FDI and determine the growth in Pakistan. It also shows a positive impact of reforms on FDI in Pakistan. A wide spread of determinants have been examined related to FDI in the past. Several studies (Chakrabarti, 2001) on the determinants of FDI direct to the selection of a set of descriptive variables that are used and are important factors affecting FDI. Some researchers underline how the domestic market size and differences in factor costs are related to the FDI location (Markusen and Maskus, 1999). This magnifies the significance of market size and its expansion for foreign firms functioning in industries having large scales economies. As the economies of scale cannot be exploited before the market achieves a certain size. The measures of market size that are used extensively are GDP, GDP per capita and growth in GDP.

Labour cost which is one of the main components of the cost function also influences FDI. Some studies find very little or negative relationship between wages and FDI, Some studies suggest that higher wages do not always discourage FDI in some markets and therefore there is a positive relationship between wages and FDI (Love and Lage-Hidalgo, 2000). As higher labour costs leads to higher productivity which gives better quality goods. Lately studies are aimed towards the impact of specific policy variables on FDI in the host country. Trade, tariff, taxes and exchange rate are included in these policy variables. Asiedu (2002). Emphasize on policy reforms in developing countries that act as a determinant of FDI. They state the corporate tax rates and the sincerity to foreign investment are important determinants of FDI. Horizontal FDI is linked with market seeking behavior and is induced by low trade costs. Therefore high tariff barriers motivate firms to take on horizontal FDI. Thus production abroad by foreign subsidiaries replaces exports. This 'tariff jumping' theory entails a positive relation between FDI and import duty (Aqeel and Nishat, 2004).

Vertical FDI is when individual firms specialise in different production stages of the output. The semi finished goods are exported to other subsidiaries for further production. This fragmentation of the production process gives the company an advantage of different factor prices across different countries. Vertical FDI reduces the cost of production and marketing of the product and in turn leads to higher profits. Foreign investors give great importance to fiscal incentives and the taxation structure. They hunt for markets with low taxes as it affects the profitability of the investment. To draw FDI several tax break rules are presented to

the MNEs as an inducement. The researches done on FDI empirically have found a negative correlation between taxes and location of the business (Shah and Masood, 2002).

Some studies found no significant impact of taxes on FDI (Hines, 1996). Whereas, the study by Froot and Stein (1991) suggests that there is a positive effect of taxes on foreign investment. The study conducted by Basile et al (2005) suggests that Italy is not greatly affected by tax rates. Fluctuations in the corporate tax rate do not significantly influence FDI. Hence there is a strong negative rooting from the national institutional and policy system.

FACTORS AFFECTING FDI

POLITICAL STABILITY

Political stability is one of the factors that affect FDI decisions globally. Firms do not prefer to make profitable investments in countries that are politically instable or there is a volatile or unpredictable political situation. Threats of civil disorder, unrest or even civil war are also factors that dissuade foreign investment. The extent and reliability of political stability remains an important issue in many economies. In some countries, commitment to the reform process and to a market economy is soundly based (Estrin et al, 1997). Political power is often fragmented, and previous communists have started to win elections. There is a close inter-relationship among commitment to reform and FDI. Successful countries can use this as a signal of their commitment to reform policies. FDI is attracted by thriving reforms.

POLICY ENVIRONMENT

A second concern for firms considers FDI into a specific country is the policy environment. These policies vary from country to country and time to time. Macro-economic policy- Limp macro- economic policy and high inflation are common in stable emerging markets. It considerably adds to exchange rate and other risks undertaken by foreign investors. Governments are in a position where expenditures for social policies or defence are soaring, but habits of a low occurrence of personal taxation make it difficult to finance which leads to fiscal production and inflation tax. Inflation rates that are high imply abating and uncertain exchange rates, which damage foreign investment. Debt or input supplies that are denominated in foreign currencies are a good example. Exchange rate indecision leads to more costs in terms of hedging risks. Stabilization programmes address the primary disparity which may lead to capital losses related to radical currency depreciation. The path taken by a country depends on its economic structure. The character of government policy linked to a specific system differs from country to country having the same economic system and at the same stage of development. There are two main areas of government strategy that directly imposes on the nature of the investment development path of an economy: macro – economic strategy and macro – organisational strategy (Dunning, 1992).

The government plays a good part in determining the macro - economic policy which is often associated with the economic system. There is substantial discrepancy between countries in the position of governments in forming macro – organisational strategy. It mainly affects the organization of economic activity and the nature of the policies most suitable changes as the country evolves. This mirrors the nature of market imperfections that the policy is. The government plays a part in facilitating the market where its macro – organizational policy advances over time. Increasing economic specialization related to economic development leads to an expansion in market collapse and boosts the benefits of government macro – organizational policy.

Hamalainen (1993) suggests that governments can also not succeed and society is frequently faced with an option between imperfect markets and imperfect governments. The macro – organisational policy holds a broad selection of issues, and the reality that there is little agreement on what the optimal involvement of the government should be, leads to variation of this policy from country to country. This difference influences both the formation of markets and the degree to which the economic activity is capably performed. This further affects the economic structure of the country, and also the amount of FDI movement connected with it. Inward investment policies- Specific policies with respect to foreign investment and the special treatment given to foreign firms affect FDI. Firms respond to positive incentives and retort against restrictions and disincentive, particularly when the economic environment is comparatively stable. Commitment to reform becomes important when the economy is not steady while the role of investment incentive is open to discussion. Grants to inward investors will be imperative if they are done in huge amounts, but since some countries are generally not in a situation to recommend direct incentives they will tend to choose methods such as tax incentives that signify unavoidable earnings rather than real costs. As several investors fail to make large profits in the initial stage, such incentives are unsuccessful in motivating FDI.

A positive government action basically to supply information to foreign investors can be important. Firms that have traditional links with an economy, motivates them to become the first movers, example- geographical, cultural or historical reasons. Firms are also sensitive to other related fundamentals of economic policy, including personal tax rates for their staff, and the nature and effectiveness of a countries government policy.

INSTITUTIONAL AND INFRASTRUCTURE DEVELOPMENT

The third factor that influences firms concerns the institutional arrangements in the area in question and its infrastructure. Multinationals will be cautious of committing themselves to economies whose laws are disorganized, because of which their assets and earnings will be poorly protected. Such economies might have corrupt public administrations, which can drastically decrease the profit of the firm, as the administration may seek to make profits for itself. Countries where telecommunications is poor, transport is costly and utilities such as energy is unreliable, are the countries that receive the least amount of FDI. These problems mainly occur in communist countries where it is now being rectified.

EXCHANGE RATE EFFECTS

The outcome of exchange rates on FDI has been studied both with respect to variations in the bilateral level of the exchange rate amongst economies and in the volatility of exchange rates (Blonigen, 2005). Various studies have been done on the consequence of exchange rate fluctuations on FDI. But none of these studies help in concluding the direction and magnitude of its influence. State an imperfect capital market where a currency appreciation in the host country might increase outward FDI. When the markets are imperfect, the in-house cost of capital is lesser than borrowing from outside resources. An appreciation of money directs to increased company wealth and supply the company with superior low cost funds to invest into the subsidiary firms abroad that are going through devaluation of their currency. Depreciation in the host currency raises FDI into the host country and on the other hand an appreciation in the host currency reduces FDI (Froot and Stein, 1991).

The research by Blonigen (1997) suggests another way in which alterations in the exchange rate level in the host country affects its inflow of FDI. If the foreign investment made by a company is encouraged by the attainment of assets that can be transferred within a company across different economies without a monetary deal such as technology and managerial skills, then an appreciation in the exchange rate of the foreign currency will lessen the cost of the asset in that particular foreign currency, but it might not lower the nominal returns. Several studies have found evidence than short term fluctuations in exchange rates leads to higher inward foreign investment.

TAXES

Both international and local economists have great interest on the effects of taxes on FDI. It is an obvious fact that higher taxes dishearten foreign investors. De Mooij and Ederveen (2003), highlights that the influence of taxes on FDI varies considerably by the type of taxes, amount of FDI activity and the treatment of taxes in the host and parent economies. Multinationals face tax restrictions in both the host and home countries which are another important issue. Different economies have different ways of acknowledging the double taxation issue that complicates the usual influence of taxes on FDI.

The paper by Hartman (1985), suggests that profits earned by affiliate abroad will finally be subject to parent and host country taxes in spite of them being repatriated and reinvested in the foreign subsidiary to create further income. These foreign taxes cannot be avoided at any cost. New investment judgments take transfer of new capital from the parent to the subsidiary into consideration. These do not originate from the host country and still have not sustained any foreign taxes. This has two significant propositions. First, that company will finance new direct investment through retained earnings and later through new infusions from the parent firm.

Second, is that FDI done by using retained earnings will react only to host country tax rates and not to the parent nations taxes or its way of dealing with double taxation issues. On the other hand the investment made by using new transfers of capital, will respond to home and host nations taxes and rates of return obtainable in both the markets.

TRADE PROTECTION

There is a fairly clear link between FDI and trade protection. Higher trade protection makes companies more likely to replace exports with subsidiary production. This is known as tariff jumping foreign investment. There has been very little research done on this as this approach is simple and general. This theory is data driven and therefore it is hard to measure non tariff type of protection in a reliable manner across markets. Many studies have been done using industry level measures to test the trade protection programs which \ have not been conclusive (Blonigen, 1997).

HOST COUNTRY DETERMINANTS

As the global economy has opened to international business dealings, the nations compete increasingly for FDI not only by improving their policy and economic determinants, but also by executing proactive facilitation measures that may go beyond policy liberalisation.

FDI POLICIES

FDI policies consist of rules and regulations prevailing admission and functions of foreign investors, the standards of treatment accorded to them and the operation of the markets within which they function. The policies range from absolute ban of FDI to non discrimination in the handling of foreign and domestic companies. The trade policy plays the most important role amongst the complementary policies employed to influence location decisions. Other policies that are related embrace privatisation policies and policies determined by the international agreements a nation might sign. Policies that are used deliberately to attract FDI and their locations comprise the 'inner ring' of the policy system of FDI.

The characteristics of such frameworks vary among countries. The importance of the FDI policy as a determinant is verified by the obvious fact that direct investment takes place only after it is allowed to enter a country. Its possible relevance can be illustrated when changes in the direction of the policy causes FDI inflows to move in or out of the country. The speedy liberalisation of FDI policies has led countries to implement more open policies into sectors which are considered sensitive like telecommunications, air transport and to authorize forms of FDI entry which were less desirable in the past such as establishment of a fully owned subsidiary, mergers and acquisitions. Other policies that are not included in the policies spoken about so far constitute the 'outer ring' (UNCTAD, 2000). They can be classified as:

- **Monetary and Fiscal policies** determine the limitations of economic stability such as the inflation rate and the state of the external and budgetary balances that affect FDI. A fiscal policy also decides general tax levels that include corporate and personal tax rates and thereby influences inward FDI.
- **Exchange rate policy** is associated to stability and manipulates the FDI decision. It affects the cost of the host country's assets, price of transferred profits and the competitive advantage of the foreign affiliate exports.
- **Structural policies** play a significant part in influencing the industry composition.
- **Factor market policies** influence the quality, productivity and the cost of labour. They include labour policies and HRD policies. FDI liberalisation increases the competitiveness of the domestic markets. While the owner specific assets of multinationals and their transnational organisational structure and moderately greater competitive strength increases awareness. This facilitates companies to act dominantly and engage in anti- competitive practices. Government policies that are used to influence FDI thus have to consider the costs and benefits of this phenomenon.

BUSINESS FACILITATION MEASURES

The liberalisation of FDI policies is seen as an enabling act meant for creating a level playing field for all investors. This act is progressively complemented by proactive measures, intended to assist the business undertaken by foreign investors in the host nation. They encompass promotion attempts, the prerequisites for foreign investors, decrease in costs of doing business such as reducing corruption and improving administrative competence and provision of services that contribute to the excellence of the expatriate.

The promotional activity is increasingly becoming more important. Nations that have changed their FDI policies, countries that want to regain their investor's attention and countries that are invisible or unattractive to the investors have all started to resort to it (UNCTAD, 1995).

Increased competition for FDI has led to more proactive policies meant for actually bringing in FDI. Investment producing measures include industry specific investment assignments. But the most capable and important activity, though costly, targets firms that are likely to respond to promotion efforts. They also invest in a given host country, especially in transactions considered desirable for the host country.

Investment facilitation service is another increasingly important element of promotional activities in both the developing and developing nations. These services consist of counselling, accelerating the several phases of the approval process and providing assistance in acquiring all the necessary permits. This includes the creation of 'one stop shops', that is single organisations that are able to handle all matters related to FDI, in developing countries and some developed countries (Wells and Wint, 1990).

INCENTIVES AS FACILITATION

Incentives are any measurable economic advantages given to specific enterprises by the government, in order for them to act in a certain manner. They contain measures either to raise the rate of return of a specific investment or to lessen its risks or costs. Governments make use of incentives to draw FDI to guide investments into preferable sectors, activities or regions, to influence the character of an investment and to influence the ranges of investment presented to foreign investors. Since the mid 1980's as the barriers to trade and investment have declined, the number of countries that present opportunities have increased significantly. A lot of studies reveal that incentives play a minor role in the location decisions of multinationals. The key location factors include market size and expansion, manufacturing costs, level of ability, infrastructure, economic stability and the quality of the general regulatory framework. The study by Guisinger et al (1992) reports that incentives are often not even taken into consideration and that the investment decisions are made essentially based on the economic and long term strategic considerations pertaining to inputs, production costs and markets. The empirical literature on determinants of FDI persists to grow unabated. It can briefly be summarised in the following points:

- Host countries with large domestic markets, evaluated by GDP per capita and constant expansion of these markets, measured by the growth GDP rates, attract large volumes of foreign direct investment.
- Resources available in the host economy including natural and human resources are an important issue in the investment decision making process by foreign investors.
- Infrastructure amenities such as transportation and communication networks are vital determinants of FDI.
- Macroeconomic stability, implied by steady exchange rates and low rates of inflation is an important factor which helps in attracting foreign investment.
- Political stability in the host country motivates inward foreign investment.
- A steady and transparent policy framework towards FDI attracts potential investors.
- Fiscal and monetary incentives such as tax concessions play a vital role in attracting FDI, but they are of very little importance in the absence of a secure economic environment.

SHARE OF TOP INVESTING COUNTRIES FDI EQUITY INFLOWS (FINANCIAL YEARS) Amount in crores (US$ in million)

Ranks	Country	2008-09 (April-March)	2009-10 (April-March)	2010-11 (April-Jan.)	Cumulative Inflows (April '00 - Jan. '11)	%age to total Inflows (in terms of US $)
1.	MAURITIUS	50,899 (11,229)	49,633 (10,376)	27,970 (6,129)	238,876 (53,369)	42 %
2.	SINGAPORE	15,727 (3,454)	11,295 (2,379)	6,817 (1,504)	51,964 (11,694)	9 %
3.	U.S.A.	8,002 (1,802)	9,230 (1,943)	5,001 (1,092)	42,190 (9,371)	7 %
4.	U.K.	3,840 (864)	3,094 (657)	2,300 (503)	28,298 (6,387)	5 %
5.	NETHERLANDS	3,922 (883)	4,283 (899)	4,752 (1,048)	24,877 (5,535)	4 %
6.	JAPAN	1,889 (405)	5,670 (1,183)	6,180 (1,367)	23,075 (5,082)	4 %
7.	CYPRUS	5,983 (1,287)	7,728 (1,627)	3,458 (755)	21,235 (4,655)	4 %
8.	GERMANY	2,750 (629)	2,980 (626)	545 (119)	13,013 (2,918)	2 %
9	FRANCE	2,098 (467)	1,437 (303)	3,149 (690)	10,068 (2,220)	2 %
10.	U.A.E.	1,133 (257)	3,017 (629)	1,503 (326)	8,526 (1,875)	1 %
TOTAL FDI INFLOWS *		123,025 (27,331)	123,120 (25,834)	77,902 (17,080)	570,105 (127,369)	-

Source: Fact Sheets on FDI, Department of Industrial Policy and Promotion, 2011

From the above table we can identify that Mauritius holds highest inflows of 42% and UAE with least 1% where as other countries like Singapore holds 2 place with 9%, USA in 3 place with 7%, UK stand with 5%total inflows, where as Netherlands, Japan and Cyprus shares same total inflow of 4%, Germany and France holds 2%

STATEMENT ON RBI'S REGIONAL OFFICES (WITH STATE COVERED) RECEIVED FDI EQUITY INFLOWS1 (from April 2000 to January 2011): Amount ` in crores (US$ in million)

Sl.No.	RBI's - Regional Office2	State covered	2008-09 (Apr. - Mar.)	2009-10 (Apr.-Mar.)	2010-11 (Apr.-Jan.)	Cumulative Inflows (April '00 – Jan. '11)	%age to total Inflows (in terms of US$)
1	MUMBAI	MAHARASHTRA, DADRA & NAGAR HAVELI, DAMAN & DIU	57,066 (12,431)	39,409 (8,249)	25,520 (5,621)	199,322 (44,592)	35
2	NEW DELHI	DELHI, PART OF UP AND HARYANA	7,943 (1,868)	46,197 (9,695)	10,431 (2,289)	111,937 (24,700)	19
3	BANGALORE	KARNATAKA	9,143 (2,026)	4,852 (1,029)	5,612 (1,217)	36,139 (8,114)	6
4	AHMEDABAD	GUJARAT	12,747 (2,826)	3,876 (807)	2,570 (565)	30,969 (6,996)	5
5	CHENNAI	TAMIL NADU, PONDICHERRY	7,757 (1,724)	3,653 (774)	5,182 (1,146)	29,914 (6,645)	5
6	HYDERABAD	ANDHRA PRADESH	5,406 (1,238)	5,710 (1,203)	4,797 (1,051)	25,605 (5,749)	5
7	KOLKATA	WEST BENGAL, SIKKIM, ANDAMAN & NICOBAR ISLANDS	2,089 (489)	531 (115)	397 (88)	6,339 (1,481)	1
8	CHANDIGARH`	CHANDIGARH, PUNJAB, HARYANA, HIMACHAL PRADESH	-	1,038 (224)	1,430 (314)	4,223 (922)	1
9	PANAJI	GOA	134 (29)	808 (169)	1,369 (301)	3,316 (723)	1
10	BHOPAL	MADHYA PRADESH, CHATTISGARH	209 (44)	255 (54)	2,044 (440)	2,961 (643)	0.5
11	JAIPUR	RAJASTHAN	1,656 (343)	149 (31)	201 (44)	2,421 (514)	0.4
12	KOCHI	KERALA, LAKSHADWEEP	355 (82)	606 (128)	142 (31)	1,633 (362)	0.3
13	BHUBANESHWAR	ORISSA	42 (9)	702 (149)	56 (12)	1,196 (259)	0.2
14	KANPUR	UTTAR PRADESH, UTTRANCHAL	-	227 (48)	446 (97)	744 (162)	0.1
15	GUWAHATI	ASSAM, ARUNACHAL PRADESH, MANIPUR, MEGHALAYA, MIZORAM, NAGALAND, TRIPURA	176 (42)	51 (11)	0 (0)	280 (64)	0.1
16	PATNA	BIHAR, JHARKHAND	-	-	25 (5)	27 (6)	0
17	REGION NOT INDICATED3		18,300 (4,181)	15,056 (3,148)	17,678 (3,857)	113,079 (25,437)	20
Sub. Total			123,025 (27,331)	123,120 (25,834)	77,902 (17,080)	570,105 (127,369)	100
18	RBI'S-NRI SCHEMES (from 2000 to 2002)		0	0	0	533 (121)	-
GRAND TOTAL 4			123,025 (27,331)	123,120 (25,834)	77,902 (17,080)	570,638 (127,490)	-

Source: Fact Sheets on FDI, Department of Industrial Policy and Promotion, 2011

From the above table we can analyze FDI equity inflows from April 2000 to January 2011 where Mumbai leads with 35% of total inflows in terms of US$ which is followed by new Delhi with 19% and then Bangalore with 19%, Ahmadabad, Chennai and Hyderabad holds 5% total inflow and Kolkata, Chandigarh and Panaji has 1% Bhopal 0.5% Jaipur is 0.4% which is followed by Kochi with 0.3% where as the last four states are Bhubaneswar, Kanpur Gawahati and Patna where they holds 0.2, 0.1, o.1, o respectively.

SECTORS ATTRACTING HIGHEST FDI EQUITY INFLOWS Amount ` in` crores (US$ in million)

Ranks	Sector	2008-09 (April-March)	2009-10 (April-March)	2010-11 (April-Jan.)	Cumulative Inflows (April '00 - Jan. '11)	% age to total Inflows (In terms of US$)
1.	SERVICES SECTOR (financial & non-financial)	28,516 (6,138)	20,776 (4,353)	13,652 (2,987)	118,923 (26,597)	21 %
2.	COMPUTER SOFTWARE & HARDWARE	7,329 (1,677)	4,351 (919)	3,225 (708)	47,340 (10,644)	8 %
3.	TELECOMMUNICATIONS (radio paging, cellular mobile, basic telephone services)	11,727 (2,558)	12,338 (2,554)	6,041 (1,332)	46,746 (10,262)	8 %
4.	HOUSING & REAL ESTATE	12,621 (2,801)	13,586 (2,844)	4,791 (1,048)	42,163 (9,405)	7 %
5.	CONSTRUCTION ACTIVITIES (including roads & highways)	8,792 (2,028)	13,516 (2,862)	4,540 (1,006)	40,233 (9,059)	7 %
6.	AUTOMOBILE INDUSTRY	5,212 (1,152)	5,754 (1,208)	5,375 (1,191)	26,198 (5,788)	5 %
7.	POWER	4,382 (985)	6,908 (1,437)	4,711 (1,033)	25,715 (5,680)	4 %
8.	METALLURGICAL INDUSTRIES	4,157 (961)	1,935 (407)	4,632 (1,011)	18,073 (4,141)	3 %
9.	PETROLEUM & NATURAL GAS	1,931 (412)	1,328 (272)	2,471 (541)	13,585 (3,120)	2 %
10.	CHEMICALS (other than fertilizers)	3,427 (749)	1,707 (362)	1,739 (382)	13,007 (2,876)	2 %

Source: Fact Sheets on FDI, Department of Industrial Policy and Promotion, 2011

In sectors attracting highest FDI equity inflows service sector leads with 21% and computer software and hardware stands second with telecommunication holding 8% of the total inflow followed by housing and construction activities shares 3 position with 7%, automobile industry with 5%, power with 4 %, metallurgical industry with 3% and least contribution is from petroleum natural gas and chemicals with 2%.

CONCLUSION

India offers exciting business opportunities in almost every sector in the country. One of the most liberal policies for foreign investment and technology transfer is followed by India. Foreign investment gives the Indian industry a chance for technological up gradation, access to global managerial skills and practices, optimum utilization of human capital and natural resources, and to compete efficiently in the international market. FDI is vital for India's integration with the universal production chains that are engaged by various multinationals across the world.

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A MARKOV CHAIN APPROACH TO INFLATION IN INDIA SINCE 2001

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ABSTRACT

One of the most important objectives of Monetary and Fiscal Policy is to promote economic growth with price stability in the country. When price increases due to shortfall in productivity, the increase in price will powerfully decrease purchasing power and demand for commodity. This paper makes an attempt to use appropriate statistical method to predict the changes in inflation by using a well known approach called Markov Chain Model which employs a probabilistic view to analyze the price changes in India since 2001.

KEYWORDS

Consumer Price Index, Inflation, Indian Economy, Markov Chain Approach, Wholesale Price Index.

INTRODUCTION

Inflation is as violent as a mugger, as frightening as an armed robber and as deadly as a hit man", quotes the 40th US President Ronald Reagan in one of his speeches. Inflation has been a vital economic concern in almost all the developing countries. It wouldn't be incorrect to say that inflation has absorbed India into its jagged tentacles. Inflation can be defined as the rise in overall price level in the economy, i.e. rise in prices of all the goods and services. When prices rise, each rupee buys less goods and services than it had been before, consequently eroding the purchasing power of money. It is measured through inflation rate- the annualized percentage change in a general price index (Consumer Price Index and Wholesale Price Index) over time[1].

HISTORY OF INFLATION IN INDIA

Since independence, India has been plagued by the malady of inflation, though the ill effects of inflation have been prominent since 1991, post liberalization. With a quick look into the past, one could certainly state that prices have rarely dropped in our country. From the 1950s, inflation has been mostly triggered by impediments in agricultural production due to poor monsoons, with things aggravating when prices of industrial raw materials have increased. Since the 1960s, voluminous fiscal deficits with the subsequent injection of money into the economy, and the hoarding of essential commodities by speculators, have been few factors causing inflation.

Dire monsoons and harvests caused inflation in the mid-'50s; while in the mid-'60s, industrial output lost pace, agricultural production was hindered, followed the devaluation of the rupee all these triggered high inflation from 1964-65 to 1967-68. The international oil crisis of 1973 happened together raising the inflation above 16 per cent. In 1975-76 during the Emergency inflation came down to zero owing to good agricultural production and a clear out on speculation in commodities. It was only during the emergency time that the inflation was low.

The budget of 1979 stimulated price hikes by imposing higher indirect taxes on some essential commodities because of which we observe reversal in the trend again. This alleviated little in 1985-86, as the food grain production increased, which was at a record 150 million tonnes. But in the following and in subsequent years, agricultural production suffered.

Since 1990s, India witnessed very high inflation. The Balance of Payment crisis in 1991, because of deficits in government finances and devaluation of the rupee, an extremely high inflation of 13.66 per cent was seen in the Indian economy. Though it was controlled later, the average rate of inflation over post liberalisation in the 90's has been a significant value of 9.3 per cent per year. Between the fiscal year 2004-05 and 2007-2008, India had experienced an average growth rate of more than 9%, but the global crisis, the Indian economy faced severe shocks in certain sectors leading to inflationary situation. Inflation in India 2009 stood at 11.49.

SIGNIFICANCE OF THE STUDY

Inflation, by far is very vital in determining the future growth of an economy. A minimal amount of inflation encourages growth of the economy. It induces the investors to induce more because of the increase in the price level. Because the increase in price level is low, the supply won't fall much. So the market forces retain the equilibrium with a supplementary increase in the GDP and other growth indicators.

This study proposes to use statistical methods to predict the changes in inflation by using a well known approach called Markov Chain Model which employs a probabilistic approach to analyze the changes over a certain time period. An analysis of the behaviour of monthly changes in the price index would give us a clear indication of the price movements and would help us predict the future direction of prices. This would be a great advantage for policy making especially in the developing countries which concentrate on growth as well as price stability. This study could also be extended to the states to develop an understanding of growth and the primal causes of inflation using state-wise data (though we don't propose to test the data for the states in this study).

Many studies have developed different econometric models to predict inflation. These models have been developed based on certain assumptions and have been tested only for a particular set of data. Testing the empirical relevance of a model developed is utmost important when we want to employ it for future predictions of price movements. Through this study we intend to test the empirical relevance of the Markov Chain Model of Inflation.

OBJECTIVES OF THE STUDY

The study is basically an extension of Dr. Vijayamohanan Pillai's paper where the Markov Chain Model was used to test the predicted series of price changes with the actual, over the period 1980-2000 i.e., for 240 months.

- The study proposes to test whether the price rise is cumulative and hence inflationary.
- Whether the Markov Chain Model can be used to predict inflation in the immediate future.

DATA SOURCES AND PERIOD OF STUDY

Whole Price Index (WPI) monthly data from 2001-2010, with base year as 1993-94 has been obtained from Office of the Economic Adviser to the Government of India, Ministry of Commerce and Industry.

Authenticity of data is not at stake as the same data is also available in the Handbook of Statistics of the Indian Economy, published by the Reserve Bank of India (RBI).

HYPOTHESIS

A price rise becomes cumulative and thus inflationary not just when the short-run and long-run probabilities are 'higher', but only if there operates a causality (or temporal dependence).

STATISTICAL TOOLS AND METHODOLOGY

Markov Chain Probability Estimates are the basic building blocks of the Model. We use simple hypothesis testing using Chi-Squared and Normal Distribution. We use statistical regression and probabilistic tools of SPSS software to analyze the data.

The Markov Chain Model adopted by Dr. Vijayamohanan Pillai, in his study "A Markov Chain Model for Inflation in India" is used. The WPI values of Inflation are considered for the analysis, where the price inflation in percent (%) over the previous month is calculated.

We describe a Markov chain as follows: We have a set of states, S = {s1, s2 .... sr}. The process starts in one of these states and moves successively from one state to another. Each move is called a step. If the chain is currently in state **si**, then it moves to state **sj** at the next step with a probability denoted by **pij**, and this probability does not depend upon which states the chain was in before the current state. The probabilities **pij** are called transition probabilities. The process can remain in the state it is in, and this occurs with probability **pii**. An initial probability distribution defined on S, specifies the starting state. Usually this is done by specifying a particular state as the starting state. [2] **pij** is conditional probability.

The analysis can be done using 2 states as well as 3 states. We consider the former case for study in this paper. When we define 3 states we have a positive state, a zero state and a negative state; and when 2 states are defined we have a positive and a non-positive state.

FIGURE: FREQUENCY DISTRIBUTIONS OF TRANSITIONS FROM THE PREVIOUS STATE I TO THE PRESENT STATE J

	Current State								
		1	2	..	..	j	..	..	m	Total
Previous State	1	n11	n12			n1j			n1m	n1
	2	n21	n22			n2j			n2m	n2
	i	ni1	ni2			nij			nim	ni
	m	nm1	nm2			nmj			nmm	nm
TOTAL		n.1	n.2			n.j			n.m	N

Using Maximum Likelihood Estimates we can calculate the values of **pij** wich is the probability of transition from the current state to the next state.

$$P(j|i) = \frac{P(i,j)}{P(i)} = \frac{n_{ij}/N}{n_{i\bullet}/N} = \frac{n_{ij}}{n_{i\bullet}} = P_{ij}.$$

= corresponding row sum

Also, we have

$$P_{ij} = n_{ij} / \sum_{j=1}^{m} n_{ij} = n_{ij} / n_{i\bullet},$$

---------- **(1)**

LIMITATIONS OF THE STUDY

The global economic crisis of 2007 had an impact on inflation, so predictions of the model during the crisis period could be faulty though it might not be the case. Also we are considering all commodityprices rather than individual prices, so we won't be able to predict which commodity are the main the cause of inflation.

Sometimes while using Markov chains though there is sufficient data, there might not be enough number of transition states to give a closed set of transient data. It could be due to various factors like a sudden recession or a rare climatic event.

REVIEW OF LITERATURE

Dr. Vijaymohanan Pillai (2002) in his paper "A Markov Chain Model of Inflation in India" tests the Markov model for price movements on WPI and other price indices. The analysis was done for a period of 1981-2001 in 2 phases i.e. pre-liberalisation and post liberalisation. The transition probabilities and steady state probabilities were calculated and the results showed that the probability that there is inflation in the economy is high which led to the conclusion that the price rise is inflationary.

Christian Ahlin and Mototsugu Shintani (2007) studied the high inflation and low inflation bands for the optimal pricing of goods and commodities, where the low inflation band was assumed to be contained within the high inflation band. There were 2 states represented by (s,S) contained within the inflation band region. Markov techniques were used to variance of inflation. The position of the states within the band region gives us the price dispersion and inflation. The conclusions drawn were that optimal pricing could pilot inflation because it leads to clustering of prices.

John Simon (1996) use similar Markov techniques to describe inflation in Australia. It also incorporates switching techniques to explicitly allow for structural changes. The paper was helps in understanding the shifts in the inflationary expectations of the public. The conclusions drawn from the paper were discussed at the Reserve Bank of Australia, for new policy decisions which had a positive impact on the economy.

Thams, Andreas (2007) in his paper "Inflation Transmission in the EMU: A Markov-Switching VECM Analysis" analyzes the transmission of inflation across the five largest economies in the European Monetary Union, i.e. France, Germany, Italy, Netherlands and Spain. The main objectives of the paper were to analyze the changes in the inflation using Markov Switching Techniques. Monthly CPI data over the period of 1970-2006 was considered for the analysis. The findings were from the early 1970s upto the mid 1980s there was inflation every time a government switched. Later on there was a stable transmission mechanism adopted leading to low degree of inflation in short and long run.

Ramesh Chand (2010) examined the nature and the causes of food inflation in India in recent past. The study finds that the main reason for increase in food prices is the supply shock due to the drought in 2009 and the carry over effect of the low food production in 2008-2009. This study also emphasises that the major cause of increase in food prices in 2008 was due the influence of exports led by high prices. This study also forecasted that the frequency of these shocks are expected to rise in future and to deal with it India need to have an effective food management strategy. It suggests that timely release of cereals stock held by FCI could reduce prices substantially. It also highlights the importance of increasing storage facilities for various types of food and reducing exports to increase domestic stabilisation stock.

There is a large scope of research on inflation in India which could be done by using Markov Process and other analytical approaches like the Bayesian Approach which could help in predicting inflation.

This study proposes to use statistical methods to predict the changes in inflation by using a well known approach called Markov Chain Model which employs a probabilistic approach to analyze the changes over a certain time period.

TABLE 1: GENERAL PRICE INFLATION (%) OVER THE PREVIOUS MONTH AND THE CORRESPONDING STATES

		WPI	Monthly Inflation		State of the Nature	
			Present	Previous	Present	Previous
					St	St-1
2001	January	158.6				
	February	158.6	0			
	March	159.1	0.315	0	1	0
	April	159.9	0.503	0.315	1	1
	May	160.3	0.25	0.503	1	1
	June	160.8	0.312	0.25	1	1
	July	161.1	0.187	0.312	1	1
	August	161.7	0.372	0.187	1	1
	September	161.7	0	0.372	0	1
	October	162.5	0.495	0	1	0
	November	162.3	-0.123	0.495	0	1
	December	161.8	-0.308	-0.123	0	0
2002	January	161	-0.494	-0.308	0	0
	February	160.8	-0.124	-0.494	0	0
	March	161.9	0.684	-0.124	1	0
	April	162.3	0.247	0.684	1	1
	May	162.8	0.308	0.247	1	1
	June	164.7	1.167	0.308	1	1
	July	165.6	0.546	1.167	1	1
	August	167.1	0.906	0.546	1	1
	September	167.4	0.18	0.906	1	1
	October	167.5	0.06	0.18	1	1
	November	167.8	0.179	0.06	1	1
	December	167.2	-0.358	0.179	0	1
2003	January	167.8	0.359	-0.358	1	0
	February	169.4	0.954	0.359	1	1
	March	171.6	1.299	0.954	1	1
	April	173.1	0.874	1.299	1	1
	May	173.4	0.173	0.874	1	1
	June	173.5	0.058	0.173	1	1
	July	173.4	-0.058	0.058	0	1
	August	173.7	0.173	-0.058	1	0
	September	175.6	1.094	0.173	1	1
	October	176.1	0.285	1.094	1	1
	November	176.9	0.454	0.285	1	1
	December	176.8	-0.057	0.454	0	1
2004	January	178.7	1.075	-0.057	1	0
	February	179.8	0.616	1.075	1	1
	March	179.8	0	0.616	0	1
	April	180.9	0.612	0	1	0
	May	182.1	0.663	0.612	1	1
	June	185.2	1.702	0.663	1	1
	July	186.6	0.756	1.702	1	1
	August	188.4	0.965	0.756	1	1
	September	189.4	0.531	0.965	1	1
	October	188.9	-0.264	0.531	0	1
	November	190.2	0.688	-0.264	1	0
	December	188.8	-0.736	0.688	0	1
2005	January	188.6	-0.106	-0.736	0	0
	February	188.8	0.106	-0.106	1	0
	March	189.4	0.318	0.106	1	1
	April	191.6	1.162	0.318	1	1
	May	192.1	0.261	1.162	1	1
	June	193.2	0.573	0.261	1	1
	July	194.6	0.725	0.573	1	1
	August	195.3	0.36	0.725	1	1
	September	197.2	0.973	0.36	1	1
	October	197.8	0.304	0.973	1	1
	November	198.2	0.202	0.304	1	1
	December	197.2	-0.505	0.202	0	1
2006	January	196.3	-0.456	-0.505	0	0
	February	196.4	0.051	-0.456	1	0
	March	196.8	0.204	0.051	1	1
	April	199	1.118	0.204	1	1

	May	201.3	1.156	1.118	1	1
	June	203.1	0.894	1.156	1	1
	July	204	0.443	0.894	1	1
	August	205.3	0.637	0.443	1	1
	September	207.8	1.218	0.637	1	1
	October	208.7	0.433	1.218	1	1
	November	209.1	0.192	0.433	1	1
	December	208.4	-0.335	0.192	0	1
2007	January	208.8	0.192	-0.335	1	0
	February	208.9	0.048	0.192	1	1
	March	209.8	0.431	0.048	1	1
	April	211.5	0.81	0.431	1	1
	May	212.3	0.378	0.81	1	1
	June	212.3	0	0.378	0	1
	July	213.6	0.612	0	1	0
	August	213.8	0.094	0.612	1	1
	September	215.1	0.608	0.094	1	1
	October	215.2	0.046	0.608	1	1
	November	215.9	0.325	0.046	1	1
	December	216.4	0.232	0.325	1	1
2008	January	218.1	0.786	0.232	1	1
	February	219.9	0.825	0.786	1	1
	March	225.5	2.547	0.825	1	1
	April	228.5	1.33	2.547	1	1
	May	231.1	1.138	1.33	1	1
	June	237.4	2.726	1.138	1	1
	July	240	1.095	2.726	1	1
	August	241.2	0.5	1.095	1	1
	September	241.5	0.124	0.5	1	1
	October	239	-1.035	0.124	0	1
	November	234.2	-2.008	-1.035	0	0
	December	229.7	-1.921	-2.008	0	0
2009	January	228.9	-0.348	-1.921	0	0
	February	227.6	-0.568	-0.348	0	0
	March	228.2	0.264	-0.568	1	0
	April	231.5	1.446	0.264	1	1
	May	234.3	1.21	1.446	1	1
	June	235	0.299	1.21	1	1
	July	238.7	1.574	0.299	1	1
	August	240.8	0.88	1.574	1	1
	September	242.6	0.748	0.88	1	1
	October	242.5	-0.041	0.748	0	1
	November	247.2	1.938	-0.041	1	0
	December	248.3	0.445	1.938	1	1
2010	January	250.5	0.886	0.445	1	1
	February	250.5	0	0.886	0	1
	March	253.4	1.158	0	1	0
	April	257.5	1.618	1.158	1	1
	May	260.4	1.126	1.618	1	1
	June	261	0.23	1.126	1	1
	July	263.3	0.881	0.23	1	1
	August	263.8	0.19	0.575	1	1

Source: Handbook of Statistics on the Indian Economy & Computed

Price inflation in % of WPI (all commodities) is estimated over the previous month in the above table.

State=1 for positive change and State=0 for a non-positive change.

Now, a cross table of the current Vs previous price inflation states is found which is basically a 2X2 table. It confirms that $n_{.j} = n_{i.}$ for i=j and $n_{10} = n_{01}$ where n_{10} is the total number of times the event $\{S_t=0 \mid S_{t-1}=1\}$ occur and n_{01} for that of $\{S_t=1 \mid S_{t-1}=0\}$. This result is observed because n_{10} and n_{01} are closely associated.

TABLE 2: FREQUENCY DISTRIBUTION OF INFLATION STATES

		Current Month Price Changes		
		Positive	**Non-Positive**	**Total**
Previous Month Price Changes	**Positive**	76	15	91
	Non-Positive	15	9	24
	Total	91	24	115

The above table is called the transition matrix which would help us determine the long run probabilities of inflation and also the nature of inflation. We use the maximum likelihood estimator which could be used as the long run estimator for predicting future inflation. When we consider more states we will have more variables, which will give us clear picture as to where the cumulative effects were high and would aid in the reasons for those effects. In the long run, we need to figure out ways to maintain low and steady inflation through suitable policy implementations.

$$P(j) = n_{\bullet j}/N,$$

$$P(0) = P_{10}/(P_{10} + P_{01}), \text{ and} \qquad \text{---------- (2)}$$

gives the long run probability for any state j=1,2 m.
For j=2, there exist only 2 steady state probabilities for the '0' and '1'states denoted by

$$P(1) = P_{01}/(P_{10} + P_{01}), \qquad |1 - P_{10} - P_{01}| < 1 \qquad \text{---------- (3)}$$

The ML estimator of P_{10} is $n_{10}/n_{1.}$ and that of P_{01} is $n_{01}/n_{0.}$. Substituting these values we compute the values P(0) and P(1).
P(0) = 24/115 = 0.21
P(1) = 91/115 = 0.79
P(0) + P(1) = 1

OBSERVATIONS
From the above analysis we observe the following
1. **P(1) > P(0),**
2. **$n_{01} = n_{10}$**

CONCLUSIONS AND POLICY RECOMMENDATIONS

From the above observations, it is evident that the inflation exists in the economy and it has been cumulative over the years. The fact that P(1)> P(0) leads to the conclusion that Inflation is highly dependent on the previous state, i.e., it is cumulative in nature. So one can conclude that price rise has been increasing over the years.
While predicting the inflation of the next period we need to consider parameters like the previous state and the prevailing price level. When these parameters have been extrapolated it seems like in the short run, we could witness a slight shift in the price level while in the long run, the cumulative effects could be more pronounced leading to high inflation.
Developing countries like India need to focus on the ever increasing inflation in the short run periods. Most of the economy is Agrarian, so inflation in the short run could affect production and total output. Policy suggestions could be made after a detailed Markov analysis on every commodity included in the WPI calculations. But with the analysis conducted policy decisions should be such that the prices so as to stabilise inflation or maintain a 4-5% inflation. With hands set on the growth path, the government has been injecting more and more money into the economy for developmental and growth activities. Though the rate of injection of money is lower than that of inflation, it is advisable to follow a very strict monetary policy to anchor inflation.

FUTURE SCOPE OF THE STUDY

In this paper we have analyzed inflation in India addressing inflation using only 2 states. We could extend the study to more states higher accuracy. Also, analysis on individual items contained in the WPI would aid in the formulation of accurate policy decisions for anchoring high inflation.

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LAW FOR SURROGACY: NEED OF THE 21ST CENTURY

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ABSTRACT

This paper focuses on the various issues related to Surrogacy like historical, ethical, economical, legal etc. In India there is no specific law pertaining to it. This paper is an attempt to bring out human angle to a business model. As this business model rotates around the life, ethics and sentiment of many people, besides finance, so it requires special attention from various sectors like government, NGOs, medical practitioners.

KEY WORDS
Assisted Reproductive Technique (ART), in-vitro fertilization, medical tourism, surrogacy, outsourcing.

INTRODUCTION

Last decade of 20th century witnessed revolution in sectors like I.T. and BPO, which turned out to be boon for India, as it was being outsourced here because of availability of skills and human resources. Health care also picked up and helped in bringing foreign exchange to the country. In current scenario, when IT and BPO industries are experiencing slowdown in growth, "Medical Tourism" is drawing attention of the world towards India. There has been an increase in flow of foreign tourists and NRIs for the purpose of availing various healthcare facilities of world class standard, in India, at cheaper rates. One of the booming sectors in medical tourism is surrogacy, which is bringing in many couples from West to India in the search of parenthood

Being faced with infertility can pose a serious challenge to our sense of existence in the world.[i].Surrogacy is a controversial combination of biology and international commerce.[ii] It has become half a billion dollar business in India. There is robust growth in surrogacy in India, with the number of surrogate mothers nearly doubling in a year. There is considerable demand for this service. By the Year 2020, it will become a flourishing trade, bringing in lot of foreign currencies**.**

Many countries have imposed ban on commercial surrogacy whereas in certain countries, surrogacy is permitted with certain restrictions. In India, there is no specific law relating to surrogacy, only the guidelines framed by the ICMR (Indian Council of Medical Research) and the Ministry of Health and Family Welfare in 2005. These guidelines have no Constitutional validity and are ambiguous. The much hyped case of baby **Manji Yamada** brought to the forefront the various lacunae in the Indian Legal System and its inability to deal with conflicts arising from it.

WHAT IS SURROGACY?

Surrogacy occurs when a woman who is not pregnant agrees to bear a child for another/others who will parent the child.

There are two types of surrogacy.

1. **GENETIC/ FULL SURROGACY:** Here, surrogate provides her egg and the intended father provides the sperm and she carries the pregnancy.
2. **GESTATIONAL SURROGACY:** The surrogate carries the pregnancy but genetic material (sperm and egg) are provided by donors - the intended parents if possible, others if not. Gestational surrogacy has been established by many State courts and legislatures as a legitimate means of curing female infertility, while full surrogacy has generally been either prohibited or deemed unenforceable.[iii]

The intending parents approach a clinic which provides the facility of surrogacy. Three contracts are signed, one between the surrogate and the intending parents, second between the intending parents and the service provider i.e. clinic and the third one between the surrogate and the clinic. The clinic makes an arrangement for a healthy surrogate. The couple agrees to bear all the expenses, incurred during the whole procedure. The surrogate commits to leading a healthy lifestyle while bearing the child of the couple and not doing anything which would harm the child in any way. Also, to hand over the child to the couple, at once it is born. And the clinic contract to take care of all the procedures, right from the time of in-vitro fertilization to the handling of the baby to the couple. The clinic also enters into a contract with the surrogate regarding the payment for her services. Once the embryo is properly fixed in the uterus of the surrogate then the couple leaves. The surrogate then lives under the care of the clinic, till the delivery of the new born. The couple returns at the time of delivery, to get the baby.

NEED OF SURROGACY

Surrogacy has been prevalent in Indian society since time immemorial. Mythological surrogate mothers are well known. Kunti made Pandu a proud father of five children though he had no biological relations with them. Even Devaki could be considered as a surrogate mother of Lord Krishna, as she abandoned him on birth and Yashoda brought him up. It is one of the methods of Assisted Reproduction. Assisted reproduction is the technique(ART), wherein if a couple faces any problem in conceiving in natural way, than they are assisted through various methods like artificial insemination, in-vitro fertilization (egg and sperm are fertilized in test tube under artificial environment and the resulting embryo is planted in the uterus/ womb)[iv] etc.

Surrogacy enables:

- Those couples, who cannot conceive or carry a pregnancy to term, take the services of surrogate, who carry their child in the uterus and then hand it over to the genetic parents, post-delivery; or
- Gay couples to have their own child by in-vitro fertilization (IVF); or
- People who do not want to marry but wish to have their legal heir.

It is even beneficial for surrogates as they are paid somewhere between US$3000-US$6000, nearly ten times of their family's annual income. This comes out as fortune in a country where the average per capita income is US$500.

INDIA: A HOT DESTINATION

Due to strict rules and high cost, (in India IVF and ART costs somewhere $10,000-$20,000 whereas same services in west costs to round about $80,000) western countries are heading to Asia, particularly India.[v] Dr. Nayana Patel has turned Anand from "milk capital of India" to centre of commercial surrogacy. Surrogacy in India is, roughly, $500million-a-year business and is growing at fast pace.

India is most preferred destination among Asian countries because of

- Cheap medical facilities as compared to west,
- Availability of advanced health care facilities and English speaking medical practitioners.
- Ready availability of women willing to rent their wombs to childless couples.
- Also Indians have a great commitment in handing over the newborn to the biological parents immediately after birth.

BABY MANJI: INDIA'S FIRST SURROGATE - MOTHER ORPHAN

A Japanese couple, with the intention to have a child, came to Anand. The wife was unable to donate egg, so the egg of unknown donor was taken and fertilized (in-vitro fertilization) with the sperm of the husband. The resultant embryo was implanted in a surrogate's womb. Just three months before the birth of child, the intended parents got divorced. The ex-wife refused to accept the new born as she had no genetic or emotional bonding with her. After giving birth the surrogate mother too abandoned the baby. Baby Manji Yamada, though had three mothers, on record, yet she became motherless after her birth.

Baby Manji's father was keen on taking her back to Japan but to make the situation worse, a NGO jumped in, debating the issue of nationality of the child and relating it to child trafficking.

After fighting a legal battle for three months, much to the relief of father and grandmother, Supreme Court issued a direction to the Indian Government to grant the baby a travel certificate. On humanitarian ground the Japanese Government issued a one year visa to her, enabling her grandmother to bring her home, to Japan.

Though temporary relief has been provided, yet there are many issues which need to be resolved. This case has thrown open many questions and calls for regulatory laws governing surrogacy in India.

LEGAL GUIDANCE

There is great growth story lying ahead for already booming surrogacy industry. According to WHO there're 13-19 million infertile couples and out of those, an estimated 8% infertile couples opt for medical intervention. But to reap the profit of this business, India needs to have proper regulatory laws as gestational surrogacy contracts are unenforceable, unlike other business contracts, which enable any of the three parties to rescind the contract leaving the destiny of the child in lurch.

The courts in Germany unanimously took a strong stand against surrogacy and found the contracts to be void (contradiction with public policy).[vi] The situation is same all over the World. Agreements signed by all the three parties have no legal enforceability.

Baby Manji's case has brought to the focus, the loopholes in the ICMR guidelines. The following issues need to be dealt while formulating laws governing surrogacy:-

1. If a child is born handicapped, the parents may back out from accepting it. In such cases, the surrogate mother may have to bear the brunt, for no fault of her, as that is not her genes. And if she also backs out, what will be the right of the child.
2. The pregnancy term is of 9 months and with divorce rate going high every year,(in USA, it is approximately 50%) what will be the fate of the child, if during this duration both parents decide to separate and go their own ways. If both deny accepting the child, what will happen to it, since the mother is only contributing genetically and not carrying the baby, so the psychological bond is missing. It would become more serious in the case where genetic material is not contributed by the intending couples. The new clause has to be added as to who takes care of the baby in the event of a divorce, so that there should not be another Manji.
3. The clinics, that provide ART (Assisted Reproductive Techniques), and the biological parents take good care of surrogate mother in prenatal stage but she needs equal care in postnatal period to regain health and recover from postpartum blues, which nobody bothers for. As she comes from financially weak background (commercial surrogate) she would not spend the money earned, on her, but rather spend on her family and children.
4. Some complications, developed due to pregnancy, may lead to the death of surrogate. In such case there should be a law, compelling the intended parent to take care of her motherless children, born from her marriage.
5. In the ICMR guidelines, there is mention that the age of surrogate mothers should be between 21- 45 years. But that does not prevent any minor from becoming a surrogate.
6. According to the ICMR guidelines, a child born through surrogacy must be adopted by the genetic (biological) parents unless they can establish through genetic (DNA) fingerprinting that the child is theirs. Adoption is a very lengthy and cumbersome process in India and DNA fingerprinting is a costly affair. The only legal recognition of the child's parentage is the birth certificate, where birth mother's name is used. If birth mother refuses to hand over the child, there is very less which doctor or intending parents could do.
7. India has an estimated 2,00,000 IVF clinics, but none has a license. Since money involved is huge, it lures even non-trained medical practitioner to enter in this business. Lack of any licensing authority is leading to opening up of many clinics in India like mushrooms. In the absence of proper quality check on these clinics, the inadequate machineries and the inexperienced doctors pose a great threat on the life of surrogate and the child.[vii]
8. This might give rise to child trafficking.

CRITICISMS

Though surrogacy is a flourishing trade yet it has attracted much criticism from different areas of society. The surrogate is treated as a means to an end and not as a person; hence it is taken as exploitative and immoral.[viii]

In UK and USA, surrogates are not paid, only altruism is practiced. In Indian society too it is looked down so the commercial surrogates hide the truth from their relatives.

In the words of HEDLEY J. "Surrogacy remains an ethically controversial area and different societies and different nations take radically different stances in their approach to it. Under some legal systems (e g Italy, Germany, Turkey) it is simply prohibited. In others, commercial surrogacy agreements are permitted (e g California, Ukraine, India) and perhaps sometimes even encouraged. The position in the United Kingdom lies between those extremes: whilst commercial surrogacy is unlawful, surrogacy itself is not but no surrogacy agreement is legally enforceable as such. Each sovereign state will have its own preferred approach and its own regulatory system. Those who enter into surrogacy agreements abroad will have to take account both of the law of that state and of the United Kingdom. As this case vividly demonstrates, not only may (and probably will) those laws be different but they may be incompatible to the point of mutual contradiction".[ix]

The contradiction in the laws of two countries reflects the significant conflict of private international law which is raising lots of difficulties. It makes the children born out of surrogacy stateless and parentless, till the time they are adopted under the lengthy and cumbersome procedure. Many commentators have likened the experience of children and birth mothers in surrogacy arrangements to children and relinquishing mothers in adoption, and point to the potential psychological and social harm that may result.[x]

In the era of globalization and widening gap between rich and poor, some people view it as an exploitation of women of third world countries through global inequality. Some feel it is a kind of economic exploitation as foreign women unwilling or unable to pay high western fees happily exploit women of third world countries at a 1/8thof the price it would cost in their country. Also surrogates are poor hence they have unequal bargaining power than the well-off, rich infertile couple.

It will also promote gay marriages and weaken the institution of marriage as people can have legal, biological child without getting married. Current baby-making market conditions have also had a direct impact on the bargaining conditions for men looking to create motherless families. Review of current legal disputes reveals that the cure logic and its manifestation, the gestational/full surrogacy distinction, create complicated and costly bargaining conditions for males seeking to create motherless families. The current legal situation of single and gay men seeking to create families through the baby-making markets exemplifies how complicated bargaining in the shadow of the cure paradigm has become[xi] The ICMR guidelines allow the gay couples to become parents through this technology. According to Indian law gay marriages are illegal. If the ICMR guidelines take the shape of law then it would be repugnant and inconsistent to the above law, legalizing the gay marriages.[xii]

It will make parenthood as commodity as these services are taken up by affluent Indian couples or NRIs or foreigners Pregnancy and motherhood demands lot of time and energy. Body of mother goes through lot of physical and psychological change. Todays ambitious, working women might not have the will and time to go for it. But if they want to have their own child, with their increased buying power, they would be inclined to take the services of commercial surrogate, thus not putting at stake their body and career. So surrogacy, which should be the solution to the childless couple, would end up as a commercial commodity as in early sixties, rich Americans, was taking the services of wet nurses to nurse their babies.
Commercial surrogacy lures many poor women to put their health at risk as it gives good financial gains, endangering the future of their own children.
In India six embryos are implanted in a surrogate womb whereas in other countries it is limited to three. This creates the risk of multiple pregnancies and can lead to severe complications and even the surrogate's death.
Since economics is attached to it, many a time's fertility doctor advice for surrogacy option even when it could be done by simple egg donation.
Sometimes without the couple's knowledge, their egg or sperm could be sold to people looking for desirable trait-like fair skinned baby.

CONCLUSION

While commercial surrogacy is banned in many countries like Spain, Australia, Italy, and China and permitted with restrictions in the US, France and Germany, the Indian Government is yet to formulate any law[xiii]. With the number of IVF (In-vitro fertilization) clinics growing day by day, at present estimated to be 200,000 in number, it is the need of the hour to bring in regulatory laws that promote surrogacy but protect mother and child's right.
The Assisted Reproductive Technologies or ART, (regulation) Bill has been prepared by a 15 member committee including experts from ICMR and the Ministry of Health and Family Welfare. It has been formed after several rounds of discussion with public and affecting parties. It was supposed to be tabled in the winter session (2008) of the Lok Sabha. This bill deals with issues such as the continued scrutiny and licensing of clinics, quality standards and practices at these centers, certification of sperm banks, confidentiality on sperm donation, rights and liabilities of surrogate and parenting couples and above all the nationality and rights of the child. The proposed bill when it becomes law, will give constitutional validity to the guidelines of ICMR and the National Academy of Medical Sciences (NAMS).[xiv]
After the case of Baby Manji, many changes have been brought in the ICMR guidelines.
The surrogate baby of a separated or divorced couple will remain their "legitimate child" if both parties had consented to assisted reproductive technology (ART) to have the baby. The baby's birth certificate will have the name(s) of the genetic parents/parent. Thus even if one parent has contributed genetically, his/her name would be on the birth certificate of the new born, erasing the need of cumbersome and costly procedure of DNA mapping or adoption. The child does not have a complete knowledge of the complex web of interrelationships which contribute to his or her identity.[xv]

- A foreigner or foreign couple not resident in India, or a non-resident Indian individual or couple seeking surrogacy in India, will have to appoint a local guardian who will be legally responsible for the care of the surrogate mother during and after pregnancy until the baby is delivered to the parent/parents or the local guardian.
- No woman shall act as a surrogate for more than three successful live births in her life.
- No woman shall donate oocytes more than six times in her life, with not less than a three month interval between oocyte pick-ups.
- Recently the maximum age of surrogate has been brought down to 35 from 45. Though this would throw out a large chunk of desiring women, wanting to be surrogate yet it would lessen the complications that arise due to pregnancy at higher age, thus saving the lives of many surrogate and child.

In addition to bringing in above changes in ICMR guidelines, to protect the future of the child born out of surrogacy but not accepted by its genetic parents because of divorce or birth of handicapped child or for whatsoever reason, the governing bodies should form a Trust under Central Adoption Resource Authority (CARA) wherein the intending parents would have to deposit money, at the time of entering into the agreement, to insure the future of the child. The multiplied sum would be handed over to the child after attaining the age of maturity, irrespective of being adopted or abandoned.
ART (Regulation) Bill is presently with Ministry Of Law and Justice. Before giving it clearance to be tabled in Parliament, it would be posted on the website (http://lawmin.nic.in) of Ministry Of Law and Justice for public feedback
It is high time for Indian Govt. to enact laws regulating surrogacy and related IVF/ART technologies to promote surrogacy and protect all the parties involved.

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9. *Johnson v. Calvert*, 5 Cal. 4th at 93, 851 P.2d at 782 (1993). For example, if a woman was infertile because she could not produce ova but did have a uterus and could carry and give birth to a child and she found a willing egg donor, then a child resulting from in vitro fertilization of her husband's sperm and the donor ovum and to which she gave birth would legally be her child.
10. 1990 Mich Pub Acts 190 (codified in Mich Comp Laws Ann § 722.853(i), effective July 24, 1990). "It is presumed that a contract, agreement, or arrangement in which a female agrees to conceive a child through natural or artificial insemination by a person other than her husband, or in which a female agrees to surrogate gestation includes a provision, whether or not express, that the female will relinquish her parental or custodial rights to the child."
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