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TEACHER EDUCATION AND ITS MANAGEMENT IN THE ERA OF GLOBALIZATION

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ABSTRACT
Globalization is a process of interaction and integration among the people, companies, and governments of different nations, a process that is an inevitable phenomenon in human history that's been bringing the world closer through information, knowledge, culture and exchange of goods. This process has effects on the environment, on culture, on political systems, on economic development and prosperity, and on education to make the children global students, who can study anywhere in the world work anywhere in the world. To produce such kind of students who are aware in every aspect, teachers have crucial role to play. Teachers should be provided with the world class training. To prepare teachers to teach in the context of globalization is the job of teacher education programs, which like the other educational institutions they have been traditionally oriented to their local contexts. "The culture of teacher education is local and therefore has advanced policies that serve the neighborhood institutions but not the needs of future citizens of today's globalized world" (Longview Foundation, 2008), and consequently, "teacher training programs are often among the least internationalized programs. In addition, in India, teacher education already faces a multitude of different pressures. To change this culture is not easy. Any cultural change takes determination, time, and effort. The current political environment of education and teacher education makes the change even more difficult. This paper is an attempt to analyze some aspects related to teacher education and its management to make global citizen.

KEYWORDS
globalization, teacher education, curriculum.

INTRODUCTION
Globalization and rapid technological change have made knowledge a critical determinant of competitiveness in the world. ICT promotes the acquisition and absorption of knowledge and information. Educationists & Educational Administrators agree that ICT is of tremendous importance to the future of education domain. Education is profoundly affected by the application of ICT, in classroom and ultimately in every sphere of life, which has changed the way people can access knowledge and the way they communicate with one another in daily behaviour.

Globalization is a process of interaction and integration among the people, companies, and governments of different nations, a process that is an inevitable phenomenon in human history that's been bringing the world closer through information, knowledge, culture and exchange of goods. This process has effects on the environment, on culture, on political systems, on economic development and prosperity, and on education to make the children global students, who can study anywhere in the world work anywhere in the world. To produce such kind of students who are aware in every aspect, teachers have crucial role to play. Teachers should be provided with the world class training.

To prepare teachers to teach in the context of globalization is the job of teacher education programs, which like the other educational institutions they have been traditionally oriented to their local contexts. "The culture of teacher education is local and therefore has advanced policies that serve the neighborhood institutions but not the needs of future citizens of today's globalized world" (Longview Foundation, 2008), and consequently, "teacher training programs are often among the least internationalized programs. In addition, in India, teacher education already faces a multitude of different pressures. To change this culture is not easy. Any cultural change takes determination, time, and effort. The current political environment of education and teacher education makes the change even more difficult. The increased attention on standardized curriculum and testing in institutions not only has narrowed what they teach (McMurrer, 2007, 2008) but also makes it difficult for teacher education programs to expand their curricula to include courses and experiences needed to prepare globally competent teachers. The test-driven accountability movement further pushes teachers and teacher education programs to focus on scores on a few standardized tests for both their students and future teacher candidates, which again makes adding international content an unfavorable suggestion.

The tendency to reduce teachers to bureaucrats or robots to be subordinated to "externally mandated and closely monitored curricula, scripted and timed instruction, merit pay tethered to achievement scores, and public humiliation when students fail to meet the formula for expected progress" (Grumet, 2010, p. 66) forces teacher education programs to pay attention to techniques, skills, standards, and subject matter content, further limiting what future teachers can learn. Moreover, the almost exclusive emphasis on the need for teachers in STEM lures teacher education programs to go after the precious dollars put up by the government while neglecting other subject matters such as foreign languages and international studies. But the imperative to change is clear and immediate. The need for all teachers to be well prepared to teach culturally and linguistically diverse students have been well documented (Garcia et al., 2010); so has the need for globally competent teachers (Longview Foundation, 2008). The number of schools that wish to offer more internationally themed courses in response to public demand is on the rise (CCSSO & Asia Society, 2008). The shortage of foreign language teachers, especially the traditionally less commonly taught languages such as Mandarin Chinese and Arabic, is growing (Asia Society, 2008).

A few visionary teacher education programs have already embarked on the journey to prepare teachers for the global age. In 2008, the Longview Foundation convened a group of education deans, teacher educators, teachers, and global educators to address this question. The report that resulted from the meeting, "Teacher Preparation for the Global Age: The Imperative for Change," gathers the strategies, programs, and practices from teacher education programs that have begun the transformation. Although the activities in which these pioneers have engaged provide excellent examples, we need to have a much more comprehensive, thoughtful, and deliberate plan to prepare our future citizens to successfully live in a world that will become only more globalized in the future.
Some suggestions in this regard are:

POLICY ADVOCACY
The current education policies and priorities are major obstacles to preparing globally competent students and teachers. Thus, the first element of a comprehensive plan for global education is to advocate policy changes. For the sake of students, there is need to emphasize the importance of global education at the national, state, and local levels.

CULTURAL REORIENTATION
The second thing the teacher education profession should do is to shift its thinking from serving the local community to the global. We need this shift to create a culture that immerses future teachers in educational experiences that expand their horizons, change their perspectives, and cultivate a positive disposition toward the world. This shift is needed also because preparing the teachers to work possibly in any part of the world, and to serve students from any part of the world, and have teacher candidates from other nations. In addition, research is consumed by teacher professionals from all over the world. Thus, as both practitioners and researchers, there is need to situate our work in the global context and be mindful of its global nature.

ARTICULATING EXPECTATIONS

The third element should be a set of explicit and well-articulated expectations for all teacher candidates to become globally competent. Such expectations can serve as a guiding framework for a coherent and systematic experience we can offer future teachers. More importantly, they can serve as goals for future teachers. The Longview Foundation (2008) report provides a list of expectations that can serve as a good starting point.

PROGRAM REALIGNMENT

The fourth element is to realign programs to the needs of education in the age of globalization. Although the existing programs may already be overloaded with all mandated courses and experiences, we must think creatively about how to infuse a global element in all experiences we offer our future teachers, for example, internships abroad, service learning in the English learning community or a foreign country (Garcia et al., 2010), and utilizing international graduate students as teaching assistants. A global element can also be integrated in existing courses. In methods courses, for example, international testing and educational practices from other countries can be included. There is another level of program realignment: the preparation of specialized educators for global education. Teacher education programs should expand their scope of preparation. Foreign language teachers, especially those in less commonly taught languages, are in demand. There are other areas that will see a rise in demand as well. For example, a growing number of schools have begun to offer international education programs in the forms of student exchange, online international conferences and collaborations, study abroad programs, and courses focusing on global issues. It is foreseeable that many schools will create positions for those with expertise and preparation in this area. Coordinating and teaching in these programs require specialized training, which is currently unavailable. Thus, teacher education institutions should anticipate, even proactively create the need and begin developing such programs.

COMPREHENSIVE AND COHERENT EXPERIENCES

A comprehensive and coherent curriculum that maps out the courses, experiences, and activities aimed at preparing globally competent teachers. This curriculum should cover all the years of the future teachers' university experiences. Teacher education programs need to work with other units across the campus to devise such a curriculum.

GLOBAL EDUCATION PARTNERSHIPS

Teacher education programs do not stand alone and cannot meet the challenges alone. Three types of partnerships are needed to deliver a comprehensive and coherent global education program: university-wide partnerships, P-12 schools and community partnerships, and international partnerships. Very often on the same campus exist international studies centers, foreign language departments, study abroad offices, and disciplinary departments that have been engaged in global issues; colleges of education can and should work with them to identify courses and experiences related to the development of global understanding and make these courses part of future teachers' learning plans. Teacher education programs can also benefit a great deal by collaborating with schools and communities that have a high concentration of immigrant children and/or a strong interest in global education. These schools and communities can serve as sites for student teaching, service learning, and observation. Developing partnerships with teacher education institutions in other countries is also of tremendous value not only for future teachers but also for developing global competence in the faculty.

CONCLUSION

Globalization has already affected our economic, social, and cultural life significantly. The impact of globalization is only going to deepen and the consequences will be more broadly felt. For our children to live successfully and peacefully in this globalized world, we need to help them develop the appropriate skills, knowledge, attitudes, and perspectives. This requires a new generation of teachers who are able to act as global citizens, understand the global system, and deliver a globally oriented education. To prepare this new generation of teachers, we need a teacher education system that is globally oriented. In the age of globalization, educational institutions will continue to be operated as local entities; however, they will need to consider themselves as global enterprises because their products (students) will need to function well in the globalized world in terms of competition for opportunities and collaboration with individuals from different cultures. Thus, schools need to adopt a global perspective in deciding what they should offer their students and how they can take advantage of global resources to provide high-quality education. This does not mean that schools should abandon their traditions. Quite the contrary, globalization demands schools to be different and unique so they can prepare students who will be able to discover and create their own niche. The term *glocalization*, which combines *globalization* and *localization*, suggests an excellent framework for the kind of education we need in the 21st century: local but with a global perspective.

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A SOCIO ECONOMIC ANALYSIS OF AGRICULTURAL LANDLESS LABOURERS

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ABSTRACT
In these economics, the pace of economic development largely brings out the accelerated development of agricultural sector. Adam Smith, in his ''wealth of nations" argued, almost two centuries ago, that agricultural output, in its widest senses, is the basic working capital of the nation in its critical stages of growth. Wage is the main problem in this sector. Through agricultural wages have been revised upward several times since independence the legislations are poorly implemented. Research is thus "Systematized effort to gain new knowledge". Research Methodology is a way to systematically solve the research problem. Convenient sampling was used to select the samples from the population. From the population the researcher has taken 200 respondents. The information collected from both Primary data and Secondary data. The present study is limited to cover only three blocks in Tirupur district selected at the rate of 2 villages from Kunnathur block in Tirupur District. In order to eliminate these socio-economic and cultural barriers, female children and women should be educated through formal and non-formal channels. A technology which best suit and fulfill the requirement of agricultural labours should be promoted in the direction of sustainable agricultural without affecting livelihood security of agricultural labour in India.

KEYWORDS
agricultural labours, landlessness, poverty and self help groups.

INTRODUCTION
In India, agricultural development is a necessary adjunct of economic development. In these economics, the pace of economic development largely brings out the accelerated development of agricultural sector. Adam Smith, in his ''wealth of nations" argued, almost two centuries ago, that agricultural output, in its widest senses, is the basic working capital of the nation in its critical stages of growth. This proposition is still true in the case of all less - developed countries. Agriculture is ever destined with the law of diminishing returns. As such, one cannot develop very fast by putting more and more of additional doses of capital and other kinds of inputs. Yet, the element of labour has its own proverbial say to cause and effect radical returns and is ever crucial in revolutionizing the total average and marginal productivity of agriculture. Agricultural labours are mostly economically and socially backward people. They are divided into four types namely Landless labourers who are attached to the landlords, Landless labourers who are personally independent but who work exclusively for others, Small Farmers with tiny bits of land who devote most of their time working to others land and Farmers who have economic holdings but who have one or more of their children and dependants working for other prosperous farmers.

The rural society in India typically consists of two broad sections, the landless and the land owning households. The landlessness has increased in recent years, and has become a source of great public concern. Chandra in his article looks at the changing level of landlessness in different parts of rural India, both conceptually and empirically.

Landlessness can be visualized in three different ways, in terms of

1. Number of rural households owning no arable land,
2. Number of households operating no land and
3. Number of agricultural labour households.

Agriculture workers constitute the most neglected class in the Indian rural structure. Their income is low and employment irregular. Since they possess no skill or training they have no alternative employment opportunities socially a large number of agricultural workers belong to schedule castes and schedule tribes. Therefore, they are an oppressed class. They are not organized and cannot fight for their rights. Because of all these reasons their economic level has failed to improve even after four and a half decades of planning. It seems that exceptional pockets in Punjab, Hairyana and Western Uttar Pradesh the Planning process has by passed them.

MODERNIZATION AND AGRICULTURAL LABOUR IN INDIA
Being a country of agriculture, cultivation of crops for food and commercial use is the major activity of both farmers and labourers in India. Indian agriculture is marked by uncertainties and variables in monsoon. In addition there have been consistent occurrences of natural calamities. In India agriculture is the victim of such calamities and disasters. Obviously this highlights various issues in agricultural production and necessitates solution considerably. The programme of the middle of 1960's as part of new strategies in agriculture or technology transformation in agriculture. This had set in mention agricultural modernization in India with far-reaching implications for the conventional method of cultivation including problems of agricultural labour. In addition the globalization programmes had further deteriorated the problems of farmers and labour in Indian agriculture. As a result the need for structural adjustment and social safety net has been highlighted. As a part of this capacity building and skill development programmes through formation of CBOs had also been initiated micro finance and enterprises with a overturn for promotion of social entrepreneurship.

PROBLEMS OF LANDLESS AGRICULTURAL LABOUR
The problem of agricultural landless labourers was increasing year after year and in order to evaluate the economic conditions of this class the First Agricultural Labour Enquiry was conducted in the year 1950-1951 by the Ministry of Labour. The enquiries revealed the following problems of agricultural landless lobourers. Wage is the main problem in this sector. Through agricultural wages have been revised upward several times since independence the legislations are poorly implemented. For instance wages in U.P, Bahar, Orisa and M. Pranges from Rs.20. to 30 per day per man compared to the wage range between Rs. 7.50 and Rs. 9.50 in Punjab and haryana there is exploitation by landowners low wages generate the vicious cycle of poverty. The no members increased in the families are other problems of landless agricultural labours. Their income earning available sources only in the field of agriculture land. The incomes of agricultural labourers are very limited. So their standard of living is not improved way social status of the labourers are very low level compare with other income group of people. Agriculture workers in the country do not have any social security. The existing legislations are also not enforced permanently by concerned authorities.

IMPACT OF TECHNOLOGY USED IN AGRICULTURAL LANDS
The introduction of machines in farm sectors had its own impact on the landless agricultural labour with the difficulties faced in agricultural production during the year 1956-57 which continued in the year 1990 specific attention or wards agricultural development became imperative the third five year plan therefore emphasized this aspect as a result of this technological transformation and modernization have taken place in agriculture. High yield variety programmes, intensive agriculture area programme and agricultural demonstration programme were introduced in year 1960. Government thus started the green revolution. As a result of all the modernization programmes and modernization and technological transformation only the rich farmers are benefited but large section of the rural population which possessed very small land holdings and a sizeable possessed very small land could not gain any benefit and similarly the areas with low potential for agriculture could not develop.

OBJECTIVES OF THE STUDY
1. To examine the causes of landlessness and to study the general level wage differential function among the landless agriculture labourers.
2. To find out the structure of income and expenditure patterns of the landless agriculture labourers.
3. To analysis the levels of assets and liabilities of landless agriculture labourers.
4. To estimate the extent of poverty of landless agricultural labourers.
5. To examine the problems faced by the landless agriculture labourers and to offer suitable solutions.
6. To examine the role of governments in the economic upliftment of landless agricultural labourers and to suggest additional measures to be followed by governments.

RESEARCH METHODOLOGY
Research is thus "Systematized effort to gain new knowledge". Research Methodology is a way to systematically solve the research problem. It may be understand as a science of studying how research is done scientifically. In research it is responsibility of the researcher to expose the research decision to evaluate before they implemented. The researcher has to specify very clearly and precisely what decisions he selects them so other can evaluate on it. A sample is a part of the target population carefully selected from the universe to constitute a sample. From the population the researcher has taken 200 respondents. Convenient sampling was used to select the samples from the population. The information collected from both Primary data and Secondary data. The data collected on the basis of a detailed questionnaire given in the appendix have been consolidated and exploited in shaping this thesis. The secondary data for the study have been collected from the village Administrative officers, Taluk officers, Block Development Officials, District Collector, District statistical office and related publications and journals. The present study is limited to cover only three blocks in Tirupur district selected at the rate of 2 villages from Kunnathur block in Tirupur District. The statistical tools as simple percentage and chi- square analysis are used for the study.

LIMITATION OF THE STUDY
Due to constraints of time and resources, the present study is limited to cover only three blocks in Tirupur district selected at the rate of 2 villages from Kunnathur block in Tirupur District is spread over a vast area. Under the scheduled interviews with the selected landless agricultural labourers in the selected villages, the researcher had to struggle in view of problems of illiteracy and poor memory power. Data under expenditure were not accurately furnished by them since they did not maintain any book of accounts or dairies. As such, the researcher had to arrive at an overall or an average estimation of expenditure from their oral commitments. The data under income to follow the foot prints of expenditure. The ecological and economic conditions of any kind of worker in any period change. As such, the limited period and area of study covered by this thesis and the findings arrived there from may fail to withstand the test of time and space. It may vary from area to area and time to time. Under the data of income and expenditure; certain factors have been purposely ignored. If the members of households fall below the age group of ten and age group of sixty-five and above, they were excluded from the angle of income and not from the angle of expenditure. Further, the school going population of the selected households were taken into account in the treatment of expenditure, assets and liabilities. Though the bonded agricultural labourers have been relieved of their bondage from their feudal lords in the district under the law in force, yet, the element of bondage has taken a new shape in different forms i.e. pannier all system. Under this system, the landless agricultural labourers have to serve and work under old feudal masters.

REVIEW OF LITERATURE
Jeemol Unni (1998) Agricultural workers of the first group have been more or less in the position of serfs or saves they are also known as bonded labourers. They do not normally receive wages in cash but are generally paid in wages. They have to work for their masters and cannot shift from one to another. They provide forced labour. In some cases, they have to offer cash and supply flows and goats to their masters. Among the other groups mentioned above the second and the third are quite important. The problem of landless labourers is the most serious problem in the rural sector.

Gunjal K.R., and Ram G.S (1977) the socio - economic status of agriculture labourers who constitute nearly one-third of the total rural work force depends largely on wage paid employment. Unfortunately, the wage rates as well as levels of agricultural employment are so low in many regions of the country and that agricultural labourers are forced to live below the poverty line. According to the 50th Round of National Sample Survey (RNSS) for 1933-94, nearly 57 per cent of agricultural labour households live below the poverty line, while the average rural poverty ratio in the country is 37 per cent.

ANALYSIS AND INTERPRETATION OF DATA
1.1 AGE AND WAGES SYSTEM OF THE RESPONDENTS

With a view to find the degree of association between age of the respondents and the working conditions two ways table is prepared and result is shown

AGE AND WAGES SYSTEM OF THE RESPONDENTS (ANOVA TWO WAY TABLE)

TABLE 1

S.No	Age	Wages System				Total
		Daily Wages	Weekly Wages	Monthly Salary	Contact Wages	
1.	Up to 30	32.5(10.8)	5(2.7)	2.5(1.8)	5(2.7)	45
2.	31-40	42.5(18)	12.5(4.5)	7.5(3)	12.5(4.5)	75
3.	41-50	35(13.2)	7.5(3.3)	5(2.2)	7.5(3.3)	55
4.	Above 51	10(6)	5(1.5)	5(1)	5(1.5)	25
	Total	120	30	20	30	200

Source: Computed

X^2 calculated value is 3.449. Degree of freedom (r-1) (c-1) = (4-1) (4.1) = 9 table value is 19.9 for 9% degree of freedom at 5% level of significance. There is no significant relationship between the age of the respondent and the wages system.

AGE AND WAGES SYSTEM OF THE RESPONDENTS (CHI-SQUARE TEST)

TABLE 2

Factors	Calculated value	Table value	Degree of freedom	Level of significance
Age	3.449	16.9	9	5%

The calculated value of x^2 (3.449) is less than the table value (16.9). Hence the null hypothesis is accepted. There is no significant relationship between the age and wages system.

INCOME Vs. WORKING HOURS

Between income and working hours is the correlation coefficient - 0.63 but the significance value is 0.576, >.05 which indicated that the correlation is not significant.

SEX Vs. INCOME CODE

There is significant association between male and female with regard to their income. In the lower income side, the % of women is more compared to men. The value 0.015 is less than 0.05.There is significant association between education up to class 5 and class 6-10 with regard to their type of House. In the lower education side, the % of the class 6-10 is more compared to up to class 5. There significant association between education up to class 5 and class 6-10 with regard to their nature of house. In the lower education side, the % of the class 6-10 is more compared to up to class 5. There is significant association between education up to class 5 and class 6-10 with regard to their reason for landless. In the lower education side, the % of the class 6-10 is more compared to up to class 5. There is significant association between education u to class 5 and class 6-10 regard to their reason. In the lower education side, the % of the class 6-10 is more compared to up to class 5. There is significant between male and female with regard to their reason for landless. In the lower landless side, the % of male is more compared to female.

FINDINGS, SUGGESTIONS AND CONCLUSION

Tiruppur is one of the important agricultural districts in Tamil Nadu. The landless agricultural labourers constitute the economically weakest and socially poor section of rural-specify in India. A large majority of them continue to live on the verge of poverty in spite of the fact that several central government schemes of poverty alleviation such as IRDP, NREP, TRYSEM, Jawahar Rojgar Yojana etc., have been implemented.

FINDINGS

1. Majority 37.5% of the respondents of landless agricultural labourer are belonging to the age group of 31-40 years.
2. Majority 57.5% of the respondents are male.
3. Majority of the respondents are married.
4. Majority 79% of the respondents are studied up to 5^{th} standard level of education.
5. Majority 52.5% of the respondents of landless agricultural labourer are having above 5 members in the family.
6. Majority 94% of the respondents are coming under the categories of the joint family.
7. Majority 35% of the respondents are coming under the categories of the Pacca house.
8. Majority 52.5% of the respondents are coming under to categories of the Rental house.
9. The most of the respondents are earning in the daily wage of in between Rs.101to 200.
10. Majority 60% of the respondents are engaged of Agricultural and allied activity.
11. Majority 60% the respondents are daily wage holders.
12. From the above analysis the researcher fined that the calculated value is more than the table value. Hence the null hypothesis is rejected. There is significant relationship between the age group of the respondents and range of wages.
13. From the above analysis the researcher fined that the calculated value is more than the table value. Hence the null hypothesis is rejected. There is significant relationship between the caste group of the respondents and range of wages.
14. From the above analysis the researcher fined that the calculated value is less than the table value. Hence the null hypothesis is accepted. There is no significant relationship between the age of the respondents and working conditions.
15. From the above analysis the researcher fined that the calculated value is less than the table value. Hence the null hypothesis is accepted. There is no significant relationship between the caste of the respondents and working conditions
16. From the chi-square test Table, the chi-square value is 1.916 and the significance value is 0.384 which is greater than 0.05, the level of significance, we conclude that there is no significant association between caste and mode of payment. Here, it is proved that the workers are not discriminated in the mode of payment of wages based on their castes.
17. There is significant association between male and female with regard to their income. In the lower income side, the % of women in lower income group is more compared to men.
18. From the chi-square Table, there is significant association between age group, with regard to their income. In the lower income side the % of above 50 is more compared to other age group. The income earning capacity after 50 is not increasing in agricultural sector.
19. There is significant association between education up to class 5 and class 6-10 with regard to their type of House. In the lower education side, the % of the class 6-10 is more compared to up to class 5.
20. There is significant association between education up to class 5 and class 6-10 with regard to their nature of house. In the lower education side, the % of the class 6-10 is more compared to up to class 5.
21. There is significant association between education up to class 5 and class 6-10 with regard to their reason for landless. In the lower education side, the % of the class 6-10 is more compared to up to class 5.
22. There is significant association between education up to class 5 and class 6-10 with regard to their reason. In the lower education side, the % of the class 6-10 is more compared to up to class 5.
23. There is significant association between male and female with regard to their reason for landless. In the lower landless side, the % of male is more compared to female.

24. From the chi-square tests Table 4.69, there is significant association between male and female with regard to their reason for landless. The landless percentage of male is more compared to female.

SUGGESTIONS

In the light of these finding the following suggestion are presented below: A social factor acts as obstacles. In order to eliminate these socio-economic and cultural barriers, female children and women should be educated through formal and non-formal channels. The voluntary agencies have also got a significant role to play in this regard. More importance must be given to the female in family also to improve the status of female agricultural labours. Since agricultural labourers are unaware of various social welfare legislations and provisions available to various social divisions, the voluntary agencies in collaboration with Governments must give wide publicity through community organization. Particularly the Minimum Wages Act (1948) should be effectively implemented. Normally women agricultural labourer are paid lower wage than the men even in doing identical jobs, although there is constitutional backing in the form of equal wage for equal work. The Government must effectively enforce the concerned Act. Co-operation of agricultural labourers in the local self governing institution must be extended in order to provide representations to this section. In the National Commission on rural labour, representation to agricultural labourer must be provided, so that their economics interest is protected. Recently the concepts of SHG,(SELF HELP GROUP) is pronounced more. But it mainly concentrates on women alone. The focus on men is also necessary at this moment. The Government should take necessary Legislative measures were taken to confer occupation rights of house sites and agricultural land for the rehabilitations of landless labourers, the newly reclaimed lands were distributed to the landless labourers.(Land Gift Mission).

CONCLUSION

The Government of India conducted agricultural Labour Enquiry and Rural Labour Enquiries. The main objectives of their Enquiries have been to collect vital information on the Socio- Economic conditions of Rural Agricultural Landless Labourers. These enquiries formulate the policy measures to uplift the economic life of population in rural areas.The wage employment programs and employment guarantee scheme of MAHATHMA GANDHI RURAL EMPLOYMENT GUARANTEE SCHEME is regulate the right direction to ensure livelihood security to the agricultural labourers. This Scheme Safeguard the agricultural landless labours sources of income earnings and improve standard of living. A technology which best suit and fulfill the requirement of agricultural labours should be promoted in the direction of sustainable agricultural without affecting livelihood security of agricultural labour in India. A balanced approach towards capital intensive technology without affecting the interest of manual labour in the Indian.

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FINANCIAL LITERACY: AN EMPOWERMENT FOR FINANCIAL INCLUSION

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ABSTRACT

Financial literacy is nothing but knowledge about finance. Financial literacy involves imparting knowledge about the risk and return of financial products to the users and providers of these products. India is ranked number two in the list of highest financial literacy countries in the world. The methodology used in the article is both primary and secondary data in nature. Primary data was collected from 100 respondents through interview schedule in the Jaipur and secondary data was collected from articles and journals.By analyzing&interpreting the data conclusion has been drawn that because of the lack of knowledge people are not able to utilize the financial services in an effective manner. Now, financial literacy in India is on the positive side. Without financial literacy financial inclusion cannot be attained. The Reserve bank of India, has been actively participating in the field of eradicating financial literacy through awareness, financial literacy centres and others in the country..

KEYWORDS

financial literacy, financial attitude, financial knowledge, financial product.

INTRODUCTION

Financial deepening is the new buzzword in the corridorsof financial world today, especially in a country like Indiawhere over 50 per cent of the population has no access to banking. The regulators, policy-makers and plannersstrongly believe that financial deepening is the firstthing for inclusive growth in India where about 260million adults are under-banked, 80 percent of thembeing in rural areas. More than 25 million no frills savingsaccounts have been opened by banks in the last fouryears since 2006 through various branchless bankingchannels (Business Correspondents - BC), but accordingto a study done by Skoch Foundation only around 12%are active. The major reason for this is the lack of financialliteracy among masses at bottom of the pyramid.Financial deepening is a term used often byeconomists, experts of economic planning anddevelopment. It refers to the increased provision of services in the financial firmament with a wider choiceof services geared to all levels of society. It also refers tothe macro effects of financial spreading on the largereconomy. The focus of the policy makers today is to bringthe 50 per cent of the under serviced population underthe fold of financial inclusion which would be aboutproviding them access to various financial instrumentslike insurance and investment which will not only helpthe individuals and bring them closer to the benefits ofconvergence but also propel economic growth. The greatneed today is institutional deepening for improving theeconomic governance of a country.

With less than half of India's 1.2 billion-strong population having access to organized financial services, the urgency in implementing financial inclusion activities begs no second-thoughts. However, the push of financial inclusion activities (increasing availability of financial services infrastructure) alone is not enough to bring more people under the fold. Financial literacy programmes need to go hand-in-hand with financial inclusion initiatives to create the pull for accessing formal channels of finance. Further, these programmes need to be tailored to take into account the demographic profile and regional differences of the target population for a stronger impact.

REVIEW OF LITERATURE

Dr. Y. V. Reddy, Governor, RBI addressed 'The Role of Financial Education: The Indian Case', helps us to know that Financial education can broadly be defined as the capacity to have familiarity with and understanding of financial market products, especially rewards and risks in order to make informed choices. Financial education primarily relates to personal financial education to enable individuals to take effective actions to improve overall well-being and avoid distress in matters that are financial. Financial education assumes importance in this changed financial environment. In considering means to improve the financial status of families, financial education can play a critical role by equipping consumers with the knowledge required to choose from a myriad of financial products and providers. In addition, financial education can help provide individuals with the knowledge necessary to create household budgets, initiate savings plans, manage debt, and make strategic investment decisions for their retirement or for their children's education

Ms.Gopinath Shyamala, Deputy Governor, Reserve Bank of India, "Inclusive growth – role of financial education" helps us to know ledged that financial education is only one pillar of an adequate financial policy to improve financial literacy and expand access to financial services. It can complement, but not replace other pillars such as greater transparency, policies on consumer protection and regulation of financial institutions. There is a need for banks and other agencies striving to extend financial education to the masses to appreciate that financial inclusion is a continuous process. Efforts to extend literacy to make the common man enabled by being aware of the evolving functional, legal and technical issues cannot be a one-time effort.

FOCUS ON FINANCIAL LITERACY

Financial literacy refers to the ability to make informed judgments and to take effective decisions regarding the use and management of money. Financial literacy is regarded as an important requirement for functioning effectively in modern society and trends in retirement income policies, work patterns and demography suggest its importance can only increase in the years ahead. When we talk about financial literacy, we are usually referring to a set of skills that allow people to manage their money wisely along with some understanding of essential financial concepts, not least an appreciation of the trade-off between risk and return. Financial Literacy is not just about markets and investing, but also savings, budgeting, financial planning, basics of banking and most importantly, about being "Financially Smart". To understand financial planning, a person should be financially literate and be able to understand the importance of preparing household budgets, cash-flow management and asset allocation to meet financial goals.

Financial literacy can broadly be defined as the capacity to have familiarity with and understanding of financial market products, especially rewards and risks in order to make informed choices. Viewed from this standpoint, financial literacy primarily relates to personal financial literacy to enable individuals to take effective actions to improve overall well-being and avoid distress in matters that are financial. The need for financial literacy is felt in the developed and the developing countries alike. In the developed countries, the increasing number and complexity of financial products, the continuing shift in responsibility for providing social security from governments and financial institutions to individuals, and the growing importance of individual retirement planning make it imperative that financial literacy be provided to all. Financial literacy involves imparting knowledge about the risk and return of financial products to the users and providers of these products.

In the developing countries also, the increasing participation of a growing number of consumers in newly developing financial markets will necessitate the provision of financial literacy - if these markets are to expand and operate efficiently. In addition, the substantial growth of international transactions during the last decade, resulting from new technologies and the growing international mobilityof individuals, makes the improvement in financial literacy, increasingly, an international concern. Financialliteracy empowers the person and reduces the burden of protecting the person from the elements of market failure. Financial literacy can make a difference not onlyin the quality of life that individuals can afford,but also the integrity, effectively, and quality of markets. It can provide individuals with basic tools for budgeting,help them to acquire the discipline to save and thus, ensure that they can enjoy a dignified lifeafter retirement. Financially educated consumers can benefit the economy by encouraginggenuine competition, forcing the service providers to innovate and improve their levels of efficiency.So, financial literacy is the process by which investorsimprove their understanding of financial markets,products, concepts and risks. Through informationand objective advice, they develop the skills andconfidence to become more aware of financial risksand opportunities and make informed choices to improve their financial position.Thus, financial literacy efforts are closely interlinked with our financial inclusion strategy.

IMPORTANCE OF FINANCIAL LITERACY

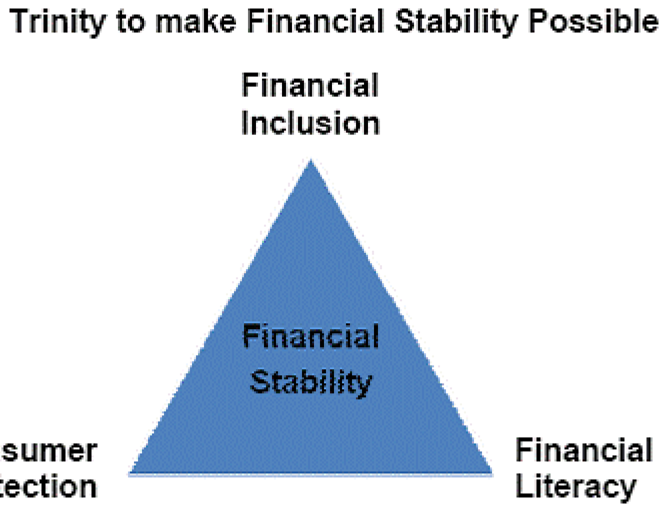
Financial literacy assumes importance in thischanged financial environment arising out of the synthesis of the processes of liberalization, globalization and reforms leading to increased competition. Inconsidering means to improve the financial statusof families, financial literacy can play a criticalrole by equipping consumers with the knowledgerequired to choose from a basket of financialproducts and providers. In addition, financial literacycan help provide individuals with the knowledgenecessary to create household budgets, initiatesavings plans, manage debt, and make strategic investment decisions for their retirement or for their children's education.

Being educated financially also enables individuals to better appreciate the possible contingenciesand save in an appropriate manner This process, in turn, raises consumers 'real purchasing power and multiplies the opportunities for them to consume, save, or invest. Having these basic financial planning skills, can help families to meet their near-term obligations and maximizetheir longer-term financial well-being.

Financial Literacy is considered an important adjunct for promoting financial inclusion, consumer protection and ultimately, financial stability. Financial Inclusion and Financial Literacy need to go hand in hand to enable the common man to understand the needs and benefits of the products and services offered by the formal financial institutions. Financial inclusion as ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups, such as weaker sections and low income groups in particular, at an affordable cost, in a fair and transparent manner by regulated mainstream institutional players. So, from the financial inclusion perspective, it essentially involves two elements, one of access and the other of literacy.

Financial literacy is also an integral component of customer protection. Despite concerted efforts, the current state of transparency coupled with thedifficulty of consumers in identifying and understanding the fine print from the large volume of convoluted information, leads to an information asymmetrybetween the financial intermediary and the customer. For example, customers are often penalized forminor violations in repayments, although they have limitedredresses mechanisms to rectify deficienciesin service by banks, rendering the banker-customer relationship one of unequals. In this relationship, it is the principal, that is, the depositor, who is actually far less powerful than the agent, that is, the bank. The representations received in regard to levying of unreasonably high service or user charges andenhancement of user charges without proper and prior intimation, and the growing number of customercomplaints against the banks, also testify to this fact. In this context, financial literacy may help toprevent vulnerable consumers from falling prey to financially disquieting credit arrangements.

FIG. 1



OBJECTIVE OF THE STUDY

1. To study the importance and present scenario of Financial Literacy withreference to theeconomic development of the country.
2. To bring out the steps taken by RBI and other banks toincrease the financial literacy.
3. To identify the extent to which the efforts of the bankstowards financial literacy.

HYPOTHESIS

1. Financial literacy /education help to attain the long term financial stability and act as an intermediary between customer and financial institutions.
2. Financial literacy raises consumer purchasing power and helps in procurement.
3. Financial literacy is the positive effort to meet the contingency and to increase the level of financial inclusion.

GLOBAL SCENARIO

The **US** Treasury established its Office of FinancialEducation in 2002. The Office works to promoteaccess to the financial literacy tools that can helpall US citizens make wiser choices in all areas of personal financial management, with a special emphasis on saving, credit management, home ownership andretirement planning. A survey in the US found that four out of ten American workers are not saving for retirementThe Financial Literacy andEducation Commission (FLEC), established by theCongress in 2003 through the passage of the Financial Literacy and Education Improvement Act, was createdwith the purpose of improving the financial literacyand education of persons in the United States throughdevelopment of a national strategy to promote financialliteracy and education. The Federal Reserve, alongwith numerous other federal government agencies, is amember of this commission, which is supported by the Office of Financial Education.In the **UK**, the Financial Services Authority (FSA) haslaunched the biggest ever campaign to improve thefinancial skills of the population and imparting educationto enable a better appreciation of the risks and rewardsinherent in financial instruments.

In **Australia,** the Government established a NationalConsumer and Financial Literacy Taskforce in 2002,which recommended the institution of the FinancialLiteracy Foundation in 2005. Working closely withstates and territories, the Foundation has produceda National Curriculum Framework for FinancialLiteracy to provide benchmarks for teaching theschool children the importance of managing theirmoney.

In **Malaysia**, the Financial Sector Master Plan,launched in 2001, includes a 10-year consumereducation program. This agenda includes infrastructureand institutional capacity development in theareas of financial literacy, advisory services, distressmanagement and rehabilitation. For this purpose,the Bank Negara Malaysia in partnership with thefinancial industry and other government agencies,has introduced the Financial Mediation Bureau,Deposit Insurance Scheme, Basic Banking ServicesFramework as well as created a new class of licensedFinancial Advisers. Savings and literacy programsare also being promoted in schools. A one-stop centre has recently been established within the centralbank for the public to obtain information aboutfinancial services in Malaysia and to provide face-to-facecustomer service on general enquiries andcomplaints. These initiatives have been reinforcedby high levels of transparency and disclosure.In collaboration with the government agencies, Monetary Authority of **Singapore** launched a national financial education programme (Money SENSE)to enhance financial literacy and self-reliance ofconsumers. The programme covers three tiers offinancial literacy: basic money management coversskills in budgeting and saving as also tips onresponsible use of credit (Tier-I); equipping citizenswith the skills and knowledge to plan for theirlong-term financial needs (Tier-II); and impartingknowledge about different investment products andskills for investing (Tier-III).

WHY FINANCIAL LITERACY IS A MUST FOR INDIA?

India has one of the world's most efficient financial markets in terms of technology and systems.

Significantly, India also has one of the highest savings rate in the world - our gross household savings rate, which averaged 19% of GDP during1996-97 to 1999-2000, increased to about 23% in 2003-04, and has been growing ever since. While Indians, as a whole, are saving more, where they are investing these savings is a cause for concern. Investments by households have increasingly moved either to risk-free, government-backed, fixed-return, low-yielding instruments or in non-financial assets. According to a survey, by Invest India Dataworks in 2007 - the year in which the capital markets reached the peak in recent years, it was found that among those Indians who earn and save, an overwhelming proportion keeps the money at home or in a bank: as a result, only 5.3 million of the 321 - million paid workers invest in mutual funds and barely 4.3 million of these 321 - million paid workers have invested in equities. A survey, conducted by Visa, revealed that 43% of Indian women do not discuss matters of money management with their children, due in large part to their own lack of understanding. It is no surprise that in a society where women are less likely than their male counterparts to engage in paid work, and are therefore not expected to undertake decision related to family budget, they do not educate their children in these matters. . A majority of our households are not using modern financial markets. Low knowledge among households of financial markets, concepts and products has a direct impact on mass-scale utilization of financial markets. Financial literacy also plays a significant role in efficient allocation of household savings and the ability of individuals to meet their financial goals. Financial literacy also means the ability to seek sound financial advice.

FINANCIAL LITERACY - AN ADJUNCT FOR FINANCIAL INCLUSION

Financial literacy is the ability to understand finance. More specifically, it refers to the set of skills and knowledge that allows an individual to make informed and effective decisions through their understanding of finances. Financial literacy is considered as an important adjunctfor promoting financial inclusion and ultimatelyfinancial stability. Both developed and developingcountries, therefore, are focusing on programmes for financial literacy / education. In India, the needfor financial literacy is even greater consideringthe low levels of literacy and the large section ofthe population, which still remains out of the formalfinancial set-up.In the context of 'financial inclusion', the scope offinancial literacy is relatively broader and it acquiresgreater significance since it could be an importantfactor in the very access of such excluded groups tofinance. Further, the process of educating may invariablyinvolve addressing deep entrenched behavioral andpsychological factors that could be major barriers.

In countries with diverse social and economic profile likeIndia, financial literacy is particularly relevant for peoplewho are resource-poor and who operate at the margin andare vulnerable to persistent downward financial pressures.With no established banking relationship, the un-bankedpoor are pushed towards expensive alternatives. Thechallenges of household cash management under difficultcircumstances with few resources to fall back on couldbe accentuated by the lack of skills or knowledge tomake well informed financial decisions. Financial literacycan help them prepare ahead of time for life cycle needsand deal with unexpected emergencies without assumingunnecessary debt.

There is a need for banks and other agencies strivingto extend financial literacy to the masses to appreciatethat financial inclusion is a continuous process. Effortsto extend literacy to make the common man enabledby being aware of the evolving functional, legal andtechnical issues cannot be a one-time effort. A commoneffort of the educational programmes typically focuses other 'supply' side that stresses on attracting customersin the financial fold. However, what is needed is to havean 'auto pilot' concept, where the prospective customeris empowered to make / demand the desired services.This could create a qualitative 'demand' situation of thefinancial services. The philosophy of Financial Inclusion has gainedmomentum in India, with the realization that the benefits of growth and development witnessed byIndia in the post-liberalized economic regime have notbeen apportioned equitably with the common man.

Financial Inclusion offers economic opportunitiesnot only for the common man but also for financialinstitutions. In building savings, availing credit andmaking investments, the philosophy is a guiding mantra for the 'aamaadmi'. Counselling and financial literacy efforts initiated and carried out by commercialbanks is the most significant empowerment tool.This empowerment will help the underprivileged torelieve themselves from the clutches of middlemenand moneylenders and associate with the formalfinancial system. It will also facilitate the bringing in thesavings of people.Financial inclusion and the initiatives around it in India have largely been about geographic penetration and outreach in the hinterland. In comparison, the focus on educating people in handling financial resources to achieve their goals has been relatively low. While financial inclusion initiatives give people access to organized financial services, the lack of knowledge has resulted in sub-optimal impact in using this opportunity and in some cases proven counterproductive with the creation of debt traps. I believe that the solution to this problem lies in creating.

The objective of financial literacy is to protectthe customer at the bottom of the pyramid. It helpscustomers to better understand and manage financialrisk and deal with complexities of the market placeand take advantage of increased competition andchoice in the financial sector. The RBI, on its part,intends to advance the cause of financial literacy inthe country as part of an overall strategy. Currently,a process of credit counseling is being encouragedto help all borrowers, particularly those in distress to overcome current financial problems and gainaccess to the structured financial system.

INITIATIVES TAKEN BY RBI

Reserve Bank of India has undertaken a projecttitled 'Project Financial Literacy'. The objective ofthe project is to disseminate information regardingthe central bank and general banking concepts tovarious target groups, such as, school and collegegoing children, women, rural and urban poor, defence personnel and senior citizens. It is disseminatedto the target audience with the help, among others, ofbanks, local government machinery, NGOs, schools, andcolleges through presentations, pamphlets, brochures,films, as also through Reserve Bank's website. ReserveBank of India has already created a link on its web site forthe common person to give him / her ease of accessto financial information in English and Hindi, and 12 Indian regional languages.A financial education site was launched on November14, 2007 commemorating the Children’s Day. Mainlyaimed at teaching basics of banking, finance andcentral banking to children in different age groups, thesite will also eventually have information useful to othertarget groups, such as, women, rural and urban poor, defence personnel and senior citizens. The comic booksformat has been used to explain complexities of banking,finance and central banking in a simple and interestingway for children. The RBI has released on its website on January 31, 2013, a comprehensive Financial Literacy Guide, which, banks have been advised to use as a standard curriculum to impart basic conceptual understanding of financial products and services. Reserve Bank of India also launched'RBI Young Scholars Award' Scheme amongst studentsundergoing undergraduate studies to generate interestin and create awareness about the banking sector and the Reserve Bank. Under the scheme, up to 150 youngscholars are selected through country-wide competitiveexamination and awarded scholarships to work on shortduration projects at Reserve Bank.

CREDIT COUNSELLING

Credit Counselling can be defined as 'counselling that explores the possibility of repaying debts outsidebankruptcy and educates the debtor about credit, budgeting, and financial management'. It serves three purposes. First, it examines the ways to solvecurrent financial problems. Second, by educating aboutthe costs of misusing a credit, it improves financialmanagement. Third, it encourages the distressed peopleto access the formal financial system.Credit counselling (known in the United Kingdom’s debt counselling) is a process of offering education to consumers about how to avoid incurring debtsthat cannot be repaid. Credit counselling often involves negotiating with creditors to establish a DebtManagement Plan (DMP) for a consumer. A DMP mayhelp the debtor repay his or her debt by working outa repayment plan with the creditor. DMPs, set up by credit counsellors, usually offer reduced payments, fees and interest rates to the client. Credit counselors refer to the terms dictated by the creditors to determinepayments or interest reductions offered to consumers in a Debt Management Plan. Thus, credit counsellors help their clients find realistic solutions to their problems and agree on repayments that are achievable. Credit counselling is kept confidential. Counselling services are generally offered free or for avery nominal charge, so that no undue additional burdenis put on the already indebted customer. Some of the common features of these centers are as under:

- The counseling centres are mainly funded trusts set up by banks or funded by the banks themselves.
- The counsellors manning the centres are retired or serving bank employees.
- Counselling is provided free of cost.
- The counselling presently provided by most of theaters is mainly curative in nature, being given after a crisis event had occurred.

INITIATIVES TAKEN BY SOME BANKS

A few banks have already taken initiatives in opening credit counseling centres in the country. An InternalGroup constituted by Reserve Bank of India to study credit counselling initiatives, visited some of the counseling centre’s in the state of Maharashtra viz.,'ABHAY' counseling centre (an initiative of Bank of India); Disha Trust (an initiative of ICICI Bank Ltd.) and Grameen Paramarsh Kendras (an initiative of Bank of Baroda). The counsellors at these centres assist people ona face to face basis as well as those who approach themover telephone, email, or by means of letters. Customersfacing credit problems arising out of multiple creditcards, personal loans, housing loans and loans from societies approach the counseling centres for advice and guidance. The counsellors guide their customers and help them to take up with the banks concerned forrescheduling / restructuring of loans. The Financial Literacy Centres have been set up by banks as per Reserve Bank of India Model Scheme with the objective of disseminating information regarding central bank and general banking concepts to various target groups including school and college going children, women, rural &urban poor, defence personnel and senior citizen with special attention to financially excluded people. Banks have established 718 Financial Literacy Centres as of March 31, 2013 mainly in district headquarters. A total of 2.2 million people were made aware through awareness camps during 2012-13.

DATA ANALYSIS & INTERPRETATION

A detailed survey is organized among 100 respondents. An interview schedule is based on financial literacy and an analysis ismade. Respondents are villagers and their per annum salary is 2, 50,000. Employment statuses of respondents are farmers, marginal workers and artisans. Out of the 100 respondents surveyed so far 50% are below 25 years of age and 40% are in the age group of 26-35 years, 6% are in the age group of 36-45 years and 4% are above 45 years of age. Gender wise 70% of the respondents are male and the remaining 30% are female. Only 23% of them deposit their surplus funds in banks. 26% of them keep the funds idle at home. Only 2/5 of the respondents are aware of the purpose of different types of accounts. The awareness of features, benefits and usage of cheques is known only to 47% of the respondents. The awareness of features, benefits and usage of demand drafts is known only to 44% of the respondents. Less than 45% are aware about the overdraft facility. Only half of the respondents are aware about the lists of documents necessary to avail a loan. More than half of the respondents (60%) do not have an idea about the interest rates charged for their respective category. Financial literacy primarily relates to personal finance, which enables individuals to take effective action to improve overall well-being and avoid distress in financial matters. Financial literacy goes beyond the provision of financial information and advice. It is the ability to know, monitor, and effectively use financial resources to enhance the well-being and economic security of oneself, one's family, and one's business.

Only a third of the respondents are aware that there are few concessions given to a girl while availing an education loan. More than 60% are aware about the features and benefits of debit cards. Around 60% of the population is aware about the features and benefits of credit cards. More than 2/3 is aware that the Government is taking efforts to increase financial literacy. Only 25% feel that the steps taken by Government are adequate, others feel that the Government needs to take more efforts to increase financial literacy operations.

FINDINGS

The most important and glaring finding is that aconsiderable number of people do not even have anaccount to deposit their surplus funds. The surplusamount is kept idle at home where it is also very unsafe, the main reason being lack of knowledge of the variousprocesses that is involved in opening an account. Individuals are under the same impression that Cheque and DD are one and the same. Theknowledge about loans provided for different purposesis lacking with a major chunk of the population.Knowledge about the basic requirements for availinga loan is known only to half the number. Most ofthe people are not aware of various concessionsgiven to a girl child while availing education loan.Majority of the people feel that the RBI and banksmust improve their efforts towards financial literacyas a chunk of the rural population is unreached yet.

CONCLUSION AND SUGGESTIONS

The process of financial literacy should start fromthe schools with the help of education departmentof respective State Governments. The Governmentshould allocate more funds to improve financial literacy.Financial literacy programs require trained instructors.To be more effective, these instructors or counselorsmust be available to the clients at the time of makingimportant decisions.Financial education has always been important forconsumers in helping them budget and managetheir income, save and invest efficiently, and avoidbecoming victims of fraud. As financial marketsbecome increasingly sophisticated and as householdsassume more of the responsibility and risk for financialdecisions, financial education is increasingly necessaryfor individuals, not only to ensure their own financialwell-being but also to ensure the smooth functioningof financial markets and the economy.Financial literacy has assumed greater importancein the recent years, as financial markets have becomeincreasingly complex and as there is informationasymmetry between markets and the common person,leading to the latter finding it increasingly difficult tomake informed choices.Financial literacy goes beyond the provision offinancial information and advice. The focus of anydiscussion on financial literacy is primarily on theindividual, who usually has limited resources andskills to appreciate the complexities of financialdealings with financial intermediaries on a day-todaybasis. Financial literacy is the ability to understand which investment is good for us and helps us to compare the productivity of two investment proposals. Financial literacy has a futuristic approach which is beneficial for individual as well as nation also.Organization for Economic Co-operation and Development(OECD) has rightly defined financial education as 'theprocess by which financial consumers / investors improvetheir understanding of financial products, concepts andrisks, and through information, instruction and / orobjective advice, develop the skills and confidence tobecome more aware of financial risks and opportunities,to make informed choices, to know where to go forhelp, and to take other effective actions to improve theirfinancial well-being'.Prosperity can only come by properly balancingthe four key personal finance components i.e. earning,spending, saving and investing. To achieve thisfinancial literacy is very important and should bemade mandatory. Financial inclusion and financial literacy form two sides of a coin with inclusion activities giving the push and literacy programmes creating the pull for financial services. To achieve this financial literacy is very important and should be made mandatory.

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DOES FINANCIAL DEVELOPMENT CAUSE ECONOMIC GROWTH? A TIME SERIES ANALYSIS FOR INDIAN ECONOMY

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ABSTRACT
The present study examines the causal relationship between financial development and economic growth for the Indian economy since financial sector reforms. By applying the techniques of unit–root tests and the long–run Granger non-causality test proposed by Toda and Yamamoto (1995), we test the causal relationships between the economic growth rate and financial development proxies. On the whole it is found that higher levels of financial development are significantly and robustly correlated with faster current and future rates of economic growth and physical capital accumulation. From the results it can be concluded that a strong positive relationship exists between financial sector development and economic growth. This study confirms the results that causality runs from financial development to economic growth. Policy makers need to concentrate on financial development to boost economic growth.

KEYWORDS
financial development, Toda and Yamamoto causality test.

INTRODUCTION
Academic literature on the relationship between financial development and economic growth dates back to as early as the early twentieth century (Schumpeter, 1911).The issue has been of great interest and generated considerable amount of debate among economists for many years. The debate primarily revolved around two major questions: *first* whether at all there is a relationship between development of financial sector on economic growth and *second*: what could be the nature and direction of the causal relationship, if any i.e. does development of financial sector promote economic growth or does economic development foster financial sector development? The possible directions of causality between financial sector development and economic growth were highlighted by Patric (1966) in his '*supply leading*' and '*demand following*' hypotheses. The 'supply leading' hypotheses claims a causal relationship from financial development to economic growth by saying that intentional creation and development of financial institutions and markets would increase the supply of financial services and thus lead to economic growth while the demand following hypothesis claims that it is the growth of the economy which causes increased demand for financial services which in turn leads to development of financial markets.

REVIEW OF LITERATURE
An extensive volume of literature and research work has emerged attempting to answer the above questions, both at the theoretical and empirical level. The findings and views expressed in these works have been generally conflicting in nature. Some studies like King and Levin (1993a, b), Levin and Zervos (1998), Demirguc and Maksimovic (1996) have found positive causal effects of financial development on economic growth in line with the 'supply leading' hypothesis. These studies claim that countries with better developed financial systems particularly those with large efficient banks and a large well organized and smoothly functioning stock markets tend to grow much faster by providing access to much needed funds for financially constrained economic enterprises. Kletzer and Pardhan (1987), Beck (2002), also argue along similar lines but they also tried to establish that financial development is much more effective in promoting economic growth in more industrialized economies than in agricultural economies. Their view has been contradicted in some other studies which argue that countries at their early stage of development benefit more from financial sector development than their older and mature counterparts (Fry, 1995). Levin et.al (2000) examined empirically by incorporating adequate corrections for the effects of simultaneity bias and country specific effects, effects of other determinants of growth and biases arising from model specific errors like omitted variables. Their conclusions identified a causal relationship running from financial development indicators to economic growth even after controlling for such factors. Support for the 'demand following' argument is also there in the research works over the last four or five decades. Robinsson (1952) argued that financial development primarily follows growth in the real economy, as a result of increased demand for financial services. Lucas (1988) stated that the role of financial sector development in causing economic growth of a country has been 'badly overstressed'.

The direction of causality between financial development and economic growth is crucial because it has different implications for development policies. Economic growth leads financial development, (demand following hypothesis) means when real growth has been taking place so that the expansion of financial institutions is only a result of the need of the expansion of the real economic activities. Support of this view can be found; in Arestis and et al (2002), Ang and Mckibbin (2007) has found out that unidirectional causality that runs from Economic Growth to financial development.

On the other hand financial development leads economic growth (supply leading hypothesis) means that the expansion of financial system may help to improve and lead economic growth by increasing savings and improving borrowing options and the reallocation of capital. Bhattacharya and Sivasubramanian (2003), Amenounve and et al.(2005) investigated the unidirectional causality runs from financial development to economic growth. At the same time, financial and the real sectors may expand together contributing to the developments of each other, which shows bidirectional causality between financial development and economic growth. Two way relationship between financial development and economic growth has been shown by Demetriades and Luintel(1996),Ghirmay(2004). From the above studies it is understood that causality will differ from country to country. Patrick (1966) mentions that, there are economies with supply leading and demand following hypothesis, he also mentions that in the early stages of development the economy will follow the supply leading hypothesis, where, as when the economy grows, it will follow the demand following hypothesis.

VARIABLES AND METHODOLOGY
This section pins down the variables relevant to the model and methodology adopted in analysing the data. Economic growth is a measure of growth in aggregate output of a nation during a specified time period. It can be measure by GDP_{fc} at constant prices. When the growth rates are to be used to judge the improvement in the economic well being of people, or any other similar purpose, the rate expressed in per capita terms would be more meaningful. In this analysis however, the objective is to see the impact of financial development on economic growth, in terms of an overall output expansion. So using the rates in

per capita terms will not be meaningful. The rates of growth of per capita will be affected by the growth rate of the population, which has as such no bearing in context of role of finance. So as an indicator of economic growth, the study has used the annual GDP_{fc} at constant prices (EGFC).

In studies where credit has been used as an indicator of financial development, it is only bank credit that is considered. However, significant financial development takes place outside the banking system. Moreover as the financial system develop the portion of the bank credit to the total credit advanced usually falls. For this reason the credit advanced by non baking financial institutions has also been included in the study. Credit thus consist of non-food credit advanced by scheduled commercial banks, credit advanced by non scheduled commercial banks, cooperative banks and financial assistance disbursed by the non- banking financial institutions. It excludes credit to the public sector in the form of food credit and therefore is able to represent more accurately the role of financial intermediaries in channelizing funds to the private market participants. This measure will therefore be more directly linked to investment and growth than various other measures often used in other studies. Chakraborty (2007) used bank credit as variable to measure the banking sector in their study. This indicates the importance of the role played by the financial sector, especially the deposit money banks, in the financing of the economy (Levine, 2003); it also measures the activity of financial intermediaries in one of their primary function of channelling savings to investors.

It is more appropriate to include an indicator for stock markets size (Stock Market Capitalisation Ratio). Chakraborty (2007) used market capitalisation ratio to represent the stock market in India.

Capital formation takes place in private sector and public sector. The trends and composition of the public and private sector and their influence on economic growth can often be different. In such a case they need to be separately accounted for. In case of India however, during the time period under study, the two trend to move parallel to each other. Both seen equally related to economic growth initially three time series were examined: capital formation by private sector, capital formation by public sector and total capital formation. All the three series follow a more or less similar pattern. Moreover the correlation coefficients of each series with economic growth are nearly the same. Therefore rather than taking the rates as separate variables and adding to the number of variables , the study has used Gross Domestic Capital Formation (GDCF) both public and private as single variable. Economic growth is supposed to be an increasing function of capital formation (Barro, 1974).

The study employed advanced time series techniques such as Johansen's multivariate cointegration, Vector Error Correction Model (VECM) to examine the short run and long run relationship between stock market indicators and economic growth of India. Toda and Yamamoto causality tests was applied for determining the causality among the variables. The four variables are included in the analysis related to indicators of economic growth and financial sector development. Annual GDP_{fc} at constant prices (EGFC) is used for indicator of economic growth. Two indicators of financial development are Institutional credit to the private sector as a ratio of GDP (CR) and Stock market capitalisation ratio (SMC). One variable i.e., CR is taken for the banking sector development and other variable i.e., SMC is taken for the stock market development. Gross domestic capital formation as ratio of GDP (GDCF) is other important variable is used because Economic growth is supposed to be an increasing function of capital formation. The annual time series data is used for analysing the relationship between financial development and economic growth the time period is 1968 to 2013, so that a sufficient time period is covered during pre- financial sector reforms and post-financial sector reforms. The data is transformed in natural logarithm form and then the analysis is done.

A brief outline of the traditional causality test, viz., Granger causality (1969) and subsequent improvements, namely, Toda and Yamamoto (1995) version of Granger causality is presented below, followed by discussion of the principal variables employed.

GRANGER CAUSALITY TEST

Traditionally Granger (1969) causality is employed to test for the causal relationship between two variables. This test states that, if past values of a variable *y* significantly contribute to forecast the future value of another variable *x* then *y* is said to Granger cause *x* . Conversely, if past values of *x* statistically improve the prediction of *y* , then we can conclude that *x* Granger causes *y* . The test is based on the following regressions:

" X is said to Granger –cause Y if Y can be better predicted using the histories of both X and Y than it can by using the history of Y alone."

We can test for the absence of Grange Causality by estimating the following VAR model:

$Y_t = a_0 + a_1Y_{t-1} + ... + a_pY_{t-p} + b_1X_{t-1} + ... b_pX_{t-p} + u_t$

$X_t = c_0 + c_1X_{t-1} + ... + c_pX_{t-p} + d_1Y_{t-1} + ... + d_pY_{t-p} + v_t$

Then testing $H_0: b_1=b_2=.........b_p=0$, against H_A: 'Not H_0', is a test that X does not Granger –cause Y.

Similarly testing $H_0: d_1=d_2=.........d_p=0$, against H_A: 'Not H_0', is a test that Y does not Granger –cause X.

In each case, a rejection of the null implies there is Granger causality.

The Granger causality test is easy to carry out and be able to apply in many kinds of empirical studies. However traditional Granger causality has its limitations. First, as pointed out by Gujarati (1995), a causality test is sensitive to model specification and the number of lags. It would reveal different results if it was relevant and was not included in the model. Therefore, the empirical evidence of two variable granger causality is fragile because of this problem. Second, time series are often non stationary (Maddala, 2001). This situation could exemplify the problem of spurious regression. Gujarati (2006) had also said that when the variables are integrated, the f-test procedure is not valid, as the test statistics do not have a standard distribution.

The Granger non causality test should not be tested in the VAR with the differences of the data.VAR model can be used for other purposes with differenced data if the series are I(1), but not cointegrated. If the time series are cointegrated then VECM model can be estimated for the purposes other than testing for the Granger non causality.

Recent studies on time-series econometrics have highlighted several crux issues pertaining to Granger causality test. First, the direction of causality depends critically on the number of the lagged terms included. If the chosen lag length is smaller than the true lag length, the omission of relevant lags may cause bias. Conversely, the inclusion of extraneous lags in the equation may cause the estimates to be inefficient. In our model, we have used the Akaike and Schwarz information criterion (AIC / SIC) to fix the choice of lag length. Secondly, traditional Granger causality test is based on the assumption that the variables are stationary, or even if non-stationary must have the same order of integration. As observed by Toda and Phillips (1993), any causal inference in Granger jargon is questionable when there are stochastic trends and the F – test is not valid unless the variables in levels are cointegrated.

There are tests for cointegration and cointegrating ranks namely, error correction model (ECM) due to Engle and Granger (1987) and the vector autoregression error correction model (VECM) due to Johansen and Jesulius (1990). Unfortunately, these tests are not easily comprehensible and requires fulfillment of the sufficient rank conditions based on trace and maximum eigen value test for cointegration. Toda and Yamamoto (1995) propose an interesting and simple procedure requiring the estimation of an augmented VAR which guarantee the asymptotic distribution of the Wald statistics (an asymptotic chi-square distribution).

RESULTS FOR POST- REFORM PERIOD (1992-2013)

This section deals with descriptive statistics, line graph and unit root test (Stationarity test) results ,lag selection criteria of the variables included in the study i.e., economic growth, gross domestic capital formation ,credit and stock market capitalisation during the post financial sector reform period (1992-2013).

DESCRIPTIVE STATISTICS

In order to understand the behaviour of data series included in the study , mean, median, standard deviation, Skewness, kurtosis and Jacque –Bera are measured and presented in the table . It is found that all variables have positive mean value. Jarque –bera test value and the probability show that the data series are normal.

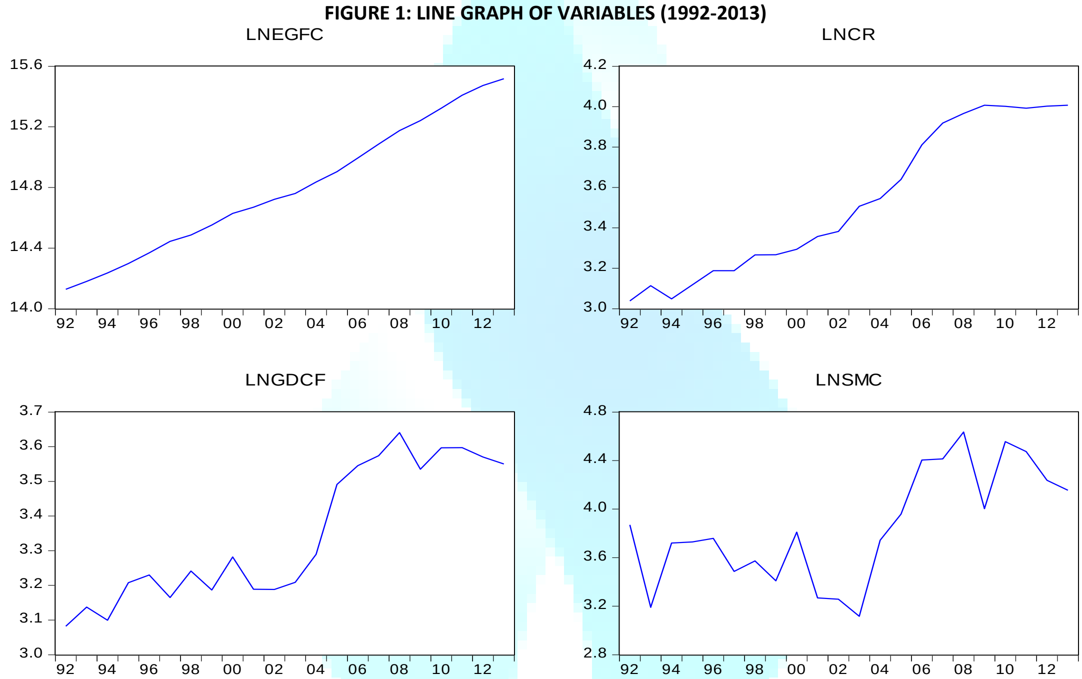
TABLE 1: DESCRIPTIVE STATISTICS OF VARIABLES DURING POST REFORM PERIOD (1992-2013)

	LNEG	LNCR	LNGDCF	LNSMC
Mean	14.79246	3.530120	3.345802	3.853314
Median	14.74076	3.444859	3.261837	3.784302
Maximum	15.51700	4.007432	3.640572	4.634984
Minimum	14.12825	3.038350	3.081925	3.116183
Std. Dev.	0.436984	0.367973	0.195770	0.464298
Skewness	0.162024	0.176852	0.249583	0.110071
Kurtosis	1.827702	1.432336	1.366356	1.914166
Jarque-Bera	1.356015	2.367455	2.674796	1.125207
Probability	0.507627	0.306136	0.262528	0.569724
Sum	325.4341	77.66264	73.60763	84.77290
Sum Sq. Dev.	4.010064	2.843481	0.804843	4.527017
Observations	22	22	22	22

LINE GRAPH

The basic movement and characteristics of variables can also be understood through line graph presented below figure 1. The entire variables move in the same direction with minor fluctuation but there is much fluctuation in the stock market capitalisation.

FIGURE 1: LINE GRAPH OF VARIABLES (1992-2013)



STATIONARITY TEST (UNIT ROOT)

Augmented Dickey-Fuller (ADF) (1981) test and Philips Perron test were used to examine the stationarity characteristics of the series. Table 2 reports the ADF unit-root test and Philips Perron test results below:

TABLE 2: UNIT ROOT TEST (1992-2013)

Variables	**Level/first difference**	**Calculated –test statistics**	**ADF critical value 5 %**	**Stationarity**
Economic Growth	Level	-1.403713	-3.644963	Not stationary
	First difference	-3.832045	-3.658446	Stationary
Credit	Level	-2.984574	-3.690814	Not stationary
	First difference	-3.498957	-3.268973*	Stationary
GDCF	Level	-1.949712	-3.644963	Not stationary
	First difference	-4.930433	-3.658446	Stationary
SMC	Level	-2.988881	-3.644963	Not stationary
	First difference	-6.825911	-3.658446	Stationary
Variables	**Level/first difference**	**Calculated –test statistics**	**PP critical value 5 %**	**Stationarity**
Economic Growth	Level	-1.490849	-3.644963	Not stationary
	First difference	-3.832045	-3.658446	Stationary
Credit	Level	-1.676973	-3.644963	Not stationary
	First difference	-3.518874	-3.268973*	Stationary
GDCF	Level	-2.076050	-3.644963	Not stationary
	First difference	-4.920746	-3.658446	Stationary
SMC	Level	-3.065376	-3.644963	Not stationary
	First difference	-6.651386	-3.658446	Stationary

*indicates 10 % level of significance

LAG ORDER SELECTION

The step of discovering the long run relationship among explanatory variable requires an adequate lag length of them in order to remove any serial correlation. The optimum lag length is usually selected based on AIC, SIC and HQ test statistic. All the test indicates that 1 lag order should be selected for the data analysis.

TABLE NO. 3: VAR LAG ORDER SELECTION CRITERIA (1992-2013)

Lag	LR	AIC	SIC	HQ
0	NA	-4.970572	-4.771426	-4.931697
1	140.4223*	-12.73206*	-11.73632*	-12.53768*
2	16.61658	-12.64265	-10.85034	-12.29278

* indicates lag order selected by the criterion

To take policy decision it is important to know which way financial development and economic growth cause each other and therefore an attempt is made to find out the causality between financial development and economic growth in Indian Context. To inspect the causality between the different variables of the model, the short run and the long run causality is determined. The first test reveals the significance of the sum of lagged terms of each explanatory variable by the mean of Chi-square test and the second test indicates the significance of the error correction term by the mean of the T-test. Table no.4 below illustrates the results of all these causality tests during the post- reform period i.e., 1992-2013.

TABLE NO. 4: VAR GRANGER CAUSALITY/BLOCK EXOGENEITY WALD TESTS RESULT (1992-2013)

Dependent variable	Independent variable Chi-sq –statistics (p-value)					ECT_{t-1} Coefficient [t-ratio]
	LNEGFC	LNCR	LNGDCF	LNSMC	All	
LNEGFC		7.306100	0.945126	4.444822	22.41278	-0.159548
		(0.0259)**	(0.6234)	(0.1083)	(0.0010)*	[-4.20070]*
LNCR	0.726710		0.369903	4.556172	4.905748	0.138825
	(0.6953)		(0.8311)	(0.1025)	(0.5560)	[0.82125]
LNGDCF	0.122875	8.910529		4.371619	15.38950	-0.143529
	(0.9404)	(0.0116)**		(0.1124)	(0.0174)**	[-0.60104]
LNSMC	1.292429	4.219899	0.522227		15.51788	-1.547328
	(0.5240)	(0.1212)	(0.7702)		(0.0166)**	[-1.32360]
*,**and*** denotes 1% , 5% and 10% level of significance						

The Chi-square statistics for the short run dynamics reveals that the null hypothesis of GDCF does not cause EGFC is accepted at 1% level of significance and CR not cause EGFC is rejected at 5% level of significance. It means that there is unidirectional causality runs from CR to Economic Growth in the short run. When EGFC is dependent variable and all other independent variables were taken together then the null hypothesis is also rejected at 1% level of significance means all the variables taken together can cause EGFC. CR was found that can significantly cause GDCF at 5 % level of significance in the short run period, even all the variables when taken together can cause GDCF at 5 % level of significance. Overall results show that in the short run period, there is unidirectional causality running from CR to EGFC and GDCF. No variable was found that can influence SMC in the short run period,but when all the independent variables are taken together then they can influence SMC at 5 % level of significance.

In the long run, the error correction term coefficients show that there is long run causality from the independent variables such as GDCF, SMC and CR to EGFC meaning that GDCF, SMC and CR have influence on dependent variable EGFC in the long run at 1% level of significance.

CONCLUSION

The present paper makes a modest attempt to explore the causal relationship between financial development and economic growth in the Indian economy for the period from 1992-2013. The study primarily revolved around question that what could be the nature and direction of the causal relationship, if any i.e. does financial development promote economic growth or vice versa? To test this hypothesis, we employed the methodology of *Granger non-causality* proposed by Toda and Yamamoto (1995).

Chakraborthy (2007) made a study in India by taking market turnover, market capitalisation ratio, bank credit, stock market volatility for financial development indicator during 1996-2005 and found out that causality is run from economic growth to financial development in the post liberalisation period. It seems that the role of financial development may not be crucial for economic growth in the post liberalisation period. This study does not confirm the results but contradict and state that causality runs from financial development to economic growth. It is understood that policy makers need to concentrate on financial development to boost economic growth.

On the whole it is found that higher levels of financial development are significantly and robustly correlated with faster current and future rates of economic growth and physical capital accumulation. From the results it can be concluded that a strong positive relationship exists between financial sector development and economic growth.

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A STUDY ON MARKET INTEGRATION AND PRICE DYNAMICS OF INDIAN NATURAL RUBBER (RSS 4 GRADE): DOMESTIC VS. INTERNATIONAL MARKETS

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ABSTRACT
Natural Rubber is a perennial crop with an economical life span of 10 – 20 years. Price of natural rubber fluctuations has got multifaceted effect on the area, production, and productivity of the crop. The main objectives of the study are attempted to measure the degree of market integration and to analyse the extent of volatility in price of natural rubber at domestic and international markets. Kottayam and Kochin rubber markets at domestic level and Bangkok markets at international level were chosen for the study and the daily spot prices for selected markets were collected from April 2009 to March 2013. Johansen's Multiple Co-integration technique and GARCH model were applied to measure the degrees of market integration and analyze the extent of volatility in price of natural rubber for RSS 4. Results indicated that only two markets among three markets were found to be integrated between domestic and international markets for the RSS 4 grade and markets experienced low level of volatility during the study period. It is suggested that as the international price may influence the Indian producer's price, which has to be taken care by the policy makers.

KEYWORDS
co-integration, unit root test, price volatility, price transmission, ribbed smoked sheet (RSS), domestic market and international market.

INTRODUCTION
Natural Rubber is an important perennial crop in India with an economical life span of 10-20 years. India is the fourth largest natural rubber producing country after Thailand, Indonesia and Malaysia. It is the third largest consumer of natural rubber in the world. India's share in the production has increased over the years and the country is now one of the largest producers of natural rubber in the world market. South Indian regions, especially Kerala, Tamil Nadu and Karnataka contribute major share of India's natural rubber production. In fact, 90 per cent of the total production comes from the state of Kerala. After the opening up of the Indian economy in 1990s, India's domestic rubber market started showing links to the international market. Probable determents of volatility in natural rubber prices in domestic market are state administered procurement programs, inconsistent important export policies and global market trend.

The period from 1994 to 1998 was the most turbulent in domestic price trend of natural rubber. In June 1995 RSS 4 price shot up sharply to Rs. 6171 per quintal from Rs. 2599 a quintal in March 1995. The probable reason of this sudden price hike was decline in world production of natural rubber in main producing countries. Immediately after May 1995 India's import of natural rubber also increased. The maximum natural rubber import during 1991-92 to 2003-04 took place rose in anticipation of future supply tightness and shortage of some grades, because Australia forecasted to decline natural rubber production due to serious drought.

After that in February 1999, Indian Government banned rubber imports through ALS (Advance License Scheme), as a result of this rubber prices moved sideways. The removal of the quantitative restrictions from 1st April 2001 aggravated the decline price trends. The probable reason behind this firming up of natural rubber prices are up trend in global market, global natural rubber supply fails to catch up with growing demand, particularly from China. The prices have reached to Rs. 18807 per quintal as on June, 2012.

Demand for rubber is most evenly distributed over the years but due to absence of production in monsoon, supply shrinkage occurs. By June/July the production becomes normal, but lingering rains last for a couple of months. During rainy period tapping of rubber trees disrupted and production falls. Resultantly prices would rise at that time, unless there is an acute economic depression or similar negative factors. Rubber prices have been on the rise in recent months due to disruption of production in Kerala, which accounts for 90 per cent of the country's production. However, in August 2011, rubber prices dropped on account of higher output and imports. Rubber price fell from Rs. 214 per kg in July 2011 to Rs 207 on August 1 and to Rs. 203 on August 13, 2011. (Market Survey 2012)

SCOPE OF THE STUDY
Natural Rubber is a predominant of plantation crop of considerable significance to Indian economy having a share of 8.9 per cent of world's production and 8.7 per cent of consumption. An important feature which distinguishes the marketing of perennial crops from that of annual crops is their comparatively inelastic supply response to prices. Among commercially important perennial crops, natural rubber has a unique advantage in processing options, which also provide marketing options for the producers and enable them to design their marketing strategy, according to the prevailing market situations. Price fluctuations have got multifaceted effect on the area, production and productivity of the crop. Unexpected and wide fluctuations in prices may discourage farmers from taking up of improved production and plant protection methods which may result in low production and instability in farm income. The study of market co-integration would perform market efficiency in Indian rubber markets, which would signal for international rubber markets and policy reforms to avoid risk in both domestic and international markets. This would be much helpful for the exporters, processors and policy makers in taking timely decisions that would favor the rubber and its related markets. Further the assessment of policy analysis would be helpful in arriving meaningful policy to make the rubber market to be more efficient. Hence, in this context, the present study was taken up with the following specific objectives.

i) To measure the degree of market integration in the domestic and international rubber markets and
ii) To analyze the extent of volatility in price of natural rubber at domestic and international rubber markets.

REVIEW OF LITERATURE
A Comprehensive and up-to-date review of literature is necessary for any field of scientific enquiry so as to understand the various concepts to be used in the proposed study and more importantly to gain a clear knowledge on the gaps in the past studies so that proposed study would make a serious effort to address those gaps in the existing literature. There are several studies examining the market co-integration especially in agricultural commodity. However, relatively the following very few exists on market co-integration in agricultural commodities.

Myint and Bauer (2005) examined the long-term performance of domestic rice markets in Myanmar by evaluating the degree of spatial market integration using the co-integration methodology. Results from this study showed that the Myanmar rice markets were integrated, an indication of long-run interdependence of rice markets. A study by **Lokare (2007)** found that although Indian commodity market is yet to achieve minimum critical liquidity in some commodities (sugar, pepper, gur and groundnut), almost all the commodities show an evidence of co-integration between spot and future prices, revealing the right direction of achieving the improved operational efficiency, though at a slower rate. Further, hedging proves to be effective in respect of some commodities. However, for a few commodities, the volatility in future price has been substantially lower than the spot price indicating an inefficient utilization of information.

Ge et al., (2008) investigated the linkages between Chinese and US cotton futures market. They considered the futures prices of contracts trading on New York Board of Trade (NYBOT) in US and the Zhengzhou Commodity Exchange (ZCE) in China. They found that these markets were cointegrated and that there was bidirectional causality in returns, between these markets. **Abdul (2009)** investigated domestic integration among ten major mango markets, i.e., Lahore, Faisalabd, Multan, Cujranwala, Sargodha, Karachi, Hyderabad, Sukkur, Peshawar, and Quetta employing Johansen's co integration approach and error correction model. The results of the study confirmed the presence of integration among major mango markets in Pakistan and these markets were able to adjust for 16 to 68 per cent of disequilibrium in one month, implying that it takes almost two to six months to remove any disequilibrium and to move back to long-run equilibrium. The Granger causality test shows that the Karachi market has bidirectional causality with Lahore, Faisalabad, Multan, Hyderabad, and Sukkur, and a unidirectional relationship with the rest.

Babar et al, (2010) analyzed the regional market integration in many agricultural commodities in Pakistan to provide information on the dynamics of price adjustment and to know whether there exists market imperfection. This study used the monthly wholesale price data from January 1991 to December 2006 of gram and estimated the degree of integration in gram markets of Pakistan using co-integration analysis. The results showed that all gram markets were highly integrated in the long run. **Dinkar Pawan and Mayank Nagpal (2010)** examined the market integration study on the pepper commodity between two markets. They also attempted to fit in an Error Correction Model (ECM), and co-integration technique to find the market integration and they used daily data for average spot price and closing futures price for the analysis. It found that an approximately one to one relationship between the futures price and the spot price, measured by the parameter β (0.9807). Hence, it concluded that the spot and futures price were co-integrated, implying a long term relationship between the two.

Anuja et al., (2013) analysed the price dynamics and market integration of natural rubber under major trade regimes of India and abroad. GARCH (1,1) model was applied to analyse the extent of volatility in prices of natural rubber for RSS 4 grade. Results indicated that the markets experienced high level of volatility during the study period (2005-06 to 2011-12). Uniformity in prices and thereby efficiency in marketing system can be brought about by integration of the markets. Johansen's co-integration analysis was used to test the market integration between domestic and international reference markets of rubber and the results revealed that there exists long run equilibrium.

The above researchers had studied the market behavior and their relation between interstate and different international markets by using the co-integration test and spatial integration of the market, for the specific commodity. In the present study, Johansen's Multiple Co-integration framework has been used to analyze the integration of the domestic and international natural rubber markets.

METHODOLOGY

The secondary data have been used for the study. For the purpose of market integration study, Kottayam and Kochin rubber markets at domestic level and Bangkok market at international level, were chosen. Further, the daily spot market prices for both domestic and international markets have been collected for the analysis. The concerned data were collected from the website of Indian Rubber Board Statistics compiled by Indian Rubber Board and International Rubber Study Group (IRSG) for the period from April 2009 to March 2013. Almost 75 per cent of the rubber is processed and traded in the domestic markets as RSS 4 grade and therefore the price of same grade was taken as the representative price of natural rubber. The following specific statistical tools such as Stationarity Test, Granger Causality Test, Johansen's Multiple Co-integration Technique, Error Correction Mechanism and Price Volatility were adopted in this study.

RESULTS AND DISCUSSION

PRICE ANALYSIS OF NATURAL RUBBER: DOMESTIC Vs. INTERNATIONAL MARKETS

The daily prices were collected from the domestic and international market for the period of April 2009 to March 2013. The major natural rubber markets prices selected for the study were Kochin, Kottamyam and Bangkok. The prices were analysed for the existence of integration, volatility and level of adjustment to the equilibrium state. First of all the time series price data were disinflated and then converted to logarithmic form. The data were tested for presence of unit root and then based on results; the first difference was taken to make the data series to stationery condition.

RESULTS OF STATIONARITY TESTS

To verify whether the level and first differenced price series were indeed stationary, Augmented Dickey-Fuller (ADF) unit root test was used. The ADF test results were presented during the study period of investigation for the current research. The equations were estimated with an intercept and no time trend for the Augmented Dickey-Fuller (ADF) unit root tests for each price series. The null hypothesis of non stationarity was tested, based on the critical values reported by MacKinnon (1991). The price series appeared non stationary in the levels, but all the series were stationary in first differences for the study period.

UNIT ROOT ANALYSIS OF NATURAL RUBBER MARKET PRICE

India is one of the major exporter and importer in natural rubber among the world countries. The time series data were collected for RSS 4 grade and is processed for the presence of unit root, co-integration, causality and vector error correction mechanism. The price data on RSS 4 was tested for presence of unit root and it is presented in Table **1.** The ADF statistics and p values along with first difference are also given in the table. In the level (zero differencing) there is presence of unit root since the calculated ADF value is more than the critical value. After first differencing the ADF statistics was found to be statistically significant were it is lower than the critical value at one per cent level.

TABLE 1: RESULTS OF UNIT ROOT TEST ON PRICES OF NATURAL RUBBER IN DIFFERENT MARKETS

Markets	Level		Ist Difference		Critical Value (1%)
	ADF Statistic at level	p-value	ADF Statistic at First difference	p-value	
Kochin	-1.96141	0.3042	-27.5971	0	-3.43557
Kottayam	-1.94148	0.3133	-27.5971	0	-3.43557
Bangkok	-2.03012	0.2739	-23.242	0	-3.43557

It is confirmed that the price series were stationary in their first differences, co-integration between the markets was tested by using both Johansen's maximum likelihood procedure and the bivariate co-integration technique of Engle and Granger for the presence of long run relationship between the domestic and international natural rubber markets and associated price transmission and resultant price volatility in the domestic markets for natural rubber.

MARKET INTEGRATION AND PRICE TRANSMISSION: DOMESTIC Vs. INTERNATIONAL MARKETS

Relationship between prices of domestic and international natural rubber markets were studied through the Granger's Causality test. Market integration between international and domestic markets on prices of natural rubber was worked out with the help of Johansen's multiple co-integration frame work. The market transmission between international and domestic rubber markets were also analysed through estimates of the VECM frame work. The econometric analyses were carried out by using the software Eviews 3.1.

GRANGER'S CAUSALITY TEST ON PRICES OF DOMESTIC AND INTERNATIONAL MARKETS

The causal relationship between the price series of domestic and international natural rubber markets were approached through Granger's causality technique and the results on prices of RSS 4 grade between domestic and international markets were carried out.

TABLE 2: RESULTS OF GRANGER'S CAUSALITY TEST ON DOMESTIC AND INTERNATIONAL MARKETS PRICE

	F - statistic	p – value
KOCH4 does Granger Cause BANG4	62.6772	0.000
BANG4 does not Granger Cause KOCH4	1.31060	0.270
KOTT4 does Granger Cause BANG4	68.4891	0.000
BANG4 does not Granger Cause KOTT4	1.26797	0.281
KOTT4 does Granger Cause KOCH4	79.6085	0.000
KOCH4 does not Granger Cause KOTT4	0.66271	0.515

The results of causality test of the international natural rubber prices on the domestic markets for RSS 4 grade is presented in Table 2. The results revealed that the Kochin Market granger causes the Bangkok market, but the Bangkok market operation doesn't influence the Kochin market prices. The Kottayam market influences the Bangkok market price but the Bangkok market price doesn't influence Kottayam market price. The Kottayam market price causes Kochin market price, but the Kochin market price doesn't cause Kottayam market price. Hence, only unidirectional causality exists between the domestic and international markets, there was no existence of by directional causality.

MULTIVARIATE CO-INTEGRATION TESTS ON DOMESTIC AND INTERNATIONAL MARKETS

Results of multivariate co-integration tests on natural rubber markets for RSS 4 grade of India with the international market are discussed n this section. As the entire data series were integrated of the same order, the tests for co-integration was done using by the Johansen and Juselius maximum likelihood test procedure as it provided most efficient estimate of the co-integrating vectors and also identified the number of co-integrating relationships among the non-stationary variables.

TABLE 3: RESULTS OF MULTIPLE CO-INTEGRATION TESTS ON DOMESTIC AND INTERNATIONAL MARKETS

No. of CE (s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.172283	240.9795	29.79707	0.0001
At most 1	0.008023	13.70107	15.49471	0.0915
At most 2 *	0.003338	4.018618	3.841466	0.045

Trace test indicates 1 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values.

The results of Multivariate Co-integration Tests on domestic and international natural rubber markets for RSS 4 grade is presented in Table 3. Results of co-integration analysis of domestic markets with international natural rubber market revealed that as per the Trace test there exists 1 co-integrating equation at the 0.05 level. It indicates that only two markets among the three markets were found to be integrated among the domestic and international markets for the RSS 4 grade.

VECTOR ERROR CORRECTION MECHANISM (VECM) ON DOMESTIC AND INTERNATIONAL MARKETS

As discussed in the earlier, before proceeding to vector error correction mechanism, lag order of variables to be included in the model had to be ascertained. The optimal lag length was identified as one for all the variables under research investigation.

For the present study, the Vector Error Correction Mechanism (VECM) was adhered for the domestic rubber markets for RSS 4 grade, which was having long run association with global natural rubber market such as Bangkok market. Accordingly, VECM for the domestic and international rubber markets for RSS 4 grade was computed, results are presented and discussed below.

TABLE 4: RESULTS OF REDUCED FORM VECTOR ERROR CORRECTION ESTIMATES ON DOMESTIC AND INTERNATIONAL MARKETS

Error Correction:	D(BANG4)	D(KOCH4)	D(KOTT4)
CointEq1	-0.00012	0.001588	-0.00022
	[-0.22791]	**[5.26681]**	[-0.75019]
D(BANG4(-1))	-0.20225	-0.01111	-0.00817
	[-6.94549]	[-0.64794]	[-0.49699]
D(BANG4(-2))	0.017913	-0.03595	-0.03456
	[0.62932]	**[-2.14424]**	**[-2.15111]**
D(KOCH4(-1))	0.115386	-0.04075	-0.04393
	[0.50914]	[-0.30526]	[-0.34351]
D(KOCH4(-2))	0.025328	0.022931	0.015763
	[0.15564]	[0.23925]	[0.17163]
D(KOTT4(-1))	0.387114	0.392251	0.399457
	[1.67743]	**[2.88581]**	**[3.06712]**
D(KOTT4(-2))	0.249054	-0.03187	-0.0318
	[1.45736]	[-0.31661]	[-0.32973]

Figures in parentheses indicates't' values

The Reduced Form Vector Error Correction Estimates for international natural rubber and domestic natural rubber markets for RSS 4 grade is presented in Table 4. The results reveal that the Kochin market prices adjust to its equilibrium price from the price shocks within short period of one day. All other markets such as Bangkok and Kottayam markets do not adjust to their equilibrium position in a short period. The Bangkok market own price converges to its equilibrium position within one day lag. The Bangkok market is influenced by the Kochin market to converge to its equilibrium price with two days lag period. Similarly the Bangkok market is influenced by the Kottayam market for converging to its equilibrium prices. In case of Kottayam market, both the Kochin as well as Kottayam markets (own price) influence with one period lag for diverging from its equilibrium position.

PRICE VOLATILITY ON DOMESTIC AND INTERNATIONAL MARKETS

Global market integration for natural rubber and transmission of international prices to the domestic markets were discussed in detail in the previous section. The price volatility in domestic and international markets is discussed blow.

TABLE 5: RESULT OF PRICE VOLATILITY ON DOMESTIC AND INTERNATIONAL NATURAL RUBBER MARKETS

Markets		Coefficient	Std. Error	z-Statistic	Prob.
Kochin	ARCH (α)	1.267469	1.556183	0.814473	0.4154
	GARCH (β)	-0.93952	0.30619	-3.06843	0.0022
	α + β	0.327945	-	-	-
Kottayam	ARCH (α)	1.27701	1.570947	0.812892	0.4163
	GARCH (β)	-0.9495	0.238539	-3.98046	0.0001
	α + β	0.327515	-	-	-
Bangkok	ARCH (α)	1.211539	1.0343	1.171362	0.2415
	GARCH (β)	-0.88736	0.21482	-4.13073	0
	α + β	0.324175	-	-	-

The price volatility for the domestic and international markets for RSS 4 is given in Table 5. The Price volatility was indicated by the sum of coefficients for the ARCH (α) and GARCH (β). If the sum is near to one, it indicates the presence of price volatility and it is less than one then it indicates the absence of price volatility. The results reveals that the sum of the ARCH (α) and GARCH (β) was found to be less than one in all the markets, as well as in the grade RSS 4. Hence it could be concluded that both the domestic and international natural rubber market prices for the RSS 4 grade was relatively free from the price volatility.

CONCLUSION

On the basis of above observations, it can be concluded that the causality test for RSS 4 grade revealed that only unidirectional causality exists between the domestic and international markets, there was no existence of bidirectional causality. In the selected Kochin, Kottayam and Bangkok markets, only two markets were found to be integrated in RSS 4 grade. In case of the RSS 4 grade in short run only the Kochin market adjust to its equilibrium price from the price shocks within short period of one day and other markets such as Bangkok and Kottayam markets do not adjust to their equilibrium position in a short period. In long run the Kochin and Kottayam markets were influenced by the Bangkok market to adjust to its equilibrium price. During the study period, the sum of the ARCH and GARCH was found to be less than one in all the markets, as well as in the grade RSS 4 and among the three selected markets such as Kochin, Kottayam and Bangkok there was no existing of much price volatility. Hence, it could be concluded that both the domestic and international natural rubber market prices for RSS 4 grade was relatively free from the price volatility.

SUGGESTIONS

The overall conclusion is that the domestic and international markets were found to be integrated and influence each other and hence the international price may influence the Indian producer's price therefore, the study suggests that the producer's procurement price for natural rubber has to be maintained at the reasonable and affordable rate by the policy makers.

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EFFECT OF ERP SOFTWARE ON PERFORMANCE OF INDUSTRIES IN SME SECTOR

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ABSTRACT
ERP is a system which provides up to date information, coordinates between different departments and enables the decision makers to take decisions for organization's overall objectives rather than the departmental or functional objectives. The ERP softwares build information base and provide knowledge base for planning and control of the business through the business function management. There are different modules for different functions like production, finance, sales and distribution, materials management etc. ERP supports a central database and connects to different modules. There are various leading ERP softwares available. The large scale industries are successfully implementing ERP software. They are able to afford the huge cost involved in implementation of ERP software. Equally important are small and medium industries in Indian economy. In terms of value, this sector along with micro businesses contributes to manufacturing output and total exports of the country. This sector employs about huge workforce throughout the country. Micro, medium and small enterprises provide maximum opportunities of jobs. ERP brings about reduction in lead time, reduced quality cost, up to date information, decision making capacity, increased customer satisfaction etc. in industries. The data is collected from select industrial units which have implemented ERP software. These industrial units belong to manufacturing sector from Belgaum, Hubli, Shimoga, Hospet and Bangalore and are engaged in production of castings and components. The study shows that SMEs have derived benefit in terms of profit and also in intangible factors such as customer satisfaction, capacity utilization, information flow and quality. It is found that SMEs have a major role in implementing ERP software and can increase their performance if their employees properly understand the use of ERP software. Most of SMEs prefer low cost ERP instead of branded ERP softwares. Most executives/managers of SMEs have recommended ERP implementation

KEYWORDS
ERP, module, lead time, cost reduction, information flow.

INTRODUCTION
Business organizations are facing great pressures to improve profitability, customer satisfaction, market share, value addition to the products and services they deliver to their customers. Especially manufacturing firms in industries like textiles, chemicals, FMCG, engineering goods etc. are constantly striving to improve the quality and reduce the total cost. They are turning to the use of information technology to make some decisions, which will help them in overcoming a few of these problems and improve efficiency.

To derive benefits from technology a system has to be developed that provides information across all functions cutting departmental barriers. Such systems enable optimum use of all the resources of the organization. This is where Enterprise Resource Planning (ERP) software will be useful. ERP is a system which provides up to date information, coordinates between different departments and enables the managers to take decisions for organization's overall objectives rather than the departmental or functional objectives.

The ERP packages build information base and provide knowledge base for planning and control of the business through the business function management. The ERP is the main system, interfaced or assisted by the other systems in the organization. These systems may stand alone or form a part of the manufacturing or commercial processing systems.

There are many features of ERP software. The important ones are security authorization, referencing responsibility and the implementation of business rules. These are provided to safeguard the organization from illegal practice and also to protect the valuable information from misuse. These features help to keep the system, the information and the data integrity at the highest level. The ERP is activated by its users. The security is built for the authorized usage and also for selective access. The implementation of the most of ERP packages begin with enterprise modeling which defines the enterprise structure, the authority functions, the processes and the business rules. The enterprise model is the platform for the ERP system implementation. There are different modules for different functions like production, finance, sales and distribution, materials management etc. ERP supports a central database and connects to different modules

It is found that many companies are implementing ERP software for the following reasons, to enable improved business performance, to support business growth requirements, to improve responsiveness across the company and to take advantage of untapped market. There are benefits related to profits, communication, performance, delivery schedule etc. The cost and time involved for implementation of ERP software is also important.

The ERP solutions are user friendly which is a major advantage offered by ERP software. The user friendly approach can be used to manage the business with varying business conditions. The solution provides trial posting, simulation for production schedule, the flexible valuation procedure etc. ERP also provides intelligent support in business management. Benefits of ERP in industries include reduction in lead time, on time shipment, reduced quality cost, up to date information, decision making capacity, increased customer satisfaction, improved supplier relationship.

LITERATURE REVIEW
The SMEs are turning their attention towards ERP software that is expected to fetch benefits. ERP implementation costs include software, hardware and personnel. The software and hardware costs are easily quantifiable but not personnel cost (Davenport, 2000). Dong (2001) proposed a conceptual model exploring the impact of top management on Enterprise Systems (ES) implementation.

Earlier ERP was mostly implemented by large scale industries in view of affordability in terms of cost and requirement. It is not only large scale companies, but also SMEs have the need to go in for ERP software. Koh et al. (2006) concludes that SMEs have the same needs as large enterprises but face different challenges in view of their financial constraints and capabilities. Buonanno et al. (2005) confirm that SMEs either do not have sufficient resources or are not willing to devote a significant portion of their resources to a complex ERP implementation process. Rao (2000) also holds that SMEs are more vulnerable than large companies. It is seen that SMEs either do not have sufficient resources or are not willing to devote their resources as compared to large scale enterprises. There is a need for more research for ERP for SMEs.

A deeper understanding of the ERP implementation at SMEs is needed to ensure coordination between different departments. Huin (2004) holds that unless differences between SMEs and large enterprises are clearly understood, ERP projects in SMEs will not reach the desired outcomes. Those facts reveal that the ERP for SMEs definitely demands specific research and analysis other than previous investigations primarily targeting large enterprises. Lussier et al.(2008) notes that understanding small business is an important area of research. The contribution of SMEs is extremely important to the economy and rapid growth. This growth is essential for providing immediate employment opportunities. Ramirez (2005) has summarized main challenges faced by SMEs in Latin America as Lack of training, Limited training in development of human resources , Lack of information systems, Lack of efforts to promote technological innovation.

Muscatello et al. (2003) adopted a case study research methodology to analyze implementation activities in order to establish criteria that lead to a successful installation. They indicate that "effective executive management commitment can help a project achieve success" and that the choice of the "executive sponsor" is significant.

Based on a review of the literature, Loh et al. (2004) propose a framework depicting primary factors that may influence the success of ERP implementations in SMEs. In many countries including Latin American countries SMEs suffer from HR training, appropriate financing and lack of information system. A better information system which is cost effective and suitable for SMEs can be considered by SMEs. It is seen that ERP for SMEs definitely demands specific research other than the studies which focused on large enterprises. It can be noted that understanding of small business is an important area of research.

Rana Basu (2012) found that only eight of twenty five issues are contributing 80% of total contribution. Hence eight issues are regarded as key issues being extracted from review section in context to ERP implementation in SMEs of developing countries like India. He identified the most important issues that would actually lead to successful ERP implementation and to prioritize the issues against the benefit criteria by applying TOPSIS (Technique for order preference by similarity to ideal solution) method. Those issues are education & training, support from top management, properly defined goals & objective, project team competence, project management, change management, proper selection of package and effective communication.

Also the important benefit criteria that appeared frequently in the literature (Shang & Seddon, 2002), have been taken into account for analysis are efficiency in overall business, improved decision making and planning, better utilization of resource, organizational empowerment, improvement in productivity and quality.

Buonanno et al. (2005) contribute with an empirical research analyzing factors affecting ERP adoption and compared SMEs to large scale companies. Their study presents correlation between company size and ERP adoption. A similar comparison between large companies and SMEs is also embraced by Bernroider et al. (2001) but focused specifically in the ERP selection process. They have identified the differences which are related to staffing the group performing the selection process. Basically, large scale organizations engage more manpower in decision making processes than SMEs. SMEs select ERP with less complex models and less expensive methods.

Maldonado Miguel (2009) analyzed the factors impacting the success of ERP implementations in 49 small and medium enterprises with empirical assessment in Latin American countries. He has analyzed the importance of six factors in successful implementation of ERP software. They are change management, ease of use of ERP, ERP project success, ERP business improvement success and ERP user satisfaction. It is found that relationship implying the ease of use of ERP and ERP business improvement has been corroborated. Similarly that relationship implying the ERP user satisfaction and change management has been corroborated. Further the relationship implying ease of use and ERP user satisfaction has been correlated. The relationship implying project implementation success and ERP user satisfaction has been confirmed. The association between project implementation success and business improvement has been correlated.

Zach Ondrej (2012) observed that SME context influences ERP system implementation. Furthermore, the owner-managers significantly influenced almost all issues across the ERP life- cycle, such as ERP system selection, implementation team work and system customization. Even though the CEOs justified the ERP system implementation, their motivation was limited to replacing the old legacy systems. This shows that the lack of strategic perspective in SMEs might limit the ability to acknowledge the potential of ERP implementation.

Maleki (2010) has identified 14 critical success factors which have critical role in successful implementation of ERP software in SMEs in Karnataka. The most important factor in successful implementation of ERP software is appropriate training. The second most important factor is top management support, the third being project management. The last important factor is project champion.

Large scale firms have manpower and implement complex ERP system. But SMEs have limited manpower which make them to go in for less complex ERP system. There is a potential for implementation of ERP software by SME as they are the next logical adopters.

SCOPE AND SIGNIFICANCE OF THE STUDY

The opportunities for industrial growth have increased significantly after the liberalization of economy in India in 1991. MNCs have established their businesses either as a subsidiary or as a joint venture with Indian companies. The increase in FDI, the liberalization policies of the government, improved infrastructure in transport, communication and education etc. have resulted in increased investment in a number of sectors. The large scale industries have made major contribution to the industrial growth. Equally important are small and medium scale enterprises (SMEs). SMEs are trying to capture the market and fill the void which is not covered by large scale industries. In India the Small scale industries (SSI) sector contributes significantly to the total exports of the country. As the SMEs are seeking to increase their productivity and skill sets to compete with large scale industries, they are concentrating on the use of information technology for optimal utilization of resources. ERP software is one of the technologies SMEs can adopt. The large scale industries are able to afford the huge amount of investment required for ERP in order to reduce cost, increase market share and achieve their objectives.

The research is extensive in the field of implementation of ERP software, critical success factors for implementation of ERP software and post implementation evaluation of ERP software. In addition, literature has mainly focused on large enterprises and only few studies have attempted to validate the proposed models empirically (Somers et al., 2004). The focus of ERP software vendors was on large scale industries. The need for implementation of cost effective and affordable ERP software is felt by SMEs. The results from this research will definitely contribute to the adoption of ERP software by small and medium scale industries in Karnataka.

This study is aimed to look into the effect of implementation of ERP software in small and medium enterprises (SMEs) with respect to customer satisfaction, quality improvement and information flow. The statistics available on SMEs which have implemented ERP software in Karnataka are quite a few. The data about the number of small and medium industries in Karnataka is obtained from the Department of industries, Government of Karnataka.

RESEARCH DESIGN

Descriptive research decision was taken up to study the implications of ERP software in SMEs in Karnataka. The researcher contacted thirty units in SME sector located in different industrial estates in Karnataka. The population consists of all the SMEs in Karnataka which have implemented ERP software. For collecting the sample data the researcher used snow ball sampling method. There are a number of industrial estates. Among them the researcher has selected following places for the study: Bangalore, Belgaum, Hospet, Hubli, and Shimoga. The selection of above five areas is completely based on level of industrialization activities and their importance in the regional development.

The data is collected from primary and secondary sources. The data collected by the researcher is directly from the sources such as executives, managers or employees of the organizations. It is collected through questionnaire by post, email or interview method. Sources of secondary data include reports published by Ministry of industries, publication by Centre for Monitoring Indian Economy (CMIE), Security Exchange Board of India (SEBI) etc. journals, websites.

The researcher has considered has following parameters to evaluate the effect of ERP post implementation: Sales Revenue, Profit after tax, Reduction in lead time of raw materials, Reduction in lead time of finished goods, Reduction in process Cycle time, inventory ratio, debtor's ratio, Working Capital turnover ratio.

There are other factors also which are equally important for the organization's success. They are Quality Improvement, Information Flow, Customer Satisfaction and Capacity utilization.

DATA ANALYSIS AND INTERPRETATION

Effect of ERP on performance parameters such as profitability, cost reduction, etc are taken as parameters. After the implementation of ERP software these parameters will be affected. If lead time for procurement of raw material finished components decrease, it is beneficial to the organization. If there is increased customer satisfaction, information availability, capacity utilization and quality improvement in the organization, then the organizations will benefited.

In the questionnaire every question has five possible answers in case of a parameter. The respondent gives his/her response as follows:

Option1: parameter highly decreased (coded as -2)

Option2: parameter decreased (coded as -1)

Option3: parameter remained same (coded as 0)

Option4: parameter improved (coded as +1)

Option5: parameter highly improved (coded as +2)

If the set of all responses are considered equally likely, it can be said that probability of response being any one of these answers is 0.2. So, probability of parameter remaining same or decreasing is 0.6 (cumulative sum) and hypothesis is set up for testing this for the variables Sales revenue, profit after tax, Lead time reduction etc. It is seen that in the response to all of the above, no firm reported decrease in sales revenue and profit after tax after implementation of ERP software. No firm reported lead time increase after implementation of ERP software which is a benefit for the firm. The other parameters like information flow, quality of products, capacity utilization and customer satisfaction have either improved or remained same after implementation of ERP software.

The data for the three years are taken for analysis for small scale industries and medium scale industries separately. The number of negative signs or zeros is counted for each parameter out of total responses. The probability of getting negative or zero responses out of all responses p equals to 0.6 is taken as null hypothesis.

Null hypothesis is rejected in favor of alternative if number of negative or zeros is very less. In the alternative we go on taking different values of p like 0.5, 0.4, 0.3, 0.2, 0.1 etc and a chi square test is applied to test the discrepancy between frequency of negative counts under null and alternative hypothesis.

It is observed that the chi square statistic goes on decreasing first and then increases. So, in the alternative we take that value of p which minimizes chi square statistic. The best value of p is obtained by fitting a Bernoulli distribution to the frequency data and p is obtained using mean frequency. This method is called method of moment estimation.

For example if out of 36 responses 3 are negative and 33 are positive the best p value will be
1-(33/36) (that is 1-mean).

The results are summarized below.

H0: The probabilities of getting zero or negative counts for Quality variable is p = 0.6

Against

H1: The probabilities of getting zero or negative counts for Quality variable is p = 0.25

TABLE NO. 1: CHI SQUARE VALUES FOR PARAMETERS

Probabilities of negative or zero count	X	Observed frequency (O)	Expected Frequency (E)	$(O\text{-}E)^2 / E$	Chi Square
p = 0.6	0	9	21.6	7.35	18.375
	1	27	14.4	11.025	
p = 0.5	0	9	18	4.5	9
	1	27	18	4.5	
p = 0.4	0	9	14.4	2.025	3.375
	1	27	21.6	1.35	
p = 0.3	0	9	10.8	0.3	0.4285
	1	27	25.2	0.128571	
p = 0.25	0	9	9	0	0
	1	27	27	0	
p = 0.1	0	9	3.6	8.1	9
	1	27	32.4	0.9	

(Source: Survey data)

The same kind of analysis is done for different variables for medium and small scale industries separately and results are summarized below.

TABLE NO. 2: SMALL SCALE INDUSTRIES

Indicator	Alternative Hypothesis p
Sales Revenue	0.083333333
profit after tax	0.083333333
Reduction in lead time raw materials	0.25
Reduction in lead time finished goods	0.027777778
Reduction in process Cycle time	0.111111111
inventory ratio	Nearly zero
debtor's ratio	0.069767442
Working Capital turnover ratio	Nearly zero
Quality Improvement	0.214285714
Information Flow	Nearly zero
Customer Satisfaction	0.047619048
Capacity utilization	0.214285714

TABLE NO. 3: MEDIUM SCALE INDUSTRIES

Indicator	Total counts	Alternative Hypothesis p
Sales Revenue	40	0.275
profit after tax	40	0.375
Reduction in lead time raw materials	42	0.261904762
Reduction in lead time finished goods	42	0.285714286
Reduction in process Cycle time	40	0.225
inventory ratio	46	0.173913043
debtor's ratio	44	0.181818182
Working Capital turnover ratio	44	0.181818182
Quality Improvement	45	0.244444444
Information Flow	60	Nearly zero
Customer Satisfaction	45	0.177777778
Capacity utilization	45	0.39

CONCLUSION

As all p values are below 0.4 it can be said that the overall probability of getting 'Non improvement' of parameters is less than 0.4 : It is found that the parameters have shown overall improvement significantly. There is improvement in financial performance measured in terms of profitability and lead time has reduced in most of the firms. The important ratios like inventory turnover ratio, debtor turn over ratio and working capital turnover ratio have also shown improvement. The non financial parameters like quality, customer satisfaction, capacity utilization and information flow have improved significantly. The categorical regression shows that non financial parameters have influence on improving the financial parameters to a considerable extent. As internet usage and applications are spreading fast, SMEs can get connected to their ERP vendors' network and gets online support for their day to day transactions using ERP. The Government can play a major role in promoting use of ERP software to SSI units.

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A STUDY ON THE PERCEPTIONAL ATTITUDE AND KNOWLEDGE TOWARDS MGNREGA IN TAMILNADU WITH SPECIAL REFERENCE TO TIRUCHIRAPPALLI DISTRICT

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ABSTRACT

In India, despite economic growth, poverty and unemployment continue to be the major economic problems with 75 per cent of the rural population living below poverty line and 74 per cent unemployed population hailing from rural India .in order to overcome this evil roots the central govt initiated the MGNREGA. Though the scheme considered as a livelihood source for the rural people but who are not fully aware of the full fruit of the scheme. In another flip of the coin most of the past research concentrated on the economic point of view and performance analysis about the scheme. The researchers in the past period not have given importance to the current topic. In order to concentrate on that particular the present study is discussed both the awareness and perceptional attitude of the beneficiaries towards mgnrega in the study area.

KEYWORDS

mgnrega, livelihood, awareness, perceptional attitude, beneficiaries.

INTRODUCTION

Social evils and uncivilized people came from the seed of poverty. The country will not move forward with the mass of poor people. To lit the lamp in the downtrodden people's life, UPA Govt has innovated the scheme called MGNREGA, which is the largest public employment programme in the World providing work to 5 Crore rural households or 10 Crore workers. One in every 3 rural households is a worker under the programme. It addressed 41% of the problem of underemployment in the rural areas.[1] In the current financial year; the central government has allotted 5,000 crores to nrega in the union budget.

MGNREGA in Tamilnadu was started on February 2nd, 2006 in six districts under phase I; phase II started on 01.04.2007 mainly in four districts, and the remaining 21 districts is taken part under phase III on 01.04.2008. This year the wage rate is increased to Rs.184 in Tamilnadu. Approved Labour Budget in the FY 2015-2016 is 239.11 crore. Total number of household completed the work in the FY 2014-2015 were 22, 07,425 crore.[2]

Tiruchirappalli is the Main district in which the scheme provided a sustainable work to the rural women as evidenced by the percentage of women participation was 79.15, where men are 20.85 in the FY 2014-2015.[3] Such huge number of people procuring benefit under this scheme it is necessary to analyses whether the job card holders really aware of the policies, benefits and the govt assistances available under this scheme.

In this cockpit view, a study has undertaken in Pullambadi block of Tiruchirappalli district to explore the perceptional attitude and knowledge towards the employment guarantee scheme.

THE EMPLOYMENT GUARANTEE ACT: THE BASIC IDEA

The Employment Guarantee Act is a step towards the right to work, as an aspect of the fundamental right to live with dignity

- The "right to life" is a fundamental right of all citizens under Article 21 of the Indian Constitution.
- "Right to life… includes the right to live with human dignity; it would include all these aspects which would make life meaningful, complete and living." (Supreme Court)

REVIEW OF RELATED LITERATURE

R.S.Negi (2015)[4] et.al underwent an attempt to assess the impact on implementation and effectiveness of the Act in district Pauri Garhwal, Uttarakhand. The study was mainly focused on the impacts of MGNREGA related to natural resources include soil, water etc. The objectives were to create wage employment for the rural sustainable livelihood to raise productive capacity of the economy and to analyze the extent of women participation. They concluded that the introduction of the programme of MGNREGA had a clear positive impact on the rural economy through employment and income generation and also through raising the standard of living and socio-economic performance of the rural community of the district. So it is recommended that the present programme should be further spread in the rural areas by means of proper planning, adequate supervision, effective implementation and better monitoring. The MGNREGA scheme should not be confined into 100 day's work for wage earners it should be further extended for shake of beneficiaries.

Ram Babu and Dr.A.N.Panda (2015)[5] conducted performance assessment of nrega in which they analyzed the current status, future prospect, funding pattern and wage rate of MNREGA. He summarised that Household provided employment in the financial year, 2013-14 (up to December, 2013) 3.8 crore and 135 crore person days of employment were generated. Expenditure on Wages in the current financial year, 2013-14, Rs.17832 corer (76% of the total expenditure) From FY 2006-07 up to FY 2013-14(up to Dec, 2013) the women participation rate has ranged between 40-51 percent of the total person-days generated, much above the statutory minimum requirement of 33% percent. 2013-14, 74 million individuals in 48 million household in rural Indian were employment under the Mahatma Gandhi National Rural Employment guarantee program with each household on average work for 46 days. This cost the Government of India Rs 39,000 corer in the year 2013-2014.

Hazarika (2014)[6] examined the impact of MGNREGA on income and migration of people of Lakhimpur District, Assam. The study found that scheme has a positive impact on eradicating poverty by increasing income of people and decreasing the rural migration

According to the study "The Politics of the Mahatma Gandhi National Rural Employment Guarantee Act in Andhra Pradesh" by Diego Maiorano (2014)[7] said that how political dynamics have influenced the nrega implementation in Andhra Pradesh. He stated that implementation performance of the scheme has been fairly good in the study area .The reason behind that success was political commitment of that state's chief minister. He argue that Andhra Pradesh has performed fairly well as far as the generation of MGNREGA employment is concerned. In fact, among India's largest states, it is among the top performers in terms of both person-days per household generated (56.49 as against an all-India average of 42.43 in 2011–12) and number of households provided with 100 days of employment (17.76% as against 7.81% on average in 2011–12). Andhra Pradesh also has an above-average participation rate of women (57.79% as against 48.17% in 2011–12).

Shenbagaraj P. and Arockiasamy S. (2013)[8] "Impacts of MGNREGA on Local Development: A Study of Ottapidaram Blocks in Thoothukudi District, Tamil Nadu", they proposed that the scheme was able to provide only 26 days of employment in a year on an average of the Thoothukudi district of Tamil Nadu. Moreover they claimed that the average earnings by each person did not exceed Rs. 2000 per year.

OBJECTIVES OF THE STUDY
The present study focused on the following objectives:
1. To know about the respondent's perceptional knowledge related to the provision of the scheme.
2. To analyses the respondents overall attitude towards the performance of the scheme.

STATEMENT OF THE PROBLEM
Based on the collection of previous literature the researcher found that most of the research have emphasized on economic aspect, performance analysis and migration level. Very few people have concentrated on social audit and political aspects of NREGS.No researcher gave importance to respondent's knowledge and attitude towards the scheme because they are the stakeholders of the scheme. They should know all the information and provisions related to the scheme. Therefore the present study will discuss both the awareness and perceptional attitude of the beneficiaries in the study area. While studying the study will emphasis on following questions:
1. Are the people really aware about MGNREGA provision?
2. Is it really a livelihood generating programme or not?
3. What type of attitude and value the respondent's possessed about the implementation of the program.

RESEARCH METHODOLOGY
UNIVERSE OF STUDY: The study was carried out in state of Tamilnadu. However, the study area was confined to Pullambadi Block in Tiruchirappalli district. Using purposive sampling method the study area was selected. The Pullambadi Block consists of 33 Panchayat which includes 22450 registered households that contains 37881 registered jobholders. Exploratory research design was followed for this research.

SAMPLING PROCEDURE: For the selection of beneficiary respondents two stages were followed. In the first stage purposive sampling method was adopted for the selection of the study area. In the second stage, for selecting the sample respondents, convenient sampling technic was adopted.

SAMPLE SIZE: Hence it is a pilot study the researcher selected two samples from each Panchayat which in number 66.All the sample were jobholders only.

SOURCE OF DATA: Data was collected both from primary and secondary sources. Primary data was collected from all the stakeholders of NREGS. Well-structured Questionnaire was used for collecting data from the beneficiaries. The secondary data was collected from official records, published reports of similar projects, and Ph.D. thesis, journals and online sources.

TOOLS OF ANALYSIS: The collected data were analysed with help of Garrett's ranking technique Under the Garrett's Ranking Technique the percentage position is calculated by using the following formula: **Percentage position=** $\frac{100(R_{ij}-0.5)}{N_j}$

Where,
Rij = Rank given for the i_{th} statement by jth employee
Nj = Number of statements ranked by jth employee
The percent position of each rank thus obtained was converted into scores by referring to the table given by Garrett. Then for each statement, the scores of individual employees were added together and divided by the total number of employees. The mean scores for all the statements were arranged in an ascending order, ranks were assigned and the important statements identified

ANALYSIS OF COLLECTED DATA
The following table clearly explains that the various sources through which the respondents come know about the birth of the scheme in the study area.

TABLE 1: SOURCES FOR AWARENESS

Sources	Number of Respondents	Percentage
News paper	5	7.5
Radio	10	15.15
Television	5	7.5
NGO representative	9	13.63
Govt officials	9	13.63
Panchayat members	16	24.24
Friends & Neighbors	12	18.18
TOTAL	**66**	**100**

Source: Primary data

Therefore, the table reveals that with help of Panchayat members the respondents get the intro or awareness about the scheme (24.24%) whereas newspaper or television does not give any proximity in the sources list, because both of the sources get only 7.5%.

In order to know about the respondent's awareness level about the scheme eleven factors were determined. The percentage score for each rank from 1 to 11 factors are calculated. The percentage score thus obtained for all the eleven ranks are converted into scale values using Garrett Ranking Conversion Table. The scale value for first rank to eleventh rank is 81, 70, 63, 57, 52, 47, 42, 36, 29 and 18 respectively. The score value (fx) is calculated for each factor by multiplying the number of respondents (f) with respective scale values (x). The total scores are found by adding the score values (fx) of each rank for every factor. The mean score is then calculated to know the order of preference given by the respondents for the factors. Based on the mean score, the overall ranks are assigned for each. The ranking analysis of the factors influencing the passengers in selecting train as their mode of travel through Garrett's Ranking Technique is shown in Table 3 and Percentage Positions and their corresponding Garrett's Table values are given table 2.

TABLE 2: PERCENTAGE POSITIONS AND THEIR CORRESPONDING GARRETT'S TABLE VALUES

Rank	Percentage Position	Garrett's Table Value
I	100(1-0.5) 11=4.5	82
II	100(2-0.5) 11=13.63	71
III	100(3-0.5) 11=22.72	64
IV	100(4-0.5) 11=31.81	59
V	100(5-0.5) 11=40.90	55
VI	100(6-0.5) 11=50	50
VII	100(7-0.5) 11=59.09	45
VIII	100(8-0.5) 11=68.18	40
IX	100(9-0.5) 11=77.27	35
X	100(10-0.5) 11=86.36	28
XI	100(11-0.5) 11=95.45	17

TABLE 3: THE LEVEL OF AWARENESS ABOUT THE SCHEME AND THEIR RANKS

S.No	Factors	Rank											No of respondents	Total Score	Mean Score	Rank
		1	2	3	4	5	6	7	8	9	10	11				
1	A	40	25	1	0	0	0	0	0	0	0	0	66	5119	77.56	I
2	B	1	15	11	3	4	6	10	5	3	4	4	66	3483	52.77	III
3	C	11	1	15	4	3	6	4	3	5	4	10	66	3391	51.37	V
4	D	2	23	8	5	1	10	7	2	2	5	1	66	3781	57.28	II
5	E	5	5	3	13	4	6	5	7	9	8	1	66	3305	50.07	VI
6	F	2	2	5	4	3	9	4	1	1	10	25	66	3117	47.23	VII
7	G	8	12	3	3	12	4	5	6	3	2	8	66	3441	52.14	IV
8	H	2	1	2	5	4	2	2	4	9	4	31	66	2182	36.37	XI
9	I	3	2	1	3	6	7	1	8	9	6	20	66	2497	37.83	X
10	J	4	6	9	1	2	4	6	2	17	8	7	66	2987	45.26	VIII
11	K	3	6	8	4	5	4	2	1	3	10	20	66	2750	41.67	IX

The factors considered for analysing the awareness level of the respondents and their rank after the Garrett ranking analysis.

TABLE 4

S.NO	Factors	RANKS
1	A. 100 days per households	I
2	B. Knowledge about correct minimum wage	III
3	C. Mode of fixation of wage	V
4	D. Equality in wage for both the gender	II
5	E. More within a radius of 5km	VI
6	F. Eligibility for unemployment allowance	VII
7	G. Compensation for delayed payment	IV
8	H. Medical assistance for injury in the worksite	XI
9	I. Available of Worksite facilities a. Crèche (if more than 5 children below the age of 6 years are present) b. shades c. Drinking water d. Period of rest	X
10	J. Right to payment within a fort night	VIII
11	K. Accidental benefits	IX

CONCLUSION

From the above study it may concluded that the respondents of Tiruchirappalli district are very familiar about only the days of employment and equal wage for both the genders. They don't have any proper knowledge about medical assistance, facilities available, compensation accidental benefits, mode of payment and fixation of wages etc. Implementation of any scheme alone is not duty of any government. They have to monitor on a continuous basis whether the scheme has given full details to the people who are taking active part under the scheme, otherwise we won't realize the expected benefits.

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EMPIRICAL ANALYSIS OF MACROECONOMIC INDICATORS AS DETERMINANTS OF GDP OF PAKISTAN BY USING ARDL APPROACH

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ABSTRACT

Purpose: *The causal and dynamic nexus of gross domestic product (GDP) growth rate and major macroeconomic variables like consumer price index (CPI), external rate of return (ERR), foreign exchange rate (FER), foreign portfolio investment (FPI) and narrow money supply (M_1) is undertaken in this study in the case of Pakistan in the short run and long run.*

Methodology and data: *Auto-regressive Distributed Lag (ARDL) model to co-integration, Unit Root Analysis and Error Correction Model (ECM) approaches are used in this study on the time series data for the period of 40 years from 1975 to 2014. Used secondary data composed form the official websites of World Development Indicators (WDI), World Bank Group (WBG), International Monetary Fund (IMF), Ministry of Finance Pakistan (MFP) and State Bank of Pakistan (SBP) primarily.*

Findings: *Inflation rate (CPI), foreign exchange rate (FER) and external rate of return (ERR) expressed a negative impact on GDP growth but other variables like foreign portfolio investment (FPI) and money supply (M_1) showed positive impact on GDP growth of Pakistan.*

Practical implications: *It is strongly recommended in the light of empirical results that government of Pakistan must control the high rate of inflation rate, foreign exchange rate and external rate of return in order to boost the economic growth. On the other side in is needed to invite the foreign portfolio investment and manage in the appropriate way the money supply will more increase the economic growth rate of Pakistan. Results of this research work are much significant and helpful for planners for the policy making, decision making and forward planning.*

KEYWORDS

GDP growth, Inflation, Interest, Exchange, Investment, M_1, ARDL and ECM.

1. INTRODUCTION

The relationship between macro-economic variables and economic growth got much attraction by a number of scholars due to its significance. Economic condition of an economy generally indicated in the form of GDP i. e., gross domestic product which represented the value of goods produced and services provided within the geographical boundaries of a state. GDP widely used to examine the economic ranking and per capita income of a country. It considered necessary to study the GDP for the economic planning and for various other economic and social decision making objectives. My selected topic is very important in the economic and non-economic life. GDP affected by a number of factors like unemployment rate, inflation rate, industrial production, stock market prices, money supply, interest rate, exchange rate, balance of trade, corporate profits, income and wages, level of new business, budget deficits, per capita income, government revenues and expenditures, infrastructure availability, means of transport and communication, human resources, educational and health facilities, investment and savings etc. Economic growth or GDP affected by a number of macroeconomic variables say exchange rate, interest rate and inflation in an economy. Economic growth indicated different environment of functional relationship with specific macroeconomic variables like exchange rate, interest rate and inflation. Numerous approaches applied to explore the relationship between GDP of a country with different economic variable by a number of researchers. But this study has selected five major variables namely inflation rate (CPI), external rate of return (ERR), foreign exchange rate (FER), foreign portfolio investment (FPI) and money supply (M_1).

According to World Economic Outlook (IMF), as in April 2014, economy of Pakistan witnessed higher and broad based economic growth rate. GDP growth percentage is 4.14% during current fiscal year. It was 3.7% during last fiscal year and was 3.84% during 2011-12.

During 2014, comparative real GDP of the World showed 3.6% growth rate. Growth rate of Euro Area was 1.2%, US was 2.8%, Japan was 1.4%, Germany was 1.7%, Canada was 2.3%, Hong Kong, Singapore and Korea showed growth rate of 3.7% while the growth rate of Vietnam was 5.6%.

ASEAN countries, Indonesia, Malaysia, Thailand and Philippines showed growth rate of 5.4%, 5.2%, 2.5% and 6.5% respectively during 2014. South Asian countries, Pakistan, India, Bangladesh and Sir Lanka showed 4.14%, 5.4%, 6.0% and 7.0% growth rate respectively.

Middle East countries, KSA, Kuwait, Iran and Egypt showed growth rate of 4.1%, 2.6%, 1.5% and 2.3% respectively.

African countries, Algeria, Morocco, Tunisia, Nigeria, Kenya and South Africa showed growth rate of 4.3%, 3.9%, 3.0%, 7.1%, 63% and 2.3% respectively.

According to Pakistan Bureau of Statistics in 2014, growth rate of agricultural, industrial, commodity producing and services sector is 2.1%, 5.8%, 3.9% and 4.3% respectively in the case of Pakistan.

This study wants to find the actual relationship in the short run and in the long run between selected macroeconomic variables and GDP in the case of Pakistan.

Various other studies are considered for the support of this study. Like, Cecchetti (2000) found that there is inverse relationship between inflation and GDP. According to structuralists that inflation had positive effect on economic growth but monetarists point of view mismatched with structuralists. Manoel Bittencourt (2012) concluded that inflation has a huge effect on the growth in the four Latin American countries which faced hyper-inflation in the 1980 and early 1990s. Phillippe Bacchetta (2013) said that some survey evidence shows that there is highly positive relationship between exchange rate and macro fundamentals. He argues that this type of unstable relationship is naturally develops when structural parameters are unknown in the economy. On the other side Levy-Yeyati and Sturzenegger (2002) said that exchange rate regime affects economic growth positively. James R. Lothian (2011) stated that he studied the validity of uncovered interest rate parity by constructing ultra-long time series that span two centuries. The forward premium regressions showed positive slope estimates over the whole sample. But the estimates become negative only when the sample is dominated by the period of 1980s. Obamuyi (2009) found reasonable results regarding rate of interest and economic growth.

Foreign portfolio investment has positive impact on the economic growth of a country as stated by Durham J. B. (2004). According to Alfaro L. (2006), positive relationship between foreign portfolio investment and economic growth.

Finally, narrow money supply also has positive impact on the economic growth as estimated by Ekone A. F. and Ogunmuyiwa M. S. (2010). This positive relation also estimated by the Wachtel P. and Rousseau R. L. (2011).

The main objective of my study is to find out the impact of inflation, exchange rate, interest rate, foreign portfolio investment and money supply on the GDP of Pakistan and to find those measured which government should adopt for economic growth in the presence of discussed variables.

No doubt, some researchers already had conducted the research on such like nature but I will apply Auto-regressive Distributed Lag (ARDL) to co-integration and Error Correction Model (ECM) which will differentiate my work.

This paper is managed as follow: Section 2 summarizes the literature review and data with mathematical model is discussed in Section 3. Section 4 contains the empirical results and discussion. Finally, main finding and policy implications are argued in Section 5.

2. LITERATURE REVIEW

GDP of a country is affected by a number of economic and non-economic variables. GDP of a country has different type of relationship with different variables. A lot of studies are available on the impact of inflation, interest rate and exchange rate on GDP. It is impossible to review all the studies but some of them are reviews as under.

2.1. INFLATION RATE (CPI) AND ECONOMIC HEALTH

Inflation expresses crucial role in an economy and it exists in all the economies at varied rate. Stability of inflation is necessary for the implementation of macroeconomic policies. In developing countries including Pakistan high population growth, rising food prices, urbanization and more money supply are the causes of inflation. Economy of Pakistan expresses overall a negative relationship between GDP growth and rate of inflation. Rate of inflation was 8.0% during fiscal year 2014 against 7.4% of last year. It was 11.0%, 13.7%, 10.1% and 17.0% during the years of 2012, 2011, 2010 and 2009.

According to central banks of respective countries rate of CPI inflation in Pakistan, India, Bangladesh and Sri Lanka is 8.7%, 10.1% 7.6% and 5.4% during 2014.

Cuaresma J. C. and Maria S. (2014) studied the impact of inflation on long run growth of a group of fourteen European Union countries. Their study showed a complex nature of relationship between these two. There estimations showed positive relationship when rate of inflation is less than 1.6%. According to both researchers previous work done by various other researchers showed linear nexus.

Pattanaik S. S. et al. (2013) stated that monetary policy strongly affected the economic growth and investment activities in the economy. They stated that tight monetary policy showed a rise in interest rate since mid of 2011, it considered the major factor of slowness in economic growth and investment events of previous countless years. They stated that since 26th July of 2011, the rate of inflation was more that of 8%. They said that it was not clear view that nominal or real interest rate was responsible for economic growth and investment or not. But theoretical and empirical study found that investment and economic growth were strongly affected by the nominal and real rates of interest. Further, researchers concluded that real rate of interest was responsible for change in real macroeconomic indicators like investment and growth and nominal rate of interest many be not representative of correct position of monetary policy.

Li M. (2011) expressed the relationship between inflation and economic progress of ninety backward and twenty eight advanced nations by considering the period of 1961 to 2004 and showed nonlinear relationship between inflation and economic growth. His more results showed different forms of nonlinear relationship between inflation and economic growth in advanced and backward countries. The observed data suggested two thresholds in case of developing economics. Researcher further said that effects of inflation on economic growth were significant and positive when the rate of inflation lower than first threshold, the effects of inflation were significant and strongly negative at moderate rate of inflation which were in between of two threshold levels, finally at highest rates of inflation, the impact of marginal inflation on economic growth diminishes fast but remained significant and negative. On the second side in case of advanced countries one threshold is detected and was significant. According to nonlinear mechanism the negative effect of inflation on economic growth reduced as the rate of inflation rose.

H_{1a} = There is statically significant impact of inflation (CPI) on economic growth

2.2. EXTERNAL RATE OF RETURN AND ECONOMIC HEALTH

Interest rate is reported by the State Bank of Pakistan in the case of Pakistan. The interest rate last record was 8.5% in Pakistan. The average interest rate in Pakistan is 12.48% during the period of 1992-2014. The highest rate was 20% in October 1996 and it was lowest in November 2002. Interest rate in Pakistan was 10% in 2009, 12.5% in 2010, 14.0% in 2011, 12.0% in 2012, 9.0% in 2013 and it was 8.5% in the year of 2014.

According to Trading Economics, during February 2015, interest rate in Australia was 2.25%, Brazil 12.25%, Canada 0.75%, China 5.6%, Euro Area, France, Italy, Netherlands, Spain & Germany 0.05%, India 7.75%, Indonesia 7.5%, Japan 0.0%, Mexico 3.0%, Russia 15.0%, South Korea 2.0%, Turkey 7.5%, UK 0.5% and US it was 0.25%.

Menyah K., Nazlioglu S. and Wolde-Rufael Y. (2014) tried to explain the causal relationship between financial development and GDP of twenty one countries of Africa. Their worked showed insignificant impact of financial development and trade liberalization on GDP growth. They used panel bootstrapped approach to Granger causality.

Sharma V. and Rajavat Y. S. (2013) tried to verify the relationship of GDP with interest rate and money supply in India by applying Johansen Co-integration test. They based on the data of twenty four years tried to find the direct and indirect impact of certain variables on GDP of India.

Arora H., Dhawan C., Daga D., Singhvi N. and Singhal S. (2013) conducted a research that value of real GDP must be considered by policy makers while making decisions about the future of any economy. They estimated the quarterly based data of more than 30 observations during the 2004 to 2013. They explained that there exists positive association of rate of interest and rate of inflation with the GDP at fixed price based in India during the observed period.

Hye Q. M. A. and Wizarat S. (2013) considered the data from 1971 to 2007 and had found the association between financial liberalization index and economic growth of Pakistan. They used nit root test and auto-regressive distribution lag tests to calculate the integration and coefficients in the short run and long run respectively. Their empirical results showed positive relationship between financial liberalization index and economic growth. Additionally expressed that financial liberalization index insignificant in the long run and real interest rate affected the economic growth negatively and significantly. They finally concluded that gross domestic product will be reduced by rupees 1.03 million as a result of 1 unit increase in real interest rate. They recommended that state bank of Pakistan and government of Pakistan should pursue financial liberalization for the stable economic growth of Pakistan.

H_{1b} = There is statically significant impact of external rate of return on economic growth.

2.3. FOREIGN EXCHANGE RATE AND ECONOMIC HEALTH

According to State Bank of Pakistan, Pakistani Rupee showed and appreciation of 1.1% in July-March of fiscal year 2014 as compared to depreciation of 3.8% during the same period of the last year. The exchange rate was Rs. 98.77 by end June of fiscal year 2014 against the Rs. 99.66 per US$ at end of June 2013. During July-September of fiscal year 2014, exchange rate came under severe pressure because of US$ 1.8 billion of external debt servicing, more deficit in current account and heavy purchase of forex by the Central Bank of Pakistan. Real effective exchange rate increased by 2.8% in July-March of fiscal year 2014 as compared to an appreciation of 0.4% in the same period of the last year.

In (2014) Pavlic I. et al. conducted a research about the interrelationship between real effective exchange rate and economic growth. They concluded that there existed causality between openness of the economy & real effective exchange rate and economic growth in the short run. They reviewed the data for the period of 1996 to 2013 of Croatia. They tried to check stability of the long run equilibrium of economic growth with tourist arrivals, openness of the economy and real effective exchange rate. They used Johansen Maximum Likelihood co-integration technique and vector error correction model technique.

Rapetti M. (2013) made empirical research to fine the relationship between real exchange rate and economic growth. Researcher applied various econometric techniques to a set of large cross-country data. It documented positive association of real exchange rate with economic growth but factors behind this association were not very much clear. Researcher analyzed that mechanism and supported it with the empirical findings. A lot of research work done by several researchers on these discussed variables but that work was on primary level in accordance with theoretical examination and empirical evidences.

Qaiser Aman Q. et al. (2013) explored that relationship between exchange rate and economic growth was not very much clear. Both evidences and theories showed diverging behavior of impact of exchange rate on economic growth. The most of the researchers explained inverse relationship between exchange rate and economic growth in term of foreign direct investment, investment and exports. All the researchers of this research paper explored the relationship between exchange rate and economic growth in Pakistan for the period of 1976-2010. Their results showed exchange rate in case of Pakistan had improved investment flow, foreign investment and import substitute industry. Exchange rate affected positively economic growth in view of that.

Elwell C. K. (2012) represented that dollar depreciation since 2002 reduced a sign of economic problems like low economic recovery, more public debt a fall in global ranking. On the other side there was possibility of adjustment in economic framework. Depreciation of currency affected various aspects of US economy say more net exports, fall in foreign purchasing power, rise in prices and increase in external rate of return. That also may be caused fall in foreign debts. As said by Craig that exchange rate is not change by legislative policy, it may be affected by the decisions made by Congress and Federal Reserve while deciding jobs opportunities, debt limits and budget deficits. His results showed that depreciation of dollar had favourable effects on the economy of US and various other economies.

H_{1c} = There is statically significant impact of foreign exchange rate on economic growth.

2.4. FOREIGN PORTFOLIO INVESTMENT AND ECONOMIC HEALTH

Durham J. B. (2004) in his absorptive capacity and the effects of foreign direct investment (FDI) and equity foreign portfolio investment on economic growth conducted a powerful study which examine the effects of FDI and equity foreign portfolio investment (EFPI) using the data of 80 countries for the time period of 1979 to 1998. He used extreme bound analysis of significant results. His results show that effect of FDI and EFPI has positive and significant impact over the financial and institutional development of a country which leads to the economic growth of that country.

Alfaro L. (2006) tried to re-estimate the impact of foreign direct investment on economic growth promotion with the help of effects of financial markets on linkages. His study finds the positive impact of portfolio foreign investment on productive externalities of the host country by foreign multinational corporations in the existence of human capital. Foreign investment is crucial for economic growth but the role of financial market is also very important for the invitation of foreign investment.

According to Shi J. (2015) had re-estimated the empirical analysis of FDI and economic growth in Gansu China which was based on the time series data from 1986 to 2010. Research, in this paper, estimated the causal relationship between foreign direct investment and economic growth in a province of China by considering data of 1986 to 2010. He applied ADF unit root test, con-integration tests, ECM and Granger causality tests. This paper found positive and significant impact of foreign investment on economic growth of a country.

Azam M. (2015) investigated the impacts of human capital and foreign investment on economic growth in the case of ten countries of Commonwealth of Independent States. A linear regression model, fixed and random effect models are applied on the panel data for the empirical investigation for the time period of 1993 to 2011. The results of this study supported and confirmed the positive nexus of human capital and foreign investment on the economic health of a country.

H_{1d} = There is statically significant impact of foreign portfolio investment on economic growth.

2.5. NARROW MONEY SUPPLY AND ECONOMIC HEALTH

The research study of Ekone A. F. and Ogunmuyiwa M. S. (2010) concluded the connection between money supply and economic growth in the case of Nigeria. They applied OLSE causality test and ECM to the time series data from 1980 to 2006 to find out the empirical results. Their results showed positive relationship between money supply and economic growth of a country.

Liu L. and Calderon C. (2003) had estimated the relationship between financial development and economic growth. They had applied the Geweke Decomposition Test on the data raged from the 1960 to 1994 in the case of 109 developing and industrial countries. Their results showed that normally growth in financial market leads to the economic growth of a county and coexistence of Granger Causality between money supply and economic health of a country. Finally, they said that financial development leads to more rapid capital formation and productivity growth which make more improvement in the economic growth of a country.

Ndirangu L. and Nyamongo E. M. (2015) investigated the effect of financial innovation on monetary policy on the economy of Kenya during the 1998 to 2013. They applied ARDL approach to cointegration. Their test of cointegration and ECM and stability test using cumulative sum of squares showed stable relationship. Their findings show positive relationship between money supply and economic growth of Kenya.

Wachtel P. and Rousseau R. L. (2011) tried to find the relationship between financial instrument and economic growth of a country by considering the data for the period of 1960 to 1989. They also find the significant relationship between financial tools and money supply with economic growth.

Caporale G. M. et. al. (2015) estimated the impact of financial development on economic growth in the case of ten new member of European Union for the time period of 1994 to 2007. Accordingly, credit market has positive impact on the economic growth of these countries. But they suggests that money market of these countries is needed to improve more to develop the economic growth of these countries. Finally, they said that more efficient banking sector is found to have accelerated the economic growth of an economy.

Shan J. Z. et. al. (2001) estimated the impact of financial development on the economic growth of a country. They estimated the model of nice OECD countries and China by applying VAR model. They also showed superiority of time series approach to cross sectional approach. Their findings showed interdependence between financial development and economic growth. Finally, they said that there exits positive but little supportive relationship between money supply and economic health of a country.

H_{1e} = There is statically significant impact of narrow money supply on economic growth.

3. METHOD

There exists cause and effect relationship between dependent variable GDP and independent variables inflation rate, interest rate, exchange rate, foreign portfolio investment and money supply. This study applies ARDL approach to co-integration after the practice recommended by Pesaran and Shin (1999). This approach is selected due to various plus point than other co-integration approaches. It is applicable regardless of stationary of variables of the model and it provide long run estimation which are not available in other alternative co-integration approaches. Another plus point of this approach is that it can adjust more variable than other Vector Autoregressive (VAR) models.

Unit root test is applied to avoid the possibility of spurious regression. On the other hand some other tests are also applied to detect the serial correlation, conflict to normality and heteroscadasticity.

The ARDL approach to co-integration is applied which is based on tree stages if data is found I(0) or I(1). Long run connections and significance of lagged variables in an error correction mechanism regression is tested in the first step. Then to create the error correction equation the first lag of the levels of each variable are added to the equation. After it significance of all the lagged variables are estimated by performing F-test. Optimal lag length is chosen, in the second stage, according to the Akaike Information or Schwartz Bayesian in the second stage to estimate the ARDL. Finally, the restricted version of the equation is solved for the long run solution.

The following model is applied to express the nexus between the dependent and independent variables:

$\text{Ln } GDP_t = \alpha_0 + \alpha_1 CPI_t + \alpha_2 INT_t + \alpha_3 EXC_t + \alpha_4 FPI_t + \alpha_5 M1_t + \mu_t$

Where

GDP	=	Gross Domestic Product
CPI	=	Consumer Price Index
ERR	=	External Rate of Return
FER	=	Foreign Exchange Rate
FPI	=	Foreign Portfolio Investment
M_1	=	Narrow Money Supply

An ARDL expression of above equation is give as under:

$\text{Ln } GDP_t = \alpha_0 + \text{Ln } GDP_{t-1} + \alpha_1 \text{ Ln } CPI_{t-1} + \alpha_2 \text{ Ln } INT_{t-1} + \alpha_3 \text{ Ln } EXC_{t-1} + \alpha_4 \text{ Ln } FPI_{t-1} + \alpha_5 \text{ Ln } M1_{t-1} + \mu_t$

The third stage, a general error correction of equation is give as under:Δ

$\Delta \text{ Ln } GDP_t = \alpha_0 + \Delta \text{ Ln } GDP_{t-1} + \alpha_1 \Delta \text{ Ln } CPI_{t-1} + \alpha_2 \Delta \text{ Ln } INT_{t-1} + \alpha_3 \Delta \text{ Ln } EXC_{t-1} + \alpha_4 \Delta \text{ Ln } FPI_{t-1} + \alpha_5 \Delta \text{ Ln } M1_{t-1} + ECM + \mu_t$

It is expected that some of the independent variables must show negative and some must show positive signs.

At last, cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) tests are applied to explain the stability of short run and long run coefficients.

3.1. SOURCE OF DATA

Present research work searches the causal relationship between the GDP and some major macroeconomic variables in the long run in the case of Pakistan during the period of 40 years from 1975 to 2014. An outline of the variables is explained below:

Gross Domestic Product (GDP). Gross domestic product refers to the value of final goods produced and services provided within the geographical boundaries of a country during one year. It is the dependent variable of this model.

Consumer Price Index (CPI). Consumer price index is used as a proxy for inflation rate. Inflation is a situation in which there is sustained increase in general price level of goods and services in an economy or a situation when aggregate demand is greater than aggregate supply. The relationship between inflation and economic growth of a county had discussed by a number of researchers in their research work. This relationship got much important in 1950s. Various researchers showed various directions of relationship between these variables and GDP at international and national level in case of developed countries and developing counties. Inflation has negative impact on GDP growth.

External Rate of Return (ERR). External rate of return or Interest rate is the amount charged by principal, lender or creditor from the borrower or debtor for the use of assets especially money. Interest rate has negative impact on GDP growth.

Foreign Exchange Rate (FER). Exchange rate is the rate of exchange between two currencies, normally of domestic currency in term of foreign or internationally acceptable currency. Exchange rate is also known as forex rate. It is presumed that low exchange rate has positive impact on GDP growth.

Foreign Portfolio Investment (FPI). Foreign portfolio investment, in economics, refers to the inflow of funds from foreign countries where foreigners purchases in the stock of country, bound markets or may be sometimes for speculation. It is supposed here that foreign portfolio investment has positive influence on GDP growth of a country.

Narrow Money (M_1). Narrow money is used as a proxy for the money supply. More money supply helps to increase the liquidity which sets an upward movement in prices, economic activities and profits. Here, it is assumed that there is positive relationship between the money supply and GDP of a country.

4. EMPIRICAL RESULTS

Results of unit root test are shown in the Table A, to determine the order of integration among time series data. This study has applied Augmented Dickey Fuller and Phillips Perron tests at level and first difference under the supposition of constant and trend.

TABLE A: UNIT ROOT ANALYSIS

Variables	ADF (ρ) value (at level)	ADF (ρ) value (1st difference)	PP (ρ) value (level)	PP (ρ) value (1st difference)
Ln GDP	0.9252	3.5039	0.9450	6.0037
Ln CPI	2.9032	-8.423	2.4532	-8.5621
Ln INT	0.9796	4.2994	1.0024	4.3994
Ln EXC	0.8539	4.1129	0.9675	6.1622
Ln FPI	0.4721	-3.6521	-0.4650	-10.8700
Ln M_1	-1.8856	-10.245	-1.9492	-10.2284
5% critic. value	-3.4477	-3.4480	-3.4477	-3.4480

Above results of the table show the variables are stationary at first differences of logarithmic transformations instead of stationary at level. So, series are integrated of order one I(1). All the results are robust according to the supposition of constant trend and no trend. In the presence of I(2) variables the computed F-stat provided by Pesaran, et al, (2001) becomes invalid. the variables are I(0) or I(1), this testing is necessary to avoid the possibility of spurious regression as Outtara (2004) reports that bounds test is based on this assumption.

Now ARDL approach is ready to apply to test the causal nexus among the macro economic variables. Lags number are determined by using most common equations like Akaike Information Criterion, Schwarz Bayesian Criterion and Hannan-Quinn, Log Likelihood. Criteria and test values are given in Table B (a) and Table B (b).

TABLE B (a): STATISTICS FOR SELECTING THE LAG ORDER

	AIC	SBC	LL
Lag 1	127.2179	114.6742	136.2179
Lag 2	125.6181	113.1121	134.6181
Lag 3	128.7087	113.4699	139.7087

TABLE B (b): DIAGNOSTIC TESTS

Item	Test applied	CHSQ(X^2)	Prob
Serial correlation	Lagrange multiplier test	18.74	0.095
Normality	Test of Skewness and Kurtosis	2.88	0.236
Functional form	Ramsey's RESET test	0.59	0.443
Hetoroscedisiticity	White test	4.68	0.03

According to above table, results indicate the autocorrelation, conflict to normal distribution has not been observed as econometric problems.

TABLE C: DESCRIPTIVE STATISTICS

	GDP	CPI	ERR	FER	FPI	M_1
Mean	4.940750	8.754750	0.144250	142.1380	7.905412	5.87014
Median	4.850000	8.935000	0.500000	117.9700	8.21546	6.154329
Maximum	10.22000	20.29000	4.930000	237.0700	11.98432	12.54391
Minimum	1.010000	2.910000	-5.600000	97.09000	2.78324	1.0983
Std. Dev.	2.069393	3.645074	2.711317	49.35515	2.89712	4.210932
Skewness	0.309083	0.599269	-0.334098	0.831989	0.678213	0.456129
Kurtosis	2.686107	3.824893	2.730193	1.968656	2.785421	2.509431
Jarque-Bera	0.801096	3.528238	0.865472	6.387486	1.456123	2.98764
Probability	0.669953	0.171338	0.648732	0.041018	0.543194	0.298341
Sum	197.6300	350.1900	5.770000	5685.520	213.8763	187.0782
Sum Sq. Dev.	167.0131	518.1760	286.6984	95001.31	432.893	365.9242
Observations	40	40	40	40	40	40

TABLE D: CORRELATIONS

	GDP	CPI	ERR	FER	FPI	M_1
GDP	1.00000	-0.18165	-0.28417	-0.44011	0.65633	0.51893
CPI	-0.18165	1.00000	-0.55217	-0.07395	-0.64531	-0.43256
ERR	-0.28417	-0.55217	1.00000	-0.01122	-0.54361	-0.54325
FER	-0.44011	-0.07395	-0.01122	1.00000	-0.45673	-0.56432
FPI	0.65633	-0.64531	-0.54361	-0.45673	1.00000	0.78621
M_1	0.51893	-0.43256	-0.54325	-0.56432	0.78621	1.00000

According to Table D, correlation analysis is needed to check the relationship between GDP growth and independent macroeconomic variables. But correlation is not a strong and reliable measure to identify the cause and effect nexus. Most of the independent variables like inflation rate, exchange rate and interest rate showed negative relationship with GDP growth but foreign portfolio investment and money supply showed positive relationship with GDP growth rate.

TABLE E (a): ARDL (1, 0, 0, 0, 0, 0, 1, 0) SELECTED BASED ON SBC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Ln GDP	4.758624	1.157498	4.111127	0.0002
Ln CPI	-0.253662	0.087081	-2.912954	0.0061
Ln ERR	-0.408737	0.116757	-3.500741	0.5013
Ln FER	-0.01732	0.005362	-3.229985	0.3026
Ln FPI	0.6912	0.3554	2.3781	0.0236
Ln M_1	0.5772	0.1154	4.4521	0.03127

Table E (a), shows the findings by using ARDL model which is based on Schwarz Bayesian Criterion. Accordingly, inflation rate of consumer price index, foreign portfolio investment and narrow money supply has significant impact on the economic growth. But the impact of external rate of return and foreign exchange rate is insignificant.

TABLE E (b): SUMMERY STATISTICS

R-squared	0.51515	Mean dependent var	4.94075
Adjusted R-squared	0.466412	S.D. dependent var	2.069393
S.E. of regression	1.6472	Akaike info criterion	3.93067
Sum squared resid	97.67764	Schwarz criterion	4.099558
Log likelihood	-74.61341	Hannan-Quinn criter.	3.991735
F-statistic	8.518072	Durbin-Watson stat	2.156366
Prob(F-statistic)	0.000209		

Calculated F-statistic, according to bounds testing approach for cointegration, is 8.5 which is significant at 1% level of significant. So, the null hypothesis of no cointegration cannot be accepted and there exists cointegration relationship among the variables in this model. According to results, macroeconomic variables explain gross domestic product significantly. The value of adjusted R-square is 0.47 which expresses a high degree of correlation among macroeconomic variables. Finally, Prob (F-statistic) is also significant at 1% which means overall goodness of fit of model.

Table (given below) shows, by using ARDL approach, the long term coefficients.

TABLE F: ESTIMATED LONG RUN COEFFICIENTS FOR SELECTED ARDL MODEL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN CPI	-0.7349	0.0869	-0.6241	0.5215
LN ERR	-0.8086	0.0983	-1.4776	0.0146
LN FER	-1.2129	0.5108	2.1901	0.0000
LN FPI	0.8721	0.4573	4.7831	0.4123
LN M_1	1.6735	0.2614	3.1439	0.0000

Coefficients of Table F, like inflation rate, external rate of return and foreign exchange rate has negative impact on the gross domestic product of Pakistan. While, foreign portfolio investment and money supply showed positive impact on the economic growth. Accordingly, 1% increase in inflation rate will decrease the economic growth by 0.735%. Similarly, 1% increase in external rate of return and foreign exchange rate also will decrease the gross domestic product by 0.809% and 1.213% respectively. But, 1% increase in foreign portfolio investment and money supply will increase in economic growth by 0.872% and 1.674% respectively.

The Error Correction Representation of long run relationship is expressed in above table. According to Error Correction Model which is based upon ARDL approach represented that there is statistically significant impact of interest rate, exchange rate and narrow money supply on gross domestic product in the long run. On the other hand other variables have insignificant relationships with GDP.

TABLE G: ERROR CORRECTION REPRESENTATION FOR THE SELECTED ARDL MODEL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Δ Ln GDP	-0.3931	0.0453	-0.6134	0.612
Δ Ln CPI	-0.3651	0.3941	0.8318	0.399
Δ Ln INT	-0.7521	0.269	-0.4112	0.003
Δ Ln EXC	-0.5167	0.2587	2.0981	0.013
Δ Ln FPI	0.8718	0.4244	2.1871	0.023
Δ Ln M1	0.4987	0.1243	4.7215	0.001
ECM(-1)	-0.4235	0.0692	-4.987	0.000
R^2	0.4312			
Adjusted R^2	0.4154			
AIC	127.98			
BIC	115.14			
F-Statistics	1276			
F-Significance	0.0000			
D.W. Statistics	1.9813			

The error correction variables ECM(-1) has been found negative and statically significant. A quite fast adjustment process is suggested by the coefficient of the ECM term and 42.35% of last year's disequilibrium in GDP growth will be corrected in the present year. R^2 interpret that 43.12% of GDP is explained by the endogenous variables and remains is explained by exogenous variables. Statistical comparison of equation is based on AIC and BIC. The value of Durbin Watson Statistics is close to 2, i. e., 1.98, including one lag, which indicates that the errors are serially uncorrelated against the alternative that they follow a first order autoregressive process.

ECM = Ln GDP + 0.3651*Ln CPI – 0.7521*Ln INT + 0.5167*Ln EXC + 0.8718*Ln FPI + 0.4987*Ln M_1

5. CONCLUSION AND RECOMMENDATIONS

This study examines the relationship among the inflation rate, interest rate, exchange rate, foreign portfolio investment, money supply and economic growth rate for the period of 40 years from 1975 to 2014. The more powerful approach ARDL has been used in order to explore the short run as well as long run relationships irrespective of whether the underlying repressors are I(0) or I(1). Secondary date has been tested by applying LM test, Ramsey Rest test, whit test, Skewness, ADF test, Phillip Parren test and kurtosis test to check the problem like serial correlation, functional form, unit root, normality and heteroscdasticity.

Any econometric problem like autocorrelation and conflict to normal distribution has not been observed. All the variables are not stationary at level but the first difference as shown by unit root test. On the other hand the first difference of the logarithmic transformation of the series are stationary. Presence of heteroscadasticity presented by using white test.

Long run results of ARDL coefficients showed that inflation rate, interest rate and exchange rate are inversely related to growth rate. While ARDL model showed positive impact of foreign portfolio investment and narrow money supply in the long run.

The error correction model which is based on auto regressive distributed lag model shows the short run variations in the variables. Accordingly, there exists statistically significant relationship between external rate of return, foreign exchange rate, foreign portfolio investment and narrow money supply. The error correction variables ECM(-1) has been found negative and statically significant. A quite fast adjustment process is suggested by the coefficient of the ECM term and 42.35% of last year's disequilibrium in GDP growth will be corrected in the present year. Short run and long run coefficients in the ARDL error correction model are drawn by the plots of CUSUM and CUSUMSQ to check the stability of short run and long run. These plots express that both CUSUM and CUSUMSQ are within the critical bounds of 5%. So, it shows that model is structurally stable.

This study is more important for managerial policy making, decision making and forward planning about the economic growth of Pakistan. It also assists the investors to make feasibility of investment on the basses of functions in the foreign exchange rate, money supply and external rate of return. They can forecast the future direction of GDP growth in order to optimum utilization of their resource. No doubt, monetary policy is very important for the economy, this study also provides a lot of information for the State Bank of Pakistan to plan and implement the monetary policy successfully.

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EMPOWERMENT OF WOMEN THROUGH SELF HELP GROUPS

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ABSTRACT
The gender disparity prevailed in various areas including literacy, education, nutrition and health, employment, decision making, participation in politics and executive positions, property rights, etc. This discrimination has been the outcome of the gender division of labour making the men to go out and market their services and so also act as the head of the household, decision-maker etc. On the other hand making women to remain at home to continuously perform the domestic activities such as taking care of the children, cook and wash for the family which have not been recognized as work till 1981 Census in India. As a result of making the men as breadwinners of the family, the female members also started assigning themselves a secondary role next only to men and as such they are treated as secondary citizen in the society. Among strategies for women empowerment, Government policies such as 73 and 74th amendment of Indian Constitution, Reservation policies, concessions, social legislation and enactment of certain acts were found be very important. However, the effect of such strategies failed to reach the target due to various bureaucratic and systemic failures. In this regard, the SHG approach towards women empowerment is found to be highly promising and effective.

KEYWORDS
economic empowerment, status of Indian women, self help groups, empowerment through self help groups.

INTRODUCTION
Women form a part of a human resource. Unless this section of the population is given opportunities to prove their capabilities, the development would be imperfect. It was in the ancient period the women were recognised equally with men and in fact they were head of the households and participated equally in decision making like men. It is only when surplus emerged and commercial production started, markets came to play a role. It is in this juncture there came a change in the role of male and female. There came the gender division of labour mainly bringing men to outside, paid employment and women in unpaid and domestic work. The gender disparity was the result since this period and women had continuously and constantly discriminated in getting their due share in the development process. The gender disparity prevailed in various areas including literacy, education, nutrition and health, employment, decision making, participation in politics and executive positions, property rights, etc. This discrimination has been the outcome of the gender division of labour making the men to go out and market their services and so also act as the head of the household, decision-maker etc. On the other hand making women to remain at home to continuously perform the domestic activities such as taking care of the children, cook and wash for the family which have not been recognised as work till 1981 Census in India. As a result of making the men as breadwinners of the family, the female members also started assigning themselves a secondary role next only to men and as such they are treated as secondary citizen in the society.

The year 2001 was declared as a 'year of women empowerment'. Efforts were being made in the direction that women should have a role in all walks of life; and special provisions should be made in the budget for activities related to the development of women.

Many schemes were planned and started to be executed, at government level, in respect of women education, laws regarding prevention of atrocities on women, their participation in economic and political spheres etc. At this juncture, SHG movement also started and in a way journey towards women empowerment began.

Empowerment is a process of change by which individuals or groups gain power and ability to take control over their lives. It involves access to resources, resulting into increased participation in decision-making and bargaining power and increased control over benefits, resources and own life, increased self-confidence, self-esteem and self-respect, increased well being. It means 'empowerment' is a multi-fold concept that includes economic, social & political empowerment. The term empowerment pre-supposes primacy of power over other dimensions. We speak of women's sharing of political power and participation in government. An important issue related to women's empowerment is the reservation of seats for them in the state legislature and union parliament. The 73rd and 74th constitutional Amendment Act 1992 has provided 33 percent seats for women in Panchayats and municipal bodies. Though the experience of the Indian Panchayat Raj Institutions, one million women have actively entered political life in India. Since the creation of the quota system, local women-the vast majority of the illiterates and poor have come to occupy as much as 43 percent of seats-spurring the election of increasing numbers of women at the district, provincial and national level. Since the onset of PRI, the percentages of women in various levels of political activity have risen from 4-5 percent to 25-40 percent.

According to an Indian writer and activist Devaki Jain, "the positive discrimination of Panchayat Raj Institutions has initiated a momentum of change. Women's entry into local government in such large numbers often more than the required 33 percent, and their success in campaigning, including the defeat of male candidates, has shattered the myth that women are not interested in politics, and have no time to meetings or to undertake all the other work that is required in political party processes. Panchayat Raj Institutions reminds us of central truth: power is not something people give away, it has to be negotiated, and some time wrested from the powerful." says Noeleen Heyzer, executive director of UNIFEM, "this is one of best innovations in grass-roots democracy in the world" (Women's Link, Jul. to Sept., 2003, p. 30). Seats in local bodies have been reserved for women for their active participation in decision-making, but the parliament has so far failed to provide a similar representation to women. In India, the participation of women in politics has actually been declined since the days of freedom movement (10%). It reached a high of 8 percent in 1984 elections. This figure has not crossed since then. The account of measures taken for women's empowerment in India clearly shows that there is a deep concern in the country to uplift their social and economic conditions, so that they may plan an active role in the task of national developments. Government is not serious for the political participation of women; the data shows that they are lagging behind in political sphere.

A) ECONOMIC EMPOWERMENT

The proportion of unpaid activities to the total activities is 51% for females as compared to only 33% for males. Over and above this unpaid work, they have the responsibilities of caring for household which involves cooking, cleaning, fetching water and fuel, collecting fodder for the cattle, protecting the environment and providing voluntary assistance to vulnerable and disadvantaged individuals in the family. This shows that though there is still a long journey ahead towards women empowerment. To achieve the goal, there is an urgent need of change in the mindset of the entire society. Indebtedness has become the hallmark of the rural life. Participation in self-help groups helps in saving some money out of their daily household expenses. Also, they can avail loan with lower interest rates. This has led a sort of change in the society's view towards woman, in general.

B) SOCIAL EMPOWERMENT

Atrocities are perpetrated on woman. She is viewed not as a human being but as delectable thing. Efforts are being made to change this situation and bring about a stage where man and woman would be viewed equally. Many Schemes are being implemented for equal education and equal opportunities of employment, so that, women would have equal rights.

The members of SHGs are mostly women. They save money and invest in SHG. They can use it at the time of their needs. As they can have money in their hand, they get some status in their family. It has resulted in developing self-confidence, self esteem and self respect also. Work participation empowers women. However the condition of women in India is more miserable than the rest of the world in almost every field of social life. They are paid half of three-quarters of the money while their male counterparts earn for the same job. India is predominantly agricultural country. Women do more than half of the total agricultural work. But their work is not valued. On an average a woman works 15 to 16 hours a day unpaid at home and underpaid outside.

Among strategies for women empowerment, Government policies such as 73 and 74th amendment of Indian Constitution, Reservation policies, concessions, social legislation and enactment of certain acts were found be very important. However, the effect of such strategies failed to reach the target due to various bureaucratic and systemic failures. In this regard, the SHG approach towards women empowerment is found to be highly promising and effective.

C) POLITICAL EMPOWERMENT

In the beginning, the process of participation of women was slow, but now the situation is fast changing. Due to advent of SHGs, women were able to see the outside world. They understood the processes involved in solving the local problems through political participation. By and by, their participation in political process started increasing. In SHGs, they found an opportunity to become a leader of SHG. In some places, local SHGs acted as pressure groups for or against a particular political candidate in Panchayat elections. Thus, Self-help Group has proved an important means in taking the process of women empowerment to rural region. Thus the SHG programme has been successful in strengthening collective self-help capacities of the poor at the local level, meeting their peculiar needs leading to their empowerment. The rural poor, with the intermediation of voluntary organisations also join together for self-help to secure better economic growth. This has resulted in the formation of large number of SHGs in the country; and the SHGs have mobilised savings and recycled the resources generated among the members. Women are motivated to change the traditions.

The women's political campaigns refer to solving the issues that affect their daily lives like safe drinking water, schools, health centres, roads, etc. some women have taken the agenda further by displaying a mature understanding of the contexts in which the political economy functions. In our society men, having attitudes resist the political empowerment of women. There is a feeling that women should only contest the reserved seats and not the general seats. Several NGOs working in the area tries to educate women about the voting behaviour and election procedures. Elected women members learn to negotiate their newfound positions in an inherently male dominated system, fighting the adverse institutionalized practices like, corruption. Women face many obstacles while contesting election such as sabotage, threats, boycott and pressure from family. However, women on gaining the political power can bring rapid change in the lives of other women and attain equality.

There is low representation of women at all levels of political institutions. Women still face major obstacles in seeking higher positions in society. Political participation is a human right, recognized in the Universal Declaration of Human Rights. Women are poorly represented at different levels of political life and decision-making. Thus, there is widespread neglect of women's priorities by politicians and bureaucrats. As per the Human Development Report, 1999 women hold only 12.7 percent of the world's parliamentary seats and only 8.7 percent of those in the least developed countries. In India, the process of politically empowering through reservation in the local bodies has helped in the wider mobilization. On many occasions, elected women have provided the leadership for organizing women and get their legitimate demands fulfilled like, widow pensions, gas connections, etc. There is a growing realization among the women that local elections are a means to bring positive change in their lives.

EMPOWERING WOMEN THROUGH SELF HELP GROUPS

The Word Bank has suggested that empowerment of women should be a key aspect of social development programs (World Bank, 2001). India has also ratified various International Conventions committed to securing equal rights to women. The National Policy for The Empowerment of Women' (2000) states that "The women's movement and a widespread network of NGOs which have strong grassroots presence and deep insight into women's concerns have contributed in inspiring initiatives for the empowerment of women.

However, the policy also speaks of "a wide gap between the goals enunciated in the Constitution, legislative Policies, plans, programs, and the related mechanisms on the one hand and the situational reality of the status of women in India, on the other…Gender equality manifests itself in various forms, the most obvious being the trend of continuously declining female ratio in the population in the last few decades. Social stereotyping and violence at the domestic and societal levels are some of the other manifestations".

The World Bank's Empowerment and Poverty Reduction: A Sourcebook defines empowerment in its broadest sense as the "expansion of freedom of choice and action" (Narayan, 2002). United Nations (2001) defines empowerment as the processes by which women take control and ownership of their lives through expansion of their choices. Kabeer's (1998, 1999) view of empowerment refers to the processes by which those who have been denied the ability to make choices acquire such ability.

Mayoux's (2000) definition of empowerment relates more directly with power, as "a multidimensional and interlinked process of change in power relations". It consists of: (1) 'Power within', enabling women to articulate their own aspirations and strategies for change; (2)'Power to', enabling women to develop the necessary skills and access the necessary resources to achieve their aspirations; (3) 'Power with', enabling women to examine and articulate their collective interests, to organize, to achieve them and to link with other women and men's organizations for change; and (4)'Power over', changing the underlying inequalities in power and resources that constrain women's aspirations and their ability to achieve them. These power relations operate in different spheres of life (e.g., economic, social, political) and at different levels (e.g., individual, household, community, market, institutional).

JSI researchers identified six general areas or domains in which empowerment of women is believed to be taking place as a result of Grameen Bank, BRAC and other credit programs: a sense of self and vision of a future, mobility and visibility, economic security, status and decision-making power within the household, ability to interact effectively in the public sphere and participation in non-family groups. Thus, their concept of empowerment can be looked at in a behavioural sense as the ability to take effective action (Snow, 1990).

SELF HELP GROUP

A self help group consists of 10-20 members drawn from a relatively homogeneous economic class (i.e. poor), self selected on the basis existing affinities and mutual trust; members meet regularly at a fixed time and place and pool their savings into a common fund from which they take need based loans. The group develops its own rules and regulations and sanctions for violations; the meeting procedures and processes, leadership change norms, intensive training and handholding, are designed to enable SHGs to function in a participatory and democratic manner. It has, however, been argued that development agencies committed to empowerment of women need to question the nature of the link between access to credit by targeting women, and the transformation of gender relations needed for empowerment and equality.

REVIEW OF LITERATURE

Tonmoyee Banerjee (2009) his case study made an effort to estimate the impact of Self-Help Groups created under SGSY programme and has been observed that income generation through group activities has improved the average income of group members, but the inequality of distribution of income is high among the group members than that of the non-group members. Further there has been a significant decline in the medical expenditure and school drop-out rate in the families of group members than that of non-group members.

Gariyali and Vetrivel (2004) in their book "Women's Own: The Self-Help Movement of Tamil Nadu" have observed that micro credit is a means for women's empowerment aimed at reducing poverty, promoting self-employment and development-based activities. Need based and timely credit has become a powerful instrument with the responsibility of savings and credit operation left to organized women's groups called the SHGs. Daring women has put the country's rural poor in a self-reliant mode. The self-help movement has sprung surprises in doomed areas.

Nashi (2004) in his article titled "Micro Finance: A Study of Stree Shakti SHG Programmes" points out that Stree Shakti, the Karnataka State Government's women's programme, launched by Women and Child Welfare Department of Karnataka State in October 2000, strictly focuses on empowerment of rural women making them financially, socially and politically capable. As on 30 September 2003, there are 7,638 Stree Shakti Groups in Belgaum District of Karnataka State involving a total of 1,10,351 women. The total savings of these groups stands at Rs.689.54 lakh. About 807 of these groups have availed bank loans. The loans total to the tune of Rs.322.91 lakh. To encourage Stree Shakti Groups and to make them effective, these groups are given opportunities to make use of the development services available in various departments. The author further states that the best thing about the Stree Shakti programme is that it is "a win-win situation" for everybody involved, the Karnataka Government, the rural women, and NGOs, as they build a self-sustaining cycle of growth for all parties.

IMPORTANCE OF THE STUDY

A number of programmes have been designed to augment the flow of credit to the poor with varying degrees of implicit and explicit subsidies. The main thrust of these credit programmes has been the provision of financial assistance to the poor at a concessional rate of interest coupled with capital subsidy to enable them to rise above the poverty line. The economic bondage between the banker and the SHGs provides an opportunity for both the bankers and the SHG members to increase the scale of borrowing. The magic of the success of micro-credit through the SHGs is the goodwill of the members. In the matter of borrowing of funds, utilisation of funds and repayment, all members have a joint accountability. Moreover, the members help one another in running their economic ventures successfully.

Though the SHGs were started in 1997 in Tamil Nadu, the concept penetrated down only in recent years. Now there is a greater amount of socio-economic emancipation among the members of the SHGs. Hence there is a need for evaluating the social and economic impact of the SHGs on their members. Hence the SHGs have been formed for meeting the needs of industrial and agricultural activities.

STATEMENT OF THE PROBLEM

Right from the Sixth Five Year Plan, a number of poverty alleviation programmes have been implemented in rural India. But these programmes are not successful. The multiplicity of programmes resulted in lack of proper social intermediation, absence of required backward and forward linkages, repayment problem, and improper creation of assets. These programmes were targets-oriented rather than beneficiary-oriented. People's participation and involvement in planning and implementation in these programmes were totally lacking. To rectify this defect, the government has decided to reformulate poverty alleviation programme. The early programme like Integrated Rural Development Programme, Training of Rural Youth for Self Employment, Development of Women and Children in Rural Areas, Supply of Improved Toolkits to Rural Artisans, Ganga Kalian Yojana, Million Wells Scheme, are no longer in operation and the new programme known as SGSY has been implemented since 1999.

Inadequate amount of loan affects its proper utilization to a great extent. This inadequacy, often, leads to unproductive spending and in the long-run, may turn out to be counterproductive and defeats the very objective of financing, or compels the poor beneficiaries to knock at the door of the agricultural/professional money-lenders. Moreover, inadequacy of loan amount and delay in disbursement of loan are responsible for diversion of loan amount and require due attention of the agencies involved in poverty alleviation programmes. Though women's role in the family life is much more important for its development both economically and socially, they are crippled with many problems in day to day life due to lack of education. Rural women are always dependent on others, especially on the male members of the family for money, and thus they lack economic independence. In rural areas local moneylenders who charge high rate of interest have been a major source of credit. This paved way for the emergence of Self-Help Groups in India.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

1. To study the role of Self-Help Groups in rural development in general.
2. To study the economic impact of SHGs in the members life.
3. To study the economic impact of bank finance and the factors influencing the acceptance of SHG members
4. To give suitable measures to encounter the problems.

HYPOTHESES OF THE STUDY

- H_0: There is no significant difference between age group and level of satisfaction.
- H_0: There is no significant difference between education and level of satisfaction.
- H_0: There is no significant difference between marital status and level of satisfaction.
- H_0: There is no significant difference between type of family and level of satisfaction.
- H_0: There is no significant difference between members of family and level of satisfaction.

METHODOLOGY

The study used both primary and secondary data. The primary data was collected from the members of Self Help Group in India. For this purpose 300 respondents were selected. The respondents were chosen by simple random sampling method. Interview schedules were used to collect first hand information from the selected sample respondents. Secondary data was collected from the existing literature available in various government institutions and offices. It also has been collected through books, reports and online.

RESULTS AND DISCUSSIONS

TABLE - 1

Factors	Calculated value	Table Value	Degree of Freedom	Remark
Age	95.608	9.488	4	Significant

It is found from the above table that the calculated chi-square value (95.608) is greater than the table value(9.488). Hence the Null Hypothesis is rejected at 5% level of significance. From the analysis, it is found that there is a close relationship between the age and their satisfaction.

TABLE - 2

Factors	Calculated value	Table Value	Degree of Freedom	Remark
Education	85.330	15.507	8	Significant

It is found from the above table that the calculated chi-square value (85.330) is greater than the table value (15.507). Hence the Null Hypothesis is rejected at 5% level of significance. From the analysis, it is found that there is a close relationship between the education and their satisfaction.

TABLE – 3

Factors	Calculated value	Table Value	Degree of Freedom	Remark
Marital Status	79.467	9.488	4	Significant

It is found from the above table that the calculated chi-square value (79.467) is greater than the table value (9.488) . Hence the Null Hypothesis is rejected at 5% level of significance. From the analysis, it is found that there is a close relationship between the marital status of the respondents and their satisfaction.

TABLE – 4

Factors	Calculated value	Table Value	Degree of Freedom	Remark
Type of Family	14.66	5.991	2	Significant

The table reveals that the calculated Chi-square value (14.66) is greater than the table value (5.991).Hence the Null Hypothesis rejected at 5% level of significance. So there is close significant relationship between type of family and level of satisfaction.

TABLE – 5

Factors	Calculated value	Table Value	Degree of Freedom	Remark
Total Members of Family	41.738	9.488	4	Significant

The table reveals that the calculated Chi-square value (41.738) is greater than the table value (9.488). Hence the Null Hypothesis rejected at 5% level of significance. So there is close significant relationship between total members of family and level of satisfaction.

FINDINGS

Out of the 300 respondents, 35.9 per cent of the respondents belong to the age group of below 25 years, 43.5 per cent of the respondents come under the age group 26-30 years and 20.7 per cent are in the age group above 30 years.

The highest literacy rate 46.4 percent of the respondents is up to school level. 35.2 per cent of the respondents have got education up to college level and 8.0 per cent were illiterate, 6.4 percent of the respondents are in other category and 4.0 percent have got diploma degree.

76.4 percent of the respondents are married, 14.4 percent of the respondents are unmarried and 9.2 percent of the respondents are in others category. Out of the sample numbers 60.8 per cent of the respondents have nuclear family system and 39.2 per cent of the respondents have joint family system. 13.0 per cent of the respondents have family members up to 4, about 78.6 per cent have4 to 6 family members, 8.4 per cent have the family size of above 6 members.

SUGGESTIONS

Women should be positioned in large numbers at top levels for significant and effective exercise of power and they need to be equipped with suitable means to shoulder these responsibilities. The Government may enact a common legislation for SHGs and women empowerment, which would serve the present scenario needs of women. Around 8 per cent of the respondents are illiterate in the study area. SHGs have taught their groups how to sign. SHGs can take a step further and start a campaign to impart functional literacy to their members. At the village level they can run a special centre with a team of volunteers to promote literacy among its members. Self-Help Groups must try to function independently instead of depending on NGOs and Block Development Officers for their effective functioning. A Self-Help Group should not only concentrate on the growth of the group, but should also show active involvement on the social issues and other essential issues like health, sanitation etc. to develop the entire village. Groups should be aware of all government schemes and should make use of them for their development. The SHG members are advised to utilize the amount only for carrying out the assigned task. The members should undergo some sort of training in order to educate themselves about the utilization of money properly. The members should be trained to rotate the money for the benefit of meeting emergencies of the needy rather than sharing equally among themselves. Cooperation among members and proper repayment of loan is the only way to get success in their scheme. There should be rotation of group leadership, so that all the members of the group get an opportunity to play managerial role. Unmarried women can be allowed to become members, a lesser financial commitment may be draw up for them.

The members have to select their activities keeping in mind the availability of raw materials, sufficient financial assistance, marketing facilities and also the demand for their products. Self-Help Groups can utilize National Small Industries Corporation, State Small Industries Corporation, Small Industries Development Organisation, Indian Institute of Foreign Trade, Handicrafts and Handloom Exports Corporation of India and State Small Industries Corporation for marketing their products. Good packing and branding of products should be introduced to capture the new market area and to increase the volume of sales.

CONCLUSION

The present scenario paves a way for the overall development of women in India. There is no denying that bank finance to the SHGs can play a greater role in reduction of poverty and vulnerability of the poorest of the poor rural women. However, the bank finance has to be complemented and supported by the non-financial services. It is concluded that women are now participating in all productive activities and are at par with men. SHG members' savings are increased to the desirable extent which automatically increase the purchasing power and increase in standard of living and thereby enhance the empowerment of women. It is cleared that gender strategies in micro finance not only focus on increasing women's access to savings and credit and also organizing self help groups to look strategically at how programmes can actively promote gender equality and women's empowerment. No doubt that the SHGs movement in India has been working in the right direction, but it is necessary to further empowerment of women in social, economical, cultural and political for the interest of the family in particular and the nation in general. The study finds that this mechanism of credit coupled with the mobilization and organization of women on the basis of strengthening and collective action empowers women. It is this aspect of the study that brings about welcome changes in the women's lives has to be highlighted. Further SHGs are concerned with the development of women in all respects along with a sound knowledge about their rights and duties. To make the SHGs really meaningful and successful, the government at different levels have to intervene in a large scale not as provider of finance or provider of other inputs, but as facilitator and promoter. It is also thus important to view micro-credit programmes as a complement rather than a substitute for effective policies to be able to transform national and international development of women.

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AN EFFECTIVE STUDY ON FOREIGN DIRECT INVESTMENT IN INDIA

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ABSTRACT

Before the Economic reforms the flow of foreign direct investment to India has been comparatively limited because of the type of industrial development strategy and the various foreign investment policy followed by the nation. Foreign Direct Investment (FDI) is considered as an engine of economic growth. Government policy towards foreign capital was very selective. Foreign investment was normally permitted only in high technology industries in priority areas and in export oriented areas. So the inflow of FDI before 1990's was very low. To fully utilize the country's immense economic potential, the government launched Economic reforms in 1991. The new government policies are simple, transparent and promote domestic and foreign investment. India's abundant and diversified natural resources, its sound economic policy, good market condition and high skilled human resources make it a proper destination for FDI. After long years of journey FDI was also introduced in various sectors and states in India. The Investment of FDI in various states and sectors leads to rapid growth of Indian economy. According to survey conducted by FICCI (Federation of Indian Chamber of Commerce) till November 2005, 70% of foreign invertors were making profits and another 12% were breaking even. Last year, annual ranking of the world's best small companies, the Forbes 200, included 13 Indian firms but just 4 from China. While India is playing global player rising from sixth position to third position most likely to FDI position globally.

KEYWORDS

FDI, Capital Investment, Industrial Policy, Economic Reforms.

INTRODUCTION

Foreign Investment is classified in to two categories, foreign direct investment and portfolio investment. Portfolio investment includes fresh inflow of funds from foreign institutional investors (FII) and funds raised by domestic corporate through global depository receipts. Foreign direct investment is investment in distribution, production and other activities of a firm in one country by individuals or businesses from another country. "***Foreign Capital is a Good Servant, But a Bad Master***"

India is the Fourth largest country by Purchasing Power Parity. U.S. report on Global Governance has declared India as the Third most powerful nation after the United States and China. Global Wealth Report 2012 estimated India's Wealth as 13.5 Trillion. Foreign Capital is defined as transfer of capital resource from the developed to the developing countries to make a qualitative change in the structure of the economies. Foreign Capital can enter a country in the form of private foreign capital and public foreign capital. Private capital can be divided into Foreign Direct Investment and Indirect Investment. Foreign Direct Investment means investment in a foreign country where the investor retains control over the investment. It typically takes the form of starting a subsidiary, acquiring a stake in an existing firm or starting a joint venture in the foreign country. Direct investors have direct responsibility with the promotion and management of the enterprise. If the investor has only a sort of property interest in investing the capital in buying equities, bonds, or other securities abroad is referred to as Portfolio Investment. In Portfolio Investment the investor uses his capital in order to get a return on it, but has no much control over the use of the capital. In recent years, FDI become a vital part in every country more particularly with the developing countries. This is due to availability of cheap labour, uninterrupted availability of raw material, less production cost compared with other developed countries, quick and easy market penetration. The different types of Foreign Direct Investment are Greenfield Investment, Brownfield Investment, Mergers and Acquisition, Horizontal and Vertical Investment. Vertical Investment takes two forms: Backward vertical FDI and Forward vertical FDI.

THE MAIN COMPONENTS OF FDI ARE AS PER FOLLOWING:

1. **Equity Capital** – It involves purchase by the foreign investor, shares of an enterprise in another country.
2. **Reinvested earnings** – It refer to the foreign investor's share of earnings that are not distributed as dividends, but are reinvested into the enterprise in the host country.
3. **Working capital** – It involves short and long term borrowing and lending of funds by the parent investors and their associate enterprises in the host country.

MOTIVES FOR FOREIGN DIRECT INVESTMENT

Three types of motives in a country generally govern foreign investors.

1. **Resource seeking:** Foreign investors investing in another country to take advantage of available production resources like variety of raw materials and natural resources.
2. **Efficiency seeking:** Foreign investors investing in another country to take advantage of low labour cost, skilled labour to improve productivity and efficiency.
3. **Market seeking: :** Foreign investors investing in another country to access its markets and to take advantage of their market size and market growth.

WHY DEVELOPING COUNTRIES SEEK FDI?

Developing countries face lack of financial resources, technological knowledge and efficient managerial techniques. These resources are important for economic growth and development. FDI is seen as important sources of capital. If channelled properly it can contribute to capital formation on the host country. Developing countries also need FDI to cover their deficits. FDI is also considered and effective mechanism for the distribution of productive information in the global economy. Thus besides increasing total capital formation in the global economy. Thus, besides increasing total capital formation, FDI can:

1. Provide access to inputs that are not available locally,
2. Provide access to state- art technology,
3. Improve management systems,
4. Expand and diversify production and export capacities and
5. Improve employment.

Developing countries require FDI if they want to incorporate into the global economy. Countries that have made a conversion from protected economies to open and liberalised economies have considered foreign investment to be important to improve their competitiveness in the international market. This helps them gain access to foreign markets and attain higher export growth. FDI flows are a more stable source of finance as compared to other form of international private capital flows. Today, FDI is the largest source of private foreign capital reaching developing countries.

In order to improve per capita income significantly the Government of India has targeted a GDP growth rate of 8.7 percent for the Tenth and Eleventh plan periods. As per the estimates this requires a savings-investment rate of 32 percent of GDP. The rate of domestic savings has been in the range of 22-24 percent in the past years (1998-2002). Despite a projected improvement in the domestic savings rate by 4-5 percent in the next few years, a substantial gap still remains, this creates the need to mobilise foreign investment. India needs FDI to develop its technological capability base. FDI, through transfer of technology, can be a useful instrument to upgrade India's export structure needs to be made dynamic, with the help of FDI.

HOW WILL FDI BENEFIT INDIA?

Industrial studies have revealed that as foreign investors' confidence in the Indian government will increase, their levels of investment in India will also go up. In the 2015-2016 fiscal year, it is expected that FDI will exceed 60 billion US dollars. In the 2013-14 fiscal year, the aggregate foreign investment amounted to 29 billion dollars. This increase owes a lot to the high expectations that foreign investors have from the Modi administration.

It has been estimated that in the ongoing Twelfth Five Year Plan, which continues till 2017, India will need almost a trillion US dollars in FDI. This money will be used to develop infrastructure such as highways, airways and ports.

INVESTMENTS IN INDIA DURING 2015-16

The ruling NDA government in the centre has announced a lot of relaxations for FDI and the business done under the FDI umbrella in India. The Union Budget presented in the Lok Sabha (the Lower House of the Parliament) by Finance Minister Arun Jaitley mentioned that the procedures through which the corporate houses attract foreign investment into India will be simplified and made uncomplicated. From now onwards, there will hardly be any difference between 'Portfolio Foreign Investment' and 'Foreign Direct Investment'. The composite cap has replaced the concept of individual cap; for instance, there is now a composite cap of 49 percent foreign investors allowed in the insurance sector.

The Indian government, during the 2014-15 fiscal year, announced that it would allow FDI worth US$ 14.65 billion into the railways infrastructure. Some of the most expensive and largest railway projects will be carried out under these investments.

During the next three years, ADAMA Agrochemicals, an Israeli firm, has set its targets to spend US$ 50 million in India. The company plans to enhance R&D and manufacturing facilities in India to grow at a better rate than the current industry growth rate. Hundred percent FDI into the health sector will be allowed by the Department of Industrial Policy and Promotion (DIPP) to enable indigenous manufacturing and reduce imports of medical devices. By the next fiscal year, the value of medical devices in the world market will be worth US$ 400 billion. The equity investment in the real estate is expected to go twofold as the Indian government has allowed 100 percent FDI into the construction sector. As per the real estate experts' beliefs, the demand from foreign property buyers will rise. Currently valued at US$ 1.5 billion, the real estate equity will reach a value of US$ 3 billion in a few years, the experts and analysts opine.

STEPS TAKEN BY GOVERNMENT TO PROMOTE FDI

The Indian Government has taken a number of steps to show its willingness to allow more foreign direct investment in the country. In the infrastructure development sector, it has relaxed the norms pertaining to area restriction, the laws regarding gaining a comfortable exit from a particular project and the requirements relating to minimum capitalization. If companies are ready to commit 30 percent of their investments for affordable housing, then the rules for minimum capitalization and area restriction will be waived off. It is expected that this will benefit the construction sector a lot, especially in the form of investment.

The situation will only get better once sect oral conditions are further relaxed and the terms that have been used in the policy are clarified up to a greater extent. This is likely to get more investment especially in the newer areas. This will also act as a fillip for entities eagerly interested in developing plots for serviced housing. This is going to be a major development considering the fact that the land in the urban areas is inadequate. One also needs to factor in the high costs of land in this regard. It will also lead to the creation of cost-beneficial, affordable houses. It will help with the 'Smart Cities' programme as well. In the insurance sector too, the government has increased the upper limit of FDI from 26 percent to 49 percent. It is an amalgamation of different areas of investment such as:

- Foreign portfolio investment
- Foreign venture capital investment
- Foreign institutional investment
- Non-resident investment
- Qualified foreign investment

The Indian Ministry of Finance has also proposed that 100 percent FDI will be allowed in railways-related infrastructure. However, this does not include the operational aspects. While it is true that the foreign investors will not be allowed to intervene in railway operations, they will be able to provide for high-speed trains, such as bullet train, and enhance the overall network in the process.

THE INDIAN MARKET FOR FDI

The last fiscal (2014-15) year saw a considerable increase in the FDI made in India. India's pro-growth business policies have contributed a great deal in making this possible. The first five months of the 2014-15 fiscal year noticed a net inflow of US$ 14.1 million FDI in India, amounting to a good 33.5 percent rise in the FDI influx registered for the corresponding period during the previous fiscal year. With an aggregate investment of US$ 353,963 million between April 2000 and November 2014, neighbouring country Mauritius has become the country with the largest Foreign Direct Investment (FDI) inflow into India.

SECTORS ATTRACTING HIGHEST FDI EQUITY INFLOWS

TABLE 1 [AMOUNT IN RS. CRORES (US$ IN MILLION)]

Ranks	*Sector*	*2012-13 (April - March)*	*2013-14 (April-March)*	*2014-15 (April '14-January, 2015)*	*Cumulative Inflows (April '00 - January '15)*	*% age to total Inflows (In terms of US$)*
1.	**SERVICES SECTOR ****	26,306 **(4,833)**	13,294 **(2,225)**	16,159 **(2,642)**	201,728 **(42,101)**	**17 %**
2.	**CONSTRUCTION DEVELOPMENT: TOWNSHIPS, HOUSING, BUILT-UP INFRASTRUCTURE**	7,248 **(1,332)**	7,508 **(1,226)**	4,359 **(722)**	112,916 **(24,028)**	**10 %**
3.	**TELECOMMUNICATIONS** (radio paging, cellular mobile, basic telephone services)	1,654 **(304)**	7,987 **(1,307)**	16,978 **(2,832)**	83,697 **(16,995)**	**7 %**
4.	**COMPUTER SOFTWARE & HARDWARE**	2,656 **(486)**	6,896 **(1,126)**	8,023 **(1,308)**	67,694 **(14,125)**	**6 %**
5.	**DRUGS & PHARMACEUTICALS**	6,011 **(1,123)**	7,191 **(1,279)**	7,559 **(1,259)**	63,630 **(12,856)**	**5 %**
6.	**AUTOMOBILE INDUSTRY**	8,384 **(1,537)**	9,027 **(1,517)**	12,529 **(2,045)**	60,725 **(11,857)**	**5 %**
7.	**CHEMICALS (OTHER THAN FERTILIZERS)**	1,596 **(292)**	4,738 **(878)**	3,408 **(562)**	48,642 **(10,230)**	**4 %**
8.	**POWER**	2,923 **(536)**	6,519 **(1,066)**	3,704 **(612)**	46,359 **(9,512)**	**4 %**
9.	**METALLURGICAL INDUSTRIES**	7,878 **(1,466)**	3,436 **(568)**	2,488 **(406)**	40,738 **(8,481)**	**4 %**
10.	**HOTEL & TOURISM**	17,777 **(3,259)**	2,949 **(486)**	3,990 **(656)**	40,198 **(7,774)**	**3 %**

CONCLUSION

The idea of the economic power of the multinationals can be had from the fact that "Today, with the solitary exception of India whose national income is only twice the annual income of General Motors, economic resources of all other under developed countries are much less than those of multinational corporation." Foreign collaborations do have a positive role in certain fields like power generation, steel, aluminium, petroleum, cement etc., but they should not be allowed to proliferate in consumer goods, needed by the upper strata of Indian society. The activities of multinationals which increase our dependence on foreigners and drain away our resources should be restricted. But a much bolder and persistent policy has to be followed to get rid of them.

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A STUDY ON FINANCIAL DERIVATIVES AND ITS EFFECT ON INDIAN CAPITAL MARKET

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ABSTRACT

Risk is a characteristic feature of most commodity and capital markets. Variations in the prices of agricultural and non-agricultural commodities are induced, over time, by demand-supply dynamics. The last two decades have witnessed many-fold increase in the volume of international trade and business due to the wave of globalization and liberalization sweeping across the world. This has led to rapid and unpredictable variations in financial assets prices, interest rates and exchange rates, and subsequently, to exposing the corporate world to an unwieldy financial risk. In the present highly uncertain business scenario, the importance of risk management is much greater than ever before. The emergence of derivatives market is an ingenious feat of financial engineering that provides an effective and less costly solution to the problem of risk that is embedded in the price unpredictability of the underlying asset. In India, the emergence and growth of derivatives market is relatively a recent phenomenon. Since its inception in June 2000, derivatives market has exhibited exponential growth both in terms of volume and number of traded contracts. The market turn-over has grown from Rs.2365 crore in 2000-2001 to Rs. 11010482.20 crore in 2008-2009. Within a short span of eight years, derivatives trading in India has surpassed cash segment in terms of turnover and number of traded contracts. The present study encompasses in its scope an analysis of historical roots of derivative trading, types of derivative products, regulation and policy developments, trend and growth, future prospects and challenges of derivative market in India. Some space is devoted also to a brief discussion of the status of global derivatives markets vis-a–vis the Indian derivatives market.

KEYWORDS
derivatives, futures, options, forwards, swaps, trading, financial market, risk, hedgers, arbitrageurs, speculators, turnover.

INTRODUCTION
Risk is a characteristic feature of all commodity and capital markets. Over time, variations in the prices of agricultural and non-agricultural commodities occur as a result of interaction of demand and supply forces. The last two decades have witnessed a many-fold increase in the volume of international trade and business due to the ever growing wave of globalization and liberalization sweeping across the world. As a result, financial markets have experienced rapid variations in interest and exchange rates, stock market prices thus exposing the corporate world to a state of growing financial risk. Increased financial risk causes losses to an otherwise profitable organization. This underlines the importance of risk management to hedge against uncertainty. Derivatives provide an effective solution to the problem of risk caused by uncertainty and volatility in underlying asset. Derivatives are risk management tools that help an organization to effectively transfer risk. Derivatives are instruments which have no independent value. Their value depends upon the underlying asset. The underlying asset may be financial or non-financial. The present study attempts to discuss the genesis of derivatives trading by tracing its historical development, types of traded derivatives products, regulation and policy developments, trend and growth, future prospects and challenges of derivative market in India. The study is organised into four sections. Section I deals with the concept, definition, features and types of financial derivatives. Section II has been devoted to a discussion of the growth of derivatives market, and regulation and policy development. Section III discusses status of global derivatives market vis-a-vis Indian derivatives market. The last section specifies summary and concluding remarks.

CONCEPT OF DERIVATIVES
The term ‘derivatives, refers to a broad class of financial instruments which mainly include options and futures. These instruments derive their value from the price and other related variables of the underlying asset. They do not have worth of their own and derive their value from the claim they give to their owners to own some other financial assets or security. A simple example of derivative is butter, which is derivative of milk. The price of butter depends upon price of milk, which in turn depends upon the demand and supply of milk. The general definition of derivatives means to derive something from something else. Some other meanings of word derivatives are: a derived function: the result of mathematical differentiation; the instantaneous change of one quantity relative to another; df(x)/dx, b derivative instrument: a financial instrument whose value is based on another security, (linguistics) a word that is derived from another word; "`electricity' is a derivative of ‘electric’. The asset underlying a derivative may be commodity or a financial asset. Derivatives are those financial instruments that derive their value from the other assets. For example, the price of gold to be delivered after two months will depend, among so many things, on the present and expected price of this commodity.

DEFINITION OF FINANCIAL DERIVATIVES
Section 2(ac) of Securities Contract Regulation Act (SCRA) 1956 defines Derivative as: a) “a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security; b) “a contract which derives its value from the prices, or index of prices, of underlying securities”.

PARTICIPANTS IN DERIVATIVES MARKET
1. Hedgers: They use derivatives markets to reduce or eliminate the risk associated with price of an asset. Majority of the participants in derivatives market belongs to this category**.**
2. Speculators: They transact futures and options contracts to get extra leverage in betting on future movements in the price of an asset. They can increase both the potential gains and potential losses by usage of derivatives in a speculative venture.
3. Arbitrageurs: Their behaviour is guided by the desire to take advantage of a discrepancy between prices of more or less the same assets or competing assets in different markets. If, for example, they see the futures price of an asset getting out of line with the cash price, they will take offsetting positions in the two markets to lock in a profit.

OBJECTIVES
1. To assess the growth and development of financial derivatives in the Indian Capital Market.
2. To develop and understanding about the concept and role of financial derivatives in India.
3. To assess the financial derivatives in India
4. To examine the performance of financial derivatives in the Indian Capital Market.

TYPES OF DERIVATIVES

Derivatives can be classified into four types:

FORWARD CONTRACTS

A forward contract is an agreement between two parties – a buyer and a seller to purchase or sell something at a later date at a price agreed upon today. Forward contracts, sometimes called forward commitments , are very common in everyone life. Any type of contractual agreement that calls for the future purchase of a good or service at a price agreed upon today and without the right of cancellation is a forward contract.

FUTURE CONTRACTS

A futures contract is an agreement between two parties – a buyer and a seller – to buy or sell something at a future date. The contact trades on a futures exchange and is subject to a daily settlement procedure. Future contracts evolved out of forward contracts and possess many of the same characteristics. Unlike forward contracts, futures contracts trade on organized exchanges, called future markets. Future contacts also differ from forward contacts in that they are subject to a daily settlement procedure. In the daily settlement, investors who incur losses pay them every day to investors who make profits.

OPTIONS CONTRACTS

Options are of two types – calls and puts. Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date. Puts give the buyer the right, but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

SWAPS

Swaps are private agreements between two parties to exchange cash flows in the future according to a prearranged formula. They can be regarded as portfolios of forward contracts. The two commonly used swaps are interest rate swaps and currency swaps.

APPLICATIONS OF FINANCIAL DERIVATIVES

Some of the applications of financial derivatives can be enumerated as follows:

1. MANAGEMENT OF RISK

This is most important function of derivatives. Risk management is not about the elimination of risk rather it is about the management of risk. Financial derivatives provide a powerful tool for limiting risks that individuals and organizations face in the ordinary conduct of their businesses. It requires a thorough understanding of the basic principles that regulate the pricing of financial derivatives. Effective use of derivatives can save cost, and it can increase returns for the organizations.

2. EFFICIENCY IN TRADING

Financial derivatives allow for free trading of risk components and that leads to improving market efficiency. Traders can use a position in one or more financial derivatives as a substitute for a position in the underlying instruments. In many instances, traders find financial derivatives to be a more attractive instrument than the underlying security. This is mainly because of the greater amount of liquidity in the market offered by derivatives as well as the lower transaction costs associated with trading a financial derivative as compared to the costs of trading the underlying instrument in cash market.

3. SPECULATION

This is not the only use, and probably not the most important use, of financial derivatives. Financial derivatives are considered to be risky. If not used properly, these can leads to financial destruction in an organization like what happened in Barings Plc. However, these instruments act as a powerful instrument for knowledgeable traders to expose themselves to calculated and well understood risks in search of a reward, that is, profit.

4. PRICE DISCOVER

Another important application of derivatives is the price discovery which means revealing information about future cash market prices through the futures market. Derivatives markets provide a mechanism by which diverse and scattered opinions of future are collected into one readily discernible number which provides a consensus of knowledgeable thinking.

TABLE 1: DERIVATIVES TURNOVER (Turnover in ₹ Cr.)

Year	Total Contracts	Total Turnover	Avg. Daily Turnover	Trading Days
2015-2016	7,57,09,981	31,44,419.47	35,732.04	88
2014-2015	50,54,78,869	2,03,62,741.42	83,797.29	243
2013-2014	30,19,42,441	92,19,434.32	36,730.81	251
2012-2013	26,24,40,691	71,63,576.66	28,654.31	250
2011-2012	3,22,22,825	8,08,475.99	3,246.89	249
2010-2011	5,623	154.33	0.61	255
2009-2010	9,028	234.06	0.96	244
2008-2009	4,96,502	11,774.83	48.46	243
2007-2008	74,53,371	2,42,308.41	965.37	251
2006-2007	17,81,220	59,006.62	236.97	249
2005-2006	203	8.78	0.03	251
2004-2005	5,31,719	16,112.32	63.69	253
2003-2004	1,43,224	5,021.81	19.77	254

CONCLUSION

Innovation of derivatives have redefined and revolutionized the landscape of financial industry across the world and derivatives have earned a well deserved and extremely significant place among all the financial products. Derivatives are risk management tool that help in effective management of risk by various stakeholders. Derivatives provide an opportunity to transfer risk, from the one who wish to avoid it; to one, who wish to accept it. India's experience with the launch of equity derivatives market has been extremely encouraging and successful. The derivatives turnover on the NSE has surpassed the equity market turnover. Significantly, its growth in the recent years has surpassed the growth of its counterpart globally

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ENTREPRENEURSHIP DEVELOPMENT IN INDIA

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ABSTRACT

The term Entrepreneur is associated directly with the risk taking ability of the person. There are two types of person for risk taking ability of the person. First is risk taker and other is risk averse person. The person who is risk averse can ready to take the calculative risk in the market to grape the market opportunity and the added advantage to become the First movers. Uncertainty is the same amount of risk which can be curable but can't be avoided. According to McClelland, "an entrepreneur is one who likes to take reasonable risk, wants to know how they can turn out as quickly as possible and has high degree of needs for the Achievement". The economy of any nation is largely depend on the entrepreneur effort and approach towards their business and the support that they are getting from the government. If we talk about in terms of India than government of India has taken the various steps for the growth and promotion for the entrepreneur like for the small and medium scale enterprise there are various government institution which are providing the basic need of funding and other necessary requirements like Technology, experts advice from the country as well as from the abroad.

KEYWORDS

entrepreneurship, entrepreneurship development.

INTRODUCTION

The term Entrepreneur defines as a person who initiates the new idea in terms of Invention. As we all know that invention is innovation. If the person invents something than he can derive something for his or her organization and the person who is able to do this is called Entrepreneur. He is actually a sole motivator who can generate the new combinations of Idea. his innovations may be in the different forms like introducing the various new methods of productions, Variety of new goods according to the tastes and preferences of the customers, opening of a new market and also the new resources of raw material.

This classic trait is the definition of risk-taking--the ability to withstand the fear of uncertainty and potential failure. "It all boils down to being able to successfully manage fear," notes Michael Sherrod, entrepreneur-in-residence at the Neeley School of Business at Texas Christian University. He sees the ability to control fear as the most important trait of all. "Fear of humiliation, fear of missing payroll, running out of cash, bankruptcy, and the list goes on."

On the positive side of the Entrepreneurship growth and initiatives by the government of India than it is on the right direction. Technology advancement has been started in India, Standard of Education and Research and Development programme in each sector has been increased. If we analyzed the data of 2011, according to the World Bank than only 5168 patents were granted in India and in China there was 172113 patents was granted for the Entrepreneur.

Entrepreneurship is about building a business from scratch while managing limited resources (including time, money and personal relationships). It is a long-term commitment, and attempting to plan as much as possible at the beginning is a noble impulse. In reality, however, planning for everything and having a ready solution for all possible risks may prevent you from even taking the first step. Successful entrepreneurs do keep some dry powder in reserve, but more importantly they maintain a mindset and temperament to capable of dealing with unforeseen possibilities. Not every attempt will result in success. The failure rate of entrepreneurial ventures is very high. At times, it is absolutely fine to take the "practical" exit route and try something new, instead of continuing to make sunk cost investments in the same venture. Many famous entrepreneurs weren't successful the first time around. But they had the serenity and foresight to know when to cut their losses.

66% of local entrepreneur says that access to private equity has improved in the past three years. Requirement of government support has also been increased. We have the figure of India and other G-20 countries data for government support for Entrepreneurship development

TABLE 1

Access To Funding	India	G-20 Average	Period
IPO Market activity			
IPO amount invested(% of GDP)	.31	.22	2009-2011 Average
Access to Credit			
Domestic Credit to private Sector (% of GDP).	48.2	99	2008-10 Average
Venture Capital availability (Scale-1-Impossible to Scale-7- Very Easy).	3.3	3	2009-2011 Average
Mergers & Acquisition Deal Value (% of GDP).	2.9	3.4	2010-2012 Average

(Sources: Journals of G-20 Summit, university of Toronto press)

India's domestic credit to the private sector is about to 48.2% which is less than the average of G-20 countries average of 99%. Entrepreneurs in India struggle to access commercial sources of financing. This suggests that the Government may need to provide more credit guarantees and support mechanisms to encourage lending. According to The World Bank, the ratio of domestic credit to GDP in India was 48.2% compared to an average of 99.0% across the G20 countries in the period of 2008 to 2010.

However, the situation is changing rapidly, and access to capital for entrepreneurs has improved in the incubation and growth stages of enterprises. More than half of local entrepreneurs cite improvements in various sources of funding; including microfinance, private equity, business angels and bank loans with the number of incubators in India expected to rise from 120 in 2012 to around 1,000 within the next decade, according to a Planning Commission report.

REVIEW OF LITERATURE

Entrepreneurship results into creation of organizations when entrepreneurs assemble and coordinate physical, human and financial resources and direct them towards achievement of objectives through managerial skills. By creating productive organizations, entrepreneurship helps in making a wide variety of goods and services available to the society which results into higher standards of living for the people. Possession of luxury cars, computers, mobile phones, rapid growth of shopping malls, etc. are pointers to the rising living standards of people, and all this is due to the efforts of entrepreneurs.

Some of the Quick Findings of G-20 Summit of Entrepreneurship Development of India in (2013) which was headed by Farokh Balsara, Stategic growth market leader, India and Mr.Gaurav Taneja, Government & Public sector Leader, India.

- Total population – 1.2 billion.
- Gross National Income (PPP) was US$3840.
- GDP growth rate was 3.2%

- GDP growth rate in Exports was 17.6%.

On the basis of these figure I can suggest that there are number of areas where we can make a improvement for the smooth run of an enterprise.
These could be,

1. Regulatory System could be streamlined.
2. Regulation governing to Export of goods should become burdensome so that we can attract more foreign players to do the business with our business players.
3. Red Tape is facing by entrepreneur should be reduced for growing in a faster way.
4. Tax system should become easy and quick understandable so that it cannot create the chaos.

SWOT ANALYSIS THE ENTREPRISE DEVELOPMENT IN INDIA

STRENGTH

- India is a developing country and in the 21st century India has the largest consumer market and on the basis of the study taken from the Asian Development Bank, the middle class is set to rise from a quarter of the population in 2005 to almost 60% in 2030.
- Government of India has taken various initiatives to boost the image of the Entrepreneur like various National Level programme and trade fairs. FICCI (Federation of Indian Chambers of commerce and Industry) and CII are playing a most significant role for changing the phase of entrepreneur in India.

WEAKNESS

- The biggest hurdles that I found in India as a hazard for the Entrepreneurship development is public is spending very less amount on education and enrollment in higher education and territory education is very law compared to other developed Nation worldwide.
- Development of Infrastructure which is required for smooth running of business is very poor which adds the cost for any company to run their operation India, its biggest hurdles for not getting attract to do the business in India.
- High level of bureaucracy which has a direct impact to start and run the business is high in India.

OPPORTUNITIES

- Government is planning to rejuvenate the various policies and structure to build up strong relationship with foreign Import and Export. For that reason GOI has established EXIM bank, which provides finance to Importer and Exporter.
- Government is trying to improve the Economic Growth so called GDP (Gross Domestic Product) & NNP (Net National Product) than can attract more and more investors from the abroad to invest more and earn good return on that.
- India has very good advantage as an Entrepreneur compare to other country in Asia, Europe, Africa and South America as it has wide population and open market.

WEAKNESS

- The biggest challenge for entrepreneur growth in India is funding is very low interns of Initial Public offering (IPO) and Venture capital financing. If India has to grow faster in entrepreneur sector than India has to improve this section very fast.
- Indian Rupees is going to depreciate again and again as 20% against the major currencies in the market (US dollar, Britain Pound, Euro etc) in second half of 2011 and it continue till second half of 2013 and it is started again in 2015. Currency depreciation is important from the point of view of an importer with a view to that they are attaching with the import of Machinery, Raw material and necessary equipments.
- Inflation rate is rising day by day is also the cause of worry because it has direct effect to the budget of lower and middle class people.

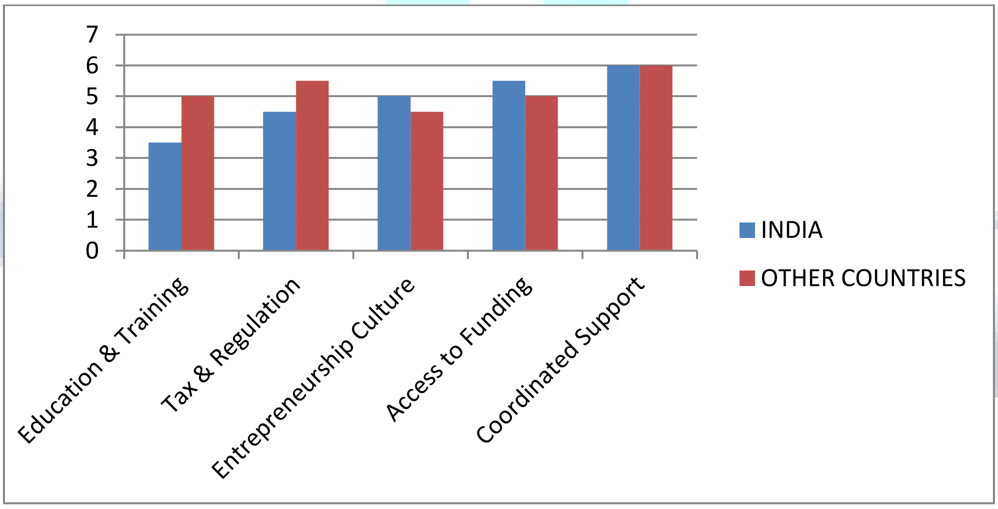
VARIOUS AREAS OF INDIA AND OTHER COUNTRIES SCENARIO FOR ENTREPRENEUR

TABLE 2

Area	India's Score	Other Country Score
Education & Training	3.5	5
Tax & Regulation	4.5	5.5
Entrepreneurship Culture	5	4.5
Access to Funding	5.5	5
Coordinated Support	6	6

Sources: Journals of G-20 Summit, university of Toronto press

FIG. 1



IMPORTANCE OF THE STUDY

Business leaders can control aspects of the internal environment that can positively or negatively affect a company's operating and financial results. For example, leaders shape their company's culture, establish the company's organizational structure and create policies that guide employee behavior. However, the greatest challenges to business success may be a consequence of the external environment over which a company has little, if any, control. To address these challenges, business leaders conduct an environmental analysis and develop policies and processes that adapt company operations and products to this environment.

FIG. 2

SOME STATISTICS OF ENTREPRENEUR SUCCESS IN INDIA ARE GIVEN BELOW

- *Average age* of the founder of the company in India is generally 37year.
- *Standard deviation*: is a measure that is used to quantify the amount of variation or dispersion of a set of data values. If we talk about in terms of India it is found 8 years.
- The youngest entrepreneur in India is generally found at the age of 26years and the oldest Entrepreneur in India is found at the age of 56years.
- Whether it's a small, Medium or large scale industry the *average amount of funding* found out in Indian enterprise is 25crores (Approx 6.25 Million USD).
- If we talk about the *size of the enterprise* on the basis of their funding from their operation, than in India it will start its range from 0-72crores.
- In India the *average amount of Revenues* that every Enterprise generates from their operations is Rs.25.2crores (Approx 6.25 Million USD). It's a very strange figure that 100% revenue generation as compare to their capital investment. That's the reason that India will the target Market for FDI and MNC's.
- Like the Range of Funding, if we talk about the *Range of Revenue* than it's overtaking the range of funding of capital. The range of Revenue than its ranges from 0-110crores (27.5 USD).

STATEMENT OF THE PREBLEM

An environmental analysis reviews current environmental conditions to forecast a future business environment. The static nature of the analysis ensures that unexpected environmental changes are not considered in a company's business projections. In addition, the environmental analysis is but one source of information that's evaluated as a company develops a strategic plan. As a result, the analysis does not guarantee business success. The benefit of the analysis is also limited by the reliability and timeliness of data used in the analysis.

Entrepreneurs in India face a broad set of challenges in setting up and growing their businesses but are nonetheless highly positive about the prospects ahead in one of the world's key rapid growth economies. Relative to its

- vast population
- The rate of new business registrations in the country may be comparatively low, but India still produces some of the world's most innovative and successful entrepreneurial ventures.
- Access funding is also the biggest hurdles in India.

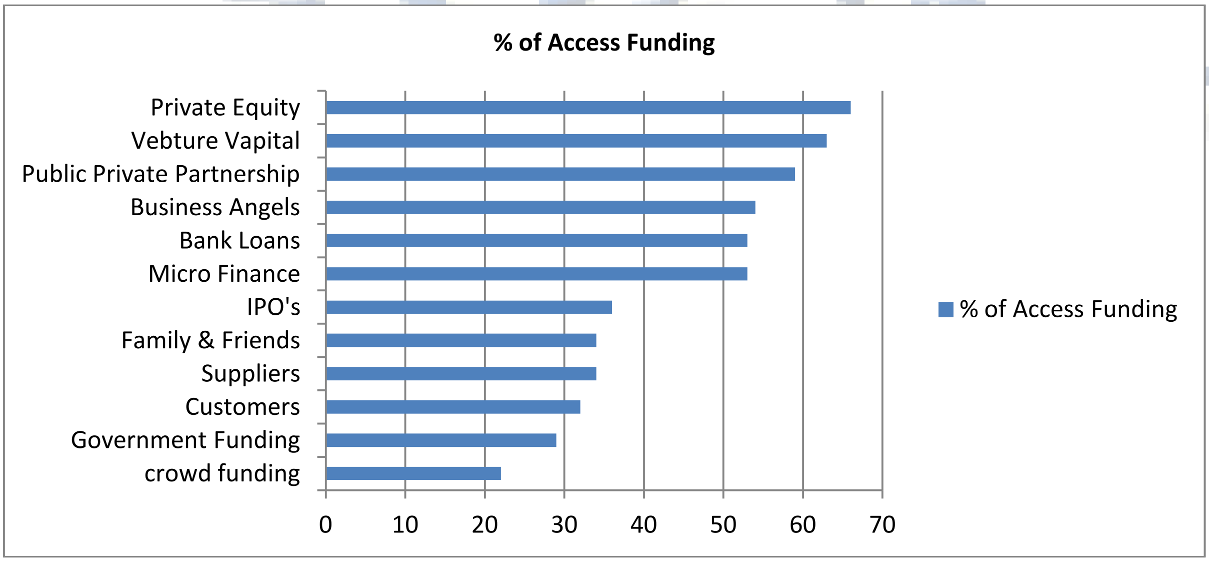
Proportion of entrepreneurs surveyed in India Citing improvement in areas of access of funding.

TABLE 3

Access Funding Sectors In India	% of Access Funding
Private Equity	66
Venture Capital	63
Public-Private Partnership	59
Business Angels	54
Bank Loans	53
Micro Finance	53
IPO's	36
Family & Friends	34
Suppliers	34
Customers	32
Government Funding	29
Crowd Funding	22

Sources: Journals of G-20 Summit, university of Toronto press

FIG. 3



From the above diagram we can identify that the most important funding source is Private equity, venture capital and public-private partnership and business Angels. And rest of the sources have less importance compare to other sources.

OBJECTIVES

The objective of the study is to how entrepreneur play a role in the society as well as how they can contribute towards the economic growth of the country and for that what are the government responsibility to motivate and support them for their business operation. Identify and apply the elements of entrepreneurship and to entrepreneurial processes; recognize the importance of entrepreneurship and identify the profile of entrepreneurs and their role in economic growth; Use the entrepreneurial mind-set and behave responsibly and ethically in their roles as entrepreneurs. There is various institutes which provides the funding to the Entrepreneur:

1. **National Equity Fund**: Established in 1987. It basically provides the need based funding to the small and tiny projects in small scale enterprise.
2. **Reserve Bank policy for credit to SSI (Small Scale Enterprise):** Established in 1993. RBI directed the various commercial banks to fulfill the Working capital requirement of SSI. It provides maximum 1crores or 20% of the size of project whichever is higher in terms of the working capital requirement of the Entrepreneur.
3. **State Finance Corporation:** it provides the term loan for the purchase of land, machinery and other necessary equipments required for the operation and a margin is 25% and provides the time horizon of two years for the repayment of loans. NSIC (National small Industries Corporation) and SSIC (state small industries Corporations) provide the finance up to the maximum limit of 60Laks and 75Laks respectively.
4. **Commercial Banks:** it provides the short and medium term loans to SSI. It generally provides to meet the requirement of working capital need in the organization as discussed earlier.
5. **SIDBI (Small Industries Development of India):** it is the Apex body for the finance of SSI. It provides the Refinancing of the loans , Discounting and Rediscounting of bills, Extension of seed capital (Like Mahila Udhyam Nidhi, Seed capital schemes, National Equity Fund), Granting direct assistance, providing factoring and leasing, extending financial support to NSIC and SSIC.

HYPOTHESIS

Statistical hypothesis is a procedure to describe the occurrence or non-occurrence of the event. Likewise in the study of Entrepreneur there is always a probability involved like whether the person has to start the business or not, whether he should select this particular location or he would have some better option with him. Whether he will earn the profit or he would incur some loss. There should always be the probability. The probability of incorrect option is null hypothesis.

RESEARCH METHODOLOGY

There are basically two types of research methodology.

1. Qualitative research methodology &
2. Quantitative methodology

Under qualitative methodology we have the one common and best method to get the appropriate result is an interview method. Interviews enable face to face discussion with entrepreneurs. If you are going to use interviews you will have to decide whether you will take notes (distracting), tape the interview (accurate but time consuming) rely on your memory (foolish) or write in their answers (can lead to closed questioning for time's sake).

Entrepreneurs in India will face a struggle if the country's economic growth continues to slow down. The economy grew by an average of more than 8% a year between 2003 and 2011 but has slowed in the past two years. A range of structural issues in India's economy have eroded some of the gains from the reforms implemented in the 1990s.

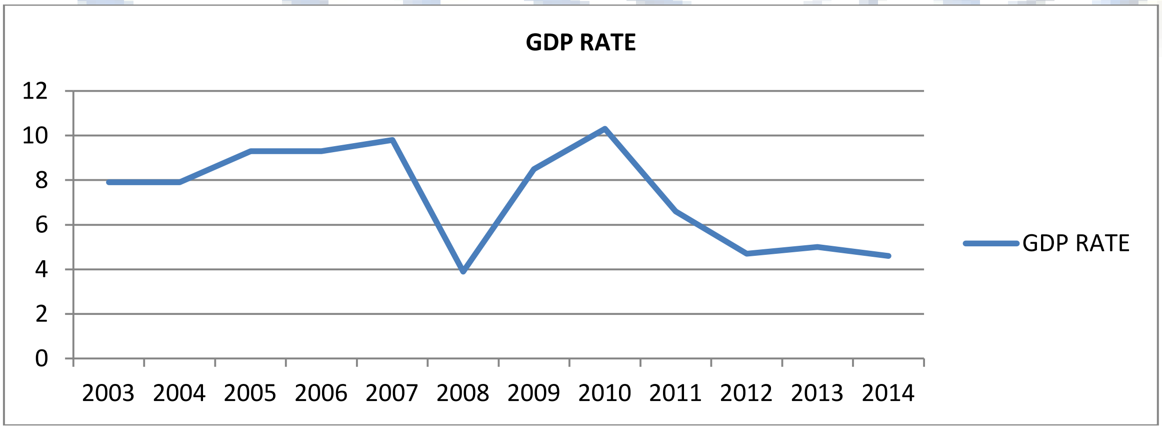
The Government has recognized the need for action. In the second half of 2012, it unveiled a series of reforms to kick-start the economy, which included allowing 51% foreign direct investment (FDI) in multi-brand retail and 100% FDI in single-brand retail. The Indian Government is also in the final stages of reviewing caps on FDI in other sectors as well, including in defense, in its bid to attract overseas capital and speed up much-needed infrastructure projects.

TABLE 4: INDIA'S GDP RATE DURING VARIOUS YEARS

YEARS	GDP RATE (%)
2003	7.9
2004	7.9
2005	9.3
2006	9.3
2007	9.8
2008	3.9
2009	8.5
2010	10.3
2011	6.6
2012	4.7
2013	5
2014	4.6

Sources: Official website of Government of India for GDP Growth

FIG. 4



We can easily identify that from past few years the GDP rate of India is constantly going downward from 2010 to 2014 due to the various hazards faced by entrepreneur in India i.e. Technological advancement, Tax policy, government policy for FDI, crude prices in international market and recently gold market is diminishing drastically from last few month from Rs.33000 to nearest of Rs.24000 in a recent days. Due to this capital loss and interest lost on capital loss has been occurred in that particular sector.

RESULT & DISCUSSION
From the above discussion we can find that the government taking more initiative to motivate the person to start a small and medium scale enterprise because they are the borne of the economic growth of the India. And for that various financial and non financial institution are working very positively in that particular side.

FINDINGS
Entrepreneurship is about building a business from scratch while managing limited resources (including time, money and personal relationships). It is a long-term commitment, and attempting to plan as much as possible at the beginning is a noble impulse. In reality, however, planning for everything and having a ready solution for all possible risks may prevent you from even taking the first step. Successful entrepreneurs do keep some dry powder in reserve, but more importantly they maintain a mindset and temperament to capable of dealing with unforeseen possibilities.

RECOMMENDATION
I suggest that government should have to open the window by removing all the necessary laws and bills which had been passed previously and which are putting the hurdles to attract the FDI in our country as compare to other developed countries. In terms of entrepreneur, they have to understand the scenario of the business in domestic as well as in international market and he should be updated with all the latest technological advancement and also support to the government for the countries better prospect.

CONCLUSION
Someone who exercises initiative by organizing a venture to take benefit of an opportunity and, as the decision maker, decides what, how, and how much of a good or service will be produced. An entrepreneur supplies risk capital as a risk taker, and monitors and controls the business activities. The entrepreneur is usually a sole proprietor, a partner, or the one who owns the majority of shares in an incorporated venture. Entrepreneur is greatly value self-reliance, strive for distinction through excellence, are highly optimistic (otherwise nothing would be undertaken), and Always favor challenges of medium risk (neither too easy, nor ruinous).

It's good to be passionate or even stubborn about what you do. But being inflexible about client or market needs will lead to failure. Remember, an entrepreneurial venture is not simply about doing what you believe is good, but also making successful business out of it. Market needs are dynamic: changes are a recurring phenomenon. Successful entrepreneurs welcome all suggestions for optimization or customization that enhances their offering and satisfies client and market needs. A product you develop for yourself alone may qualify as a hobby, but a product for the market should satisfy market needs.

FIG. 5

LIMITATIONS
For entrepreneurs, practice doesn't make perfect; action does. You simply cannot wait until you are 100 percent ready before you take action. We always want to think things all the way through, but sometimes you need to just go for it, foregoing your perfect business plan and winging it with a five-page deck instead. The hardest part of giving up on perfectionism is to "own" your decision. While it is never going to be easy, if you let go of perfectionism, you will achieve better results. Entrepreneurs' resolve is tested from the very first step of starting a business. In fact, one of my entrepreneurship professors compared starting a business to jumping off a cliff and assembling your parachute on the way down. While it is that scary, if you succumb to your fear and never take the plunge, you have zero chance of succeeding. As an entrepreneur, worry comes with the territory. In fact, over a third of entrepreneurs told Gallup they worried a lot about yesterday. While worry is a quotidian experience, it is not productive. You have to make peace with the things that concern you, and not let them stop you from taking action and pursuing your dreams.

SCOPE FOR FURTHER RESERCH
Scope for further research is always here in this subject, as its vast field and the environment of business changing day by day when there is a sudden changes in the economical and environmental factors and it's also affected by the people taste and preferences, income, standard of leaving and public relations. Sky has a limit for this subject as it is affected by the people mind set and also the creativity and efficiency of the people is also matter as business is purely depend on how you convince your customer and come ahead from your competitors in the market.

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POPULATION AND DEVELOPMENT: A BRIEF REVIEW

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ABSTRACT

Although the concept of "demographic transition" implies that economic development may affect population growth, in the past, economists were concerned primarily with the reverse relation. Since the last quarter of the Twentieth Century, the idea that economic policy may influence population growth in less developed countries has received increasing attention. Some have argued that labour-intensive development strategies may lead parents to want more children. On the other hand, development with growing female education and labour-force participation may provide the pre-conditions for family limitation. Whatever be the causal links between the changing economic and social parameters, such changes are bound to affect deeply a great many people who depend on the rural sector of less developed countries for their livelihood. An attempt has been made here to present a brief review, since the early mercantilist writers, on the relationship between population and development.

KEYWORDS

agricultural growth, economic growth, population growth, technological change.

JEL CODES

J11, O11, O33, Q22.

I. POPULATION-ECONOMY LINKAGE: EARLY WRITINGS

The role of population in development has been considered in various ways, and has been seen to exert both positive and negative impacts on the welfare of a nation. It has often been believed that development of a country is initiated and sustained by the forces generated by the size and nature of growth of its population. Its wealth and military strength being directly dependent on a thriving population, the latter was viewed not only as a useful input for development but also considered as essential. Alternatively, population has been seen as a contributory factor towards human distress: poverty, wars, famines and epidemics. On the other hand, the neo-classical economists relegated population to the background. According to them, population is an exogenous variable in the domain of economics and is determined mainly by non-economic factors. To Jevons, a neo-classical economist, "the doctrine of population forms no part of the direct problem of economics" (Meier, 1984).

In the true sense of the term, a population theory first emerged when the well-known work of Thomas Malthus (1798) was published in the eighteenth century, although some thought had been given to population issues in earlier periods also (Bhende and Kanitkar, 1988). Among the early Mercantilist writers, Niccolo Macchiavelli (1469-1527) was perhaps the first to observe that excessive population would diminish through want and disease. Insofar as he recognised the existence of a relationship between population growth and resource use, he may be considered a precursor of Malthus (Stangeland, 1904). Giovanni Botero (1544-1617), also a mercantilist, believed that population growth is circumscribed by the limited means of subsistence which essentially act as primary checks to continuous growth and forces the growth rate to fall eventually. This effect was strengthened, he believed by secondary checks such as gradual infertility of soil, diseases and epidemics and natural disasters. In spite of this, however, he felt that a large population was the primary source of strength for a country (Stageland, 1904). The latter sentiment was reiterated by Mandeville (1670-1733) who stressed that an increasing population was "the never-failing Nursery of Fleets and Armies".

After 1750 writers began to reject some of the mercantilist ideas and focused on that sector of the economy, neglected so far by the mercantilist. They concerned themselves with agriculture and productivity of land. These authors were primarily French and were known as the Physiocrats. They viewed agriculture and land as the source of all wealth and regarded population as necessarily dependent on food supply (Encyclopaedia Britannica, 1967). However, according to the Physiocrats the best way to avoid pressure of population on food supplies was to increase agricultural output. It was left to the Italian economist Giammaria Ortes (1713-1790) and the English economist Robert Malthus to clearly advocate for the reduction of population growth rate as a solution to the problem.

II. WAGE-POPULATION MECHANISM: THE CLASSICAL VIEW

The classical school of thought originated with Adam Smith. In the Smithian model, population growth is a function of the growth of national wealth. The growing national wealth keeps the demand for labour high and when there is high demand for labour, the labour receives a liberal reward which enables them to marry early and have a large number of children, many of whom are likely to survive in a regime of high wage rate. The worst thing happens when national wealth is not increasing. According to Smith, "The demand for men, like that for any other commodity, necessarily regulates the production of men, quickens it when it goes on too slowly; and stops it when it advances too fast" (Smith, 1988; original publication 1776).

From the very outset, Smith adheres to the conception of capital or "stock" as consisting of "advances" to workmen to tide them over during the period when production takes place: hence, a connection is laid down between "the demand for those who live by wages" and "the funds which are destined for the payment of wages" (Blaug, 1968). The relationship is not explored but it is used as a basis of the conviction that the growth of capital entails a constantly rising demand for labour. The short-run supply and demand theory involving the size of the labour force and the size of wages fund is combined with a long-run minimum-of-existence theory. Smith is not very clear as to how this adjustment takes place, but a Malthusian wages-population mechanism is implied.

At the heart of Ricardo's (1772-1823) system is his ideas about wages (Blaug, 1968). He defines "natural wages" as the wage, which will keep population stationary in contrast to short run market wages. While money wages rise through time because of the rising price of wheat, the wages-population mechanism will keep real wages constant. But the subsistence is taken to depend on "habit and custom" (Population and Development Review, 1988).

Ricardo observed that a rising price of wheat need not prevent a gradual rise in real wages. Comments on countries like Ireland and Poland with an abundance of fertile land show that Ricardo regarded over population in underdeveloped countries as the result, and not the cause, of backwardness and poverty. Reducing population in such cases, according to him, would merely cause wages to rise and the supply of labour to fall.

Although Malthus (1766-1834) was by no means the first to consider demographic problems, he was certainly the first who successfully put forward a theory of population growth. Ever since, his views have been the starting point of every discussion relating to population problems. Malthus' theory had definite analytical consequences that made it an integral part of classical economics. In fact the Malthusian theory lent support to the subsistence theory of wages by focusing on the rigid dependence of population growth upon food supply. The theory explained poverty in terms of a simple race between population and the means of subsistence and as such it provided the cornerstone for all classical thinking about economic policy (Blaug, 1968).

The Malthusian theory essentially consisted of three propositions : (i) man's biological capacity to procreate exceeds his physical capacity to increase the food supply; (ii) either the preventive or the positive checks are always in operation; and (iii) the ultimate check to reproductive capacity lies in the limitations on the food supply (Malthus, 1914; original publication1798). In other words, lack of subsistence is an "ultimate" check in the sense that all other checks are only ways in which the scarcity of food manifests itself. This is perhaps even true of the "preventive" checks as Malthus believed that only fear of hunger could provide the motivation for voluntary limitation of numbers.

Malthus did not mention a tendency to diminishing returns in agriculture until the second edition of the Essay (1803). He pointed out that the power to produce food is "obviously limited by the scarcity of land …… [and] by the decreasing proportion of the produce which must necessarily be obtained by the continual additions of capital applied to the land already in cultivation". This was again followed by the proposition that "although the saving of labour and improved system of husbandry may be the means of pushing cultivation upon much poorer lands than could otherwise be worked; yet the increased quantity of the necessities of life so obtained can never be such as to supercede, for any length of time, the operation of the preventive and positive checks to population".

III. AGRICULTURAL ORGANISATION AND DEMAND FOR CHILDREN

Demographic changes vary from one rural area to another, both within and between countries. Access to land, tools and techniques, and the nature and pattern of family labour use are different in various systems of agriculture, and those differences are likely to affect the fertility decisions in agricultural households. It is, therefore, useful to review the different agricultural production systems in developing countries. In large parts of Africa with tribal tenure system all members of the tribe have access to land, a "common property", for cultivation (Boserup, 1965) and according to custom, more land is assigned to larger families. According to this system, a man can occupy more land by marrying more wives and having more children. Hence, the system may contribute to polygamy and the desire for large families (Boserup, 1970). This has many benefits. A man with many children need not pay for hired labour. Moreover, more children would mean certain support in his old age. By providing social security and prestige, large families would, therefore, be the ideal for most such communities in Africa.

So far as women are concerned, they also gain certain benefits from having many children. On the one hand, children regularly help them in the work they have to perform: as a housewife, as well as an agricultural worker. On the other hand, having no children would mean loss of prestige and the risk of no old-age support. Consequently, women are also motivated to have large number of children whom they regard as their own personal wealth (Caldwell, 1976).

The land tenure system among the European peasant communities in the period before the industrial revolution was quite different from that of the African. The size of the holdings the peasant families possessed had no relation to the number of family members (Boserup, 1981). If a family had more than one male child it was required to subdivide the holding among them. But if such division of holding was not legally sanctioned by the society, some members of the family became tenants or wages labourers and thus there was a loss of social prestige for the family. In such cases, therefore, second and later sons were not considered as "wealth" for the European peasant communities. Moreover, child labour was not as important in Europe as the tasks usually performed by them were not required in European agriculture. Moreover, only landless families needed old-age support. The landowning communities were well-off enough to be able to look after themselves in their old-age or to hire labour to look after the agricultural operations. These considerations led to a norm of smaller families in Europe.

The differences in the techniques used in agricultural production in most of the developing countries are likely to have an influence on fertility in farm households. These techniques and the nature and availability of resources (e.g. access to land, implements and methods, working hours etc.) are different in the various systems of agriculture. These systems may be considered as suitable to different population densities and environment conditions (Boserup, 1965).

Especially, in many developing region where population density is quite high, as in India, agricultural land is fragmented with each agricultural family enjoying only a small parcel of land. In such systems, rising pressure on land exerted by a rapidly growing population induces multi-cropping of land in order to raise agricultural output. Otherwise, this economics have to resort to import of food (Boserup, 1984). Simultaneously, the farmers would have to adopt more intensive techniques of production by eliminating fallow and transforming pastures and forests into cultivable areas. The organisation of agricultural production determines how this process of intensification will influence fertility. Demand for children in rural areas would depend on different elements which include use of child labour. However, child labours do not provide the only or the most important motivation for desiring a large family. Other benefits that can be expected from children involve their role as sources of security, status etc. Therefore, in such situations rural families are likely to want more children.

IV. TECHNOLOGICAL CHANGE, FOOD SUPPLY AND POPULATION GROWTH

Population growth is linked to technological change in complex ways. One obvious effects of population growth is to reduce the ratio of natural resources to population. But on the other hand more people make it possible to exploit the economies of scale. The former effect, although it has an immediate negative impact on the quality of life, may, however, provide motivation for technological change for better utilization of scarce resources. The latter effect makes it possible to apply methods of production that are indivisible and large scale. These first order changes in their turn would result in further changes in population growth and technological development. Thus, earlier doses of population and technological changes give rise to a continuous dynamic process in to the future.

In other words, there are two important linkages between population density and technological levels. The first is between population size and the amount and quality of infrastructure. A large population could undertake large-scale investment in infrastructural changes including irrigation facilities, which would not be feasible for a smaller population. Therefore, increase in population density by natural increase or by immigration was a pre-condition for use of more advanced technologies. The second link is that between population size and natural resources. The amount of natural resources both per head and sometimes in absolute amounts is reduced with the increase in population density. Therefore, technologies such as extensive subsistence systems can no longer be used when population density exceeds a certain level. Thus, technological change is needed either to economize the use of natural resources or to make it possible to use substitutes for them (Boserup, 1981).

In Europe, agricultural development proceeded by successive stages related to population changes. In the first phase of the demographic transition, marked by accelerating population growth, agriculture was intensified by labour-intensive means, with little, if any, industrial inputs. This phase lasted in Western and Central Europe from the mid-eighteenth to the mid-nineteenth century. This was followed by a second stage, which had two characteristic features. One was increasing reliance upon imports of agricultural products as a supplement to home production. The other feature was the increased use of industrial and scientific inputs. In the third phase, declining birth rates and declining income elasticity for food reduced the demand for food and imports of food and led to accumulation of food surpluses.

Between the appearance of food production and the Christian era, there seems to have been little change in population density or technology in many parts of the world. Again, in some areas, this period brought large technological changes. Population multiplied many times in some areas in the Eastern Hemisphere, and in a few in America, and gradually hunting and gathering were replaced by systems of intensive agriculture (Boserup, 1981). However, the multiplication of population in the ancient world bore no instance to the recent explosive increases. Ancient societies, unlike modern economies, had enough time to adapt to population increases by development or imports of new systems of food supply, and by improvement of the quality of inputs.

Childe (1952) and Wittfogel (1957) have interpreted the changes in ancient societies in terms of invention of new technologies and focused on the quality of agricultural inputs. But they overlooked the increasing intensity of land use in step with population increase. This has been brought into focus by some studies of long-term changes in ancient land use (Adams, 1965; Sanders, 1972; Smith and Young, 1972; Adams and Nissen, 1976; Butzer, 1976). Boserup (1981), discussing about technological change in ancient agriculture, argued that Mesopotamia and several river basins in the Eastern Hemisphere were the areas in which population increase was accompanied by intensification of food supply systems and by improvement of inputs. In the Western Hemisphere population increase was accompanied by intensification of food supply systems, but with little, if any, improvement in the quality of inputs (Sanders, 1972).

This interplay of forces is easily witnessed in Asia, although population growth and density varies widely over the continent. By the 1970's when almost all the countries in East Asia had reached medium technological levels, those in South and South East Asia were still unindustrialized and at low technological levels. Two distinctly different patterns emerged in Asian countries. While countries with medium and high technological development appeared to have high population densities, another group of countries with medium and low population densities were all at very low technological levels and were characterised by low industrialisation (Boserup, 1981).

The population has been growing rapidly in the Third World countries especially in Asia, during the post World War II period. The response to this pressure had been Malthusian in nature. With the increase in world population, the extensive systems of agriculture have been replaced by intensive system in many parts of the world. As a result, not only population, but growth rate of food production has also been increased (Boserup, 1981). According to Binswanger and Ruttan (1978), between 1880 and 1960, population in Europe and Japan increased around one percent per year while during the same period total agricultural output and food production rose by one and a half percent per annum. Another study of FAO (1975) showed that the average rate of increase of food production in the third world countries, during 1952-72, was 2 to 3 percent per year, although there were large variations among the countries. It is interesting to note that the rate of growth of food production was much higher in countries with high population growth rates as in developing countries of Asia, Africa, etc., while in European and American countries with low growth rate of population, food production increased at a much slower rate. A few third world countries, responded to high population growth by raising the rates of growth of food production. This was affected by the introduction of the new agricultural strategy known as the "Green Revolution". However, the countries which made use of these technologies during the period 1952-72 were relatively small. Compared to the earlier periods the increase in food production was impressive, but it was less impressive when compared to the population growth (Boserup, 1981). For this, a large number of these countries (including India in the 1970's) had to resort to imports of food from developed countries enjoying higher agricultural productivity.

One of the reasons why this group of countries from Africa and Asia remained behind others may be the lack of development of rural infrastructure. The Indian experience is a case in point. Although Green Revolution was initiated in India during the later part of 1960's only those regions which already had better infrastructure including irrigation, transport and other facilities since the British Colonial reign were the ones to spearhead the movement of modernisation and expansion of food production in India. The state which played a leading role was Punjab experienced an average increase of nearly seven percent in agricultural output annually (Sinha, n. d.). However, most areas of India were not this fortunate, being characterised by lack of infrastructure. Consequently these areas showed a meagre increase of food production per capita less than one half of one percent annually on the average during 1952-72, resulting in large food imports.

Boyce (1987) investigated empirically the linkages between population growth and agricultural growth via a cross-sectional analysis of West Bengal, an Eastern State of India, and Bangladesh which has a common border with West Bengal. He examined two opposing views in explaining the effect of population growth upon agricultural performance: (1) the first view, neo-Malthusian in nature, which holds that population growth poses a hindrance to the growth of total as well as per capita agricultural output due to the negative impacts on investment, environment and over all agrarian structure; (2) the other view of induced innovation (Hayami and Ruttan, 1971) according to which population growth plays a positive long-run role by inducing technological and institutional change. The results obtained by Boyce indicate that the scenario in West Bengal and Bangladesh do not support the predictions of the neo-Malthusian school. Rather population growth was found to have exerted a positive effect upon agricultural growth thereby supporting the induced innovation hypothesis.

V. LINKAGES BETWEEN POPULATION CHANGE AND INCOME GROWTH: EMPIRICAL FINDINGS

An obvious consequence of agricultural development is growth in agricultural income. Population growth has been shown to have both beneficial and adverse effects on per capita incomes and it is relatively uncertain so far as its net impact on development is concerned. As empirical evidence based on time series data shows countries in which there was more rapid economic progress were the ones who also experienced faster population growth, thereby suggesting that they tended to be a broad positive association between population growth and economic improvement (Horlacher & Mackellar, 1987). However, analyses based on cross-section data undertaken by Kuznets (1967), Easterlin (1967) and others show that population increase and growth of per capita income was negatively related.

In another cross-country analysis McNicoll (1984) observed that efforts to generate sustained increases in per capita product are hindered by rapid population growth. While calculating correlations between rates of population growth and growth rates of per capita product for 77 developing countries covering the periods 1960-1970 and 1970-1980, Chesnais (1987) found no significant correlation for the earlier period, while a significant negative coefficient was found for the later period. Still other studies (Bairoch, 1981; Rodgers, 1984) done separately for developing countries show that these two variables are apparently unrelated.

Income has been found to often act like a direct constraint on fertility decisions; alternatively it also affect the desire number of children indirectly through changes in tastes, aspirations and sense of self-reliance of the parents. Thus the relation between changes in fertility and income is not simple. In many studies (for example Collver, 1965) birth rates have been directly influenced by business conditions through the Malthusian proposition of marriages being postponed in bad times and occurring in good times. Similar cross-sectional studies showed positive association between fertility and income (Jain, 1939; Stys, 1957; UN, 1961; Driver, 1963; Salaff, 1972). Another analysis for the rural Philippines (Encarnacion, 1972) shows that income exerts a positive effect on fertility at the lower end of the income distribution while at the upper end it has a negative effect. Among many of the possible explanations for the positive association between income and fertility may be because at the lowest end of the income distribution the poor suffer from inadequate nutrition and ill-health because of which the women may find it more difficult to conceive thereby resulting in longer intervals between births. Also rates of miscarriages in pregnancy are higher (Jain, 1969; Jain, et.al, 1970; Baird, 1965). Another interesting explanation of the positive relationship between income and fertility may be because of the changing aspirations of the poor people. As they move away from the subsistence level their growing desire to imitate the lifestyle of the richer sections raise the marginal utility of their income thereby increasing the opportunity cost of children, resulting in lower fertility (Wyon and Gordon, 1971). According to Mueller (n. d.) this explanation works especially when the parents' experience sustained income increases over a period of time as it occurred in the case of farmers in Japan, Taiwan and Indian Punjab. This explanation finds support in another study (Freedman, 1972) with micro level data which showed that actual and expected income changes had a significant positive relation with the consumption aspiration of the Taiwanese population. It was found that there is a large demonstration effect whenever the large farmers' exhibit ostentatious lifestyle following income gains and the poorer farmers are apt to aspire to that lifestyle. If educated modern elite or leading families accept family planning and support the agents of the family planning programme, attitudes among other families in the village may be favourably accepted (Dasgupta, 2000). Anker (1973) found that the presence of higher castes in Indian villages near Baroda raised contraceptive use and reduced desired family size among the lower castes, as compared with residents of villages inhabited exclusively by lower castes.

VI. AGRICULTURAL GROWTH AND POPULATION CHANGE: DIRECT AND INDIRECT IMPACTS

The neo-Malthusian argument is that population growth affects per-capita agricultural growth negatively. Van de Walle (1983) defines neo-Malthusianism as 'a position arguing that slower population growth can itself accelerate the process of development, and that family planning programmes can, on their own, bring down fertility'. This view has been argued in three ways. The first relates the supply of labour to the supply of capital. Population growth reduces the supply of capital caused by higher levels of consumption for the growing numbers. The second line of argument is that population growth leads to environmental deterioration caused by excessive and unproductive exploitation of the agricultural base as well as diversion of natural resources into immediate consumption needs. The third way is that population growth has been considered to hinder agricultural growth by weakening the agrarian structure caused by increased unemployment and poverty and reduced farm size and uneconomic fragmentation of holdings.

According to another school of thought (led by Schumpeter, Boserup and others), however, population growth is not necessarily detrimental to agricultural growth as it has a positive long-run effect on agricultural growth through the inducement of production-increasing technological change. According to Schumpeter (1947), population growth may sometimes lead to reduction in per capita incomes, but 'at other times, it may have an energizing effect that induces new developments with the result that per capita income rises'. The first systematic application of this perspective to agriculture was by Boserup (1965). She argued that, in the short run, population growth might reduce the average product of labour, but in the long run two other effects act to raise it - first, the compulsion to work harder and longer leads to 'changes in work habits which help to raise overall productivity'; second, the increasing population density 'facilitates the division of labour', allowing new economies of specialization, particularly with the development of transport and education. Colin Clark (1967), who endorsed Boserup's position, identified that rapid population growth is 'the principal motive force' bringing about extensive clearings of uncultivated land, drainage of swamps, and the introduction of improved crops and manures, the events which have been described as "agricultural revolutions". According to

North and Thomas (1973) population growth constitutes 'the predominant parameter shift which induced the institutional innovations which account for the rise of the Western World'. Hirschman has argued that population pressure generates counter-pressure to maintain living standards, and that the resulting activity of the society 'causes an increase in its ability to control its environment and to organize itself for development' (Hirschman, 1958).

On the other hand agricultural growth has been shown to affect patterns of population changes in several studies (Vosti and Lipton, 1991; Ghosh, 1991; Mukhopadhyay, 2001). Especially the introduction of Green Revolution has been shown (Boserup, 1984) to induce many economic and demographic changes in many densely populated areas. It has been pointed out that Green Revolution technique, which is a mixture of labour intensive and modern input using methods, demand higher use of chemical inputs and certain types of mechanisation. At the same time since Green Revolution techniques involve the cultivation of labour intensive commercial crops and various types of land improvements, the demand for labour with considerable skills is likely to rise. As a result Green Revolution raises awareness and aspirations for: (a) investment in the farm, (b) raising of consumption standards and (c) enhancement of human capital levels of children. The introduction of Green Revolution, which necessitates the use of high yielding variety seeds, chemical inputs and machines, induces farmers to direct an ever-larger part of their resources to the purchase of these modern farm inputs. This raises the opportunity cost of children, which are an alternative form of investment for farm families. Secondly, with rising disposable incomes (resulting from higher output) consumption aspirations are raised and this makes farm families more conscious of the economic burden of having many children, thereby depressing the demand for them. Finally, need for skill upgradation of the labour force induces parents to invest more on quality enhancement (more education) for their children rather than in their numbers. Green Revolution may thus create an atmosphere conducive to family limitation. It is observed that farmers in India who are growing high yielding varieties are making larger outlays than others for farm investment, education of children, housing etc. and are also accumulating bank accounts (NCAER, 1970, 1971).

Agricultural technology has been shown to exert both direct and indirect impacts on demographic change in a study by Vosti and Lipton (1991). The authors show that agricultural technology has a highly significant direct impact on demographic transition. In addition, technology was found to have a significant impact on income derivable from annual crop production, which in turn was found to exert an important impact on demographic transition. The empirical results of their analysis strongly support the notion that different rates of agricultural growth – and different mixes of agricultural technology used to generate given rates – do have substantial direct and indirect impacts on the speed of total fertility rate declines in different Indian districts. The results of their study suggest that the demographic impact of modern agricultural technology is by no means uniform across the innovations generated by research for crops and farming practices they ultimately affect. Finally, in their analysis, the impact of modern agricultural technology was found to vary from the fertility-enhancing impacts of agricultural mechanization and crop-specific yield improvements to the fertility-neutral cases of irrigation, fertilizer use and general spread of High Yielding Variety seed technologies and to the fertility retarding impacts of increases in real wages, real incomes, and output concentration ratios.

It has also been shown that agricultural innovations such as the Green Revolution have considerable externalities. A study by Fliegel (1956) shows that rural families exposed to the impact of new technologies is more receptive to other innovations like birth control. Copp (1958) suggests that people who are open to innovations in one area of activity, such as their work, are also receptive in other areas, such as, their family life or health practices.

VII. CONCLUSION

Malthusian theory considered the emergence of agriculture to be the result of the fortunate invention of food production techniques some ten thousand years ago, and saw the increase of world population in the following period as an adaptation to the increase in the world's carrying capacity obtained by this technological innovation. It was assumed that, before the invention of food production, prehistoric populations lived in a state of permanent semi-starvation, because their fertility was high. According to this view, only the invention of food production saved humanity – for a time – form the plight to chronic malnutrition. As agricultural populations and agricultural methods invaded more and more of the world, a radical improvement in nutrition due to the invention of agriculture was thought to have caused a shift from stagnant population to rapid growth (Childe, 1952).

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DECODING THE OIL PRICE CRISIS – 2014

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ABSTRACT
Oil, the liquid gold which has caused many of the modern wars and caused economic turmoil is now facing its own crises. The prices of oil fell by more than 40% in the second half of the last year. The liquid gold is losing its sheen. The paper is aimed to analyse the major factors which determine the prices of the oil and find the main reasons for the recent downfall in the Oil prices both real and speculative.

KEYWORDS
Iraq Turmoil, oil prices, oil demand and supply, speculation, shale production.

INTRODUCTION
Crude oil is a complex mixture of various hydrocarbons found in the upper layers of the earth's crust. Crude oil is often attributed as the "Mother of all Commodities" because of its importance in the manufacturing of a wide variety of materials. Crude oil accounts for 35% of the world's primary energy consumption. Crude oil is used to produce fuel for cars, trucks, airplanes, boats and trains. It is also used for a wide variety of other products including asphalt for roads, lubricants for all kinds of machines; plastics for toys, bottles, food wraps, among others. Global proven oil reserves in 2011 was around 1652.6 thousand million barrels, of which the OPEC had 1196.3 thousand million barrels. Crude oil accounts for 33% of the world's primary energy consumption. Global oil demand was 88.3 million barrels per day (mmb/d) in 2011, an increase of around 0.7% from the previous year. In 2010, Russia, Saudi Arabia, the US and Iran were the top oil producing countries. Although the US is the world's third largest oil producing nation, it is the world's largest consumer and importer of oil followed by China, Japan and India. Oil accounts for 29% of India's total energy consumption and there seems to be no possibility of scaling down the dependence on these fuels. Crude oil production during the period April-March 2012 (provisional) was 38.19 million metric tonne (MMT), as compared with 37.71 MMT during the corresponding period last year. The total oil consumption of the world in 2010 was around 3.34 mmb/d, and India is currently the fourth largest consumer of oil and imports more than 70% of its crude oil requirement.
Oil has played a crucial role in development of human civilization and has driven economies in a big way by acting as the most important source of energy and is a key component for industries. Oil has provoked political as well as economic tug-of-war between the developed countries – the largest consumers, and the OPEC countries – the largest producers. This, conflicting situation between monopolistic and monopsonistic forces have been the key factors for determining the price of oil. In recent times, emergence of some Asian countries as major consumers of oil has changed the global oil-based economic and political scenario. It has been deduced here that in a bilateral monopoly market between OPEC and DCs, the side which has less elasticity, will have lesser surplus. But, in a cartel monopoly market, the situation gets worse as there is no force to pressurise the supply side.

LITERATURE REVIEW
The Economist published an article titled '**Why the oil price is falling**' (December 8th 2014). The article focuses on the fact as to why the oil prices fell by 40% within 6 months from June 2014. It attributes it to 4 major factors which are Low Demand due to weak economic activities and introduction of better technology or replacements, non-impact of turmoil in Iraq and Libya on their oil production, America emerging as a leading oil producer and Saudis and Gulf nations not cutting down there production. It also identifies US shale industry, Russia and Iran as the most vulnerable parties in this oil price downfall.
Brad Plumer in his article '**Why oil prices keep falling – and throwing the world into turmoil**' (April 18th 2015) (www.vox.com) talks about the major causes of what is believed to major causes of the oil price crisis of 2014. He in the first half focuses on how the demand supply mismatch has caused this fall. He focuses on the increasing production in United States and Canada from Shale formations and at the same time disturbances in Libya and Iraq. He also discusses about the weak demand from Asia and Europe due to slowdown in China and Germany and subsidy cuts in countries like Indonesia and Iran. The second half focuses on the OPEC response of not cutting down production and explores the impact of it on Russia, Iran, Venezuela, Saudi Arabia and US and its Shale Industry.
Talmiz Ahmad in his article '**Gulf stability and the oil supply scenario**' (The Hindu) (November 17th 2014) discusses the Oil Price crisis of 2014. Apart from the economic explanation of the Demand Supply Mismatch he explores a political angle in it to. He delves into the possibility of a grand conspiracy involving Saudis deliberately keeping the prices low to hurt Russia, Iran and at the same time Shale Industry or otherwise another possibility being that even US is backing Saudi in its attempt to hurt Russia and Iran.

NEED AND IMPORTANCE OF STUDY
Keeping in mind the importance of crude oil as an energy source for fulfilling our daily energy requirements and acting as a base for driving future technological advancements it is important to study its production, demand and prising. The issues related to oil prices acts as a relevant area for research studies and any major price fluctuations require critical analysis as it has both economic and political implications at the global level. With the recent slump in the oil price being observed it thus become a topic a research requiring a through analyses to explore the major causes behind this price crisis.
It is important to undertake this study to understand the implications of the crisis and take preventive actions. It would be impractical to predict future course of this turmoil without understanding its evolution.

GLOBAL DEMAND OF OIL

TABLE 1

Oil: Consumption							Change in 2013 over 2012	Share of Total (2013)
Thousand barrels daily	2008	2009	2010	2011	2012	2013		
Total World	86147	85111	87801	88934	89931	91331	1.4%	100%
of which: OECD	48085	46057	46509	46040	45545	45558	-0.4%	49.2%
Non-OECD	38062	39054	41292	42894	44386	45773	3.1%	50.8%
European Union	14710	13977	13827	13455	12946	12770	-1.9%	14.5%
Former Soviet Union	4040	3887	3984	4293	4434	4559	2.8%	5.1%

Source: www.bp.com

The balance between demand and supply of oil and gas industry has been falling since July of 2014, and many industry analysts have struggled to find a direction in the market. While, many anticipate the price of oil would rise again and seek any signs of their hopes-for increase; others can see no reason for a rise and explain that the low price of oil is now the new normal.

Months into the process of market rebalancing from the oil price collapse, one might be hoping for more clarity on supply and demand impacts. Yet, in some ways, the outlook is only getting murkier. That's in part because the backdrop against which the adjustment is playing out is constantly changing. Given deep changes in supply and demand in recent years, the way lower prices impact the market is also different from previous price corrections. That too is causing uncertainties, and not just about the response of unconventional North American supply to lower prices. The demand response has taken the market by surprise. Unexpected pockets of demand strength have emerged. Unexpected demand strength in crude and product markets has boosted refining margins in some of the very markets where demand had seemed to be the weakest.

Surging crude oil demand is being fuelled by strong economic growth, particularly in non-OECD nations. The U.S. Energy Information Administration projects that total world consumption of marketed energy is expected to increase by 44 percent from 2006 to 2030. Reduced spare oil production capacity leaves very little room to compensate for unanticipated supply disruptions or spikes in demand. The tenuous balance between supply and demand is even more of a concern when you consider that most of the world's oil is located in some of the more politically unstable parts of the world. As such, supply disruptions, whether real or perceived, can have dramatic effects on the price of crude oil.

TABLE 2

Oil: Proved Reserves	At End 1993	At End 2003	At End 2012	At End 2013	Share of Total	R/P Ratio
	Thousand Million Barrels					
Total World of which:	1041.4	1334.1	1687.3	1687.9	100%	53.3
OECD	140.8	247.5	249.6	248.8	15%	33.2
Non-OECD	900.6	1086.6	1437.7	1439.1	85%	59.5
OPEC	774.9	912.1	1213.8	1214.2	72%	90.3
Non-OPEC	206.3	325.2	342.6	341.9	20%	26
European Union	8.1	8	6.8	6.8	0%	13
Former Soviet Union	60.1	96.8	130.9	131.8	8%	26

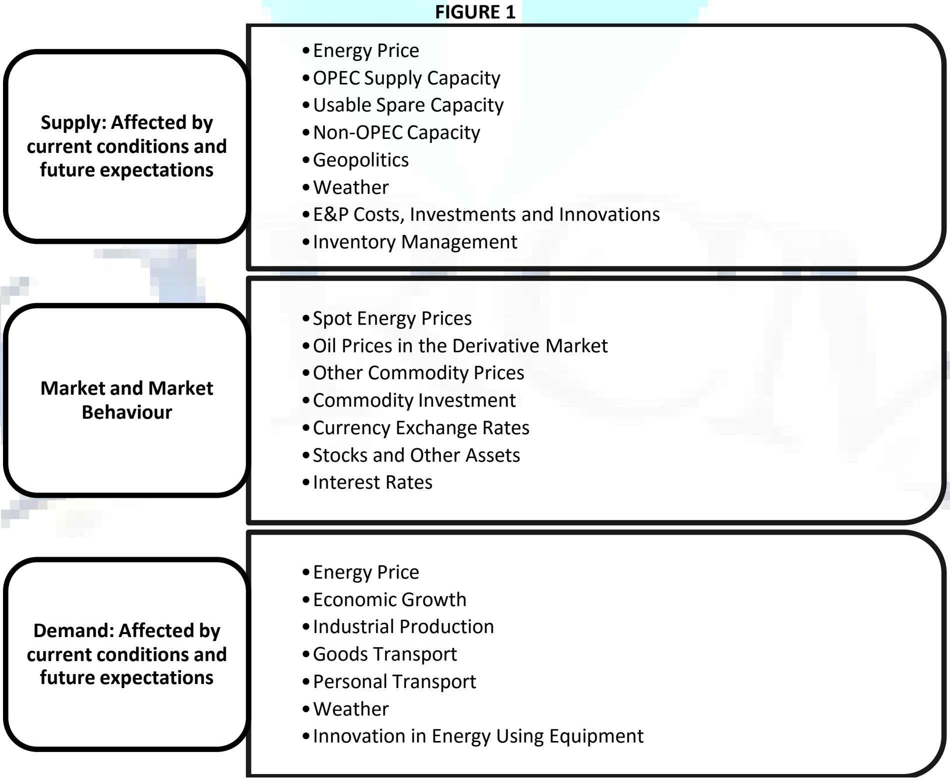
Source: www.bp.com

Global economic expansion is driving what the U.S. International Energy Agency (IEA) says is the biggest increase in oil demand in 24 years. In particular, energy consumption in the emerging economies of non-OECD countries is expected to increase by 73 percent between 2006 and 2030. All in all, that suggests the market rebalancing may still be in its early stage.

FACTORS DETERMINING THE PRICE OF OIL

The price of petroleum affects a variety of goods and services, because many economic activities use oil as an energy source. No one prefers to pay higher prices, but the global oil market is much more complicated than most people realize, and the price of oil is dependent upon many different factors.

FIGURE 1



❖ **OPEC (THE ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES)**

OPEC, is a consortium of 13 countries: Algeria, Angola, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates and Venezuela, is the single largest entity impacting the world's oil supplies . OPEC is responsible for 40% of the world's oil production, and sets policies among member countries to meet global consumption. OPEC can affect the price of crude oil, by increasing or reducing production among member countries. For example, the 2007 and 2008 increase in oil prices was due to reductions in OPEC production allocations in 2006.

❖ **SUPPLY AND DEMAND**

Global oil inventories balance supply and demand. If production exceeds demand, excess supplies can be stored. When consumption exceeds demand, inventories can be tapped to meet the incremental demand, and the relationship between oil prices and oil inventories allows for corrections in either direction. Non-OPEC suppliers produce 60% of the world's oil, and although they are 50% larger than OPEC, they don't have sufficient reserves to be able to control price and can only respond to market fluctuations. OPEC, however can directly influence market pricing, especially when the supply of oil produced by non-OPEC nations decreases.

❖ **RESTRICTIVE LEGISLATION**

As the majority of the world's oil reserves and production are controlled by government-run companies, the global oil market is heavily politicized and its functioning is far from that of a competitive market. Energy policies and taxes in oil-rich countries also affect the price of oil. If a government bans oil exploration in a place with proven reserves, such as the Gulf of Mexico, then commodity markets mark this as a "loss" in crude oil supply and gas prices go up as a result.

In India, gas prices can vary from state to state because central and state taxes account for an average of 15% to 33% of the price you pay at the pump. Also, in the United States, gas prices can vary from state to state and city to city because state and local taxes account for an average of 11-12% of the price you pay at the pump. Other factors that affect the price of gasoline include local retail competition, proximity to gasoline suppliers, and environmental regulations.

❖ **POLITICAL UNREST**

If an oil-rich area becomes politically unstable, supplier markets react by bidding up the price of oil so that supplies are still available to the highest bidder. In this instance, only the perception of a shortage in supply can increase prices, even while production levels remains constant.

❖ **PRODUCTION**

The location of reserves, the amount and properties of oil found, the geological formation in which the oil is found, and the costs of extraction are all determined by physical factors. As oil is a non-renewable natural resource, physical factors significantly affect the cost of supplying oil from a particular reserve. In addition, substantial investment is required to continuously discover new reservoirs and to develop them.

❖ **FINANCIAL MARKETS**

Oil brokers match buyers and sellers of crude oil, and trade contracts for future delivery of oil, known as "futures". Clients purchase futures to hedge against oil price increases that could adversely affect their profitability. Oil producers sell oil futures contracts in order to lock in a price for a specific period of time and oil brokers purchase oil futures to promise future delivery of oil at a certain price. Conclusively, financial markets plays a vital role as a deciding factor for determining the oil prices.

❖ **WEATHER**

Like most commodities, seasonal changes in weather affect the demand for oil. In the winter, more heating oil is consumed, and in the summer, people drive more and use more gasoline. Even though markets know when to expect these increased demand periods, the price of oil rises and levels out with the season every year. Extreme weather conditions (hurricanes, tornadoes, thunderstorms) can physically affect production facilities and infrastructure disrupting the supply of oil and induce pricing spikes.

❖ **SPECULATIVE BUYING**

Speculative buying creates a varying cost for oil based products as speculators buy and sell futures contracts on the open market. Oil speculation also leads investors to purchase more contracts when negative tensions enter the oil market. In 2008, it was thought that speculators were bidding up oil prices and creating an unsustainable price level (up to $140/barrel). By late 2009, prices fell to $30/barrel because the demand was not present to support the inflated price level.

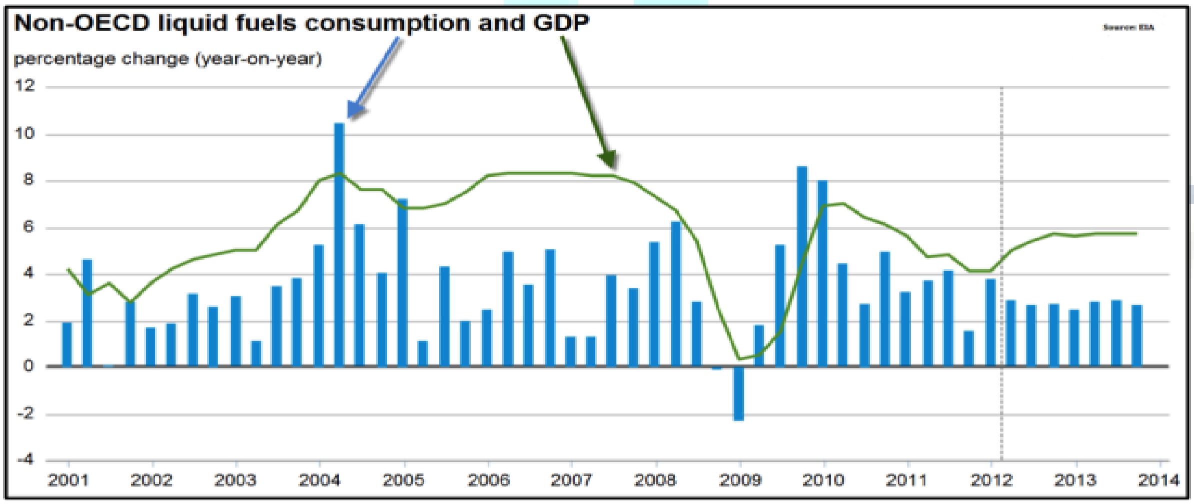
❖ **EXCHANGE VALUE OF THE DOLLAR**

Oil is traded and sold internationally in US dollars. Dollar depreciation generally tends to increase oil demand and raise the price of oil. Conversely the strengthening of the dollar reduces real income in consumer countries, decreasing the demand for oil and lowering prices.

❖ **NON-OECD DEMAND**

Oil consumption in developing countries that are not part of the Organization of Economic Cooperation and Development (OECD) has risen sharply in recent years. While oil consumption in the OECD countries declined between 2000 and 2010, non-OECD oil consumption has increased more than 40 percent. China, India, and Saudi Arabia have had the largest growth in oil consumption among non-OECD countries during this period.

FIGURE 2



Source: EIA

With oil's stature as a high-demand global commodity comes the possibility that major fluctuations in price can have a significant economic impact. The two primary factors that impact the price of oil are:

❖ supply and demand
❖ market sentiment

The concept of supply and demand is fairly straightforward. As demand increases (or supply decreases) the price should go up. As demand decreases (or supply increases) the price should go down.
But in case of oil, supply and demand are quite complicated, the price of oil as we know it is actually set in the oil futures market. An oil futures contract is a binding agreement that gives one the right to purchase oil by the barrel at a predefined price on a predefined date in the future. Under a futures contract, both the buyer and the seller are obligated to fulfil their side of the transaction on the specified date.
Oil peaked with the commodities index in both 1920 and 1980. It is important to note that supply, demand and sentiment take precedence over cycles because cycles are just guidelines, not rules.
Unlike most products, oil prices are not determined entirely by supply, demand and market sentiment toward the physical product.
Rather, supply, demand and sentiment toward oil futures contracts, which are traded heavily by speculators, play a dominant role in price determination. Cyclical trends in the commodities market may also play a role. Regardless of how the price is ultimately determined, based on its use in fuels and countless consumer goods, it appears that oil will continue to be in high demand for the foreseeable future.

REASONS FOR RECENT FALL IN OIL PRICE
In the recent times the prices of oil have fallen substantially. The prices were more than $115 a barrel in June 2014 and it fell to below $50 in December 2014, which translates to a fall of more than 40%. This has happened after stability for more than 3 years. Even at OPEC (Organisation of Petroleum Exporting Countries) meeting in Vienna on November 27th the Organisation, which controls nearly 40% of the world market, failed to reach agreement on production curbs, sending the price further tumbling. Also hard hit are oil-exporting countries such as Russia (where the rouble has hit record lows), Nigeria, Iran and Venezuela. The question arises why is the price of oil falling?
As we have seen above that the oil price is partly determined by actual supply and demand, and partly by expectation. Demand for energy is closely related to economic activity. Supply can be affected by weather (which prevents tankers loading) and by geopolitical upsets. As far as the expectation is there if producers think the price is staying high, they invest, which after a lag boosts supply. Similarly, low prices lead to an investment drought. OPEC's decisions shape expectations: if it curbs supply sharply, it can send prices spiking.
The reason for the current scenario can be categorized to two broad heads:
- Demand Supply Mismatch
- Grand Strategies

DEMAND SUPPLY MISMATCH
There has been a demand supply mismatch in the oil market in a sense that the demand for oil has been falling and the supply increasing that is a deficit in demand and a surplus in supply which resulted in the oil prices spiralling down.
REASONS FOR FALL IN DEMAND
- **Negative European Growth Outlook**

The EU economy has not yet recovered from the sovereign debt crisis and the growth forecasts not very strong; this has resulted in a weak demand from EU in the recent past. The EU economy is expected to enjoy a short-term boost from falling oil prices. According to the European Commission's economic winter forecast, the EU's GDP growth is expected to rise from 1.3% in 2014 to 1.7% this year, thanks in part to cheaper oil. But the economic impacts of the oil price fall are complex and as well as include some negative consequences like, by pushing consumer price levels down, the fall in oil prices could lead indirectly to lower wage growth and decreased investment in the oil sector.
- **Economic Slowdown in Japan and China**

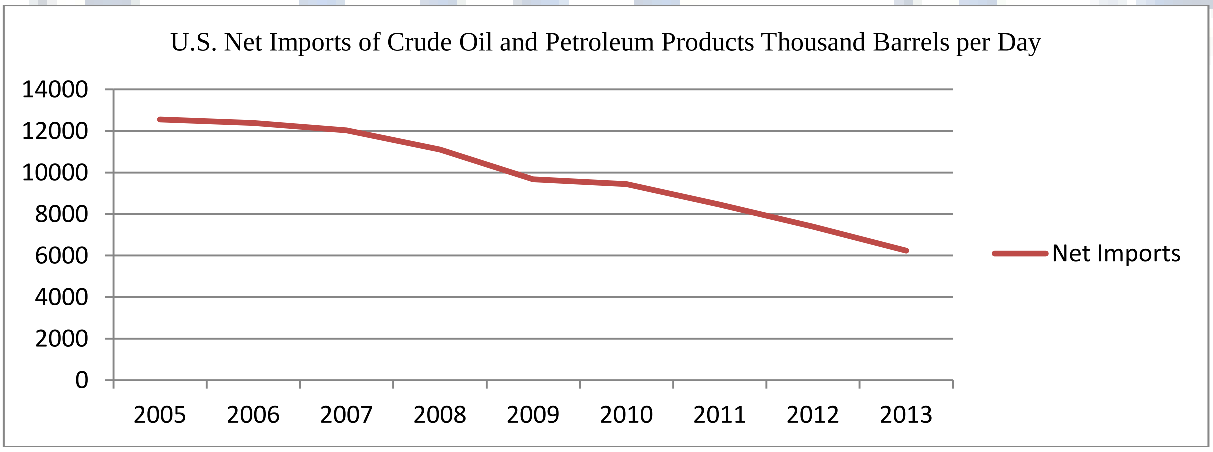
Japan being the 3rd largest oil importing country in the world with imports of 4,394,000 bbl. /day was faced by an economic turmoil and slowdown which impacted directly on the global oil prices due to a lower demand. Abenomics, a strategy introduced by Japanese Prime Minister Shinzo Abe will play a vital role in deciding the path of global oil prices if it boosts the oil demand to the expected level. China's national growth projected at around seven per cent per year, thus an increase in oil demand is negligible.
- **A subsidy cut in the Asian Countries**

Prominent Asian countries reduced the subsidy on oil prices during the last 2-3 years, which resulted in the shift of burden on the consumers which conclusively reduced the total oil consumption in these regions. Hence, collectively lowering the global oil consumption.
- **Domestic Production in USA**

Post the global recession the demand has not seen major strides. Along with that the US oil demand in the international market has reduced to increase in domestic production especially with the increasing shale oil production.
Demand is low due to weak economic activity. The global economic slowdown is the principal culprit. Along with this increased efficiency and a growing switch away from oil to other fuels due to increased focus on sustainability, green development and environment.
REASONS FOR RISE IN SUPPLY
- **Shale Production in USA**

The rise of US shale gas supply had the effect of displacing coal in favour of gas for US power generation in the last few years, despite the US having the world's largest reserves of coal.
Consequently, US coal has found its way into European markets, where its relative low price coupled with low carbon prices has made it more competitive in power generation than gas.

FIGURE 3



Source: EIA

Thereby, emerging as the biggest market changer is shale oil production in the United States: with additional production of 3.9 million barrels a day (MBD), the U.S. now produces more than all OPEC members except Saudi Arabia. Though it does not export crude oil, it now imports much less, creating a lot of spare supply.

- **Increased Production Iraq and Libya**

Iraq is now the second largest oil producer in OPEC, with Iraq & Libya's oil production averaging at 2.9 million bpd in the year 2014. This created a situation of oversupply, which ultimately resulted in disturbing the balance of demand and supply and affecting oil prices. Another reason for this to have a major was the expectations. With the political disturbances in the region it was expected that the supply from both the countries would fall but in reality the supply increased to counter the turmoil in Libya and IS increased the production from captured wells in Iraq to fund their rebellion.

- **Saudi's Reluctance to cut production**

Saudi Arabia has showed its reluctance to cut production in the OPEC meet citing the reason that it would lose its market share as it happened in the last oil crisis when they agreed to cut production.

Not only have the Organization of the Petroleum Exporting Countries (OPEC) members not effected cuts in their production, additional production has also come into the market from member-states experiencing domestic turmoil — Libya and Iraq — which have had record exports. With the central government and the Kurdish regional government in Erbil reaching the agreement towards the supply of Oil, it will increase production to raise more money to fight ISIS and US has also entered the oil supply market.

It seems low prices will continue next year due to low demand and high shale oil production and we now have "a new chapter in the history of oil markets." Even with the most optimistic of the predictions does not show prices to go beyond $95 a barrel in the next 1-2 years.

GRAND STRATEGIES

Another scenario which seems to be coming up is that Saudis and their Gulf Allies and deliberately not taking any action to curb the oil production and letting the price fall continue. They do not want any impact on their own market shares. Saudi Arabia can tolerate lower oil prices quite easily. It had around $900 billion in reserves when the oil prices started tumbling. Its own oil costs very little (around $5-6 per barrel) to get out of the ground. But all the counties with a major dependence on oil revenues would be seriously affected by the low prices which include the countries detested by them: Russia and Iran. It seems that the U.S. and Saudi Arabia have arrayed against Russia and Iran. The west is of the belief that this economic pressure caused by the low prices may force them to act in a more accommodative way in their engagements with western interlocutors. It seems that a scenario of a global oil war emerging.

Russia's intrusion into the Ukraine in February 2014 and the ensuing annexation of the Crimea have been prompted by energy and geopolitical factors. The energy factors are that 50% of Russia's gas and oil supplies to the European Union (EU) are piped through the Ukraine. It is in Russia's energy interests to make sure that the gas and oil pipelines transiting the Ukraine are well defended not only against sabotage but also against the Ukraine making use of the gas without paying for it. Ensuring that there is a pro-Russian government in the Ukraine becomes a very important Russian national interest. There is, however, a geopolitical dimension. The Ukraine has become like a chess pawn in a grand chess game being played by the United States and the EU with Russia. At the heart of the Ukraine-Russia crisis is the EU's attempts incited and abetted by the United States to draw the Ukraine away from Russia into the EU and eventually into NATO, thus bringing NATO to the borders of Russia. Having failed to achieve their aim, the EU supported by the US instigated internal strife in the Ukraine which ended with the ousting of the legally-elected president and eventually the annexation of the Crimea. If the conflict between the West and Russia continues to escalate, an oil and gas embargo could be one of the sanctions that is considered against Russia. Even before the current tension with the West over the Ukraine, Russia was in the process of reorienting its energy posture to Asia in view of the growth in energy demand in that continent and the likely stagnation or decline of demand in Europe over the next few decades.

Russia's Gazprom and China's CNPC has finally signed a historic gas deal which will provide the world's fastest growing economy with the natural gas it needs to keep pace for the next 30 years. The total value of the contract is $400 billion signed in May, 2014. One of the major factors impacting is Russia and China's progressing friendly relations. Despite of sanctions imposed by the west, this deal showcased that Russia could not be isolated.

However, whatever the neo-cold warriors in Washington may hope for, both Russia and Iran are known to be resilient and unlikely to compromise their established foreign policy positions only on account of falling oil prices. In fact, the adverse circumstances are likely to encourage domestic tenacity and greater camaraderie between the two beleaguered nations.

Optimistic thought is economic pain may make these countries more amenable to international pressure. Pessimistic one is that when cornered, they may lash out in desperation.

The other scenario sees a deliberate Saudi attempt to retard the further development of the shale oil industry in the U.S., to dent its production capacity which is crucially dependent on high oil prices of $80-90 per barrel to sustain production. It is known that oil firms have committed investments of over a trillion dollars in projects based on oil prices at $95 for them to be viable including include Western oil companies with high-cost projects involving drilling in deep water or in the Arctic, or dealing with maturing and increasingly expensive fields such as the North Sea.

However the above scenario seems unlikely as, while low prices may put medium-term U.S. production in jeopardy, this is hardly a deliberate Saudi ploy. The Kingdom is well aware that shale oil has in fact stabilised world markets at a time of acute turmoil in oil-producing countries. For this reason it has repeatedly welcomed new production sources, particularly since unconventional production boosts the demand for fossil fuels and reduces investments in renewables. Also going against a military giant like Russia without any backing or assurance from any super power including USA is an unlikely scenario.

Looking through another perspective to this situation, with the almost 20% drop in oil prices, we also have been wondering why Saudi Arabia suddenly has become so dovish — actually saying, in the face of recent price declines, that it has at least 3 million barrels a day in spare capacity it can dump on the market. Perhaps not coincidentally, that's about how many barrels Iran sells on the world market each day. As oil nears $50 a barrel, the Saudis' comments make sense only if one supposes they want to punish Iran — where oil output has been dropping sharply, and which desperately needs hard currency from oil sales to buy weapons and nuclear know-how. While keeping in mind that Oil provides Iran nearly 90% of its budget and 40% of its GDP. To say it is the lifeblood of Iran's economy is an understatement. Without oil revenues, the government might collapse.

With the OPEC meeting in Vienna on November 27th the Organisation having failed to reach the conclusions/ consensus and the market being more optimistic about geopolitical risk the end is not in sight.

What happens in the long term and how the prices stabilize and which strategy works only time can tell?

CONCLUSION

Unlike most products, oil prices are not determined entirely by supply, demand and market sentiment toward the physical product. Rather, supply, demand and sentiment toward oil futures contracts, which are traded heavily by speculators, play a dominant role in price determination. Cyclical trends in the commodities market may also play a role. Regardless of how the price is ultimately determined, based on its use in fuels and countless consumer goods, it appears that oil will continue to be in high demand for the foreseeable future.

The recent fall in the oil prices has been caused by a mismatch in the demand and supply. A falling demand caused by slow economic growth especially in China & Europe; excessive supply from Iraq, no production curbs from OPEC and increasing domestic production of U.S.A.. Another reason is Saudi's deliberately letting prices fall, to hamper economy of Russia & Iran and destroy economic viability of Shale production.

Sanctions against Russia will therefore fail as they mostly failed against Iran whose economy is 18% of Russia's economy in size. It would be a huge technical and economic endeavour to find an alternative source for Russia's gas and oil supplies to the EU with Germany being most vulnerable to Russia's whims. And whilst some oil supplies could partially replace Russian oil supplies to the EU, it will impact on the global oil price since replacement could only come from the Arab Gulf suppliers whose production is virtually committed to the Asia-Pacific region.

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PROSPECTS OF GENETICALLY MODIFIED CROPS IN INDIA: CHALLENGES AND ISSUES

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ABSTRACT

Genetically Modified Organisms, are the ones in which the genetic material (DNA) has been altered in such a way as to get the required quality. This technology is often called 'gene technology', or 'recombinant DNA technology' or 'genetic engineering' and the resulting organism is said to be 'genetically modified', 'genetically engineered' or 'transgenic'. GM (Genetically Modified) products (current or those in development) include medicines and vaccines, foods and food ingredients, feeds and fibre. Genetically-Modified Foods have the potential to solve many of the world's hunger and malnutrition problems, and to help protect and preserve the environment by increasing yield and reducing reliance upon chemical pesticides and herbicides. Yet there are many challenges ahead for governments, especially in the areas of safety testing, regulation, international policy and food labeling. Many people feel that genetic engineering is the inevitable wave of the future and that we cannot afford to ignore a technology that has such enormous potential benefits. However, we must proceed with caution to avoid causing unintended harm to human health and the environment as a result of our enthusiasm for this powerful technology. In this context, the present paper overviews the problematique dimensions of GM Crops and its legal ramifications in relation to social, environmental and intellectual perspective.

KEYWORDS
biodiversity, biotechnology, environmental sustainability, food security, genetically modified crops, intellectual property rights.

1. GENETICALLY MODIFIED CROPS: CONCEPT NATURE AND OVERVIEW

1.1 BIOTECHNOLOGY IN GENERAL

Biotechnology is not a new science. It is based on very old traditions used since the beginning of the civilized world to improve products of the land such as agricultural products and animal farming. The origin of biotechnology can be traced back to prehistoric times, when microorganisms were already used for processes like fermentation. Beer brewing, cheese making and production of sour milk are some of the common examples which are often included in describing what is called biotechnology.[1]

The term 'biotechnology' generally refers to the use of biological processes, as through the exploitation and manipulation of living organisms or biological systems, in the development or manufacture of a product or in the technological solution to a problem. As such, biotechnology is a general category that has applications in pharmacology, medicine, agriculture, and many other fields. In relation to genetic engineering, the techniques have been used to manipulate the deoxyribonucleic acid (DNA) of bacteria and other organisms to manufacture biological products such as drugs. Plants and foods with desired qualities such as prolonged shelf life or increased resistance to diseases and pests have been created through genetic engineering; that is, by inserting DNA from other organisms

1.2 PLANT BIOTECHNOLOGY

In the context of the modern biotechnological revolution, plant genetic resources have become a significant source for plant breeding, crop development and enhancement. Undoubtedly, like most technology, biotechnology can be used for good or ill, but in the field of agriculture, it has the prospect of giving enormous benefits in the quality and yield of foods and the range over which they can be grown. The advent of genetic engineering has permitted the expeditious introduction of a wide range of desirable traits into plants. These include: pest control traits such as insect and virus resistance as well as herbicide tolerance; post-harvest traits such as delayed ripening of spoilage prone fruits; male and/or seed sterility for hybrid systems; and output traits such as plant colour and vitamin enrichment.[2]

Despite the fact that some people have been opposing and viewing biotechnology with caution, the remaining section of the public is attracted to the benefits of biotechnology for food, for example as evidenced by the demand for Falvr-savr tomatoes, that is a new variety of tomatoes which remain ripe far longer than normal tomatoes before they rot after their introduction in the United States.

Biotechnology has taken the development of new plants and seeds into the fast lane. The world is experiencing a 'breakthrough in agricultural technology that may soon enable us to harvest crops from deserts, farm tomatoes in seawater, grow super potatoes in many new localities, and enjoy entirely new crops such as tomato. We can now isolate and manipulate the genes that constitute the hereditary materials of each species' genetic makeup.' These recent developments in biotechnology have increased the need to protect inventions and regulate commercial exploitation.[3]

2. INTELLECTUAL PROPERTY (IP) PROTECTION TO GENETICALLY MODIFIED (GM) CROPS AND FOODS

The most important mechanisms for legally protecting agricultural biotechnological inventions are patents and plant variety rights. It has been a subject of debate and a matter of dispute whether plants and agricultural biotechnological inventions can be the subject of patent protection, in addition to or as an alternative to the protection afforded by plant variety rights. Biotechnological patents have been criticized for granting an excessive scope of protection to proprietors, whereas plant variety rights have been slighted for not providing enough protection. This issue is one of many questions in patent law to which no single global answer could be given, owing to the differences of law from one country to another.[4]

The possibility of patent protection for plants and animals was first mooted at about the beginning of the 20th century. However it was a long time before this view was accepted by legislatures, courts and Patent Offices. This is due to the belief that living organisms and cells were non-patentable products of nature. Hence, under the rationale that naturally occurring organism were not new, the assumption was that patents could not be granted. In such a case, it was perceived that the grant of a patent would remove from the public domain something 'which nature has produced and which nature has intended to be equally for the use of all men'.

The issue of the patenting of life-forms was finally given a judicial answer in the landmark decision of the United States Supreme Court in 1980 in *Diamond* v. *Chakrabarty*. It was held that a bacterial strain into which a plasmid from another strain had been inserted constituted patentable subject-matter. The Court distinguished the products of nature from man-made inventions and held that statutory subject-matter included 'anything under the sun made by man' and that genetically engineered micro-organisms were not precluded from constituting patentable subject-matter merely because they were living cells. Although this clearly spelled out liberal approach, not many countries have followed up by clear permissive legislation. In fact, there are only a few specific exclusions in those jurisdictions, hence vagueness reins.[5]

Undeniably, Intellectual Property Rights (IPRs) offer a temporary monopoly for the commercial exploitation of an invention and innovation, thus creating an incentive for further research and development. As patents primarily serve an economic function, the basic belief governing the system is the conviction that the protection provides an incentive for people to innovate and invest. Hence the possibility of recouping the high investment in genetic engineering and plant development industry can effectively be guaranteed through adequate legal protection. This justification, though controversial, is equally legitimate from a public policy perspective. Nevertheless, the economic justification for patent is not always uncontroversial, as many IPRs, which include patent laws, have been asserted of going too far in protecting those who produce innovations at the expense of those who use them. Historically, and even today, the way patents have been justified in different countries has depended on the level of industrial development. The use of IPRs in plant breeding especially in developing and least developed countries have raised issues on food security, smallholders' access to technology and the possible monopolization of genetic resources.

Another related concern in developed countries is pertaining to the changes in the structure and composition of the plant breeding and seed industry, in particular the increasing involvement of large companies. The increasing role of the private sector in fundamental research has triggered the issue of the appropriate scope and system of protection for results of such research. For example, Monsanto's decision to co-operate with plant breeders in the development of new plant varieties through the combination of traditional plant-breeding methods with its genetic resources aroused the question of the extent to which IPRs should be used to protect the results of genetic research.[6]

2.1 GLOBAL IPR REGIME AND ECONOMIC CONCERNS

As far as the global intellectual property regime is concerned, the most significant IPR treaties in the context of plants and biotechnological inventions are the Agreement on Trade-Related Aspects of Intellectual Property Rights (henceforward the TRIPS Agreement or TRIPS), and the Convention of the International Union for the Protection of New Varieties of Plants (The UPOV Convention). The former, which is administered by the Geneva-based World Trade Organization (WTO), is so important because it is the first and the only international treaty which seeks to establish enforceable universal minimum standards of protection for all the major intellectual property rights. The latter, which is administered by another intergovernmental organization, the International Union for the Protection of New Varieties of Plants (UPOV), is significant because it deals specifically with plant varieties.[7]

Bringing a GM food to market is a lengthy and costly process, and of course agri-biotech companies wish to ensure a profitable return on their investment. Many new plant genetic engineering technologies and GM plants have been patented, and patent infringement is a big concern of agribusiness. Yet consumer advocates are worried that patenting these new plant varieties will raise the price of seeds so high that small farmers and third world countries will not be able to afford seeds for GM crops, thus widening the gap between the wealthy and the poor. It is hoped that in a humanitarian gesture, more companies and non-profits will follow the lead of the Rockefeller Foundation and offer their products at reduced cost to impoverished nations.[8]

Patent enforcement may also be difficult, as the contention of the farmers that they involuntarily grew Monsanto-engineered strains when their crops were cross-pollinated shows. One way to combat possible patent infringement is to introduce a "suicide gene" into GM plants. These plants would be viable for only one growing season and would produce sterile seeds that do not germinate. Farmers would need to buy a fresh supply of seeds each year. However, this would be financially disastrous for farmers in third world countries who cannot afford to buy seed each year and traditionally set aside a portion of their harvest to plant in the next growing season. In an open letter to the public, Monsanto has pledged to abandon all research using this suicide gene technology.

2.2 PATENTING OF GM CROPS AND FOODS

A relatively new concern raised in the debate on GM is that of IPRs. The issue caught attention of many after the Monsanto-Schmeiser case. The fact that the court dissociated biosafety concerns of the fanners from IPRs of the company showed that there is a loophole within the biosafety regime, which addresses the IPR issue that is so intrinsically linked with biosafety. As mentioned earlier, GMOs introduced into the environment can find their way beyond field in which they had been introduced, to the lands of farmers who neither grow them nor are willing to use GMs. But they end up infringing the patent rights of some company.

The process of growing a genetically modified crop to selling it in the market is a lengthy and costly and many GM processes are protected under strict IPR regime. This entails paying of licence fees and bearing increased costs of the genetically modified seeds by the traditional farmers who so far had relied on traditional development and storage of seeds.[9]

Some critics also feel that small number of companies that are involved in the development and application of GM technology are likely to monopolize markets. GM technology has many opportunities and solutions to problems that have plagued humankind since a long time. It can help in enhancing the production and quality of crops with desired area-specific qualities and empowering the species with better pesticide and herbicide resistance, better tolerance of adverse natural conditions like salinity and drought with low toxicity levels, and higher nutritional values. However, playing with nature has its own inherent risks in the form of insecticide resistance, cross-contamination, environmental hazards, and ethical concerns, which may not be acceptable to a particular community or region, thus offsetting the advantages of GM technology. Moreover, GM is a knowledge-based activity and it opens a whole new window of concerns *vis-a-vis* IPR and legal framework along with affordability and danger of monopolization by the developer.[10]

Consequently, there is no doubt that GM technology has many positive aspects but the concerns related to it should be addressed genuinely by conducting better research and long-term studies in community before introducing it in general. Also every effort should be made to develop a legal framework to manage the various aspects of GM technology at both development and user levels with strict regulation but providing enough flexibility so that it is available for people who need it without putting their interest at stake.

2.3 IP PROTECTION TO GM CROPS AND FOODS IN INDIA

Technological advances are always a consequence of human intellectual effort and legal protection of such effort is often sought by the technology developers to protect it from unwarranted copying. Legal instruments exist in many countries recognizing the importance of Intellectual Property protection in various sectors of the economy. However, the extension of Intellectual Property protection to products of genetic engineering particularly genetically modified crop seeds has thrown the system into fresh controversy especially in developing countries. Patents, which are the mechanism of Intellectual Property protection of such crop seeds, not only discourage reuse of patented seed from one growing season to the next but also growing of such seeds without the consent of the patent holder. The implication is that farmers have to buy fresh seed every season, an expensive and largely unaffordable undertaking to a majority of smallholder farmers who are normally resource-constrained. More importantly, the phenomenon threatens to push to extinction an age-old practice of seed saving and free access through sharing among smallholder farmers in developing countries that has formed the basis of food security in these regions. As such food security in these countries is under threat and calls for exclusion of Intellectual Property Rights (IPRs) and the subsequent patenting from crop varieties derive their justification from the foreseen threat.[11]

The dangers linked with genetically modified products especially plants and crops are many. Fears are raised of contamination of the local landraces by the foreign genes in genetically modified relatives. Safety of genetically modified foods for human consumption remains contentious with views largely polarized. As such movement of GM foods across sovereign borders has become a subject calling for strict scrutiny. Genetically Modified (GM) food aid from developed countries, which are also leaders in genetic engineering, to starving nations in the developing world has equally become controversial.

The development of genetic engineering of plants in the 1980s was accompanied by a sequence of increasingly specific confirmations of the patentability of various types of life forms, provided that they met the standard patent criteria of novelty, utility, and non obviousness. The 1980 Supreme Court decision in *Diamond* v. *Chakrabarty* held that regular utility patents could be granted for inventions involving living organisms. This decision specifically addressed the patentability of a newly created microorganism that could break down crude in a manner that might be useful to control oil spills. Subsequent U.S. Patent and Trademark Office and Supreme Court decisions confirmed that plants and animals, including those created by conventional breeding, and particular sequences of genetic material or DNA such as genes, markers, and promoters (which control the expression of genes in cells), could be protected by utility patents.[12]

India is a member of the World Trade Organization (WTO) and a signatory to the WTO Agreement, which spells out the code of conduct of a country's trade with other WTO members. The WTO Agreement has a component on trade-related aspects of Intellectual Property Rights (TRIPS) to which India is committed to enact minimum standards of Intellectual Property Protection. Domestic statutes protecting intellectual property in India include the Acts on Copyrights, Trademarks, Registered Designs and Patents. Article 27.3 (b) of this agreement requires the member countries to provide for protection of plant varieties either by a patent or by an effective *sui generis* system or by any combination thereof. Intellectual Property protection of genetic engineering products particularly GM crop varieties should have been covered under the Patent Act but the Act falls short of excluding biotechnology and products thereof from patentability.[13] The *sui generis* system for protection of plant varieties was developed integrating the rights of breeders, farmers and village communities, and taking care of the concerns for equitable sharing of benefits. It offers flexibility with regard to protected genera/species, level and period of protection, when compared to other similar legislations existing or being formulated in different countries. The Act covers all categories of plants, except microorganisms. The genera and species of the varieties for protection shall be notified through a gazette, after the appropriate rules and by-laws are framed for the enforcement of the Act.[14]

The year 2001 and India gets a plant varieties protection legislation (*The Protection of Plant Varieties and Farmers' Rights Act*, 2001, Act 53 of 2001) heralding agriculture of the 21st century: A `brand' new age, where `new' plant varieties can be labelled and sold; the `creator' breeding seeds for commercial purposes is granted protection by law through Plant Breeder Rights (PBR). Such ensuing rights give exclusive commercial control to the breeder over the propagating

material of the `protected' variety. Agriculture, reincarnating as agribusiness in today's global trade system, dares to commodify all plants, seeds, and knowledge related to any of these.
The Indian law, which has been hailed as progressive, pro/developing country legislation, has some notable features. Apart from a well-defined Breeder's Right, it has strong and proactive Farmers Rights. In fact the Indian legislation succeeds in balancing the rights of Breeders and Farmers and exploits the flexibility granted in TRIPS, in an intelligent manner. There are clauses to protect the rights of Researchers and provisions to protect the public interest.[15]
The Indian legislation is the first in the world to grant formal rights to farmers in a way that their self-reliance is not jeopardized. What is very significant and positive about this legislation is that it charts its own course, deviating from the norms set by UPOV. The Union for the Protection of New Plant Varieties (UPOV) is at present the only platform for regulating Plant Breeders Rights. It is a developed country platform, which is modulated to protect the interests of agriculture in industrial countries. It does not even have the notion of Farmers Rights. The innovative Indian legislation has opened up interesting possibilities for developing a developing country platform for regulating Breeders and Farmers Rights so that both, not just one, are acknowledged and protected.[16]The objectives of the Act are as follows:
(i) To provide for the establishment of an effective system for protection of plant varieties.
(ii) To provide for the rights of farmers and plant breeders.
(iii) To stimulate investment for research and development and to facilitate growth of the seed industry.
(iv) To ensure availability of high quality seeds and planting materials of improved varieties to farmers.

3. IMPACT OF GM CROPS ON BIODIVERSITY AND THE ENVIRONMENT
The beneficial role of biotechnology in improving crop yields is well established. However, several recent studies have also revealed that there are significant risks associated with genetically modified crops-risks that may adversely affect our health and environment. Long-term studies are urgently needed to produce results which may be able to resolve these questions, yet such data have not been forthcoming. If this book raises too many questions, it is because they are timely. Biotechnology is at a critical juncture where several developing countries are poised to make large investments in GM crop research and expand their cultivation nationwide. The need for risk evaluation has never been greater than it is today. Underneath this critical approach is the basic optimism that biotechnology will be able to provide the means to feed the world's hungry, provided that the potential risks are first evaluated and dealt with. It would be unwise to proceed with the planting of GM crops on a large scale until the risks to health and environment are fully evaluated.[17]
3.1 BIOTECHNOLOGY AND BIODIVERSITY
Since the exciting and hopeful prospect of abundance that was initially expected of biotechnology, we have come a long way. Biotechnology has indeed produced many benefits. Food production has increased manifold, although population growth has outstripped achievements in agriculture. It has become clear during the last several years that the "green revolution", pioneered by Prof. M.S. Swaminathan that was so successful in carrying India forward during the last 30 or 40 years is no longer adequate. This is due to several complex factors which have been discussed by others. What is needed is an "evergreen revolution", or perhaps several such revolutions, occurring periodically to meet the demands of an ever-growing population. The area of agricultural land is shrinking rapidly, due to the explosive growth of human and animal populations followed by habitat destruction.[18]
3.2 CAUSES FOR DECLINING AGRO-BIODIVERSITY
The principal underlying causes for declining agro-biodiversity include the rapid expansion of industrial and Green Revolution agriculture, intensive livestock production, and industrial fisheries and aquaculture (some production systems using GM varieties and breeds) that cultivate relatively few crop varieties in monocultures, rear a limited number of domestic animal breeds, or fish for or cultivate few aquatic species. Variety replacement is the main cause of losses. The replacement of local varieties or landraces by "improved" and/or exotic varieties and species is reported to be the major cause of genetic erosion around the world.
Globalization of the food system and marketing, as well as the extension of industrial patenting and other intellectual property systems to living organisms, has led to the widespread cultivation and rearing of fewer varieties and breeds for a more uniform and less diverse, but more competitive, global market. The consequences are marginalization of small-scale, diverse food production systems that conserve farmers' varieties of crops and breeds of domestic animals, which form the genetic pool for food and agriculture in the future; reduced integration of livestock in arable production, which reduces the diversity of uses for which livestock are needed; and reduced use of "nurture" fisheries techniques, which conserve and develop aquatic biodiversity.[19]
Genetic erosion refers to the loss of genetic diversity, including the loss of individual genes and gene complexes (particular combinations of genes), such as those manifested in locally adapted landraces. The main cause of genetic erosion in crops, as reported by almost all countries, is the replacement of local varieties by "improved" or exotic varieties and species. As old varieties in farmers' fields are replaced by newer ones, genetic erosion frequently occurs because the genes and gene complexes found in the diverse farmers' varieties are not containedin the modern varieties. In addition, the sheer number of varieties is often reduced when commercial varieties are introduced into traditional farming systems. There have been few systematic studies of the genetic erosion of crop genetic diversity that have provided quantifiable estimates of the actual rate of genotypic or allelic losses.
3.3 BENEFITS OF AGRICULTURAL BIODIVERSITY
Prime Minister Manmohan Singh of India pointed out that in the past, the community food tradition assured that a wide range of food crops rich in protein, iron, micronutrients, and vitamins was available to the people; however, commercial agriculture has narrowed the range of food crops available.
Agricultural biodiversity can help in developing decentralized community food security systems that benefit local communities. They are also beneficial for long-term security through the establishment of gene banks, seed banks, and grain banks, which can be managed by local people. The diversity of crops could also reduce pesticide use. Furthermore, tropical fruits, sweet potato (with beta-carotene), and other vegetable crops can fight vitamin A deficiency in children.
Agricultural biodiversity provides the important raw material for improving the quality of crops, livestock, and fish. It can also create opportunities for entrepreneurship by generating employment and additional income from a whole range of value-added foods, medicines, nutraceuticals, biofuel and other sources. On a global scale, nearly 2.5 billion people depend directly on wild and traditionally cultivated plant species to meet their daily needs.[20]
3.4 TOXIC EFFECTS
Unfortunately, there are other consequences of biotechnology that are clearly undesirable. The picture that has emerged from recent studies is unfavorable, even alarming, if the results are confirmed in long-term studies. While we are even more convinced today that biotechnology will continue to be needed for feeding the world's billions in the future, there is evidence which indicates that a cautious approach is very much warranted. The method of achieving greater food production by utilizing GM crops, as we have done so far, appears to have some significant associated risks to our health and environment.[21] A few examples will suffice.
An analysis of results obtained when rats were fed GM corn (MON 523 produced by Monsanto Corp.) was published by Prof. Gilles-Eric Seralini, 2007 from the University of Caen, France. The study, completed at CRIIGEN (Caen, France), examined the raw data on MON 863 feeding experiments on rats, initially suppressed by Monsanto but later obtained by others in 2005 after a court action in Germany. Using more sophisticated analytical methods than those employed by Monsanto, the new study uncovered an increase of up to 40% in blood triglycerides in female rats, and a more-than-30% decrease in urine phosphorus and sodium in male rats, specifically linked to the GM diet. The reasons for these changes are unclear, but they may provide clues to the deaths of many animals which consumed Bacillus thuringiensis (Bt) feed in other animal experiments. However, these data should be confirmed further using large numbers of experimental animals. Similar observations were reported by the Russian scientist Irena Ermakova, who fed GM soy to female rats. Other studies have shown the deleterious effects of GM pollen on Monarch butterflies and caterpillars as well as other insects.
The scientists conducted laboratory tests to establish the relative toxicity of Bt toxins and pollen from Bt corn in monarch larvae. They found that first instars are sensitive to Cry1Ab and Cry1Ac proteins, and that pollen contaminants can dramatically influence larval survival and weight gain and produce spurious results. The biologist examined the ecological consequences of transgenic Bt in a meta-analysis of 42 field experiments. They indicated that non-target invertebrates are generally more abundant in Bt cotton and Bt maize fields than in non-transgenic fields managed with insecticides; however, in comparison with insecticide-free

control fields, certain non-target taxa are less abundant in Bt fields. The central goal of this study was to quantitatively investigate whether changes in invertebrate abundance were statistically significant. The failure to find significant differences in previous studies was generally viewed as a signal of environmental safety, but they were often based on small samples. Whether statistically significant differences in abundance truly indicate ecologically significant changes is not clear. The study revealed, however, that Bt crop acreage has less insect biodiversity than untreated fields. It is unclear whether the reduced abundance of various groups (coleopterans, hemipterans, and hymenopterans) is due to direct toxicity or is a response to reduced availability of prey in Bt crops.[22]

4. IMPACT ON ENVIRONMENTAL SUSTAINABILITY IN INDIA

Environmental activists, religious organizations, public interest groups, professional associations and other scientists and government officials have all raised concerns about GM foods, and criticized agri-business for pursuing profit without concern for potential hazards, and the government for failing to exercise adequate regulatory oversight. It seems that everyone has a strong opinion about GM foods. Most concerns about GM foods fall into three categories: environmental hazards, human health risks, and economic concerns.[23]

4.1 ENVIRONMENTAL HAZARDS

(i) **Unintended Harm to Other Organisms: A** laboratory study was published in Nature showing that pollen from B.t. corn caused high mortality rates in monarch butterfly caterpillars. Monarch caterpillars consume milkweed plants, not corn, but the fear is that if pollen from B.t. corn is blown by the wind onto milkweed plants in neighboring fields, the caterpillars could eat the pollen and perish. Although the Nature study was not conducted under natural field conditions, the results seemed to support this viewpoint. Unfortunately, B.t. toxins kill many species of insect larvae indiscriminately; it is not possible to design a B.t. toxin that would only kill crop-damaging pests and remain harmless to all other insects. This study is being reexamined by the USDA, the U.S. Environmental Protection Agency (EPA) and other non-government research groups, and preliminary data from new studies suggests that the original study may have been flawed[22]This topic is the subject of acrimonious debate, and both sides of the argument are defending their data vigorously. Currently, there is no agreement about the results of these studies, and the potential risk of harm to non-target organisms will need to be evaluated further.

(ii) **Reduced Effectiveness of Pesticides**: Just as some populations of mosquitoes developed resistance to the now-banned pesticide DDT, many people are concerned that insects will become resistant to B.t. or other crops that have been genetically-modified to produce their own pesticides.

(iii) **Gene Transfer to Non-Target Species**: Another concern is that crop plants engineered for herbicide tolerance and weeds will cross-breed, resulting in the transfer of the herbicide resistance genes from the crops into the weeds. These "super weeds" would then be herbicide tolerant as well. Other introduced genes may cross over into non-modified crops planted next to GM crops. The possibility of interbreeding is shown by the defense of farmers against lawsuits filed by Monsanto. The company has filed patent infringement lawsuits against farmers who may have harvested GM crops. Monsanto claims that the farmers obtained Monsanto-licensed GM seeds from an unknown source and did not pay royalties to Monsanto. The farmers claim that their unmodified crops were cross-pollinated from someone else's GM crops planted a field or two away. More investigation is needed to resolve this issue.[24]

There are several possible solutions to the three problems mentioned above. Genes are exchanged between plants via pollen. Two ways to ensure that non-target species will not receive introduced genes from GM plants are to create GM plants that are male sterile (do not produce pollen) or to modify the GM plant so that the pollen does not contain the introduced gene. Cross-pollination would not occur, and if harmless insects such as monarch caterpillars were to eat pollen from GM plants, the caterpillars would survive.

Another possible solution is to create buffer zones around fields of GM crops. For example, non-GM corn would be planted to surround a field of B.t. GM corn, and the non-GM corn would not be harvested. Beneficial or harmless insects would have a refuge in the non-GM corn, and insect pests could be allowed to destroy the non-GM corn and would not develop resistance to B.t. pesticides. Gene transfer to weeds and other crops would not occur because the wind-blown pollen would not travel beyond the buffer zone. The estimates of the necessary width of buffer zones range from 6 meters to 30 meters or more. This planting method may not be feasible if too much acreage is required for the buffer zones.

4.2 HUMAN HEALTH RISKS

(i) **Allergencity**: Many children in the US and Europe have developed life-threatening allergies to peanuts and other foods. There is a possibility that introducing a gene into a plant may create a new allergen or cause an allergic reaction in susceptible individuals. A proposal to incorporate a gene from Brazil nuts into soybeans was abandoned because of the fear of causing unexpected allergic reactions. Extensive testing of GM foods may be required to avoid the possibility of harm to consumers with food allergies. Labeling of GM foods and food products will acquire new importance.[25]

(ii) **Unknown Effects on Human Health**: There is a growing concern that introducing foreign genes into food plants may have an unexpected and negative impact on human health. A recent article published in Lancet examined the effects of GM potatoes on the digestive tract in rats. This study claimed that there were appreciable differences in the intestines of rats fed GM potatoes and rats fed unmodified potatoes. Yet critics say that this paper, like the monarch butterfly data, is flawed and does not hold up to scientific scrutiny. Moreover, the gene introduced into the potatoes was a snowdrop flower lectin, a substance known to be toxic to mammals. The scientists who created this variety of potato chose to use the lectin gene simply to test the methodology, and these potatoes were never intended for human or animal consumption.

On the whole, with the exception of possible allergenicity, scientists believe that GM foods do not present a risk to human health.[26]

5. LEGAL SAFEGUARDS UNDER ENVIRONMENTAL LAW

In India, the Genetically Modified Organisms are regulated under the *Environment Protection Act*, 1986 (EPA).[27] In addition the Indian biosafety regulatory framework comprises 1989 *Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms, Genetically Modified Organisms and Cells* (1989 Rules), and Department of Biotechnology guidelines, the 1990 *Recombinant DNA Safety Guideline*" (1990 DBT Guidelines) and 1994 Revised *Guidelines for Safety in Biotechnology* (1994 DBT Guidelines) and 1998 *Revised Guidelines for Research in Transgenic Plants and Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds, Plants and Plant Parts* (1998 DBT Guidelines).

The objective of EPA is protection and improvement of the environment. The Act calls for the regulation of Environment Pollutants, defined as any solid, liquid or gaseous substance, present in such concentration that tend to be injurious to the environment. The 1990 and 1994 DBT guidelines recommend appropriate practices, equipments and facilities necessary for safeguards in handling GMOs in agriculture and pharmaceutical sectors. These guidelines cover the R&D activities on GMOs, transgenic crops, large-scale production and deliberate release of GMOs, plants, animals and products into the environment, shipment and importation of GMOs for laboratory research. The 1998 DBT guidelines cover areas of recombinant DNA research on plants including the development transgenic plants and their growth in soil for molecular and field evolution. It also calls for the toxicity and allergenicity data for ruminants such as goats and cows, from consumption of transgenic plants. It also requires the generation of data on comparative economic benefits of a modified plant.[28]

6. REGULATORY MECHANISM IN INDIA

When assessing the Indian legal framework for biotechnology, attention must be paid both to international compromises and internal norms. India is party to several international treaties that directly impact biotechnology regulation and management. These treaties pertain to several public international law regimes, such as international trade law, international environmental law, intellectual property law and international human rights law. On the other hand, the national normative framework is the outcome of a relatively unsystematic evolution which has its origin in the *Environment (Protection) Act*, 1986. The norms of the Environment (Protection) Act provide the legal background to the *Rules for Manufacturing, Use, Import, Export and Storage of Hazardous Microorganisms, Genetically Engineered Organisms or Cells*, which are the other key pieces of legislation.

The majority of the agencies that enact rules and control activities in the biotechnology field pertain to four ministries of the central government. The Ministry of Science and Technology controls the Department of Science and Technology, the Department of Scientific & Industrial Research and the Department of

Biotechnology. The Ministry of Health governs the Indian Council of Medical Research. The Ministry of Agriculture controls Indian Council of Agriculture Research. The Ministry of Human Resource and Development control the University Grants Commission. Finally, the Department of Scientific & Industrial Research funds the Council of Scientific and Industrial Research (both of whom directly fund biotechnology).[29]

A series of committees set up a multi-tiered regulatory framework aimed at ensuring the biosafety of genetically engineered organisms in India. These agencies are the Review Committee on Genetic Manipulation, the Genetic Engineering Approval (Appraisal) Committee, the Recombinant DNA Advisory Committee, the Institutional Biosafety Committee, the State Biotechnology Coordination Committee and the District Level Committees. In the biopharmaceuticals domain, these bodies work together with the Central Drugs Standard Control Organization and the Drugs Controller General of India, which have a broader mandate covering all pharmaceuticals.

The multiplicity of regulatory agencies and the complex approval procedures have been identified as factors that negatively affect the functioning of the Indian biotech sector. In response to sector specific reports time-frames for approval of biotech products have been streamlined, but the implementation of other proposed reforms, such as the establishment of a single-window agency, is still pending. If created, the National Biotechnology Regulatory Authority will regulate the research, manufacture, import and use of genetically engineered organisms and products derived thereof.[30]

7. PROSPECTS OF GM CROPS

Biotechnology was born about three decades back in the laboratory of the industrial west. It holds the promise of bringing prosperity not through machine, but through living organisms. Though this discipline was born in the west, its application will bring maximum benefit to the agrarian east because of its inherent life-based nature. Two decades ago, many agricultural scientists rightfully saw the emerging recombinant DNA technology as a potent tool in enhancing crop productivity and food quality while promoting sustainable agriculture. Much of the early excitement and expectation was met with successive breakthroughs in scientific research on plant gene transfer methods, identification of valuable genes, and the eventual performance of transgenic crops. Plant breeders saw the technology as an additional means of crop improvement that could complement the existing methods. For the first time, plant breeding was subjected to rigorous testing, and a regulatory framework was developed to oversee the commercialization of GM crops on a case-by-case basis.[31]

There has been widespread acceptance and support for biotechnology from the scientific community. The accumulated experience and knowledge of decades of crop improvement, combined with expert judgment, science-based reasoning, and empirical research has led to the scientists' confidence in GM crops. They are of the view that GM crops will pose no new or heightened risks that cannot be identified or mitigated, and that any unforeseen hazard will generally be negligible, effectively manageable, or preventable. Therefore, transgenic crops have been widely accepted by the farmers, and an unprecedented adoption rate of this technology was observed during the last decade. The use of biotechnology for the development of improved plant varieties has been endorsed by dozens of scientific bodies. FAO (Food and Agriculture Organization), WHO (World Health Organization), The American Medical Association, and The French Academies of Medicine and Science, among others, have studied plant genetic engineering techniques and given them a clean bill for human health. In a report published in July 2000, the UK's Royal Society; the National Academies of Science from Brazil, China, India, Mexico and the US; and the Third World Academy of Science encouraged funding for research on genetic engineering, arguing that it can be used to advance food security while promoting sustainable agriculture. 'It is critical', declared the scientists, 'that the potential benefits of GM technology become available to the developing countries'. An FAO report issued in May 2004, argued that 'effective transfer of existing technologies to poor rural communities and the development of new and safe biotechnologies can greatly enhance the prospects for a sustainable improvement of agricultural productivity today and in the future', as well as 'help reduce environmental damage caused by toxic agricultural chemicals'.[32]

Developments in the field of biotechnology and molecular biology can help in better understanding complex pathways of plants such as the photosynthetic pathways. It will be possible to increase the efficiency of these pathways to ultimately result in high crop yields. Rapid disease diagnosis with molecular methods will have significant impact on agricultural productivity. Enhancing stress tolerance in crop plants will permit productive farming on currently unproductive lands. The growing season of crops could be increased, and the losses from abiotic factors such as drought, heat, cold, salinity, and acidity could be minimized. The shelf life of fruits and vegetables can be prolonged to reduce losses due to food spoilage, expand the market vista, and improve the food quality. Undesirable traits such as the presence of neurotoxin in kesar dal; cyanide in tapioca; aflatoxins in groundnut and antimetabolites in chickpea, horsegram and sweet potato could be 'silenced'. The quality of food crops could be improved to provide better nutrition to underprivileged and resource-poor consumers. Prolonged 'vase life' of cut-flowers will help broaden the market for horticulturists, while reducing losses and minimizing dependency on expensive cold storage. Human and livestock health can be improved through crops with enhanced nutritional quality such as iron-rich rice (Golden Rice) and vitamin A-rich rapeseed oil (Golden Mustard), and through the production of edible vaccines and other pharmaceutical proteins. Industrially applicable crops such as those producing enzymes, 'designer' starch and oils, biodegradable plastics, and industrial chemicals can also be developed to reinvigorate the Indian economy and create a large number of jobs. Crop plants that can clean up soil, water and air through 'phytoremediation' can be developed and planted in critical areas. Trees that grow faster with fewer diseases and pest problems can be developed for their positive impact on rural economy and the environment. In fact, a revolution is now occurring in the field of gene identification and cloning from every useful biological entity and its subsequent transfer to others. Large-scale genome sequencing has accelerated the identification of diverse genes, and development in the field of functional genomics has helped in assigning a role to those genes. Thousands of novel genes with diverse function are cloned and characterized every day. Therefore, we are passing through an era of gene revolution that can immensely benefit modern agriculture, facilitating a sustainable development that will greatly help the poor, developing, and populous countries. However, we have to prioritize our efforts in addressing most chronic agricultural problems that cannot be mitigated by conventional methods. The strategic integration of biotechnology tools for developing new crop cultivars with better pest resistance, higher yield, better nutritional quality and better factor productivity can revolutionize Indian farming. Compared to 'Green Revolution', the 'Gene Revolution' would be environment-friendly and relatively scale-neutral, benefiting big and small farmers alike. Thus, it can be of great help to small farmers with limited resources, in increasing their farm productivity by making available improved and powerful seeds. It can also reduce their dependence on chemical inputs such as pesticides and fertilizers. India desperately needs such technologies to march into the next century, fulfilling its vision of economic upliftment and prosperity for two-thirds of its population, which is dependent on farming. However, a strong public-private sector is essential to ensure that the poor people benefit from the Gene Revolution.[33]

8. CONCLUSION

India has placed a heavy emphasis on agriculture biotechnology and the government sees this technology as the harbinger of a second Green Revolution, one that will bring about the same jump in food production that the original Green Revolution did. There are many reasons why this is unlikely to happen in the foreseeable future. For one, there seem to be little that Ag-biotech has to offer to bring about significant yield increase. On the other hand, channeled properly and accompanied by stringent bio-safety testing, Ag-biotech has the potential to solve certain specific problems in agriculture. Phenotypic traits that are dependent on single genes have a better chance of success than polygenic traits like drought tolerance. There is more on offer than just transgenic technology in the field of agriculture. The future holds the promise of at least two new technologies that have the potential to make plant breeding more precise and effective as also to bring about an increase in food production. These two technologies are Marker Aided Selection (MAS) leading to Marker Assisted Breeding, the other is Apomixis. Still largely in the experimental stage (apomixis more than MAS), both are promising technologies without the baggage safety concerns.[34]

MAS is a combination of molecular biology and traditional genetics which allows the selection of genes of interest by tracking the marker DNA to which the gene is linked. This makes plant breeding more precise thus saving time and allowing varieties to be developed quickly. Apomixis which is essentially 'freezing' a hybrid biologically so that the advantages of hybrid vigor are perpetuated through the next generations, without segregating the way normal hybrids do. This means, once a hybrid with favorable traits is developed, it can be stabilized and farmers will be able to save seed for the next crop which they cannot do with the usual hybrids without losing the hybrid advantage. Given the high cost and public distrust and rejection associated with Ag-biotechnology as well as the difficulties of establishing biosafety, it would seem to be in India's interest to go slow on this costly and controversial technology and invest heavily in MAS and apomixis to pave the way for a safer and more sustainable basis to food security.

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TRADE LIBERALIZATION EFFECTS ON INCOME DISTRIBUTION AND POVERTY IN CAMEROON

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ABSTRACT

Cameroon has signed several trade agreements with the WTO on the multilateral trade system and with the European Union on the ACP-EU agreements .These agreements, clear signs of a will to open up trade, have been put into practice in an economic policy context aiming at reducing income inequalities and poverty of households. The objective of the present study is to evaluate the potential effects of an open-up trade that result from the WTO and ACP agreements on income inequality and households poverty in Cameroon. The methodology used is based both on the analysis of the effects of the liberalization of trade through the transmission channels and by simulation through the multiplier principle based on the model of the Social Accounting Matrix of few conceivable economic policy measures. The results of this study indicate that trade liberalization has an effect on the level of households' income and therefore on poverty; although this is not always accompanied by a reduction of income inequalities between the different categories of households.

KEYWORDS

Income inequality, Poverty, Social accounting matrix, Trade liberalization.

JEL CLASSIFICATION

I30, J50, R20.

1. INTRODUCTION

The analysis of the effects of the different macroeconomic policies on the distribution of income and households poverty has become a major concern (preoccupation) of policies decision-makers and economists of several countries taking part in the international trade (trading). Among the concerned policies, we can cite the fiscal reforms, the external trade liberalizations, the financial liberalization, the signature and (the coming into force) the applications of free trade zones with regional organisations. That is particularly the case of Cameroon which, since these last decades now entered into several opening works and trade liberalization. As a matter of fact, with the two great free trade agreements (EPA) within the scope of EU-ACP and MTS within the scope of the WTO agreements) which are put in place progressively, several questions of social, financial and economic consideration are raised.

In the heart of the debate which divides the advocates (partisans) and the opponents of trade liberalization is the question of the impact of trade liberalization on the populations' welfare of the countries taking part in the international trade. This debate is very important for Cameroon since poverty alleviation and income inequalities are at the centre of the preoccupations of public policies.

In face of such questions, it is important to question ourselves about the effective incidence of trade liberalization on poverty and the distribution (allocation) of income of the Cameroonian households. This question becomes more topical and worrying especially since in the scope of the economic reforms undertaken in the days following its independence in 1960, the country has progressively entered into some trade liberalization processes.

Since its independence in 1960, Cameroon is among the signatory countries of several multilateral and bilateral trade agreements which lie resolutely within the scope of the liberalization logic and the diversification of its economic partners. Member of the World Trade Organization (WTO) since the 1st January 1995, the country has entered into several negotiations of the Multilateral Trade System (MTS). The country is equally a member of the Africa-the Caribbean-the Pacific (ACP[1]) group within the framework of the Economic Partnership Agreements (EPA[2]) with the European Union (EU). Similarly, Cameroon has also ratified on the 15th January 2009 an EPA of stage with the EU in which it commits itself to liberalize by January 2010 20% of the imports of European origin, in order to attain 50% after 15 years starting from 2010 and 80% in 2083.

From all that has been written so far, the central question of the present study is that of knowing what effects the economic policies and the reforms put in place in the scope of the trade liberalization process can have on the distribution of income and the households' poverty in Cameroon?

The objective of the present study is then to quantify and to analyse with the help of transmission channels and the social accounting matrix based multiplier model the potential effects of the various measures of trade liberalization stemming from the negotiations of the EPA-ACP/EU agreements and the WTO agreements on the distribution of income and the households' poverty in Cameroon between 1995 and 2007.

The study is carried out in order to test the following hypothesis: the measures of trading policies implemented in Cameroon in the scope of trade liberalization have an impact on households' poverty and income inequalities alleviation.

2. CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1. CONCEPTUAL AND THEORETICAL APPROACH OF POVERTY, INCOMES INEQUALITIES AND TRADE LIBERALIZATION

2.1.1. CONCEPT AND MEASURE OF THE DISTRIBUTION OF INCOME

Income distribution can be divided into two main categories: through function and through order of size or importance. The distribution through function shows the modalities of allocation of the national income between the factors of production. As to the distribution through the order of size or personal distribution, it shows the amounts of all types of functional incomes received by the rich, the poor and the individuals or family groups of the middle class. The distribution of income can equally be classified according to primary distribution and the secondary distribution. The primary distribution is the personal distribution before the redistribution while the secondary distribution is a modification form of the primary distribution through the redistribution mechanism.

[1] A set made up of 46 then 77 African, the Caribbean and the Pacific Island countries, signatories of the Yaoundé convention, then the Lomé convention and finally the Cotonou agreement with the EU and members states.

[2] The countries negotiating the EPA are gathered together in six regions: the Pacific region, the Caribbean region, the Central Africa region, the West Africa region, the East and South Africa region (AFOA) and the SADC region.

Different indices have been developed to assess the inequalities. We have for instance: Atkinson, S-Gini, Atkinson-Gini, and the Entropy generalized index. Among all these indices, the concentration index or the Gini coefficient remains the most used one in the measure of inequalities [Atkinson (1987), Sen (1997)].

2.1.2. CONCEPT AND MEASURE OF POVERTY

There is not a unique definition of poverty. Several definitions have then been proposed with the passing years by some experts and academics; every one of them generates some different instruments to characterize and to measure it under its various forms. If we consider for instance the economic dimension of poverty, there are three forms of poverty: the monetary or ''income'' poverty; the living conditions or ''existence'' poverty; the potentialities or ''capabilities'' poverty.

However, there exists a close relation between these three forms of poverty; while the monetary poverty provides a means of measure of poverty, the living conditions poverty gives its main characteristics and the capabilities poverty provides its causes. This then shows the complementarity nature of the three forms of poverty in the scope of a poverty analysis.

a. The monetary or ''income'' poverty

According to FAO (1996), the monetary poverty gives the expression of an aspect of the standard of living and results from the insufficiency of resources leading to an insufficient consumption (expression of a very poor level of well-being). Its measure leans either on the income or on the consumption, expressed in monetary terms; this threshold can be estimated in ''absolute'' or ''relative'' value. The ''absolute'' poverty threshold[3] is the form of poverty which is more suitable for the developing countries, where a very important part of the population live around the minimal survival threshold, while in the developed countries, where the food security is quasi-ensured, poverty is more based on comparisons (Maertens, 2009). Likewise, an ''absolute'' poverty measure is useful in the economic crisis period for it permits to follow up the number of individuals who go below an objective threshold considered as poverty detector, while during the period of growth, a ''relative'' poverty measure brings out (highlights) the rejected individuals of growth.

b. The living conditions or ''existence'' poverty

Poverty can equally be perceived in its exclusion dimension in relation to a certain way of cultural and material life, resulting from the impossibility to satisfy the essential needs (in reference to the theory of essential needs). The analysis is widened to the whole set of needs which permit to live a decent life in a given society, and this refers to the notion of social integration/exclusion. This living conditions poverty or existence poverty has a more qualitative vision of poverty, which expresses a situation of lack in the domains relating to the feeding (nutritional disequilibrium), to the health (non access to the primary health care), to the education (non schooling) and to the housing. However, the non satisfaction of a given need, considered as essential, can have multiple causes (non availability of a service, non accessibility, the cost, and the differences of perception of the essential character of the need). Due to the fact that the determination of the living conditions poverty threshold remains a notion relating to the sociocultural environment of an individual, it is then difficult to determine the choice of the pertinent indicators of this form of poverty.

c. The potentialities or capabilities poverty

The poverty of capabilities is expressed by the fact that an individual does not have means (different forms of capital) which could have permitted him/her to get out of poverty, to live correctly and to show to advantage his/her individual capacities. This insufficiency of capital accumulation[4] generates an insufficient development of the individual capacities [Herpin and Verger (1998), Sen (1985)]. This approach permits to tackle poverty at its source in considering it as the result of the incapacity to seize the opportunities which are presented owing to a lack of capacities resulting from a deficient health, an insufficient education, a nutritional disequilibrium. In a dynamic vision, we become poor as a result of the modifications in the patrimony (property) through bankruptcy, in the human capital (handicap) or in the social capital (exclusion or family breaking).

There exist a great number of indices of measure of poverty. We have for instance: the Watts index, the Gini index, the Clarck index, Hemming and Ulph (CHU). The measure class of Foster, Greer and Thorbecke (1984), known under the name of ''FGT'' index, seems to be a more general index for the measure of poverty.

2.1.3. CONCEPT OF TRADE LIBERALISATION AND TRANSMISSION CHANNELS

a. Concept of trade liberalization

The concept of trade liberalization is often similar to that of the opening towards the outside world. In this case, we indiscriminately talk of trade liberalisation or trade opening up. The lexis of Economics (8th edition, 2004) defines liberalization as the set of measures aiming at facilitating the development of international trade. In other words, the liberalization implies the suppression, the reduction of all forces other than those of the markets mechanism, which influence the international trading in general and trade in particular. This lexical definition deliberately agrees with that of the World Bank (1996, pp. 28) according to which the liberalization decentralizes the decisions of trade and production in favour of the enterprises and households, and directly tries to correct the weak points of the centralised planning.

This approach of liberalization is highly shared by the World Trade Organisation, which, since its creation in 1994, has come forward as the guarantor for the liberal ideology in the world [CNUCED (2012) and WTO (2012)]. We can say that these institutions considered it as a powerful instrument of motivation to the competition and to the profit and a mechanism of regulation of the demand and supply of prices of goods and services according to the invisible hand of Adam Smith.

Besides this definitional approach of the international institutions, many other authors have tried to apprehend the notion of trade opening up/trade liberalization. Thus, for Krueger (1986) and Bhagwati (1991), the liberalization means the reforms of the trade policies leading to a mechanism of prices independence and the reduction of the anti-exports bias. Pritchett (1991), Reinikka (1994), Papageorgiou et al. (1991) and Bhagwati (1991) think that the liberalization should be considered as an overhang towards the prices neutrality. For these authors, the neutrality is the central element of liberalization.

When widening the notion of liberalization to that of free trade, we can say that the trade liberalization implies an elimination of barriers of all kinds from the internal and external trade. But in the reality, we can notice that there exists no absolute and total liberalization of trade. That is why in practice, the trade liberalization refers to the liberalization of imports and/or the trade policies movements towards the neutrality of the relative prices structures and/ or the substitution of the State intervention forms which create more distortions by those which create less distortions (Bamou, 1999).

b. Transmission channels of trade on poverty

The main transmission channels of the effects of trade liberalization are: the prices of the traded goods, the employment and the salaries, the State revenue and the economic growth.

The effect of trade liberalization on the prices is function of the variations of the prices of imported goods or the amelioration of the prices of the exported goods. The impact on the welfare of the households depends on the manner the poor consume the imported and exported goods and also on the fact that they are or can become the producers of the exported goods. At the level of the employment and the salaries, the effect of liberalization is exerted either through the increase of the level of employment or the improvement of salaries (Cling, Razafindrakoto and Roubaud, 2005). On the State revenues, the trade liberalization acts through the tariff and taxes on imports and exports. In the case where the process of liberalization is accompanied with a reduction of the customs revenues, this can constitute a major constraint for the African countries which budgets are strongly reliant on the customs revenues. Moreover, a significant reduction of the public revenues can be source of the diminution of the State capacity to supply services to the poor. On growth and according to Winters, McCulloch and McKay (2004), if we accept the argument or thesis that the opening up favours growth, we can expect that it will generally have a

[3] According to the World Bank (2000), the extreme poverty threshold is now estimated at 1. 08 dollars per day and per inhabitant (generally rounded down to the nearest dollar that is to say 1 dollar).

[4] It is a question of means of material nature (physical equipments or financial capital) but also of human capital (level of education or of experience, life expectancy), and of social capital (relations network, stocks of rights, etc.). Sen (1985) talks of ''functioning'' to define the activities that an individual can run or the steps that he/she can reach. It is not a matter of guaranteeing the attainment of a given level but only to ensure the effective possibility or real opportunity to get to that level.

favorable impact on poverty (trickle down effect thesis). This impact depends however on the effect of the opening up on inequalities discussed previously, as well as on that of growth on the inequalities (a great increase of inequalities is translated into an increase in poverty).

c. Social accounting matrix based multiplier model as an instrument of economic policy analysis

Based on the construction of a social accounting matrix, the social accounting based multiplier model has come into being in a parallel way to the development of the works on the social accounting matrix (SAM). Thanks to its architecture, it permits to measure the effects of a change or shock occurred in a sector of the economy on the whole economy. This model has been largely disclosed in the developing countries by the World Bank, which saw in it an instrument capable of permitting to evaluate the impact of the economic policies put in place or implemented in the framework of the adjustment policy on poverty [Graham Pyatt and Jeffery Round (2004)]. Afterwards, with the gradual integration of the developing countries into the international trade, this model and its different variants have experienced a renewed interest due to its effectiveness in the analysis of macroeconomic policy shocks on the microeconomic indicators of countries taking part in trade (Tchoumo and Jumbo, 2013).

Since the first use of the model, many applications of this model have been developed in several countries for various research interests. For Indonesia, Keuning and Thorbecke (1992) have used this model to study the effects of the government budget reduction in the 1980s on the socioeconomic indicators on a sample of 10 groups of households. . Defourny et Thorbecke (1984) have used this model to describe the South Korean economy and to analyse the effects of subsidies on households. Pansini Rosaria Vega (2008) has used the new approaches of the decomposition of the SAM to formalize a model in order to analyse the different direct and indirect effects of macroeconomic policy shocks on poverty and inequalities of income among households in Vietnam.

In Ghana, Powell and Round (2000) have constructed a model, on the basis of the 1993 Ghanaian social accounting matrix in order to describe the economy and the interactions between the different sectors of activities. In South Africa, social accounting matrix model has enabled to study and to assess the different strategies of economic policy implemented by the South African government in her policy of poverty reduction and the improvement of the living conditions of the citizens (Statistics South Africa 2010). In 2012, in the framework of the works carried out by the African Growth and Development Policy, Rhoda Gakuru and Naomi Mathenge have used the SAM model to highlight the level of income inequalities in Kenya and its implications on the different policies of growth and poverty alleviation.

Many other studies have focused on the development of a social accounting matrix model for more general analyses. We have for instance the works of FAO (2006) and Fofana (2007), who have developed a SAM model for the analysis of the socioeconomic impact of agricultural policies on rural development and for the analysis of the impact of macroeconomic policies and shocks respectively.

One of the most important variant of the SAM model is the “Calculable General Equilibrium Model”. This variant has also aroused a lot of interest and has motivated several works of which several were focusing on the analysis of poverty, economic growth and the effects of trade liberalization.

Several studies have been carried out on the impact of trade reforms on the economic performance, the revenue distribution and poverty in many African countries these recent years [Souleymane Diallo et al. (2004) for Côte d’Ivoire; Maertens et al. (2009) in Senegal; John Cockburn (2010)[5] et al. for studies focusing on Benin, Burkina Faso, Senegal, Cameroon, Morocco, Zimbabwe, Tunisia and South Africa]. From all these studies and from an economic theory point of view, it emerges that trade liberalisation has an impact on economic development and the reduction of income inequalities.

In Africa in general and in Cameroon in particular, several applications of this model have been developed to analyse poverty, economic growth as well as the distribution of incomes [Cogneau and Roubeau (1993); Emini (2000); Thurlow and Wobst (2003) ; Lange and Schade (2004)]. When gathering in a unique framework the main tables of synthesis of the national accounting (the resources-employment table, the table of integrated economic account, the table of financial operations) and the different surveys, the social accounting matrix based multiplier model has permitted to give answers to some new macroeconomic questions which up to now have remained without any answer.

From the studies carried out on the impact of trade reforms on the economic performance, the allocation of incomes and poverty in the developing countries these last years [Souleymane Diallo et al. (2004), Fofana et al. (2003), Bamou (1999), Maertens et al. (2009)], it emerges that if on the economic theory point of view the trade liberalization has an impact on the economic development and the reduction of incomes inéqualities, the way in which these measures affect the welfare and the distribution of incomes of the populations is strongly related to the specific conditions of the countries which implement them.

The present study is limited to the analysis through the mulitiplier effect principle of the linked effects of the trade liberalization at the same time on poverty and on incomes inequalities of households. Thus, when subdividing the households in two groups according to the residence milieu and in six groups according to the standard of living, we can then measure the impact of the liberalization not only in terms of the residence milieu but also in terms of social categories of households.

3. METHODOLOGY

In order to give a suitable answer to our central question and to verify whether our working hypotheses are accepted or rejected, the methodological approach used consists in a twofold analysis. The first analysis is based on the compiling of information provided by the different surveys carried out in some Cameroonian households, and relating to the socioeconomic situation of households between 1996 and 2007. The second analysis is based on the social accounting matrix based multiplier model. For that, we have first of all constructed a Macro Social Accounting Matrix of 11 accounts, and then we have disaggregated this matrix in order to construct a multiplier matrix which has constituted the skeleton of our model thanks to which we have simulated some few measures of trade policy in use in the ACP-EU and WTO agreements.

4. RESULTS AND INTERPRETATIONS

4.1. MEASURE OF THE EFFECTS OF TRADE LIBERALIZATION THROUGH THE TRANSMISSION CHANNELS

4.1.1. TREND AND POVERTY PROFILE

On the basis of the results of the three surveys ECAM I, ECAM II and ECAM III carried out as we earlier said it over the whole national territory in 1996, 2001 and 2007, we can construct table 1 and table 2 which provide respectively the evolution of the level of households’ poverty and the evolution of the inequalities in the distribution of income between 1996 and 2007.

[5] See the book titled: ‘’ Libéralisation commerciale et Pauvreté en Afrique’’ published by the Press of the University of Laval (Canada) in 2010. This book under the direction of the Center of Research for International Development summarises several works carried out by different authors on the theme of trade liberalization and poverty in Africa.

TABLE 1: EVOLUTION OF THE INDICATORS OF POVERTY BETWEEN 1996 AND 2007 (in percentage)

	1996	2001	2007
Incidence (P0)			
National	53.3	40.2	39.9
Urban	41.4	17.9	12.2
Rural	59.6	52.1	55.0
Depth (P1)			
National	19.1	12.8	12.3
Urban	14.7	4.3	2.8
Rural	21.5	17.3	17.5
Gravity (P2)			
National	ND	5.8	5.0
Urban		1.6	1.0
Rural		7.7	7.2

Source: report ECAM I , ECAM II , ECAM III ; SDEG.

TABLE 2: EVOLUTION OF THE GINI INDEX BETWEEN 1996 AND 2007 (in percentage)

	1996	2001	2007
National	0.406	0.408	0.390
Urban	0.449	0.406	0.352
Rural	0.345	0.369	0.322

Source: report ECAM I , ECAM II , ECAM III ; SDPR(2003), SDEG.

4.1.2. INTERPRETATIONS OF THE RESULTS OF THE SURVEYS

It emerges from these results that the monetary poverty has moved back for about 13 points between 1996 and 2001 and remains stable over the 2001-2007 period. As a matter of fact, the incidence of poverty has declined from 53.3% to 40.2% between 1996 and 2001, before stabilizing around 39.9% in 2007. This decline of poverty can be the result of a large growth of average income (growth effect) or an improvement in the process of redistribution of incomes (redistribution effect). But in the reality, it is recognized in Cameroon through the decomposition of the evolution of income that, the decline of poverty is especially due to the economic growth effect than to the redistribution effect. Between 2001 and 2007, the poverty index remains practically stable. The immediate consequence of this stability of the level of poverty is the significant increase of the number of the poor due to a population increase which is still very important (the demographic growth rate stands at 2.7%).

As a matter of fact, out of a population estimated at about 15.5 millions of individuals in 2001, 6.2 millions were considered as poor. In 2007, the ECAM III report estimates the population of the country at about 17.94 millions of individuals with 7.1 millions of poor. Theoretically, the diminution of the poverty incidence between 1996 and 2001 expresses, with a demographic growth rate of 2.7%, a reduction of poverty and an improvement of the living conditions of the populations during the second phase of the liberalization period of the country; while the index stability between 2001 and 2007 expresses an increase of poverty. However, the stability of the incidence of poverty observed at the national level hides a striking contrast between the residence milieus. As a matter of fact, in the urban milieu, the poverty rate which was at 17.9% in 2001 has experienced a drop of 5.7 points over the 2001-2007 period; while it has rather experienced an increase of 3.1 points in the rural milieu to stand at 55.0% in 2007. The degradation of the situation in the rural milieu could be explained by the fact that the households' activities incomes have not evolved or developed at a sufficient rate to permit them preserve their purchasing power.

During that very period, the gravity of poverty which measures the aversion of the populations vis-à-vis poverty or of the inequalities between the poor is situated at 5% in 2007 against 5.8%. This result shows that the poor population tends to be homogenized. As a matter of fact, this rate was at about 13.8% in 2001 (ECAM II). Moreover, the depth of poverty has remained practically stable over the period: 12.8% in 2001 against 12.3% in 2007. In other words, the poor have globally not gained from the effects of economic growth in order to reduce significantly the average gap between their level of consumption and the poverty threshold, even though the effect of growth has essentially benefited to the 10% of the poorest households. This depth corresponds to a poverty intensity or severity of about 31%, that is to say a deficit of CFA F 83 500 per poor individual in average.

As to the next table that is to say table 2, it presents the evolution of the inequalities in the distribution of incomes between 1996 and 2007. It emerges from that table that, if the incidence of the absolute poverty has declined between 1996 and 2001, this is not the case for the inequalities which, for lack of diminishing, are reinforced at the national level and much more in the rural milieu. On the other hand, the inequalities index has experienced a drop between 2001 and 2007. This drop expresses a decline of inequalities between the households at the national level and just as well in the rural zone as in the urban zone. However, it is interesting to notice that the inequalities reduce much more in the urban zone that in the rural zone.

4.2. MEASURES OF THE EFFECTS OF TRADE LIBERALIZATION BY SIMULATION OF LIBERAL TRADE POLICIES

4.2.1. RESULTS OF THE SIMULATIONS

The analysis of trade liberalization through the transmission channels gives us only the information on the households according to the residence milieu but we do not know its effects on the different sub categories of the households (Poor, Intermediate, Non poor). To complete this analysis, two options of economic policy have been thought and simulated in order to illustrate the effects of the trade economic policies on the allocation of incomes and the households' poverty. The first one which is relative to the ACP-EU and the WTO agreements, examines the effects of a 50% reduction of the trade or tariff barriers of all the imported goods and the suppression of customs duties on the exported good. The second one, relative to the accompaniment measures provided for in the agreements (internal support to the countries taking part in the agreements), is an implicit representation of an agricultural policy[6] permitting to increase the agricultural productivity[7] by a 20% increment of the APU transfers to the households. It should be noticed that the SDPR considers the increase of the productivity of factors as the major source of a growth which can generate income sufficiently high to lower by half the poverty incidence in 2015.

These diffrernt scenarios will be simulated under the hypothesis that Cameroon essentially exhange with the European Union and in considering that the Cameroonian government gets wider the tax base and/or increases the direct tax rate on the income of persons to compensate the losses due to the custom disarmament.

[6] It can be a subsidy policy of the agricultural inputs, farmers' training, reinforcement of means of production, reinforcement of the infrastructures, etc.

[7] The 20% increase of transfers towards the households can be interpreted as an internal support policy to the country taking part in the agreements and which can be included in the framework of the National Programme of Participative Development which is a programme elaborated and put in place by the Cameroonian government, with the help of the international community. This programme has as objective to assist the government in the definition and the implementation of mechanism aiming at giving responsibilities to the grass roots communities and the decentralized structures of the State in order to render them actors of their own development.

TABLE 3: RESULTS OF THE SIMULATIONS (IN MILLIONS OF CFA F)

	Income of the households					
	Urban			Rural		
	Poor	Intermediary	Non Poor	Poor	Intermediary	Non Poor
Initial income (Y)	265079	382312	1487548	1582140	1005234	1416243
Initial total	2134939			4003617		
Income after simulation	265126	382988	1488851	1582225	1005477	1416630
Total after simulation	2136965			4004332		
Variation (dY)	47	676	1303	85	243	387

Source: calculations of the authors

4.2.2. INTERPRETATIONS OF THE RESULTS OF THE SIMULATION

From the above table, we can easily notice that there is an increase of the total income of the households after simulation. The income being an essential determinant of the households' standard of living, its modification leads to the repercussions on standard of living of households and therefore on poverty. Knowing that these simulation hypotheses correspond to the conceivable trade liberalization measures during the second phase or stage of the liberalization process in Cameroon, and assuming that the variation of the poverty indicators is essentially explained by the variation of incomes induced by the liberal trade policies, we can conclude that the trade liberalization has led to the reduction of households' poverty.

However, this globally positive evolution of incomes hides at least two important disparities:

- with respect to the group Urban/Rural, we note that the application of the measures of trade policy has more impact on the urban households than on the rural households, but it has been acknowledged that more than haft of the poor reside in the rural zone;
- with respect to the sub group, we note that the measures of trade policy benefit less to the poor households in the urban zone as well as in the rural zone.

Finally, we notice that the reduction measures of customs duties on the imported products, the suppression of customs duties on the exported products and the transfers, have effectively a positive effect on the welfare of households. As a matter of fact, when we consider stable all the other determinants of poverty like the increase of the population, we can conclude that the trade liberalization has contributed to improve the income of the urban and rural households; and this leads to a poverty reduction or alleviation in these different milieus. However, this amelioration of incomes has not always been accompanied with a reduction of inequalities of incomes between the households.

Such a result is both in line with the results of some authors and contradicts the results of others depending on the methodologies used in the analysis related to other countries of trade liberalization on poverty and/or distribution of income. Najid Ahmed et al. (2012) in Pakistan and Antoine Bouët et al. (2013) in Senegal for instance have shown that trade liberalization leads to the reduction of poverty and to a slight increase to income inequalities. Other studies carried out in Senegal [see John Cockburn et al. in Trade Liberalisation and Poverty in Africa (2010)], in Morocco [see Touhami Abdelkalek in Trade Liberalisation and Poverty in Africa (2010)], in Zimbabwe [see Margaret Chitiga et al. in Trade Liberalisation and Poverty in Africa (2010)] and in Tunisia [see Sami Bibi et Rim Chatti in Trade Liberalisation and Poverty in Africa (2010)] just to name a few show with slight differences that trade liberalisation leads to a reduction of poverty in the above mentioned countries. However, the results of our study confirm that rural households in general and the poor households in particular benefit less from poverty alleviation due to measures of trade liberalisation policies. Moreover, this results is in line with that of John cockburn et al (2010)] who arrived at the conclusion that in Benin, rural households in general and the poor in particular are more victimised by the increase in poverty.

This divergence in the results for the same study objective might be justified among others by the model used, the simulation hypotheses, the decomposition of the sectors of activities in the aggregate social accounting matrix, the choice of the transmission channels of trade liberalization on households. This also concerns the present study for we have considered the income as a transmission channel of trade liberalization on households while other studies rather use the prices of goods in the market.

5. CONCLUSION AND RECOMMENDATIONS

The analysis of the effects of trade liberalization on the distribution of incomes and poverty of the households in Cameroon has been the object of this study. To achieve this objective, we have used a methodology which is based on the analysis of the effects of trade liberalization through the transmission channels and by simulation based on the multiplier model.

It emerges from the analysis of the effects of the trade liberalization through the transmission channels that the measures of economic policy put in place in the scope of the trade liberalization process have not contributed in a significant and sustainable manner to the reduction of poverty and the improvement of the living conditions of the populations between 1996 and 2007 in terms of the residence milieu.

It emerges from the analysis of the effects of the trade liberalization through simulation that the options of policy put in place in the framework of the trade opening up improve the income of the different categories of households and consequently reduce poverty. However, contrary to what was expected, the increase of incomes is unequally distributed between the categories of households and do not always permit to reduce significantly the inequalities of incomes. As a matter of fact, the variation of income benefits much more to the urban households that to the rural households. Moreover, in each zone, the poor households benefit less from this amelioration of incomes.

These results are in accordance with our initial hypothesis which states that the trade opening up resulting from the liberalization of trade affects the sources of incomes of the different economic agents and, therefore, the allocation of the national income, but also that the improvement of the welfare and/or the reduction of poverty following the trade opening up depend on the strategies and economic policies put in place in the country.

From the results of the present study, the following recommendations of economic policies are suggested. First of all, it is important for the group of countries of the Central Africa in which belongs Cameroon to understand and to measure the stakes in these different agreements in order to better defend the interests of its population. This comes through the harmonization and the amelioration of the functioning of the national committees of follow up and coordination of the negotiations of these agreements as well as through a greater implication of the political, social and economic actors in these negotiations.

Among the objectives of the ACP-EU agreements, appears in good place that of facilitating the economic intra African integration in general and sub regional in particular. After all observations, this objective is far to be achieved in Africa [Elbadawi, I. (1997), Foroutan, F. (1998) ; Sekkat K et al. (2004), Collins et al. (2010)] for, there still exist many barriers to the free movement of individuals and goods. All these things delay the process of negotiation and compromise in this manner the economic development of the members' countries. From the determining stakes of the different trade talks for each country, it is important to put in place at the intra regional and the sub regional level, policies which aim at breaking the mentalities and the institutional constraint which handicap the efforts of economic integration and compromise in this way the development of a genuine intra African and sub regional market.

The rigidity of the rural milieu in responding favorably to the measures of trade policy of opening up equally stems from the loss of affection of the rural milieu in terms of attractiveness and incitation to the investment. For that, it is important to create in these zones a social, economic and political environment which favours the entrepreneurship in general and the agricultural entrepreneurship in particular. We also note the marginalization of the informal sector which, with time – in the rural zone as well as in the urban zone – increases drastically. In reality, we can no more continue calling ''informal'' a sector which with the passing years has been generalized, has been diversified and is now accepted as being part of our economy. It is then desirable to accompany institutionally, financially and technically this sector in order to permit it, by the side of the SMIs and SMEs to be for the African countries in general and for Cameroon in particular some new emergent sectors following the example of the Asian countries.

At the national level, it is important to diversify the sources of incomes of households. This could be done among others through the creation of employments, the customs and fiscal incentive measures, the amelioration of governance, the support to the agriculture which comes through the improvement of the distribution networks (channels) of the inputs, a marketing of products, the access to credits, the training and the agronomic research, the popularization of support infrastructures. Measures should be taken in order to favour more the transformation within the country of the exported raw material and the agricultural products in order to benefit from the increase in value and to increase the demand/Supply in labour.

For the future studies, we recommend to carry out a more global study using the calculable general equilibrium model on the analysis of the effects of trade liberalization on poverty and the distribution of incomes in dividing up the households according to the socioeconomic criterion, that is to say to gather the households in Public salaried employee, Formal private, Agricultural informal, Non agricultural informal, Unemployed person, Pensioner, Other non-working population.

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BRANDING NEXT GENERATION PRODUCTS: ISSUES AND CHALLENGES

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ABSTRACT
Branding is a name or symbol that is commonly known to identify a company or its products and separate them from the competition. A well-known brand is generally regarded as one that people will recognize, often even if they do not know about the company or its products/services. These are usually the businesses name or the name of a product, although it can also include the name of a feature or style of a product. The overall 'branding' of a company or product can also stretch to a logo, symbol, or even design features that identify the company or its products/services.

KEYWORDS
Next generation products, branding.

GENERALLY THE FOLLOWING ISSUES ARE CONSIDERED WHILE BRANDING A PRODUCT
HOW CAN BRANDING BENEFIT OF BUSINESS?
The main benefit of branding is that customers are much more likely to remember. The business a strong brand name and logo/image helps to keep the company's image in the mind of the potential customers.

RECOGNITION AND LOYALTY
If the business sells products that are often bought on impulse, a customer recognizing the brand could mean the difference between no-sale and a sale. Even if the customer was not aware of a particular product. There trust in the brand they are likely to that unfamiliar product
IMAGE OF SIZE
A strong brand will project an image of a large and established business to your potential customers. People usually associate branding with larger businesses that have the money to spend on advertising and promotion.
An image of size and establishment can be especially important when a customer wants reassurance that you will still be around in a few years time.
IMAGE OF QUALITY
A strong brand projects an image of quality in your business, many people see the brand as a part of a product or service that helps to show its quality and value. It is commonly said that if you show a person two identical products, only one of which is branded; they will almost always believe the branded item is higher quality.
IMAGE OF EXPERIENCE AND RELIABILITY
A strong brand creates an image of an established business that has been around for long enough to become well known. A branded business is more likely to be seen as experienced in their products or services, and will generally be seen as more reliable and trustworthy than an unbranded business.
The purpose of this paper is to explow the different possibility's for branding a new product. The new generation that is generation Y and post generation Y have different testes. Preferences and choices, there for there is a need to revisit the field of brand building for the current generation.
The basic source of this study is the published literature in different learned journals and the same are interpreted in the present Indian context.
The continued success of technology-based companies depends on their proficiency in creating next-generation products and their derivatives. So getting such products out the door on schedule must be routine for such companies, right? Not quite. The authors recently engaged in a detailed study--in which they had access to sensitive internal information and to candid interviews with people at every level--of 28 next-generation product-development projects in 14 leading high-tech companies. They found that most of the companies were unable to complete such projects on schedule. And the companies also had difficulty developing the derivative products needed to fill the gaps in the market that their next-generation products would create. The problem in every case, the authors discovered, was rooted in the product definition phase. And not coincidentally, the successful companies in the study had all learned how to handle the technical and marketplace uncertainties in their product definition processes.
GENERATION X
Generation X, sometimes abbreviated to Gen-X, is a term used to describe the people born roughly between 1960 and 1980. It is sandwiched between the Baby Boomer and Millennial generations. Stereotyped as having characteristics such as a lack of direction and cynicism, members of this group they have been influenced by a wide range of cultural and political shifts, perhaps most notably the development of various technologies.
GENERATION Y
Generation Y refers to the population group in the US born from somewhere around 1976 to around 2000. They are sometimes called echo boomers because some of them are the children of baby boomers. On the other hand, some Generation Y children, especially those born in the late 1980s or afterwards, may be the grandchildren of baby boomers. Other names for this group are the Millennials, the Internet Generation, and the abbreviated Gen Y or Gen Years.

ISSUES AND CHALLENGES
COMMON BRAND PROBLEMS
1. No one in the organization has a solid understanding of the brand's consumers or their needs.
2. The brand does not stand for anything and it does not promise anything. It is just a name and a logo.
3. The brand touts a clichéd, unsubstantiated, meaningless point of difference (such as, we are the quality leader or the service leader or the innovation leader or, worst of all, just the leader).
4. Brand messaging is helter-skelter. That is, it varies by audience, message vehicle, campaign, etc.
5. A crisis occurs that reinforces that the brand was never really serious about its promise.
6. The brand becomes a "whipping boy" for some social issue. Special interest groups that disagree with the brand's policies target the brand for attack.

7. There is little to no awareness of the brand in the marketplace. This could be because it is a start-up brand or because it is new to the specific geographic market.
8. The brand's less than stellar perceptions are due to product problems. The product may have quality problems or be inferior to its competitors' products in other ways.
9. Internal politics and organizational dysfunction lead to brand and customer service dysfunction.
10. The brand and the organization behind it have rested on their laurels for far too long, not keeping up with consumer needs and industry innovations.

NEW BRANDING CHALLENGES

1. Brands are important as ever

- Consumer need for simplification
- Consumer need for risk reduction

2. Brand management is as difficult as ever

- Savvy consumers
- Increased competition
- Decreased effectiveness of traditional marketing tools and emergence of new marketing tools
- Complex brand and product portfolios

OBJECTIVES OF STUDY

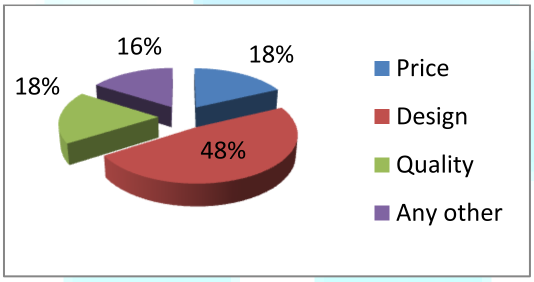
1. To know the challenges and issues of next generation.
2. To know the expectation of next generation.
3. To know the benefit of branded products.
4. To study the satisfaction level of customer.
5. To know the customer mind set while purchasing branded product.

1. Which among the following is most important while choosing a brand?

TABLE 1

Particular	Respondents
Price	9
Design	24
Quality	9
Any other	8

FIG. 1



INTERPRETAION

From the above graph it is observed that,9 out of 50 respondents are belong to price, 24 respondent are belong to design, 09 represents are belong to quality, and 8 respondent are belong to other categories. So that major respondents are belongs to other categories.

CO-VARIANCE

$$\bar{X} = \frac{\sum X}{N}$$

$$\sigma = \sqrt{\frac{\sum x^2}{N}}$$

TABLE 2

X	X-$\bar{X}$	x^2
9	-3.5	12.25
24	11.5	132.25
9	-3.5	12.25
8	-4.5	20.25
∑X=50	0	$\sum x^2$=177

$$\bar{X} = \frac{\sum X}{N} = \frac{50}{4} = 12.5$$

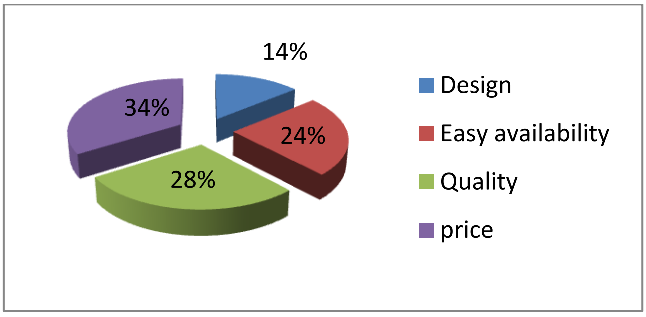
$$\sigma = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{177}{4}} = \sqrt{44.25} = 6.65$$

2. What according to you are the changes that the new generation look forward to?

TABLE 3

Particular	Respondents
Design	7
Easy availability	12
Quality	14
price	17

FIG. 2



INTERPRETAION

From the above graph it is observed that,7 out of 50 respondents are belong to Design, 12respondent are belong to easy availability and 14 represents are belong to quality , 17 respondent belong to price to according these are change that new generation look forward to brand products.

CO-VARIANCE

$$\bar{X} = \frac{\sum X}{N}$$

$$\sigma = \sqrt{\frac{\sum x^2}{N}}$$

TABLE 4

X	X-$\bar{X}$	x^2
7	-5.5	30.25
12	-0.5	0.25
14	1.5	2.25
17	4.5	20.25
∑X=50	0	$\sum x^2$=53

$$\bar{X} = \frac{\sum X}{N} = \frac{50}{4} = 12.5$$

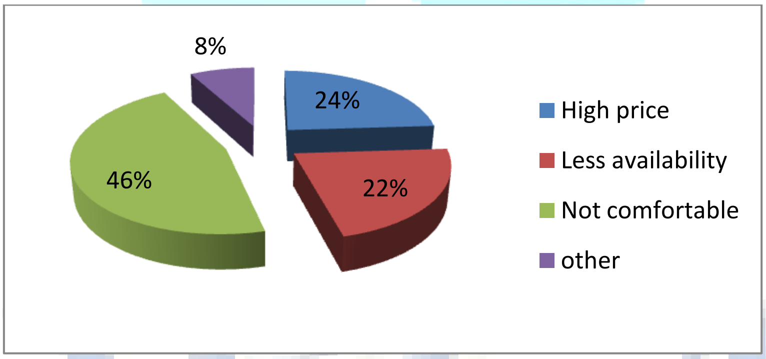
$$\sigma = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{53}{4}} = \sqrt{13.25} = 3.64$$

3. What are the problems you face while purchasing a branded product?

TABLE 5

Particular	Respondents
High price	12
Less availability	11
Not comfortable	23
other	4

FIG. 3



INTERPRETAION

From the above graph it is observed that,12 out of 50 respondents are belong to high price, 11 respondent are belong to less availability, 23 represents are belong to not comfortable , and o4 respondent are belong to other categories. So that major respondents are belongs to other categories.

CO-VARIANCE

$$\bar{X} = \frac{\sum X}{N}$$

$$\sigma = \sqrt{\frac{\sum x^2}{N}}$$

TABLE 6

X	X-$\bar{X}$	x^2
12	-0.5	0.25
11	-1.5	2.25
23	10.5	110.25
4	-8.5	72.25
∑X=50	0	$\sum x^2$=185

$$\bar{X} = \frac{\sum X}{N} = \frac{50}{4} = 12.5$$

$$\sigma = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{185}{4}} = \sqrt{46.25} = 6.80$$

FINDINGS

- The kind of brand product which use and occupational level of respondents are dependents
- 52% of the respondent knows about the branded products through Advertisement.
- It is clear that many of the respondent influenced by the friends (22%), parents (14%), and by the advertisement while purchasing a branding product.
- We can identify that 46% of customers are faced problem in not comfortable.
- 1/3rd of the respondent are satisfaction with the quality of the brand product.

SUGGESTION

- Effective advertisement through television should be telecasted to branded products,
- The branded products should be a improve to states in education aspects.
- The branding product are using to the average of middle family and high level family persons.
- The branding product will be a attracted of people to design & quality.
- The new generation look forward to a branded products require at most style and status.
- Loyalty customer is there to the branded product to the current generation.

CONCLUSION

Following are the conclusion drawn after analysis of data collected from the survey research.
The branding next generation product has got very response from its readers. Most of the customers prefer the branded products for it's cost. If the current generation's People follow the suggestion given by the respondent to increase the sales to branded products and increasing the users improve quality and add the more new feature, new design and technology then it will reach the more then customers of next generation.
From overall study it can be concluded that most of the customer considered design style and price and service while making purchase decision.

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THE CONTRIBUTION OF MICROFINANCE TO SUSTAINABLE DEVELOPMENT IN RWANDA

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ABSTRACT

Rwanda's traditional financial sector is considered to be relatively shallow and undiversified. The World Bank affirms that respectively, from 2010 to 2014, the domestic saving ration has been 7.3%; 8.3%; 8.1%; 11.5% and 11.604%. The government of Rwanda considers financial sector development to be a high priority, seeking to expand access to credit and financial services, enhance savings mobilization, and mobilize long term capital for investment. The microfinance sector is however relatively young. It has been formalized with the creation of the first Banque Populaire in 1975. The Government initiated a reform in 1995. Rwanda has applied the economic liberalization program by privatizing the sector; encouraged market determined prices of financial services and enhanced market competition. The Government has set instructions and laws such as Instruction n° 11/1997 establishing the BNR; the banking law n° 08/99 enacted 1999, assigning the responsibility for MFI supervision to BNR; Instruction n° 06/2002 regulating microfinance activities for MFIs; Instruction n° 05/2003 issued specifically for SACCOs. In 2009, a new law n° 40/2008 establishing the organization of Microfinance activities was published. This law provides four categories of Microfinance Institutions: Informal Microfinance Institutions, Savings and Credit Cooperatives, Limited Corporations, Limited Company or Limited Liability Company. Using Qualitative and Quantitative Methods, considering Government's efforts, the present research was about the contribution of Microfinance Sector to the achievements of Millennium Development Goals (MDGs) towards Sustainable Development in Rwanda. The research found that Rwanda has experienced positive and rapid growth so that Rwanda comes in first in the category of starting a Business and second in Getting Credit. As financial sector strives to expand products and services to reach the underserved population, Rwanda is progressing positively and seems to be on the right track towards achieving its goals of becoming a middle-income country by 2020.

KEYWORDS

microfinance, millennium development goals (MDGs), sustainable development, sustainability.

JEL CODE

01, 02.

1. INTRODUCTION

Yunus 1999 states: "They were poor because the financial institutions in the country did not help them widen their economic base".
For more than 30 years microfinance has been portrayed as a key policy and program intervention for poverty reduction and 'bottom-up' local economic and social development. Microfinance is the provision of tiny loans to the poor to help them establish or expand an income-generating activity, and thereby escape from poverty. The microfinance movement began with the work of Dr Muhammad Yunus in Bangladesh in the late 1970s, spreading rapidly to other developing countries (Bateman, 2011). Poor people need and use a variety of financial services, including deposits, loans, and other services to seize business opportunities, improve their homes, deal with other large expenses, and cope with emergencies. However, the financial services usually available to the poor are limited in terms of cost, risk, and convenience. Certain types of credit, especially from moneylenders, are extremely expensive. Rotating savings and credit clubs are risky and usually don't allow much flexibility in amount or in the timing of deposits and loans. Deposit accounts require minimum amounts and may have inflexible withdrawal rules. Loans from formal institutions usually have collateral requirements that exclude most of the poor (Littlefield & Rosenberg, 2004). Microfinance institutions have demonstrated that it is possible to serve poor clients, operate in a financially sound manner, and reach scale. Microfinance institutions can also be an important part of a strategy to strengthen the banking system and promote financial development more broadly. In fact, by helping to increase the income and asset base of the poor, they may increase demand for bank loans; Microfinance institutions can also help develop and prove financial techniques for reaching the poor at lower cost and lower risk; mainstream banks may partner with microfinance institutions. (Barr, 2004). The key question is whether microfinance promotes sustainable development. The present research, taking Rwanda as a case study, focuses on the role of Microfinance to the achievements of Millennium Development Goals (MDGs) toward sustainable development.

2. THE CONCEPT OF MICROFINANCE

Definitions

Otero (1999) defines Microfinance as the provision of financial services to low-income poor and very poor self-employed people". These financial services according to Ledgerwood (1999) generally include savings and credit but can also include other financial services such as insurance and payment services. For Robinson 1998, the aim of microfinance institutions (MFIs) is to enable beneficiaries to raise their income levels and improve their living standards. A microfinance institution (MFI) according to Microfinance Information eXchange (MIX) is an organization that offers financial services to the very poor. Microcredit, a significant component of microfinance, is characterized by small loans with frequent repayments, usually monthly or bi-monthly, and short maturities that typically range between four months and two years. While microloan amounts and terms vary greatly by region, the average global microloan is approximately US$1,026, with an average interest rate of 30% (Atikus, 2014).

Characteristics of FMIs

Microfinance services are aimed at the poor clients, who do not have access to formal financial sources. Microfinance has its unique following characteristics: Mostly it is collateral free; MFIs go to clients rather than clients going to MFIs ; Simplified savings and loan procedures; Small size of loans and savings; Repeat loans; Loan size increases in the repeated loans or subsequent cycles; Interest rate is usually in between money lenders and formal banks; Free use of loans (no restrictions on specified purpose); Repayment considers incomes from business as well as other sources; Loan and savings products within manageable numbers.

Key Principles of MFIs

ADRA- Nepal, 2009 lists the following principles of MFIs: The poor needs a variety of financial services, not just loans; Microfinance is a powerful instrument against poverty; Microfinance means building financial systems that serve the poor; Financial sustainability is necessary to reach significant numbers of poor people; Microfinance is about building permanent local financial institutions; Microcredit is not always the answer; Interest rate ceilings can damage poor access to financial services; The government's role is as an enabler, not as a direct provider of financial services; Donor subsidies should complement, not compete with private sector capital; The lack of institutional and human capacity is key; The importance of financial and transparency.

The goals for MFIs should be:

To improve the quality of life of the poor by providing access to financial and support services; To be a viable financial institution developing sustainable communities; To mobilize resources in order to provide financial and support services to the poor, particularly women, for viable productive income generation enterprises enabling them to reduce their poverty; Learn and evaluate what helps people to move out of poverty faster; To create opportunities for self employment for the underprivileged; To train rural poor in simple skills and enable them to utilize the available resources and contribute to employment and income generation in rural areas.

3. HISTORICAL BACKGROUND OF MICROFINANCE SECTOR DEVELOPMENT IN RWANDA

The microfinance sector in Rwanda is a relatively new and a fast growing market. Despite the existence for decades of informal finance grassroots organizations such as the tontines, microfinance really started with the creation of the Union de Banques Populaires (UBPR) in 1975. Since then, the microfinance market has followed different phases in its evolution as described in the following by Kantengwa, 2009:

- 1965 : Probable date of appearance of the first ROSCA or IBIMINA;
- 1975 : Establishment of the first Banque Populaire (BP), the Banque Populaire of NKAMBA, on August 4, 1975;
- 1986 : Banques Populaires create a Union called Union of the Banques Populaires (UBPR);
- 1994 : all MFIS stopped their activities and lost their assets during the 1994 war and genocide;
- 1995: Launching of the financial sector reform. After 1995, the Government started reforms of the financial sector aiming at creating an efficient financial system. The principal objectives of these reforms include the reinforcement of the Central Bank (BNR) legal powers of coordination and supervision of the banking structure, the introduction of new financial instruments, the liberalization of interest rates and the opening of the banking structure to foreign banks. These reforms had a considerable impact on the development of the Rwanda's financial sector.
- 1996 : Reopening of the Banques Populaires;
- 1999: Promulgation of the banking law n° 08/99 dated June 18, 1999 assigning the responsibility for the MFIs' supervision to BNR;
- 2002 : Creation within the Rwanda Development Bank (BRD) of the Fund for Refinancing and Development of Microfinance (FOREDEM);
- 2002/2003: Adoption by BNR of two instructions regulating the activities of microfinance in general (Instruction n° 06/2002) and the instruction specific to COOPECS (Instruction n° 05/2003);
- 2004 : First microfinance conference evaluating the level of achievement of the objectives of year 2005, declared international year of microcredit;
- 2005: a "microfinance best practices sensitization tour" was organized around the country by the Secretary of State for Planning (in the Ministry of Finance) and the Governor of the National Bank of Rwanda explaining the risks of an illegal proliferation of Coopecs (Coopératives d'épargnes et crédits) and other MFIs. Were invited to these meetings all MFIs, local authorities at various levels; the National police force and all the other actors of the field. The main objectives of the tour were to present the orientations of the Government in the promotion of microfinance, to professionalize the microfinance sector, to explain the role of the supervisory authority based on the banking law n° 08/99 and to underline the importance of all microfinance actors' implication in the promotion of microfinance (local administrative authorities and the national police force);
- 2006: after the failure of MFI unable to honor withdrawal requests from its depositors, BNR noted that several MFIs had suspended deposits payment with the risk of the crisis extending to the entire microfinance sector. In June 2006, the Central Bank decided to close 9 major MFIs after the following diagnostic:
  - Management of these institutions was characterized by poor corporate governance
  - These MFI had important losses caused by poor internal organization and a mismanagement of their loan portfolio which caused significant difficulties in loan recovery;
  - Loss of confidence by the population in these institutions caused massive withdrawals of deposits accompanied by a complete halt of new deposits creating severe liquidity problems;
  - Some of these MFI could not meet the licensing conditions laid down by the National Bank of Rwanda. The liquidation of these MFI totalizing deposits in excess of 3 billion RWF was managed by BNR with the help of a ministerial and technical Commission. Liquidators were named by a court of law and the Government granted an amount of 1.5 billion RWF to repay 50% of the depositors' money. Commissions were also established at districts level in order to support the liquidators in their recovery efforts. End December 2008 80% of deposits has been repaid for an amount exceeding 1 billion RWF (BNR, 2009)
- 2006: Adoption by the Government, in September 2006, of the national microfinance policy and its strategy of application;
- 2007: Creation of an MFIs Association in Rwanda (AMIR) within the framework of this microfinance policy; and promulgation of the Cooperative Law n° 50/2007 dated 18/09/2007 in revision of the Cooperative Law n° 31/1988 dated 12/10/1988;
- 2008: Considering the specificity and the importance of the microfinance sector, a microfinance law was adopted by the Parliament and was gazetted in the Official Journal of the Republic of Rwanda in 2009. A new microfinance regulation has also been published during the same period.
- 2008: Transformation of the Banques Populaires and their Caisse Centrale into a commercial bank, called Banque Populaire du Rwanda SA (BPR, SA);
- The National Dialogue Meeting of December 2008 proposed an integration strategy of the rural population in the financial system: it is the strategy "To create at least a COOPEC on the level of each UMURENGE throughout the country".

In 2008, the number of licensed MFIs, "Banques Populaires du Rwanda" not included, were 97 at the end of December 2008. The majority of them have a legal status of Cooperative (83 out of 97) while 11 MFIs have a legal status of Limited company (SA) and 3 with a legal status of Limited liability company (BNR, 2009).

4. MAIN CATEGORIES OF MFIs

The new microfinance law and the new regulation recognize 4 MFIs categories based on its activity; the number of members and its annual turnover (MINECOFIN, 2013a):

✓ **Small Informal Microfinance Providers (IBIMINA)**

The category I FMIs consists of Traditional Rotating Saving Organizations which only operate on the basis of members contributions.

✓ **Small Single- Office Saving and Credit Cooperative Only**

The category II FMIs are constituted by Small SACCO that must be licensed by and report to the National Bank, but are subject to a simplified prudential framework. The level of deposit mobilization remains below a threshold set by the National Bank Regulations, currently Frw 20 Millions.

✓ **Formal savings and credit cooperatives and other microfinance institutions**

The category III FMIs are constituted by limited corporations and accept deposits from general public, or are operating as SACCO but exceed the threshold of currently FRW 20 Millions. This category must full scope of prudential and reporting requirements set by the microfinance law and the National Bank Regulations. Umwalimu SACCO is a good example of such institutions.

✓ **Credit only microfinance institutions**

The Category IV FMIs are Microfinance that do not accept deposits from the public. Category IV FMIs may be incorporated as Public or Private Limited Companies (SA or SARL). As non deposit taking-institutions, they benefit from certain exemptions and adjustments in the prudential framework. RIM s.a is an example such institutions.

✓ **Microfinance bank**

In addition, the notion of microfinance bank has been introduced with a capitalization of 1.5 billions RWF with the authorization to emit checks, payments cards and access to the refinancing window of the Central Bank. Urwego Opportunity Bank (UOB) is an example of that category of MFIs.

5. GOVERNMENT INTERVENTIONS IN MICROFINANCE SECTOR

5.1 LAWS, POLICIES AND STRATEGIES

The Government does not provide Microfinance Services, but it intervenes in Microfinance Sector through establishment of Laws, Policies and Strategies. The main official documents are: The banking law n° 08/99 dated June 18, 1999 assigning the responsibility for the MFIs' supervision to BNR; The law n° 55/2007 of

30/11/2007 governing the Central Bank of Rwanda, the law n° 40/2008 of 26/08/2008 establishing the organization of microfinance activities and its implementing Regulation n° 02/2009 of 27/05/2009; National Micro Finance Policy (MINECOFIN, 2009), the National Microfinance Policy Implementation Strategy (MINECOFIN, 2013b), and the recently validated National Savings Mobilization Strategy (MINECOFIN, 2013c).

5.2 MINISTRY OF FINANCE AND ECONOMIC PLANNING (MINECOFIN)

MINECOFIN is responsible for promoting and developing the Microfinance Sector. Its mission is to develop policies and strategies aimed at promoting savings, developing credits and mobilizing resources for MFIs. It is also responsible for coordinating the successful implementation of policies and strategies. It has a unit in charge of the promotion and the development of the sector.

5.3 NATIONAL BANK OF RWANDA (BNR)

The National Bank of Rwanda is mandated to regulate and supervise Microfinance Institutions (including Savings and Credit Cooperatives, SACCOs, and some Limited Companies that operate microfinance activities). The supervision is conducted through three main activities: Licensing of FMIs; Off- site surveillance and On- site inspection of MFIs thus licensed. BNR has a unit in charge of supervision of MFIs.

The activity of supervising Microfinance Institutions by the National Bank of Rwanda is based on the law. Before the creation of the cited laws, two instructions were implemented: BNR Instruction No 06/2002 of 09 July 2002 on the regulation of Microfinance activities, which deals with FMIs other than Savings and Credits Unions; And BNR Instruction No 05/2003 of June 26, 2003 on the regulation of Savings and Credit Unions.

5.4 RWANDA NATIONAL ASSOCIATION OF MICROFINANCE INSTITUTION IN RWANDA (AMIR)

Established in June 2007, it is legally recognized as professional association by the Ministry of labour and its statutes were published in the official gazette no 6 of 15th march 2008. AMIR is the only umbrella body for microfinance institutions in Rwanda that seeks to build a flourishing microfinance sector in Rwanda through different areas of Advocacy and Information, research and development, responsible finance, performance monitoring and capacity building. Currently, AMIR has 108 active members.

5.5 INITIATION AND PROMOTION OF SACCO SECTOR (UMURENGE SACCO)

Administratively, Rwanda is divided into 4 Provinces plus Kigali City. Each Province is divided into Districts. Each District is divided into Sectors. Each Sector is divided into Cellules, which are divided into Villages (Imidugudu).

The ultimate objective of Rwanda's long term development plan is to transform the country into a middle-income country and an economic trade, communication and financial hub by the year 2020. Towards the achievement of this goal, the Government of Rwanda has recently adopted an Economic Development and Poverty Reduction Strategy (EDPRS), with Financial Sector Development as one of its key components. Indeed Rwanda's economic development agenda can't be achieved without a financial sector that is effective, in particular that is capable to expand access to credit and financial services, and to enhance saving mobilization and to mobilize long-term capital for investment. To address the issues the National Dialogue Meeting held in December 2008 recommended the creation of at least one SACCO at the level of each Administrative Sector (Umurenge) (MINECOFIN, 2009). Today, Rwanda covers 416 Imirenge SACCO equivalents to 416 administrative sectors.

6. THE CURRENT STATE OF MICROFINANCE SECTOR

6.1 LIMITED COMPANY

BNR 2013 lists 12 Limited Companies acting in Rwanda as shown in the following table:

TABLE 1: LIMITED COMPANY IN RWANDA BY 2013

Province	Districts	Number of Limited Company
Kigali City	Nyarugenge	8
	Kicukiro	2
	Gasabo	1
	S/T	**11**
South	Muhanga	1
	TOTAL	**12**

6.2 SAVING AND CREDIT COOPERATIVES (SACCO) NAMED CREDIT UNIONS OR COOPECS)

The basic structure of the Sacco and credit unions is what differentiates them from banks; they are user-owned financial intermediaries, the dividends from these co-operatives are shared equally among members because they have got equal shares. Members typically have a "common bond" based on geographic area, community, employer, industry or other affiliation. Each member has equal voting rights regardless of their deposit amount or how many shares they own. Their principal products are savings and credit, however some offer money transfers, payment services and insurance. SACCOs sometimes join together to create second-tier associations for the purposes of building capacity, liquidity management and refinancing; these second-tier associations can play a useful role in monitoring.

The key elements of a SACCO are the credits and savings products. Unlike most micro-credit NGOs and institutions they provide a savings product which offers interest and a return on their deposits, which provides a new income stream for the individual and can either be reinvested or withdrawn for use. The following table lists all SACCOs acting in Rwanda except Imirenge SACCOs.

TABLE 2: SACCO IN RWANDA BY 2015

Province	Districts	Number of SACCO
Kigali City	Nyarugenge	2
	Kicukiro	3
	Gasabo	6
	S/T	***11***
East	Bugesera	1
	Rwamagana	2
	Kayonza	0
	Ngoma	1
	Kirehe	0
	Nyagatare	0
	Gatsibo	1
	S/T	***5***
West	Nyabihu	1
	Rubavu	8
	Ngororero	2
	Rutsiro	2
	Karongi	1
	Nyamasheke	2
	Rusizi	6
	S/T	***22***
North	Rulindo	6
	Gakenke	2
	Burera	1
	Gicumbi	3
	Musanze	1
	S/T	***13***
South	Kamonyi	1
	Muhanga	5
	Ruhango	2
	Nyanza	0
	Huye	1
	Gisagara	1
	Nyamagabe	2
	Nyaruguru	0
	S/T	***12***
	TOTAL	**63**

6.3 SACCO SECTOR (UMURENGE SACCO)

As described above, there are a number of 416 Imirenge SACCO equivalent to 416 administrative available in Rwanda as summarized by this table:

TABLE 3: IMIRENGE SACCO IN RWANDA BY 2015

Province	District	Number of Imirenge SACCO	Province	District	Number of Imirenge SACCO
Kigali City	Nyarugenge	10	North	Rulindo	17
	Gasabo	15		Gakenke	19
	Kicukiro	10		Burera	17
S/T		**35**		Gicumbi	21
East	Bugesera	15		Musanze	15
	Rwamagana	14	**S/T**		**89**
	Kayonza	12	South	Kamonyi	12
	Ngoma	14		Muhanga	12
	Kirehe	12		Ruhango	9
	Nyagatare	14		Nyanza	10
	Gatsibo	14		Huye	14
S/T		**95**		Gisagara	13
West	Nyabihu	12		Nyamagabe	17
	Rubavu	12		Nyaruguru	14
	Ngororero	13	**S/T**		**101**
	Rutsiro	13			
	Karongi	13			
	Nyamasheke	15			
	Rusizi	18			
S/T		**96**			
		TOTAL	**416**		

6.4 MICROFINANCE BANKS

In Rwanda, there are 5 Microfinance Banks: AB Bank Rwanda (ABBR), Agaseke Bank Limited (ABL), Unguka Bank Limited (UBL), Urwego Opportunity Bank (UOB) and Zigama Credit and Saving Bank (ZCSB).

7. MFIs TOWARD MILLENNIUM DEVELOPMENT GOALS (MDGs)

TABLE 4: THE CONTRIBUTION OF MFIS TO THE ACHIEVEMENT OF MDGs IN RWANDA

MDGs Goal	Contribution of MFIs to the achievements of MDGs in Rwanda
Poverty reduction	Rwanda is still very much a nation working towards recovery. In 2000, nearly two-thirds of the population was living below the national poverty line. Five years later, poverty rates remained at nearly 60 percent. However, Rwanda has experienced positive and rapid growth since then, with poverty rates having dropped to 45 percent and still decreasing. As development indicators have been improving in Rwanda, so has the expansion of access to financial services. Rwanda aims to become a middle-income country by 2020, targeting 80 percent access to finance by 2017. The total assets of the banking system in Rwanda have nearly doubled since 2007, reaching US$924 million by the end of the first quarter in 2012. SACCOs are recognized as widely accessible and have been a fundamental part of the expansion of the provision of financial services to rural areas. SACCOs translate into rural financial inclusion, increase credit needed to support rural-based micro businesses and projects, and play a key role in the support of the agricultural industry. In fact, Umurenge SACCOs triggered increased credit extension to rural based agro-businesses to RwF5.2 billion (US$8.7 mil) by November 2011 from RwF 818 million (US$1.4 mil) in 2010 (Audrey Linthorst, 2012). The ease of doing business in Rwanda is a strong step in the right direction – it ranks third across sub-Saharan Africa in the Ease of Doing Business ranking published by the World Bank, second to only Mauritius and South Africa. Likewise, Rwanda comes in first in the category of starting a Business and second in Getting Credit(World Bank Group, 2014). The most common mechanism used by microfinance institutions to offer their services to clients is group-based lending. Borrowers form groups to mutually guarantee one an other's loans. The interest charged on loans is always significantly lower than the rate charged by other credit sources for poor women, such as loan sharks and money lenders. Poor families with access to even modest increases in financial resources can better manage the health problems that occur. Money generated from a small business, for example, contributes to household income, which can improve the family's food security and support the children's education. A family with even small amounts of savings can use them to more quickly manage and recover from traumatic events, such as the death or illness of a wage earner.
Achieve universal primary education	Credit enters the household and might influence several of the factors that determine children's education, including the overall financial budget as well as the individual parent's budget, the time allocation, the individual parent's degree of participation in household decision making, and the perceptions regarding the importance of children's education. Microfinance programs generate sufficient income to sustain not only the financial services but also additional reproductive health education services offered by the same staff. In Rwanda, literacy rate for 15-24 year olds stood at 84 per cent in 2010/11 an increase from 57 per cent in 2000/6 (UNDP, 2015a). The proportion of children attending school has increased and by 2010/11 the net attendance rate at primary school was 92 per cent up from 63 per cent in 1990. There was a rapid increase in primary school attendance rates between 2000/1 and 2005/6 driven by the induction of free education but also by the development of Microfinance. Microfinance allows people affording credits and pay themselves schools not only primary and secondary but also university. The good example is Umwalimu SACCO (SACCO for Teachers) which allows teachers of primary schools affording university and they are promoted from primary to secondary schools.
Promote gender equality and empower women	Rwanda has made great strides in promoting gender equality driven by a strong commitment by the Government. Rwanda was equal second in the world on the 2009 Social Watch Gender Equity Index, with only Sweden having a higher score. Looking beyond 2015 the Government's 2020 Target is for women to make up 40 per cent of all those in decision making positions (UNDP, 2015b). In fact, improved access to health and education for women, allied with expanded opportunities for employment and access to microcredit, has expanded choice and empowered women. While gender disparities still exist, women have become increasingly powerful catalysts for development, demanding greater control over fertility and birth spacing, education for their daughters and access to services. The ability of women to control their own fertility is absolutely fundamental to women's empowerment and equality. Microfinance services empower women, enhance their roles as decision-makers within the family, and pave the way for behavior change. Microfinance has made Rwandese women strong business women.
Reduce child mortality	The infant mortality rate (IMR) stood at 85 prior to 1994, increased dramatically during and in the aftermath of the tragic events of 1994 and reached a peak of 107 in 2000. Since then it has fallen dramatically, to 85 by 2005 and 62 in 2008 and 50 in 2010. To hit the MDG Target it will have to fall to 28, which would mean accelerating the rate of decline significantly. The major cause of mortality amongst children is malaria, followed by anaemia, acute respiratory infection and diarrhoea – all of which are preventable through comprehensive and well-coordinated interventions including the distribution of mosquito nets, improved access to water and sanitation, improved cook stoves and simple health interventions such as rehydration salts (UNDP, 2015c). Families accessing microfinance have better health practices and better nutrition and are less sick than comparison families. Increased incomes lead to better and more food for the family, improved living conditions, and consumption of health services, including preventive health care.
Improve maternal health	There has been a significant decrease in the maternal mortality ratio, with Rwanda making good progress towards achieving the MDG Target of reducing the rate from 1,300 per 1000,000 live births in 1990 to 325 in 2015. The main reason for the improvement is an increasing number of women giving birth in a health-care facility attended by a qualified health care professional and the introduction of maternal death audit. Also there has been a dramatic increase in the uptake of modern contraception methods especially since 2005 when the rate was 10 per cent uptake by married women of child bearing age (UNDP, 2015d). The prospect of getting a loan can draw people to a program that offers them additional services. Certain features of group-based microfinance programs make them ideal for integration of reproductive health education: - Group-based microfinance brings poor women together on a regular basis over periods of months and years to repay loans and deposit savings. These meetings are also opportunities to provide reproductive health education. - Increased income and assets due to microfinance should enable women clients to put what they learn from reproductive health education into practice, and to increase their consumption of primary health services and contraceptives.
Combat HIV/AIDS, malaria & other diseases	The HIV/AIDS prevalence rate in Rwanda is lower than in many other sub-Saharan countries. Rwanda has seen a great achievement in mother-to-child transmission rate with a dramatic decline from an estimated 21.5 per cent rate in 2005 to 2.6 per cent in 2010 (UNDP, 2015e). MFIs play an instrumental role in bringing health services to their clients. Many MFIs have group-based delivery mechanisms where clients form groups that meet at regular intervals for loan administration. This group-based forum is an appropriate venue for health education services. Additional MFI program delivery systems include branch locations in poor areas, client relationships, and home site visits. These channels are also effectively in providing health services including an update to modern and appropriate equipment against diseases and malaria.
Ensure environmental sustainability	The main problems facing the environment in Rwanda are pressures from the growing population on the natural resources such as land, water, flora and fauna and other non-renewable resources. The livelihood and food security of a majority of the population indeed depend directly on the ecosystems and the goods and services derived from them, as does the health of the population. Key current actions: Measures to reduce the wood consumption (investment in renewable sources of energy , increasing the use of modern energy sources, especially in rural areas are encouraged); Communities are encouraged to practice Reforestation; Promote water conservation and storage measures; Promote sustainable farming practices and take anti-erosion measures (UNDP, 2015f). MFIs offer loans invested in that area and more MFIs are starting to adopt environmental objectives in addition to their financial and social goals. Five main types of strategies of intervention of MFIs to ensure environmental sustainability: (1) adopting environmental policies by starting integrating environmental concerns into the business's official mission, principles, and policies. The idea is to confirm institutional commitment and create a framework that is favorable for the implementation of environmental programs. (2) reducing the internal ecological footprint by financing projects related to environment conservation such as projects related to greening, Biogaz (3) managing portfolio environmental risks: It consists of screening and monitoring all loans according to environmental criteria. The objective here is to manage the environmental risks of clients' activities and avoid supporting harmful practices. (4) providing green microcredit; and (5) providing environmental nonfinancial services that can include environmental awareness-raising campaigns.
Develop a global partnership for development	Rwanda has set out its expectations for the management of aid in support of development goals incorporating elements of the Paris Declaration on Aid Effectiveness. The Government of Rwanda's preference is for aid to be provided as Direct Budget Support (BS) followed by Sector Budget Support (SBS). Development partners are expected to align aid with government priorities (UNDP, 2015g). Microfinance engage global partnership: In fact, on Government side, aid is necessary to build strong microfinance and to intervene in case of failure; When microfinance fails, the government intervenes to save the development of members. On the Microfinance side, the global partnership means that staff administration have to work together with outside microfinance in order to deliver quality services. Also members or beneficiaries of microfinance need visitation class and other types of collaboration with different microfinance operating in the same domain in order to improve the way of acting, developing new projects.

FINDINGS

With Wrenn (2007), the research found that Microfinance plays four key roles in development in Rwanda: It helps poor households meet basic needs and protects against risks; It is associated with improvements in household economic welfare; It helps to empower women by supporting women's economic participation and so promotes gender equity; It equips the client people with knowledge related to environmental climate change, promote gender equality, they are engaged in children and adult education and they create national and international relationship.

Credit play a role in financing the provision of basic needs, especially in the areas of low-cost housing, water supply, sanitation and health services; gains in improved income, food security, educational and nutritional status. Income-poverty reduction is a function of two factors: the rate of growth and the distribution of income (Morduch, 2002). Microfinance providers are keenly aware of the health needs. Health education is by far the most common health service offered by microfinance providers: health and well being, such as family planning, preventive services, care of childhood illnesses and management of acute health problems (Leatherman, 2011). The beneficiaries of MFI loans are best trained on Climate change, natural resource depletion, and pollution problems and how they impact on the execution of the loans (Hammill, Matthew & McCarter, 2008). In Rwanda MFIs aware, for instance, their clients to use modern technical fishing modes, using BIOGAZ, Combat soil erosion, greening. In Rwanda, MFIs contribute to children's education by providing home equipments including electricity, and capacity of affording school fees.

CONCLUSION

A billion people live on less than a dollar a day. The United Nations aspires to halve this number by 2015 led by its Millennium Development Goals. Poverty is a multidimensional problem requiring a comprehensive approach. Microfinance is now established as an important poverty alleviation tool, although most MFIs exclusively focus on income generation for poor people. This is only a partial solution. MFIs need to target other 'basic needs' of the poor, including health and education. Though this adds challenges for MFIs, particularly for financial sustainability, MFIs cannot ignore clients' health concerns. There are multiple strategies to connect health interventions to financial services. Institutions must choose options based upon their specific characteristics like size, population served, and socio-economic and political context. There are increasing examples of successful credit and health programs. Freedom from Hunger, with its Credit with Education model, has best documented this area, the health impacts provided, and the continued financial success of partner MFIs. Microfinance client economic and physical well-being is vital towards a better tomorrow. In Rwanda, MFIs contribute indubitably to the achievements of MDGs toward sustainable development. The study appreciates the efforts done and suggests an improvement for MFIs to fulfill all basic needs of poor people.

RECOMMENDATIONS

To provide a more comprehensive poverty solution, for MFIs to better achieve poverty alleviation, they need to recognize clients' non-financial needs and facilitate satisfaction of such needs. Poor people will not break out of the circle of poverty without significant health and education improvements. For MFIs sustainability and performance: Loan default and customer attrition are major problems confronting MFIs, directly impacting their operations and even survival. By addressing clients' health needs, MFIs can reduce loan defaults and increase income. In fact, illness and related expenditures are the leading cause for micro-business failures and loan default.

SUGGESTION FOR FURTHER STUDY

Taking Rwanda as a case study, the present research analyzed the impact of MFIs to sustainable development. Indicators concerned by the research were eights MDGs. The study found that low-income countries included Rwanda, need microfinance to achieve the sustainable development. The present research focused on positive key actions taken by MFIs leading to the achievement of MDGs. Despite MFIs contribute to the achievement of MDGs, there are some weaknesses and failures on which further studies would focus and then it will be possible to establish strengths and also weaknesses on MFIs in Rwanda.

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SMEs IN INDIA: ROLE AND RELEVANCE IN ECONOMIC DEVELOPMENT

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ABSTRACT

The Small and Medium enterprises play a vital role in the Indian economic structure due to its significant contribution in terms of output, exports and employment. For a developing nation like India, where the labour is abundant and capital is scarce, the small sector is a major source of employment for millions of people. Keeping in view the importance of SMEs, the Indian government has included this sector in its five-year plans. The SMEs are still hampered by the problems of finance, marketing and low quality. Taking into account the enormous potential of the small sector, the entrepreneurs and the policy-makers must act collectively to facilitate growth in this sector. Various factors affecting the growth and development of small-scale industries and the problem faced by this vital sector of Indian economy is examined in this paper. Role and relevance of SMEs in economic development is also analysed. Further the policy initiatives taken by the Government in India is also discussed.

KEYWORDS
SMEs, MSME, Industrial sector, India, economy and labour.

1. INTRODUCTION

Small and Medium Enterprises is an integral part of the Indian industrial sector. Less capital investment and high labour absorption is the distinctive feature of Small and Medium Enterprises (SMEs). It has created unprecedented importance to this sector. As per the Development Commissioner of Micro, Small and Medium Enterprises (2001), the sector has the credit of being the second highest in employment, which stands next to agricultural sector. The nature of the businesses in this sector plays an important role to alleviate poverty and propel sustainable growth and equitable distribution of income in India. The SMEs play an important role in efficiently allocating the enormous labour supply and scarce capital by implementing labour intensive production processes. SME triggers private ownership, boosts entrepreneurial skills and their flexibility in responding quickly to changing market demand and supply conditions are noteworthy. In recent years, the small-scale sector in India has emerged as a progressive and decentralised sector on its own. Small-scale industries have made a significant contribution to employment generation in the non-agricultural sector in India. The data available from the Ministry of Small-scale Industries, Government of India (Annual Report 1999:2000) indicates that there has been an excellent growth in small scale industries in India in recent years. The number of SSI units in India has increased from 2.082 million in 1991-92 to 3.121 million in 1998 -99. The value of production in these units has increased from Rs.1786.990 Billion to Rs.5275.150 Billion in 1998-99. The volume of employment in small-scale sector has increased from 12.98 million in 1990-91 to 17.158 million in 1998-99. According to the Ministry Of Micro, Small and Medium Enterprises, the number of MSME units in India has grown at a CAGR of 4.5 per cent during FY07 – FY11, and stood at 31.2 million at the end of FY11. The cumulative investments in these units rose at a CAGR of 11.5 per cent during the same period. Strong growth in total investments in MSMEs indicates towards their expanding footprint and growing importance. The MSMEs are increasingly contributing towards employment generation in India. The number of people employed by MSME has grown to 73.2 million during FY11 recording a CAGR of 5.3 per cent since FY07.

Some of the important organizations that are associated with SMEs in India are: Small Industries Development Organization (SIDO), Small Industries Development Bank of India (SIDBI),National Small Industries Corporation Ltd. (NSIC), Confederation of Indian Industry (CII), Federation of Indian Chamber of Commerce and Industry (FICCI), Laghu Udyog Bharti (LUB), Associated Chamber of Commerce and Industry of India (ASSOCHAM), National Institute of Small-Industry Extension Training (NISIET), World Association for Small and Medium Enterprises (WASME), Small Scale Industries Board (SSIB), PHD Chamber of Commerce and Industry (PHDCCI), Federation of Indian Exporters Organization (FIEO), Federation of Associations of Small Industries of India (FASII), Consortium of Women Entrepreneurs of India (CWEI), Indian Council of Small Industries (ICSI), Indian Institute of Entrepreneurship (IIE), National Institute for Entrepreneurship and Small Business Development (NIESBUD)and Small Entrepreneurs Promotion and Training Institute (SEPTI) (Ghatak, 2009).

2. SMEs – ROLE AND RELEVANCE IN ECONOMIC DEVELOPMENT

Small and medium enterprises are the backbone of industrial development. It is very important for both developed and developing country. Small and medium enterprises always represented the model of economic development, which emphasized high contribution to domestic production, significant export earnings, low investment requirements, employment generation, effective contribution to foreign exchange earning of the nation with low import-intensive operations. The contribution of small scale industries (SSIs) has been remarkable in the industrial development of the country. It has a share of 40% in the industrial production. 35% of the total manufactured exports of the country are directly accounted for by this sector. In terms of employment generated, this sector is next only to agriculture employing approximately 14 million people. Overall, the small industry sector has done quite well and has enabled the country to achieve considerable industrial growth and diversification. Small scale industries are less capital intensive and suit the Indian economic environment with scarce resources and large population base. In addition, it is highly and has a scope for labor intensive for building upon the traditional skill and knowledge. Small scale industries have remained high on the agenda of all political parties, intelligentsia and policy makers since independence as a legacy of Gandhian philosophy.

3. GROWTH AND PERFORMANCE OF SMALL SCALE INDUSTRIES IN INDIA

The level of output by the SSIs went up from Rs 28,060 crore in 1980-81 to Rs.5,78,470 crore by the end of 1999-2000, showing an increase of nearly 20 times over a period of 20 years. Exports have also gone up by nearly 40 times over a period of two decades. The contribution of SSI in exports was high during the period, especially up to the year 1995. The trend reversed during the period 1995-2000 when the growth rate recorded a declining trend.

TABLE 1: PERFORMANCE OF SSIs, YEAR 1990-91 TO 2011-12

Sr. No.	Year	Total SSI Units (Lakhs)	Fixed Investment (Rs. Crore)	Production (Rs. Crore)		Employment (Lakh Persons)	Exports (Rs. Crore)
				Current Prices	Constant Prices (1993-94)		
1	1990-91	67.87	93555	78802	84728	158.34	9664
2	1991-92	70.63	100351	80615	87355	165.99	13883
		(4.07)	(7.26)	(2.30)	(3.1)	(4.83)	(43.66)
3	1992-93	73.51	109623	84413	92246	174.84	17784
		(4.07)	(9.24)	(4.71)	(5.6)	(5.33)	(28.10)
4	1993-94	76.49	115795	98796	98796	182.64	25307
		(4.07	(5.63)	(17.04)	(7.1)	(4.46)	(42.30)
5	1994-95	79.60	123790	122154	108774	191.40	29068
		(4.07)	(6.9)	(23.64)	(10.1)	(4.79)	(14.86)
6	1995-96	82.84	125750	147712	121175	197.93	36470
		(4.07	(1.58)	(20.92)	(11.40)	(3.42)	(25.46)
7	1996-97	86.21	130560	167805	134892	205.86	39248
		(4.07)	(3.82)	(13.60)	(11.32)	(4.00)	(7.62)
8	1997-98	89.71	133242	187217	146262.9	213.16	44442
		(4.07)	(2.05)	11.57)	(8.43)	(3.55)	(13.23)
9	1998-99	93.36	135482	210454	157525.1	220.55	48979
		(4.07)	(1.68)	(12.41)	(7.7)	(3.46)	(10.21)
10	1999-00	97.15	139982	233760	170379.2	229.10	54200
		(4.07)	(3.32)	(11.07)	(8.16)	(3.88)	(10.66)
11	2000-01	101.1	146845	261297	184401.4	238.73	69797
		(4.07)	(4.90)	(11.78)	(8.23)	(4.21)	(28.78)
12	2001-02	105.21	154349	282270	195613	249.33	71244
		(4.07)	(5.11)	(8.03)	(6.06)	(4.44)	(2.07)
13	2002-03	109.49	162317	311952	210636	260.21	86013
		(4.07)	(5.16)	(10.52)	(7.68)	(4.36)	(20.73)
14	2003-04	113.95	170219	357733	228730	271.42	NA
		(4.07)	(4.87)	(14.68)	(8.59)	(4.31)	
15	2004-05	118.59	178699	418263	251511	282.57	NA
		(4.07)	(4.98)	(16.92)	(9.96)	(4.11)	

4. POLICY INITIATIVES BY GOVERNMENT IN INDIA

The importance that the government attaches to SSI sector is reflected in the fact that a new ministry to deal exclusively with small and tiny industries was constituted in 1999. The policy initiatives taken by the Government in India and given in the annual report of Ministry of Small Scale Industries, 1999-2000 in regard to SSI sector can be divided into the following categories.

A. FINANCIAL CONCESSIONS

From time to time the SSI units have been given a number of financial concessions. Some of the concessions currently available are: Excise exemptions for branded goods to units located in rural areas. General Excise exemption to industries such as those engaged in cotton yam and glazed tiles, packaged tea. Increase in MODVAT Credits to manufacturing units. The other fiscal incentives are by way of concession in credit to SSI units from banks. Important changes in recent budget include: Enhancement in the limit of composite loan from Rs. 200,000 to Rs. 500,000. Delegation of more powers to branch managers to grant ad-hoc facilities to the extent of 20% of limit sanctioned. Special training programs for branch managers, Opening of more SSI branches, Credit insurance scheme etc.

B. RESERVATION

The reservation of items of exclusive manufacture in SSI sector is statutorily provided for in Industries Regulation and Development Act. The reservation policy aims to ensure that the bulk of increased production of consumer goods is in the small-scale sector. The reservation policy also helps in expanding employment opportunities through setting up of more SSI units. 812 items are currently reserved for exclusive manufacture in SSI sector. Non-SSI units can undertake manufacture of reserved items only if they undertake 50% export obligations. There is no regulation or restrictions on marketing of reserved items by large units.

C. INFRASTRUCTURE SUPPORT

The government has launched a program of infrastructure development in regional and rural areas. Infrastructure facilities like power, water, and communications are funded by the government and SIDBI with the government providing equity and SIDBI providing the loans.

D. TRAINING

The Small Industries Development Organisation, through its network of Small Industries Service Institutes is conducting training programs such as Entrepreneurship Development Programs for various target groups for generating employment and upgrading skills in industries such as hosiery, food products, leather products, herbal cosmetics etc. These trainees are given equity assistance and loans for setting SSI units.

E. TECHNOLOGY SUPPORT

SIDBI had set up a Technology Development and Modernisation Fund for direct assistance of Small-scale Industries to encourage existing industrial units in the sector, to modernise their production facilities and adopt improved and updated technology to strengthen their export capabilities. Assistance is available for meeting capital expenditures, acquisition of technical knowhow, upgrading of process technology and total quality management hi SSI units. The other forms of technology support include: Setting up tool rooms and Product cum Process Development Centres Providing assistance to industry associations/voluntary agencies to set up testing centres. Industry Specific Institutes for training such as Central Leather Institute.

F. EXPORT PROMOTION

Export promotion from the small-scale sector had been accorded a high priority in the India's export promotion strategy because export from this sector accounts for about 40% of total exports. Export strategy for SSI sector includes simplification of export procedures, providing export incentives, trainings and awards etc.

G. CREDIT GUARANTEE SCHEME

The objective of the Credit Guarantee Scheme is to help the SSI units to access credit without the need for a collateral security from eligible financial institutions. The lower limit under the scheme is Rs.2.5 million. The Government of India and SIDBI, the apex development bank have set up a corpus fund of Rs.25 Billion. The fund, which is mown as Credit Guarantee Fund Trust for Small Industries (CGTSI) helps in the availability of collateral free credit to the SSI sector. The Member Lending Institutions sanction credit to the eligible borrowers based on the viability of the projects and seek guarantee cover from CGTSI against the payment of one time guarantee fee 2.5% of the sanctioned credit facility and thereafter, annual service fee of 1% on die outstanding credit 'CGTSI guarantees up to 75% of the credit subject to loan cap of Rs.2.5 million and guarantee cap of Rs.1.875 million per borrower. The current trend in percentage of default is around 20% (Venkatsubramanyam, 2001). The success of the guarantee scheme will get reflected only when Member Lending Institutions treat the guarantee scheme as an incentive to support the SSI units.

5. CONCLUSION

In India SMEs has achieved steady growth over the last couple of years. The role of SMEs in the industrial sector is growing rapidly and they have become a thrust area for future growth. The Indian market is growing and the Indian industry is making rapid progress in various Industries like manufacturing, food processing, textile and garments, retail, precision engineering, information technology, pharmaceuticals, agro and service sectors. Under the changing economic scenario the SMEs have both the opportunities and challenges before them. The support given by the national and the state governments to the SMEs is not adequate enough to solve their problems. However for the sector to fully utilize its potential, it is essential that the entrepreneurs along with the government support take necessary steps for further development. It is quite evident that, nurturing this sector is essential for the economic well-being of the nation. The various policy initiatives in regard to financial concessions and lending, reservations of items exclusively for manufacture in SSI sector, infrastructure and technological support given by the Government of India points to an equity and social justification. However, it should be understood that India is a very diverse country with a huge population and many social, cultural and political problems, which can have a considerable impact on the economy as well. The consequences of not providing support to SSI sector can be disastrous for India.

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EMERGING TRENDS IN GENDER BASED EMPLOYMENT STRUCTURE IN RURAL INDIA

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ABSTRACT
Provision of employment opportunities is one of the principal objectivities of economic planning. The process of economic development is generally associated with changes in the structure of employment and labour force. The structure of employment has numerous problems such as the high level of underemployment, emergence of low productivity jobs and underutilization of educated persons and gender based wage differentials in rural India.

KEYWORDS
employment structure, rural India.

INTRODUCTION
The occupational structure is a reflector of economic development of the nation. So it is necessary to throw light on question of changing the occupational structure of the economy. Economists think that it is of utmost necessary that a large part of workers in the agriculture sector should be transferred to industrial and service sector. The big army of the present day is of illiterate rural workers, most noticeably the female among them, would have much difficult job market situation to face. Though India is growing rapidly as a developed country yet the situation of unemployment is not much changed over the decades. A large segment of the country lives in the villages and the rural areas. The rural labour force suffers from limited mobility. To achieve a complete, rapid stable development and a strong position in the world economy, the most important is the planning at the human resource and its maximum utilization. Mere generation of employment is not going to deliver the goods. As the objective of five year plans, the employment to be gainful and sustainable: it should be able to yield a reasonable level of income to the workers and also generate surplus for further growth and employment generation.

REVIEW OF LITERATURE
The structure of working force in an economy has widely been analyzed by the scholars and economic theorists. This coming paragraph stat the efforts made by the researchers in this regard**. Krishamuraty (1972)** analyzed the structure of working force in 1971. He concluded that the change in the industrial distribution of working force is a major indicator of changes in the level of economic development rate for male and female while the male workforce increased slightly, the female work force declined substantially. **Madheswaran and shroff (2002)** summarized the work participation rate for females and found that female labour is showing an increasing trend. But in case of males, work participation rate according to 1991 census was 52.5 per cent in the rural areas and 48.95 per cent in the urban area.**D'Souza (2002)**concluded that the proportion of male workers in the rural primary sector has been declining over the past 25 year. By contrast the female workers in the rural sector being more dependent on the primary sector for employment. **Rao and Rao (2008)**analyzed the emerging trend in rural employment conditions in Andhra Pradesh was largely unorganized rural and non-industrial in nature. The female work participation rate in rural AP was the highest in the country during 1983 to 2000. According to **Dash et.al. (2010),** at state level, in Himachal Pradesh, Jammu and Kashmir, Rajasthan, West Bengal and Andhra Pradesh had an employment growth higher than national average during the period 1984 to 1993-94. In the subsequent period, among the major states only Punjab, Biharand Assam have not attained the growth rates higher than the national average but have also succeeded significantly in improving their performance over the previous period. From the above studies it can be concluded that the work participation of females has increased during the last decade but in comparison of male workers it remains low during the past decades. There is also a huge difference between the wage rates of male and female workers.

RESULTS AND DISCUSSIONS
Table no: 1.1 has shown the state wise work participation rates for the males and females in rural area during 2009-2010. The highest work participation rate for males has been recorded in Karnataka during the time period. But in the case of females situation is different. The highest female work participation rate is observed in Himachal Pradesh. This is because of the improvement in the level of women in the state. It has created a strong preference for white color and salaried jobs. The increasing participation of woman in the labour force not only improves their status, but the well-being of the whole family as well.

TABLE NO 1.1: LABOUR FORCE PARTICIPATION RATES FOR PERSONS OF AGE 15-59 YEARS ACCORDING TO USUAL STATES (PRINCIPAL STATES + SUBSIDIARY STATES) (JULY 2009-JUNE 2010)

(%) (Rural)

S.No	State/UT	Male	female	Persons
1	Andhra Pradesh	84.6	62.8	73.7
2	Arunachal Pradesh	75.4	44.7	61.3
3	Assam	87.2	25.6	57.5
4	Bihar	82.8	10.6	47.8
5	Chhattisgarh	79.8	57.6	68.9
6	Delhi	87.8	5.4	50.5
7	Goa	71.6	19.9	48.0
8	Gujarat	89.9	47.7	69.6
9	Haryana	79.8	38.1	60.2
10	Himachal Pradesh	82.6	68.5	75.3
11	Jammu & Kashmir	79.7	42.9	61.8
12	Jharkhand	84.1	26.4	56.6
13	Karnataka	89.7	52.7	70.9
14	Kerala	83.6	36.7	58.3
15	Madhya Pradesh	87.2	44.5	66.8
16	Maharashtra	83.6	56.0	70.0
17	Manipur	79.6	32.7	56.4
18	Meghalaya	83.8	56.4	70.8
19	Mizoram	90.4	59.7	75.4
20	Nagaland	74.5	48.8	61.7
21	Odisha	89.2	37.2	62.4
22	Punjab	82.5	34.9	58.5
23	Rajasthan	82.1	56.6	69.5
24	Sikkim	82.2	47.5	66.3
25	Tamil Nadu	85.9	56.0	70.2
26	Tripura	88.8	33.6	61.1
27	Uttarakhand	65.6	58.7	62.2
28	Uttar Pradesh	84.2	28.2	56.4
29	West Bengal	88.3	22.3	56.6
	UTs			
30	A & N Islands	89.7	35.8	63.8
31	Chandigarh	79.3	24.2	53.1
32	Dadra and Nagar Haveli	95.4	7.4	52.2
33	Daman and Diu	77.4	26.7	55.8
34	Lakshadweep	84.4	47.6	66.9
35	Pondicherry	85.4	50.3	67.9
	All India	84.4	39.8	62.9

Source: GOI, NSSO, Key Indicator of Employment & Unemployment Situation in India, 66th Round, July 2009-June2010.

Mizoram, Andhra Pradesh, Tamil Nadu and Chhattisgarh had shown the significant growth rates for female in rural areas. In rural areas, female workers are mostly engaged in agricultural activities or in outside economic activity. A large number of females are participating in the family farming or other householdbusiness. From the table it can be seen that the growth rate for male is highly positive in the states like Andhra Pradesh (89.9%), Mizoram (90.4 %), Dadra s Nagar Havelli (95.4 %) and Gujarat (89.9 %). A large number of workers are engaged in rural areas due to lack of efficiency, proper education and professionalism. On the other hand, programme of encouraging the growth of household and cottage industries under the rural industrialization programme is also contributed to the rural labour force. There has been also an increase in the proportion of workers engaged in trade, hostel and restaurant, transport storage and communications. The overall trend of male and female working population is increasing during time period. But in comparison to male workers the proportion of female's workers is increased during the past decades due to educational level. Woman workers (skilled and unskilled) constitute a significant and increasing trend. The overall picture that emerges is clear; the majority of the employed males and females are casual workers.

CONCLUSION

This paper revealed that the proportion of the male and female workers in the labour market has shown the significant growth rates. But education is facilitating women, s participating in labour market. The changes in the employment during the last decade have been so dramatic that the work place in the country is no longer a man, s preserve. Entry of women in larger proportion in to the labour force has been, to a great extent, the result of change in the macroeconomic policies during the Eighties, the Nineties and largely part of Twentieth century. But the condition of male workers in rural areas is not much changed. They always wished to get a regular and well-paid job. However, there has been an increasing trend in both of male and female workers with some exceptions.

SUGGESTIONS

1. Creation of public facilities for ensuring ten years of schooling for all the children must therefore, is a prior objective of educated system.
2. Unemployment among the educated is mainly due to over emphasis on theoretical aspects of various subjects. The education system is cut off from ground realties of the Indian economy. The education system requires some changes which would help a person to get job easily in the labour market.
3. New innovative skill development programms for the working poor will need to be developed.

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