Role of NGO in Rural Development

Prof. D. S. Jadhav
Assistant Professor,
Dr. SET'S Arts and Commerce College, Ugar-Khurd.

Abstract:

In India, the scope of development is not narrow but very wide, as it includes not just the economic development but the growth on social front, quality of life, empowerment, women and child development, education and awareness of its citizens. To achieve this, a holistic vision and collaborative efforts involving various departments, agencies and even NGOs is required. NGOs or Non-Governmental Organizations have more benefits of working in rural areas as compared to governmental organizations because NGOs are more flexible, NGOs are specific to a particular locality and moreover these are committed towards serving the public and community as a whole.

Introduction:

NGOs are difficult to define, and the term 'NGO' is rarely used consistently. As a result, there are many different classifications in use. The most common focus is on 'orientation' and 'level of operation'. An NGO's orientation refers to the type of activities it takes on. These activities might include human rights, environmental, or development work. An NGO's level of operation indicates the scale at which an organization works, such as local, regional, national or international.

The term "non-governmental organization" was first coined in 1945, when the United Nations (UN) was created. The UN, itself an inter-governmental organization, made it possible for certain approved specialized international non-state agencies—i.e., non-governmental organizations—to be awarded observer status at its assemblies and some of its meetings. Later the term became used more widely. Today, according to the UN, any kind of private organization that is independent from government control can be termed an "NGO", provided it is not-for-profit, non-criminal and not simply an opposition political party.

\NGOs and Rural Development in India:

In India, the scope of development is not narrow but very wide, as it includes not just the economic development but the growth on social front, quality of life, empowerment, women and child development, education and awareness of its citizens. The task of development is so huge and complicated that just implementing government plans is not sufficient to fix the problem. To achieve this, a holistic vision and collaborative efforts involving various departments, agencies and even NGOs is required. Owing to such a great need, the number of NGOs in India is increasing rapidly and, at present, there are about 25,000 to 30,000 active NGOs in India.

Superficially, rural development seems to be a simple task but, in reality, it is not. Post-Independence era has seen many rural development programmes through different five-year plans. Alleviating poverty, employment generation, more opportunities for generating income, and infrastructure facilities are emphasized through the policies and programmes of the government. Along with this, the panchayat raj institutions have also been initiated by the government to strengthen the democracy at grass roots level. But in spite of all the efforts rural poverty, unemployment rate, low production still exists. The fight is still on for the basic facilities such as livelihood security, sanitation problem, education, medical facilities, roads, etc. Still there is a huge gap in terms of infrastructure that is available in urban and rural

ISBN No. : 978-81-906732-6-6

areas. The basic rural development should include all these apart from employment, proper water supply and other basic facilities.

NGOs or Non-Governmental Organizations have more benefits of working in rural areas as compared to governmental organizations because NGOs are more flexible, NGOs are specific to a particular locality and moreover these are committed towards serving the public and community as a whole. As the task of development is massive, many NGOs are playing vital role in the rural development of India in collaboration with the government.

NGOs in India:

Since ancient times, social service has been an integral part of Indian culture. Soon after Independence, a number of NGOs had emerged in India. Mahatma Gandhi even pleaded to dissolve the Indian National Congress and transform it to a Lok Seva Sangh (Public Service Organization). Though his plea was rejected, but the followers of Mahatma Gandhi started many voluntary agencies to work on various social as well as economic issues of the country. This was the first phase of NGOs in India.

The second phase of NGO development started in 1960 when it was felt that just the government programs were not sufficient to complete the task of development in rural areas. Many groups were formed whose role was to work at grass root levels. Moreover, favorable state policies had drastically affected the formation of NGOs and their roles at that time. Over the years, the role of NGOs in rural development of India increased. At present too, their role significantly changes with the change in the policies of the government through different plans.

In the sixth five-year plan (1980-1985), a new role for NGOs in the rural development had been identified by the government. In the seventh five-year plan (1985-1990), the Indian government envisaged an active role of NGOs in developing self-reliant communities. These groups were supposed to show how the village resources along with human resource, skill, local knowledge that is greatly underutilized could be used for their own development. As NGOs were working in close connection with local people so bringing such a change was not a tough task for them.

Owing to this, in the eighth five-year plan, more importance to NGOs for rural development in India had been given. Under this scheme, a nation-wide NGO network had been created. The role of these agencies was the rural development at a low cost.

In the ninth five-year plan, it has been proposed that NGOs would play a significant role in the development on the public-private partnership model. More scope has been provided to NGOs by the government for rural development through the agricultural development policies as well as their implementation mechanisms.

As with every five-year plan, the role of NGOs in the rural development of India is growing, so NGOs are now attracting professionals from different fields. NGOs act as planners and implementers of developmental plans. They help in mobilizing the local resources to be used for development. NGOs help in building a self-reliant and sustainable society. These agencies play the role of mediator between people and government. NGOs are actually the facilitator of development, education and professionalization.

Hurdles in the way to rural development:

A major problem that NGOs are facing in India is their dependency upon government funds or external donations. With this dependency, NGOs are less flexible in carrying out their task as most of the tasks depend upon funds. Moreover, the structures of NGOs have become bureaucratic in nature leading to a decreased effectiveness in the overall development.

Then the traditional thinking of rural people, their poor understanding, and low level of education for comprehending new technology and efforts, lack of awareness are people related hurdles that NGOs are facing. Villages also lack infrastructure facilities like water, electricity, educational institutes, communication facilities that leads to their slow development.

Apart from these, there are certain problems like economics such as high cost technology, underprivileged rural industries, social and cultural differences, conflicts between different groups, administrative problems like political interference, lack of motivation and interest act as hurdles on the

ISBN No. : 978-81-906732-6-6

way to rural development in India. But in spite of all the hurdles, NGOs will keep on working for rural development in India. NGOs selectively utilized the local talent, train the individuals and use this for rural development. But the complete success of the rural development actually depends upon the willingness and active participation of rural people in the development processes and efforts.

Impediments in the way to Rural Development:

In operational context the major issues facing by the NGOs are the lack of qualified individuals who would like to work in the rural areas. Another major problem that NGOs are facing in India is their dependency upon government funds or external donations. With this dependency, NGOs are less flexible in carrying out their task as most of the tasks depend upon funds. Moreover, the structures of NGOs have become bureaucratic in nature leading to a decreased effectiveness in the overall development. Then the traditional thinking of rural people, their poor understanding because of high rate of illiteracy for comprehending new technology and efforts, lack of awareness among people related hurdles that NGOs are facing. Villages also lack infrastructure facilities like water, electricity, educational institutes, communication facilities that leads to their slow development.

Major role seen for NGO's in rural development:

As economic reform and liberalization saw the Government vacating several areas to let private sector entrepreneurship flourish and contribute to the high growth rate of the economy in recent years, a similar paradigm shift is needed to transform NGOs from their dependence on aid and grants from within and outside for transforming the rural scenario in the country.

This is sought to be achieved for the NGOs through engaging them in micro-finance, micro insurance, and micro-entrepreneurship activities for the overall development of the rural areas and to promote the welfare of the people of rural India,

Better credibility:

As NGOs get finance generated through their own activities. Their credibility vastly improves and their service to rural people gets reinforced. CNRI is an apex body with over 2,000 member-NGOs engaged in multifarious activities ranging from self-help group formation, income generation, marketing, and agency work for insurance companies for life and non-life products and for banks and financial institutions to environment protection, watershed management, handicrafts, textiles, traditional medicinal plants and HR development. It is completing one year of its existence. To mark the celebration of one year of its service to NGOs, CNRI is hosting a three-day national meet - `Advantage Rural India' - from April 17.

Special Sessions:

The meet will feature sessions on NGO/SHG products, finance and marketing, rural connectivity, energy needs and new technologies, employment opportunities for rural youth, role of NGOs in the field of rural education, experience sharing with the performing NGOs in the field of organic farming, value-added agriculture, food processing, animal husbandry, environment, forests and natural resource management. The Union Minister for Rural Development, Dr. Raghuvansh Prasad Singh, will inaugurate the meet; the Union Home Minister, Mr. Shirvraj Patil, will address the participants. An assessment of the Role of NGO's in Rural Development:

The NGOs have taking active participation in rural development. The rural poor and socially depressed classes are mainly depending upon the operations of NGOs. No particular job is particularly meant for the NGOs. Thus, there is a huge competition among the NGOs to extend the services for the benefit of the poor. At the same time we should not forget the mushrooming of the NGOs for their welfare. The following are the important activities should take up for the development of the poor.

1. Agricultural related programs:

Numerous activities can be undertaken under agriculture sector. The jobs/projects like distributing planting materials, cattle, poultry, minor irrigation, free medical care for cattle's, safe drinking water for animals etc.

ISBN No. : 978-81-906732-6-6

2. Health programmes for human and non-human beings:

The works like pit drainage, housing, creation of smokeless environment, good drinking water for animals and human beings, regular health checkup camps etc. will improve the health conditions of the human and non-human beings.

3. Community development programs:

The community development programs like adoption of villages for development, moral support during flood and famine period, supply of food and drinking water during flood, common well, training programs for the rural youths, housing projects, repair and renovation of houses etc will satisfy the basic necessities. The important program like training programs for the rural poor will hold the youths from rural exodus. Even this type of training programs may also be extended for the rural women, so that we can expect self-sustenance among this community.

4. Human Resource Development programs:

The personality development programs, skill development programs, educational programs, integrated development projects etc will enable the rural poor to earn bread and butter.

5. Trade and industrial promotion:

The important problem in the present context is availability of the market for the products of rural enterprises. Therefore, an NGO has a direct link with the government for marketing of the goods. Apart from this, NGO can also go for training the rural youths in fabrication works, wood works, beedi rolling, agarbathi manufacturing, printing press etc.

6. Government support:

The government (central, state or local) support at all level is inevitable for rural development. NGOs alone cannot do miracles overnight. Therefore, the government should watch and ward the working of NGOs at phase wise manner. Thus, the fund or whatever may be directly should move to beneficiaries. The NGOs should accountable for the funds.

Role and Effectiveness of NGOs in Rural Development work:

Major rural development programmes of the NGOs were agricultural programmes, health programmes, human resource development programmes, community development and industrial and trade programmes. Majority of the beneficiaries, non- beneficiaries, workers of NGOs and workers of other development agencies considered rural development works of the NGOs as effective for rural development. Studies reveal that the NGOs can play a vital role in the development. The role of state in the planning process, political parties, participation, active participation of grassroots organizations, role of donor agencies etc. are important for ensuring people participation and socio-economic development of the people. Poverty eradication, HRD, health care, environmental protection, protection of human rights, empowerment of women, child and weaker sections, ushering in silent revolution etc. are some of the importance goals of NGOs.

This study was based on NGOs functions including villager's socio–economic changes, health and sanitary condition, economic security, education and status of self-employment, increase in irrigated area, animal resources and Cropping Intensity, increase in yield of the crops under Demonstration and changes in crop management practices, the operational constraints in the functioning of NGOs and perception of the beneficiaries. However, this study also point out that expecting radical's social change through voluntary effort is also a kind of day-dreaming and add that the socio-economic structure and states positives attitudes towards NGOs also contribute for its growing role in the development process.

Conclusion:

In this way the NGO's can bring the awareness among the poor rural people. It is now the need of the society as well as the nation to make these rural area and people competent to be aware about their fundamental rights. NGO's are the only organizations that could make the rural area developed.

******

ISBN No. : 978-81-906732-6-6

Rural Entrepreneurship in India: Opportunities and Challenges Ahead

Prof. Pritam P. Kothari
HOD (Department of Management Studies)
Bharati Vidyapeeth University, Pune
Abhijit Kadam Institute of Management and Social Sciences, Solapur

Dr. Avinash A. Dhavan
Placement Head
Bharati Vidyapeeth University, Pune
Abhijit Kadam Institute of Management and Social Sciences, Solapur

Abstract:

The majority of the population in India lives in villages. The village is the back bone of the country. Village or rural industries play an important role in the national economy, particularly in the rural development. Rural entrepreneurship is not only important as a means of generating employment opportunities in the rural areas with low capital cost and raising the real income of the people, but also its contribution to the development of agriculture and urban industries. Rural entrepreneurship can be considered one of the solutions to reduce poverty, migration, economic disparity, unemployment and develop rural areas and backward regions.Rural entrepreneurship is one of the newest areas of research in the entrepreneurship field. This paper is concerned with the distinctive challenges and opportunities of developing entrepreneurship in rural locations, and also provides the necessary suggestions that can be used in this context. This paper defines rural entrepreneurship, integrates the current rural entrepreneurship discusses the constraints of potential rural entrepreneurs and development inputs and pitfalls in managing a rural enterprise and other related issues.

"India lives in its villages" - Mahatma Gandhi.

Introduction:

Concept of Entrepreneurship:

Defining entrepreneurship is not an easy task. To some, entrepreneurship means primarily innovation, to others it means risk-taking? To others a market stabilizing force and to others still it means starting, owning and managing a small business. An entrepreneur is a person who either creates new combinations of production factors such as new methods of production, new products, new markets, finds new sources of supply and new organizational forms or as a person who is willing to take risks or a person who by exploiting market opportunities, eliminates disequilibrium between aggregate supply and aggregate demand or as one who owns and operates a business

Concept of Rural Entrepreneurship:

Rural Entrepreneurship is that entrepreneur ship which ensures value addition to rural resources in rural areas engaging largely rural human resources.

"Rural Entrepreneurship can be defined as entrepreneurship emerging at village level which can take place in a variety of fields of Endeavour such as business, industry, agriculture and acts as a potent factor for economic development".

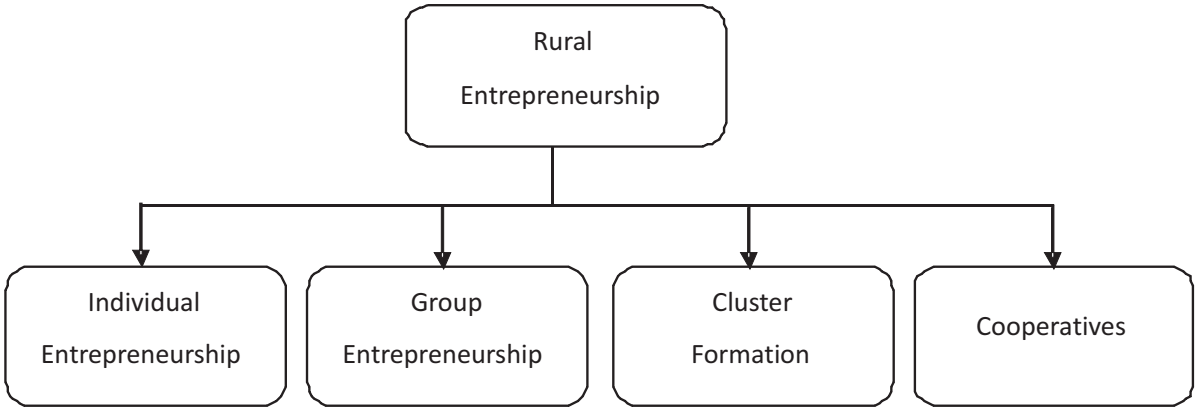
The majority of the population in India lives in villages. The economic development of our country largely depends on the progress of rural areas and the standard of living of rural masses. Village or rural industries play an important role in the national economy, particularly in the rural development. Rural entrepreneurship is based on stimulating local entrepreneurial talent and the subsequent growth of indigenous enterprises. It recognizes opportunity in the rural areas and accelerates a unique blend of resources either inside or outside of agriculture. Rural entrepreneurship brings an economic value to the rural sector by creating new methods of production, new markets, and new products and generate employment opportunities thereby ensuring continuous rural development. Rural entrepreneur is one of the most important inputs in the economic development of a country and of regions within the country. Rural entrepreneurs are those who carry out entrepreneurial activities by establishing Industrial

ISBN No. : 978-81-906732-6-6

and business units in the rural sector of the economy. Establishing industrial and business units in the rural areas refers to rural entrepreneurship. Rural entrepreneurship can be considered one of the solutions to reduce poverty, migration, economic disparity, unemployment and develop rural areas and backward regions.

transformation and change.

According to Joseph Schumpeter, the rate of economic progress of a nation depends upon its rate of innovation which is turn depends on rate of increase in the entrepreneurial talent in the population.



Forms of Rural Entrepreneurship:

Rural entrepreneurial activity can be broadly classified in four types such as:

i) Individual Entrepreneurship: It is basically called proprietary i.e. single ownership of the enterprise.

ii) Group Entrepreneurship: It mainly covers partnership, private limited company and public limited company.

iii) Cluster Formation: It covers NGOs, SHGs and even networking of these groups. These also cover formal and non-formal association of a group of individuals on the basis of caste, occupation, income, etc

iv) Cooperatives: It is an autonomous association of persons united voluntarily for a common objective

Roles of Rural Entrepreneurs in Economic Development:

The entrepreneurs with their ability to scan, analyze and identify opportunities in the environment transform them into business proposition through creation of economic entities. They by channelizing the resources from less productive to move productive use crate wealth. Through efficient and effective utilization of national resources, they act as catalysts for economic development and agents of social

According to Meir and Baldwin, development does not occur spontaneously as a natural consequence when economic conditions in some sense are right. A catalyst is needed which results in entrepreneurial activity to a considerable extent. The diversity of activities that characterizes rich countries can be attributed to the supply of entrepreneurs. They play a vital role for the economic development of a country in the following ways.

Formation of Capital:

Entrepreneurs by placing profitable business proposition attract investment to ensure private participation in the industrialization process. The otherwise idle savings are channelized for investment in business ventures which in turn provides return. Again the savings are invested giving a multiplier effect to the process of capital formation.

Balanced Regional Development:

The entrepreneurs always look for opportunities in the environment. They capitalize on the opportunities of governmental concessions, subsidies and facilities to set up their enterprises in

ISBN No. : 978-81-906732-6-6

undeveloped areas.The setting up of still plant at Tata nagar, Reliance Petrochemicals at Jamnagar (Gujarat) have resulted in the development of Good Township and peripheral regional development. Thus entrepreneurs reduce the imbalances and disparities in development among regions.

General Employment:

This is the real charm of being an entrepreneur. They are not the job seekers but job creators and job providers. With the globalization process the government jobs are shrinking leaving many unemployed. In the circumstances, the entrepreneurs and their enterprises are the only hope and source of direct and indirect employment generation. Employment is generated directly by the requirement of the large enterprises and indirectly by ancilliariation and consequential development activities.

Improvement in Standard of Living:

Entrepreneurial initiative through employment generation leads to increase in income and purchasing power which is spent on consumption expenditure. Increased demand for goods and services boost up industrial activity. Large scale production will result in economies of scale and low cost of production. Modern concept of marketing involves creating a demand and then filling it. New innovative and varying quality products at most competitive prices making common man's life smoother, easier and comfortable are the contribution of entrepreneurial initiative.

Increase in per Capita Income:

Entrepreneurs convert the latent and idle resources like land, labour and capital into goods and services resulting in increase in the national income and wealth of a nation. The increase in national income is the indication of increase in net national product and per capita income of the country.

National Self-reliance:

Entrepreneurs are the corner stores of national self-reliance. They help to manufacture indigenous substitutes to imported products which reduce the dependence on foreign countries. There is also a possibility of exporting goods and services to earn foreign exchange for the country. Hence, the import substitution and export promotion ensure economic independence and the country becomes self-reliance.

Planned Production:

Entrepreneurs are considered as economic agents since they unite all means of production. All the factors of production i.e., land, labour, Capital and enterprise are brought together to get the desired production. This will help to make use all the factors of production with proper judgment, perseverance and knowledge of the world of business. The least combination of factors is possible avoiding unnecessary wastages of resources

Equitable Distribution Economic Power:

The modern world is dominated by economic power. Economic power is the natural outcome of industrial and business activity. Industrial development may lead to concentration of economic power in few hands which results in the growth of monopolies. The increasing number of entrepreneurs helps in dispersal of economic power into the hands of many efficient managers of new enterprises. Hence setting up of a large number of enterprises helps in weakening the evil effects of monopolies. Thus, the entrepreneurs are key to the creation of new enterprises that energies the economy and rejuvenate the established enterprises that make up the economic structure.

Importance of rural entrepreneurship :

The development of rural entrepreneurs is a complex problem which can be tackled by the social, political and economic institutions. The sooner they are established the better it would be for the entrepreneurial development in the rural sector and the economic growth of the country.

Provide employment opportunities:

Rural entrepreneurship is labor intensive and provide a clear solution to the growing problem of unemployment. Development of industrial units in rural areas through rural entrepreneurship has high potential for employment generation and income creation.

ISBN No. : 978-81-906732-6-6

Check on migration of rural population:

Rural entrepreneurship can fill the big gap and disparities in income rural and urban people. Rural entrepreneurship will bring in or develop infrastructural facilities like power, roads, bridges etc. It can help to check the migration of people from rural to urban areas in search of jobs.

> Balanced regional growth:

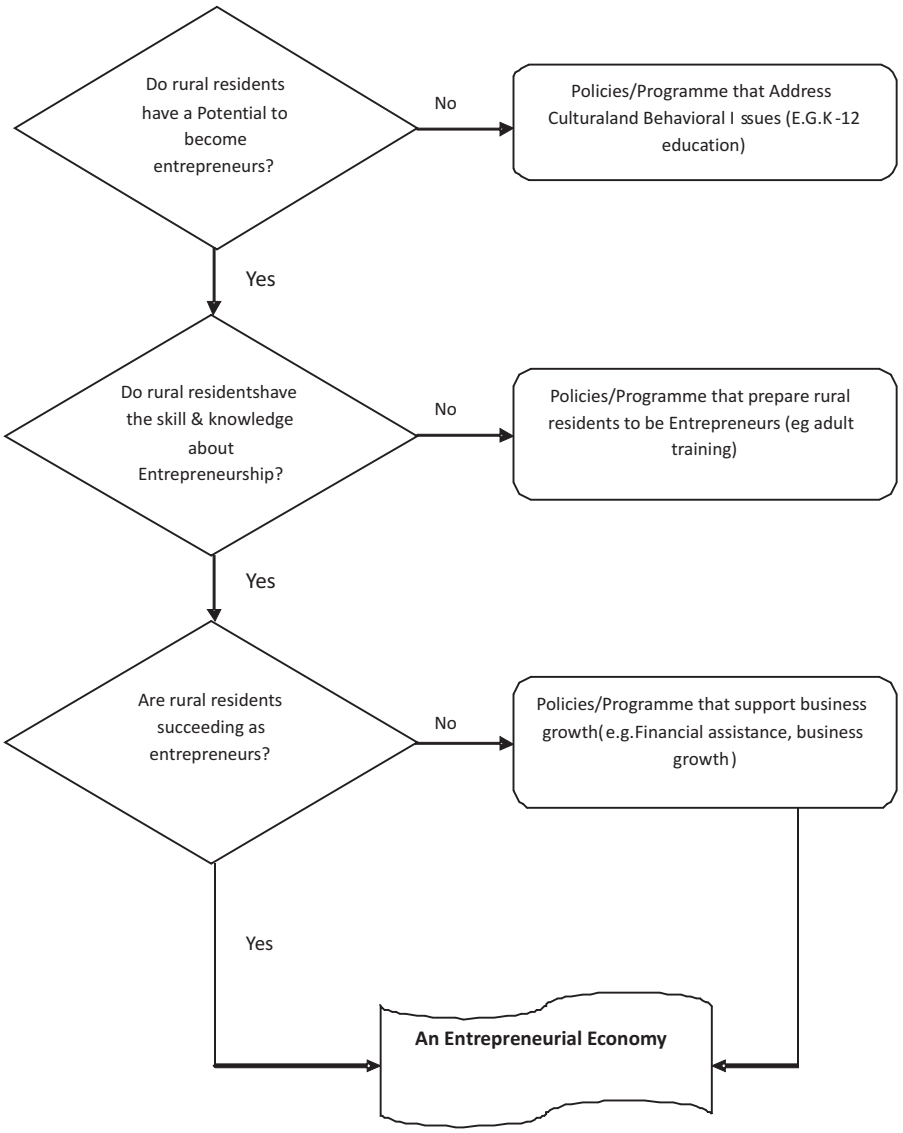
Rural entrepreneurship can dispel the concentration of industrial units in urban areas and promote regional development in a balanced way.

Promotion of artistic activities:

The age-old rich heritage of rural India is preserved by protecting and promoting art and handicrafts through rural entrepreneurship.

Framework for Encouraging Rural Entrepreneurship:

Jay Kayne with Kauffman Foundation provides a general framework for encouraging rural entrepreneurship. The framework provides the critical questions necessary to evaluate the entrepreneurial opportunity in a rural place. The framework suggested by Jay Kayne (2000) is represented below:



ISBN No. : 978-81-906732-6-6

Check on social evils:

The growth of rural entrepreneurship can reduce the social evils like poverty, growth of slums, pollution in cities etc.

Awaken the rural youth:

Rural entrepreneurship can awaken the rural youth and expose them to various avenues to adopt entrepreneurship and promote it as a career.

Improved standard of living:

Rural entrepreneurship will also increase the literacy rate of rural population. Their education and self-employment will prosper the community, thus increasing their standard of living.

Challenges Faced in Growth of Rural Entrepreneu -rship in India?

Most of the rural entrepreneurs face peculiar problems like illiteracy, fear of risk, lack of training and experience, limited purchasing power and competition from urban entrepreneurs. Some of the major problems faced by rural entrepreneurs are as under.

Paucity of funds:

Most of the rural entrepreneurs fail to get external funds due to absence of tangible security and credit in the market. The procedure to avail the loan facility is too time-consuming that its delay often disappoints the rural entrepreneurs.

> Absence of enterprising skill:

Most of the rural people in India lack risk bearing ability. Reluctant to involve oneself in business, inclination towards wage employment, and lack of creative thinking are few reasons which have restricted the growth of self-employment in rural area.

Competition:

Rural entrepreneurs face severe completion from large sized organizations and urban entrepreneurs. They incur high cost of production due to high input cost.

Middlemen:

Middlemen exploit rural entrepreneurs. The rural entrepreneurs are heavily dependent on middlemen for marketing of their products who pocket large amount of profit.

Legal formalities:

Rural entrepreneurs find it extremely difficult in complying with various legal formalities in obtaining licenses due to illiteracy and ignorance.

Procurement of raw materials:

Procurement of raw materials is really a tough task for rural entrepreneur. They may end up with poor quality raw materials, may also face the problem of storage and warehousing.

Risk element:

Rural entrepreneurs have less risk bearing capacity due to lack of financial resources and external support.

Lack of technical knowledge:

Rural entrepreneurs suffer a severe problem of lack of technical knowledge. Lack of training facilities and extension services crate a hurdle for the development of rural entrepreneurship. The educated and trained youths mostly leave for urban destinations in search of jobs

Lack of infrastructural facilities:

Rural areas are characterized by poor infrastructural facilities viz, roads, water, market, electricity, street lighting, road transport, storage and communication etc. which hamper the smooth movement of various industrial activities.

Poor quality of products:

Nowadays, the consumers are more sensitive to the quality of the products .Another important problem is growth of rural entrepreneurship is the inferior quality of products produced due to lack of availability of standard tools and equipment and poor quality of raw materials.

Negative attitude:

The environment in the family, society and support system is not conducive to encourage rural people to take up entrepreneurship as a career. It may be due to lack of awareness and knowledge of entrepreneurial opportunities.

ISBN No. : 978-81-906732-6-6

Adverse social, cultural and industrial environment:

Social evils, caste systems, fatalism, religious superstitions, particularly in the country side, do not allow development of adventurous spirit. Lack of skill and expertise in labourers, their tendency to migrate to cities and consumer's habit to buy goods produced by big companies create many problems for new entrepreneurs.

Non availability of skilled labours:

In rural areas, skilled labours cannot be found easily by the entrepreneurs. Highly skilled personnel prefer to work in big cities due to high salary than rural areas.

Lack of market information due to poo communication facility:

The absence of effective communication and access to the right information makes it difficult for rural entrepreneurs to understand market trends and policies followed by the government on industrialization.

Measures To Be Taken To Solve These Problems:

Different organization like NABARD are trying to sort these problems. Marketing problems are related with distribution channels, pricing, product promotion etc. In order to make the rural entrepreneurs to stat the business venture, the following measures may be adopted:

Creation of finance cells:

The financial institutions and banks which provide finances to entrepreneurs must create special cells for providing easy finance to rural entrepreneurs.

Concessional rates if interest:

The rural entrepreneurs should be provided finance at concessional rates of interest and on easy repayment basils. The cumbersome formalities should be avoided in sanctioning the loans to rural entrepreneurs.

Proper supply of raw materials:

Rural entrepreneurs should be ensured of proper supply of scarce raw materials on priority basis. A subsidy may also be offered to make the products manufactured by rural entrepreneurs cost competitive and reasonable.

Offering training facilities:

Training is essential for the development of entrepreneur ships. It enables the rural entrepreneurs to undertake the venture successfully as it imparts required skills to run the enterprise. Presently the economically weaker entrepreneurs of the society are offered such training facility under Prime Minister's Rozgar Yojna. (PMRY) Programmed FICCI, (NGOs) Lions Clubs, Rotary Clubs and voluntary organizations can also arrange such training programmers for rural entrepreneurs to provide them stimulation counseling and assistance .For rural entrepreneurs, individual based EDI' approach is highly relevant where the motivation and familiarization processes coupled with promise of bank credit and support by way of escort services could persuade rural youth with certain basic skills of- hands on technology to start small enterprises.

Setting up marketing co-operatives:

Proper encouragement and assistance should be provided to rural entrepreneurs for setting up marketing co-operatives. These co-operatives shall help in getting the inputs at reasonable rate and they are helpful in selling their products at remuneration prices. Hence, middlemen can be avoided and rural entrepreneurs derive the benefits of enterprise. Common production-cum-marketing centers should be set up with modern infrastructural facilities. Thus, proper education, comprehensive training, setting up of separate financial institutions, development of marketing co-operatives to a large extent help to flourish the rural entrepreneurs in India. Further, both government and non-government agencies should play an important role.

Awareness Programme:

Government agencies and NGO's working in rural area should conduct awareness programme like corner meetings, seminars, Role plays. Etc. to aware rural population regarding their rights , various scheme available in government agencies, financial assistance.

ISBN No. : 978-81-906732-6-6

Conclusion:

In India, about 75% of the households live in villages. Rural entrepreneur is a key figure in economic progress of India. In recent times, more and more entrepreneurs are realizing the potential of rural market and have started focusing on it. Therefore, promotion of rural entrepreneurship is extremely important in the context of producing gainful employment and reducing the widening disparities between the rural and urban population. Rural entrepreneurship is necessary to minimize poverty and to overcome low productivity in the farm sector. Rural entrepreneurship is the way of converting developing country into developed nation. Therefore, there should be more stress on integrated rural development programs. The problem is that most of the rural youth do not think of entrepreneurship as the career option. Therefore, the rural youth need to be motivated to take up entrepreneurship as a career, with training and sustaining support systems providing all necessary assistance. There should be efficient regulated market and government should also lend its helping hand in this context. Grading and standardization should be promoted and promotional activities should be enhanced. NGO's should be provided full support by government.

References:

1. Dr. Deepa Kaushal; Irfan Allie; Sajad Ahmed Mir, Opportunities and Challenges faced by Rural Entrepreneurs in India, International Journal of social sciences & Interdisciplinary Research, ISSN 2277-3630, IJSSIR, Vol.3 (3), March (2014).
2. Dr. Kalpana P. Nandanwar, Role of Rural Enterpreunership in Rural Development, International Referred Research Journal, March, 2011, ISSN-0974-2832, RNI-RAJBIL 2009/29954, Vol.II, Issue-26, (March 2011).
3. A K gill, B K Shahu, R N Patel, Rural Entrepreneurs in India: Challenges and problems, International Journal of Multidisciplinary Research and Development, 2014; 1(7): 104-109.
4. Sudipta Ghosh, Enterprenurship: An overview of the Issues and Challenges in the Context of Rural Development in India, Volume-I, No-2, Business Spectrum, ISSN-2249-4804, (July-Dec 2011).
5. Monica Sharma, Vandana Chaudhary, Rajni Bala, and Ranchan Chauhan, Rural Enterpreunership in Developing Countries: Challenges, Problems and Performance Appraisal, Global Journal of Management and Business Studies, ISSN 2248-9878, Vol.3, Number 9, (2013).
6. Kaushalakshi, Dr. A Raghuama, Rural Entrepreneurship: A Catalyst for Rural Development, International Journal of science and Research, ISSN (online): 2319-7064, Impact Factor (2012): 3.358. Volume.3 Issue8, (August 2014).
7. Brijesh Patel, Kitit Chavda, Rural Entrepreneurs in India: Challenges and problems, International Journal of Advance Research in Computer Science and Management Studies, Volume 1, Issue 2, ISSN: 2321-7782, (July 2013).
8. Sandeep Saxena, Problems Faced by Rural Entrepreneurs and Remedies to Solve It, IOSR Journal of Business and Management, ISSN: 2278-487X, Volume 3, Issue 1 (July- Aug.2012).
9. Baumol, William (1990), Entrepreneurship: Productive, Unproductive and Destructive, Journal of Political Economy 98: 893-921.
10. Brock, W.A. and Evans, D.S. (1989), Small Business Economics, Small Business Economics1 (1): 7-20.

******

Role of Media in Rural Development

Ravindra Bajpai
Senior Journalist, Editor,
Daily MP Hindi Express, Jabalpur (Madhya Pradesh)

Abstract:

The role of media is not limited to distribute or market the news and consumerism. In order to enhance their TRP, various channels of electronic media are highlighting five star life style in their serials. This has ignored rural life very badly. It is very strange that the planning and thinking for rural India is made in airconditioned chambers, which are away from rural environment.

During school days, we read the poem of eminent poet Shri Sohanlal Dwivedi, the first line of which says: "Where is our India. It is situated in out Villages."

During those days, the meaning of above line was not understood in real terms, but with the passage of time, we could realize that despite various achievements, 'India' cannot be imagined after ignoring the villages. Since ancient times, if India has been considered agriculture based country, the main reason for this has been that crores of people, who worked very hard to earn their both end meals lived in the villages. During 21stcentury, India has become the fastest growing economy, but ignoring rural sector will prove to be suicidal. Though, Govt. of India has allocated huge budget for the rural development, however in absence of proper execution of schemes, the expected results could not be achieved. Still, there are huge number of villages, where Electricity, Water, Education, Road, Health etc. could not be reached.

It is worth noting that, 'Rural Development' has always been an important agenda of political parties. Despite this, villages could not be facilitated at par with the towns. The main reason been the 'Media' has not given due thrust towards this aspect. Though, villages have not been totally ignored by media, however media has not done the justice with rural India, in the resolution of grievances or to fight for rural development.

My intention is not limited to only print or electronic media, but also with other mode of expressions like Film, Literature etc. Market forces dominate on news media. As such, the consumerism is given prominence by media. Further, since the country's majority of middle class and upper class lives in in the urban area, news media focuses this consumer class. The same is the situation with literature and film media.

In older daysthe script writers, film makers, novelist used to focus their plot around the village and villagers. Films like Mother India and Do Beegha Jameenare the living examples of centering the story around the villages. After Munshi Premchand, the number of writers focused the rural arena and exhibited their creativity. However, blind urbanization pushed the rural India into the background.

The role of media is not limited to distribute or market the news and consumerism. In order to enhance their TRP, various channels of electronic media are highlighting five star life style in their serials. This has ignored rural life very badly. It is very strange that the planning and thinking for rural India is made in airconditioned chambers, which are away from rural environment. In the ages of information revolution role of media has gained manifold prominence. Then the question arises that how the economists think to strengthen the economy of country without giving due concern for the majority of the people residing in rural India. Why the media do not attach priority and also not focus towards the village developments?

Indian culture believes in soul and immorality. It will not be out of place to mention that villages

ISBN No. : 978-81-906732-6-6

are the soul of India, and India cannot be imagined without the villages. In other words, villages are like backbone of social and economic structure of India. As without backbone, the strength in the body cannot be thought, likewise imagining India to be world power without rural development is like living in fool's paradise.

Consideringall this, the role of media in rural development is a very serious subjects. This important pillar of democracy is capable to bring the changes in positive directions. It is important that while communication channels have expanded their reach to remote villages& the TV, Mobile, Internet has reached to every nook and corner of the country, where mode of road or rail transport is still not available.

This may open the new doors of rural development. It hasbeen experienced that the policy of the government may not be able to achieve the desired goals of rural developments, until media do not focuses on this aspect seriously. Now, media is not only a channel of communication of news and views, but also may be instrumental in motivating and creating public awareness and movement. Many important public movement, political changes could be possible due to activerole played by media.In the given situation, in case print media and other channel of communication give the due emphasis for rural development, then Govt. machinery will be compelled to give due focus on rural development, irrespective of political ideology.

It is unfortunate that presently media is controlled by the people, who are either not well versed with the ground realities or suffering from inferiority complex, even while talking about the villages. I strongly believe that in place of highlighting the glamorous and TRP based issues, in case media focuses on the real requirements of India, then it will not only do a justice with its expected role, but will also prove it's worth in the country's development.

Rural development is not only important due to economic reasons, but also due to social and cultural reasons. In absence of rural development, the urbanizations is growing, resulting in inorganic growth of urban population. This imbalance has generated many problems. The increasing urbanization has also spread the cultural pollution, whereas rural India is still connected with the roots of the country, which only lies in real India.

'Unity in Diversity' has been a distinctive feature of India. 'Rural Development' is a most important element in nurturing 'Unity in Diversity' and to protect the culture of India. Media need to come out of the trade aspect and should bear in mind the social responsibility seriously.

Considering development of cities as the overall growth of the country has been a great mistake. One should not be hesitant to accept that the media has also contributed in this mistake to a great extent. Today, when the agenda of country's development is being considered utmost important and the efforts are being made to match the pace with the world, then it is very relevant that media should inspire Govt. and society both to be responsible and serious for the rural development. The idea of rural development given by Mahatma Gandhi before the independence, is still relevant and useful in the current context.

Since media is associated with main stream of the country, hence it cannot limit itself to distribution of news and entertainment of people. Media need to understand more than anyone that though the body of the 'Bharat' may be seen in towns, however her soul still lies in villages.

******

Rural Women in India: The Invisible Lifeline of Rural Community

S. M. JOSHI
Principal,
Dr. SET'S Arts and Commerce College, Ugar-Khurd

Abstract:

This paper deals with the general condition of the rural Indian women and the impact of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) on the overall empowerment of the rural women. MGNREGS is for the rural people, including rural women, who are unskilled or semi-skilled. Several provisions, like availability of drinking water, shade, first-aid, crèche at the working site have made this scheme unique. Crèches are helping the rural mothers as they do not have to depend on others at home to take care of the children. Usually, the elder daughter takes on the responsibility of the younger siblings at home when the mother is away for work. This facility has relieved the elder daughters from this duty and they can attend school. This flagship programme of the Government of India has been criticized from several quarters. However, some positive intentions of the ground-level officials and the awareness of the beneficiaries can really bring in a revolution in the lives of Indian rural women.

Introduction:

India is a country which attained independence in 1947, but the rural-urban divide and the rich-poor divide are still plaguing India. 68.84 per cent of the Indian population lives in villages. There are 6, 40,867 villages in India. According to 2011 census, the populations of rural women who are literate are 58.8 per cent. (Census, 2011) According to the "2007 Revision of World Urbanisation Prospects" by the United Nations, India would continue to have the largest rural population in the world until 2050. (Hindustan Times, 28.2.2008) There are several issues which are creating difficulties in the lives of Indians, like rising crimes against women, increasing poverty, corruption, nepotism, lack of transparency in the official functioning, bureaucratic hassles, criminalization of politics, criminal-politician-bureaucratic entente etc. However, the common Indian citizen is striving to get two ends meet.

Life of Indian Women:

India is a country of contradictions. On the one hand, women are worshipped as deities, without whose blessings, work cannot be initiated. On the other hand, crimes against women and girls are increasing day by day in India. It is sad that in many cases, the perpetrators are known to the victims. The perpetrators could be among relatives, neighbors, friends etc. This increasing mistrust can create havoc in the Indian societal pattern. The patriarchal norms are so entrenched in the Indian society that it is very difficult to pull oneself out of this conundrum. When girls are born in most Indian families, they are not welcome, at times, even by their mothers. They lament that a son could have been a real asset for the family. Upbringing of girls is an expensive affair, where there is only loss as the girl gets married off and will serve the grooms' family throughout her life. In India, the life of a woman changes a lot after marriage. She leaves her parents' house after marriage and starts living with the groom's family. Since childhood, she is socialized into thinking that she has to take up the food habits, dress, rituals etc of the new family. So, happily or grudgingly, she evolves her identity according to the demands of the groom's family and the groom.

A hefty sum of money is spent on her dowry. At times, the demand from the groom's family continues even after marriage. When the bride's family fails to satisfy their demands, the bride is tortured. Domestic violence is high in Indian homes. There is dowry deaths' occurring every now and then. It has been pointed out that it is always the bride who is dying and not the women in the

ISBN No. : 978-81-906732-6-6

groom's side when they are working in the kitchen. Many young brides die in the kitchen due to stove-burst, where the groom's sides mask it as an accident. Dowry-deaths of Indian girls had gone up so much that Section 498A was brought in which makes the groom and his family responsible for unnatural death of the bride within 7 years of marriage. It also has other provisions to protect Indian women after marriage. However, like all other laws, this law has also been misused by a miniscule of the population in order to take revenge on the groom. Some innocent grooms had to face wrong detainment. However, the misuse cannot be a standard to judge the efficacy of the law. If that is the standard utilized, then none of the laws can be implemented. Violation of the law cannot prevent the law from protecting the real victims of society. Right to equal inheritance to women of Hindu, Sikh, Buddhist and Jain religions, who form the majority in the country have been provided by the Indian State. But, still today, there are very few women who demand the property as they feel that it sour their relation with their brothers. In many cases, brothers are forcing them to relinquish their property right. Women lack the support system needed to contest in the courts. Rural women in India are less literate than rural men. There is a negative attitude of the family towards educating the girl child. Moreover, lack of separate toilets for girls in schools, lack of security while travelling from home to school, lack of female teachers in schools, elder sister's responsibility to look after the younger siblings when both the parents have to work to meet both ends, are some of the reasons behind the high drop-out rate of girls from schools. Primary education is free, but parents are not interested to send them to school. Right to Education has been passed by the Parliament, but it is still far when the right will be a reality. Mid day meal scheme has been formulated in order to attract the small children to school. However, this scheme received set- backs when many school children died after consuming food from the school kitchen.

Majority of rural Indian women do not have the right to choose their partner. It is always decided by the family elders and the marriage is arranged with an endogamous group, where caste plays a very important role. If the girl wishes to marry someone from other caste or tribe, the traditional leaders of the villages oppose. In states like Haryana, there are Khap Panchayats, or traditional village elders who provide punishments to both the adult girls and boys of the same village and caste, who falls in love and marries. According to the Khap leaders, marrying someone within the village or caste is equal to marrying a sibling. They act as kangaroo courts and punish them even by awarding deaths. In many cases, the brutality of such crimes is not even opposed by the parents. Such is the power of these Khap Panchayats that the elected Members from these constituencies do not oppose them for fear of losing the vote bank in the area.

Majority of rural women suffer not only from economic poverty but also from 'information poverty'. Rural women are vital and productive workers in India's national economy. There is statistical bias in under estimating the role of rural women in development. Women work for longer hours than men and contribute substantially to family income, they are not perceived as productive workers. (Pankajam and Lalitha, 2005) They are silent workers who are struggling to complete her household duties from dawn to dusk. But, still, in the family, many a times, she is criticized for not being sincere in her job. If the family members had to pay for the whole household work and the free labour she provides in the small agricultural land of the rural families, then her real worth could have been realized. She does this day-in and day-out with compromising the family interest, but in very few families, she gets the respect which she should get.

Equal pay for equal work is one of the cornerstones of the gender equality movement the world over. But Labour Bureau data show there has been little progress in terms of parity of salaries for men and women for equivalent work in India. Even more alarming is the fact that even though wage disparities have always existed in rural parts of the country, in some spheres of activity, the divide has widened. So while men were paid 70 per cent higher wages than women for ploughing work at the end of 2004-05, the difference rose to 80.4 per cent in end-March 2012 and stood at 93.6 per cent at the start of 2013-14. While men were paid 75 per cent more than women for well-digging work in March 2005, the difference stood at 80 per cent in the current financial year. The data indicate that daily wage disparities have by and large remained

ISBN No. : 978-81-906732-6-6

constant since 1999, though they did rise in the early 2000s. As of 2013, the discrimination in wages paid to women tends to be higher in physically intensive activities (such as ploughing and well-digging), but lower in the case of work such as sowing and harvesting. Outside the agricultural sphere, it appears that gender stereotypes won out once again, if one considers unskilled non-agricultural work. (Jayaram, 2003)

In rural India, very few women have ownership over land or productive assets. This proves to be a road block in institutional credit. Majority of the agricultural labourers are women. They mainly assigned manual labour. Men perform operations involving machinery. (Kurukshetra, 2003) Agriculture which is the mainstay of the rural Indian economy is sustained for the most part by the female workforce. They are the invisible life line of the agrarian rural community life. Rural women from childhood days have to bear the burden of taking care of younger siblings, cooking, engaging in domestic chores, looking after the fodder of the domestic animals in their parents' house. They are married off at a very early age. Indian women are condemned to a life of serfdom, anonymity, facelessness. At the root is the 'gender insensitive' society. (Singh, 2004) According to UNICEF, child marriage is a violation of child rights. Child brides are often forced to drop out of schools, are subject to the risks of early pregnancy and are more likely to be exposed to violence and isolation. Approximately, twenty-three million girls in India face this reality. Among them, majority of them are from the rural areas. (UNICEF, 2012) National Sample Survey Organization (NSSO) a Government of India organization has stated that in 2009-10 and 2011-12, women's employment has taken an alarming dip in rural areas in the past two years. In jobs that are done for 'the major part of the year', a staggering 9.1 million jobs were lost by rural women. This is a reflection of the fact that women are no longer getting longer term and better paying jobs, and so are forced to take up short term transient work. (Varma, 2013) In this gloomy scenario, Mahatma Gandhi National Rural Employment Act is providing a positive light to rural women. Several studies have shown that with the introduction of this Act, many rural women are coming out of their house for the first time to engage in paid employment. As it is a government scheme, socio-cultural stigma of patriarchy regarding working in the public space, that has been present earlier, is slowly ebbing. Moreover, the financial independence with the work is bringing in sea change in the mentality of rural women. They are for the first time, engaging in decision making regarding spending the money. With financial empowerment, comes in social empowerment as many of them are also joining self-help groups, to further their abilities. The flagship scheme has been discussed in detail.

Mahatma Gandhi National Rural Employment Guarantee Act-a Wage Employment Scheme:

NREGA is the most significant act in the history of Indian polity in many ways like grass-root level participation of every citizen and beneficiary through democratic process, multi-layered social audit and transparency mechanism by involvement of civil society, comprehensive planning at village level towards sustainable and equitable development etc. Important salient feature of the Act is to improve the quality of life of rural households who are vulnerable to out-migration in search of daily wage employment by channelizing the wage workforce towards developmental activities at the village level itself. (IAMR, 2009) It is a powerful instrument for ensuring inclusive growth in rural India through its impact on social protection, livelihood security and democratic empowerment. The Act was notified in 200 districts in the first phase with effect from February 2nd 2006 and then extended to an additional 130 districts in the financial year 2007-2008 (113 districts were notified with effect from April 1st 2007 and 17 districts in Uttar Pradesh (UP) were notified with effect from May 15th 2007). The remaining districts have been notified under MGNREGA with effect from April 1, 2008. In October 2009 the name of the scheme was changed to MGNREGA. (www.nrega.in) MGNREGA covers the entire country with the exception of districts that have a hundred percent urban population. The MGNREGA has given rise to the largest employment programme in human history and is unlike any other wage employment programme in its scale, architecture and thrust. Its

ISBN No. : 978-81-906732-6-6

bottom-up, people-centered, demand-driven, self-selecting, rights-based design is distinct and unprecedented. It provides a legal guarantee for wage employment. It is a demand-driven programme where provision of work is triggered by the demand for work by wage-seekers. There are legal provisions for allowances and compensation both in cases of failure to provide work on demand and delays in payment of wages for work undertaken. The MGNREGA overcomes problems of targeting through its self-targeting mechanism of beneficiary selection, that is, a large percentage of poorest of the poor and marginalized seek employment under the Scheme. The Act incentivizes States to provide employment, as 100 per cent of the unskilled labour cost and 75% of the material cost of the programme is borne by the Centre.

Goals of MGNREGS are social protection for the most vulnerable people living in rural India, livelihood security for the poor through creation of durable assets, improved water security, soil conservation and higher land productivity, drought-proofing and flood management in rural India empowerment of the socially disadvantaged, especially women, scheduled castes and schedules tribes, through the processes of a rights-based legislation, strengthening decentralized, participatory planning through convergence of various anti-poverty and livelihoods initiatives , deepening democracy at the grass-roots by strengthening Panchayati Raj Institutions and effecting greater transparency and accountability in governance

A Paradigm Shift:

The Mahatma Gandhi National Rural Employment Guarantee Act has given rise to the largest employment programme in human history and is unlike any other in its scale, architecture and thrust. Its bottom-up, people-centered, demand-driven, self-selecting, rights-based design is new and unprecedented. It provides a legal guarantee of wage employment, which is a demand-driven programme where provision of work is triggered by the demand for work by wage-seekers. There are legal provisions for allowances and compensation both in cases of failure to provide work on demand and delays in payment of work undertaken. Self-targeting mechanism of beneficiary selection overcomes the problems of targeting. There is also a concomitant disincentive for failing to provide work on time, as the States then bear the cost of the unemployment allowance. Gram Panchayats implement at least 50 per cent of the works. This Wage seekers are the primary stakeholders of the Programme. Their exercise of rights and demand for work are the main triggers for the successful implementation of the programme. The rights of the wage seekers are very clearly mentioned. They are application for registration, obtaining a Job Card, application for work and to obtain a dated receipt for the application made, choice of time and duration of the work applied for getting work within fifteen days of application or from the date when work is sought in the case of an advance application, whichever is later. Facilities of crèche, drinking water, first aid, shade should be available in the work site, so that the wage workers have the basic facilities, in order to function effectively. Presence of crèche is a boost for mothers to work. They also have the right to get ten per cent extra wage in case of employment provided beyond 5 km of radius. They have the right to check their Muster Rolls. Wages are to be disbursed on weekly basis or in any case not later than a fortnight after the date on which such work was done. This is the first time that the Government of India is providing the right to get unemployment allowance; in case employment is not provided within fifteen days of submitting the application or from the date when work is sought in the case of an advance application, whichever is later. The unemployment allowance should not be less than one-fourth of the wage rate for the first thirty days and not less than one-half of the wage rates for the remaining period of the financial year. Medical treatment in case of injury in the course of employment including cost of hospitalization if required and ex gratia payment in case of disability or death in the course of employment has also been included.

The other stake-holders of the scheme are the Gram Sabha (GS), three-tier Panchayati Raj Institutions (PRIs), especially the Gram Panchayat (GP); programme officer at the block level; District Programme Coordinator (DPC); State Government; Ministry of Rural Development; civil society and other stakeholders like line

ISBN No. : 978-81-906732-6-6

departments, convergence departments, Self-Help Groups (SHGs), etc. It is very necessary that all the levels realize the importance of the purview of the scheme and are honest in providing the facilities to the beneficiaries, which they are supposed to get.

MGNREGA has been a large and ambitious social security and public works programme in the world. The Prime Minister has pointed out that nearly 5.50 crore families or nearly one in four rural households were provided over 250 crore person-days of work under this flagship

Some Recommendations for Empowering The Rural Community:

The MGNREGS projects should be planned as to utilize the period of off-season for agricultural labourers. Such a planning will provide off-season employment to labourers. The MGNREGS projects should be made time-bound. Many workers think that it is a means to earn easy money as it is a government scheme and the functionaries aim is to spend money. It is thought to be a dole. This mentality needs to be amended for making the scheme effective. Whenever, attempts are made to ensure proper measurement of the work done, there is resentment among the workers. (Thadathil and Mohandas, 2012)

It is absolutely essential for the success of the NREGA that the local community be involved in the planning and implementation of the works. The local community must make it a part of the village long term development plan. The number of Gram Sabha meetings is very few. Again a dismal record is indicative of problems within the community. There is a heavy presence of the administrative bureaucracy in planning and implementation of the works.

Under the current implementation regime, maintenance is not covered. While assets are created in large number, the Panchayats are being told to maintain it. The problem is that Panchayats do not have the money to undertake such large-scale maintenance works. Our studies pointed out that due to this most of the assets are going to be put into disuse. Another very important point is that there should be a binding work completion plan for each asset created. MGNREGS can be made effective, if the community assert their rights. The rural women can play an active role in this. This is possible only through an effective means of awareness and mobilization process. The level of awareness is very low among some wage seekers, particularly regarding unemployment allowance, wages to be paid if work is provided beyond five kilometers, social audit and grievance redressal mechanisms etc. Appropriate media and agency for awareness generation should be identified and utilized.

Traditional and modern media should be utilized for awareness building among the workers. The awareness building methods should be carved so that it is well understood by the wage workers. Most of them are illiterate or have studied up to primary schools only. So, the awareness messages should be in the form of short films, animation slides, posters, etc.

It is difficult as most of the participants stated that the government officials cannot reach the large mass of the rural people given their workload, logistic problems and attitude. So, the non-governmental organizations can be roped in to perform this function in a cost effective way.

The planning has to be done, keeping in view the terrain, rainfall, social conditions, local presences etc. Some of the facilities include core banking operations, weekly and monthly reconciliation of accounts, adoption of two cycle approach in Muster Roll operation, Mobile Monitoring System (MMS) for capturing attendance at worksite and location of the worksite, wage payments through mobile vans etc. Incentives to staff to motivate the staff can make the scheme successful. Plugging corruption is a sure way of making the scheme really effective. (Rao, Kanth, Dheeraja, 2012)

Several research studies on MGNREGA have stated that this has opened doors for supplementary source of income and this income is being used by rural households for starting their own ventures. Rural community, including the rural women are benefitting from this scheme. It has brought in a significant increase in monthly per capita consumption expenditure of rural households. There is high participation from marginalized groups including the Schedule Castes and Schedule Tribes. In the case of both the groups, the participation rate exceeds their share in the total population. It has reduced the traditional gender

ISBN No. : 978-81-906732-6-6

wage discrimination, particularly, in the public works sector and has had a positive impact on the socio-economic status of the women. This is a real contribution as both men and women are having equal right to work and payment. The scheme has made a more direct and positive impact on reducing distress migration as compared to migration taken-up for economic growth and other reasons. Distress migration from the rural areas creates a lot of social problems, which are being warded off by MGNREGS. (www. nird.org.in) Rural women have indigenous knowledge, which can be properly utilized by the State. Conservation of bio diversity and food security can be entrenched in the rural community if rural women's indigenous knowledge can be learnt.

Women in rural areas from families living below the poverty line were a target group of the scheme. In India, the 73rd Amendment in 1992 has brought in reservation in Panchayats. 30 percent of the seats are reserved for rural women. In MGNREGS also, it has been stated that there should be minimum 30 per cent of the women beneficiaries. In many states, they have gone beyond the minimum number. In some villages, the whole government scheme is being carried out by the women in the village as all the male members are engaged in other work. This belief in themselves that they can run their families and the village, has created a boost in their self-esteem. The challenges may come in, but rural women are ready for it. The rise in the confidence level has helped them to go ahead in many fields.

A newspaper produced entirely by women in rural India is among the four winners of this year's Literacy Prizes awarded by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Khabar Lahariya, the fortnightly newspaper distributed to more than 20,000 readers in Uttar Pradesh, is entirely created and marketed by newly literate "low caste" women who are training as journalists in Chitrakoot and Banda districts.The King Sejong Literacy Prize was given to this fortnightly paper. (Deccan Herald, 6.9.13)

Conclusion:

To make the scheme successful in empowering rural women, it is very necessary that they should participate in large numbers in the Gram Sabha (open rural assembly) and voice their preferences and concerns regarding the implementation of government schemes, including, MGNREGS. The opportunity of right to livelihood should be properly made use of. Indian Constitution had not given the right to work as a justiciable right. But, it was in 2005 that the Indian Parliament passed the law on Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) to provide the right to work to Indian citizens of rural areas. Rural Indian women are stepping out of their private space and making a contribution in building infrastructure in the village, other than empowering themselves. The Government of India has provided an opportunity to rural women to live with dignity and honor and equal footing with the rural man. Earlier, the contribution of the rural women was invisible to the people with patriarchal mindsets. MGNREGS is trying to empower the invisible lifeline of rural community. For making their lives successful and meaningful, Indian rural women have also to put in 100 percent initiative. Otherwise, the scheme may fail as any other government project, with all its loopholes. If implemented successfully, it can become a role model for all developing countries.

****

ISBN No. : 978-81-906732-6-6

Role of Financial Options in Rural Infrastructure Development

Dr. S. N. Venkatesh
Principal,
Seshadripuram First Grade College, Yelahanka, Bangalore

Shashidhar Yadav J
Lecturer, Department of Commerce and Management, Seshadripuram First Grade College, Yelahanka, Bangalore

Abstract:

In this paper we have discussed about research shows that understand the prevailing financing Options for rural infrastructure and attempt to identify viable alternatives towards bridging the gap. This is driven by the fact that the positive impact of these services on agriculture-based economic activity in rural areas is significant, the user group for them is large and the investment required is lumpy. Initially we have discussed various rural infra financing in India and conclusion.

Keywords: *Financing options, Rural Infrastructure, Lumpy.*

Introduction:

Infrastructure has the potential of transforming rural India. As several studies show, rural infrastructure can improve livelihoods, health and productivity and reduce poverty. Public spending on productivity-enhancing infrastructure, such as roads, electricity, irrigation, agricultural research and development (R&D) and education contributes to reducing poverty through improved agricultural productivity, higher wages and non-farm employment (see for instance Datt and Ravallion 1996; Fan et al. 2000; Fan et al. 2007). By lowering transportation costs and increasing farmers' access to markets, roads lead to agricultural expansion, and by lowering the transaction costs of credit services, result in increased lending to farmers, higher demands for agricultural inputs and higher crop yields (Binswanger et al. 1993).

Electrification increases non-farm income and allows students longer study hours. Tele-communication improves rural access to financial, health and extension services. Most fundamentally, improved sanitation and drinking water facilities promote health and well-being and, over the longer term, improve productivity (Jalan and Ravallion 2003; Kumar and Vollmer 2011).

The role of rural infrastructure is also critical as India's rural economy transitions from an agriculture-led to a non-farm economy. Indeed, government spending on infrastructure has a more significant and lasting impact on poverty Government spending on infrastructure has a more significant and lasting impact on poverty reduction than government outlay on fuel, food and other subsidies. Infrastructure 117 reduction than government outlay on fuel, food and other subsidies. Almost all rural infrastructure sectors are under the ambit of state governments, but getting reliable and standardized information on their expenditures or outcomes is very difficult. Over the years, the central government has also contributed to developing rural infrastructure. In the first few decades after Independence, driven by food security concerns and the push for the green revolution, the central government focused primarily on large irrigation projects and, from the mid-1960s onwards, on electrification for tube well irrigation. From the mid-1970s, the central government also supported rural road construction, mainly under various employment-generation programmes.

Since 2000, however, and particularly since 2005, the central government has broadened its rural infrastructure thrust to encompass the range of basic infrastructure that addresses the needs of individual households. The relative emphasis has thus increased over time towards essential infrastructure like water and sanitation, housing and household electrification. With this expanded focus, government spending on rural infrastructure quadrupled between 2000–01 and 2010–11. Since 2005, with the launch of Bharat Nirman, the central government's flagship rural infrastructure programme that includes roads, electricity,

ISBN No. : 978-81-906732-6-6

drinking water supply, telecom, irrigation and housing, investment in rural infrastructure has shot up. The Eleventh Five Year Plan (2007–12), which had a major focus on infrastructure, had projected rural infrastructure investment at Rs 4.35 lakh crore (in 2006–07 prices), equivalent to 30 per cent of total infrastructure investment. It is estimated that 90 per cent of the rural infrastructure investment has been realized, with over 40 per cent from the. To supplement these budgetary allocations, debt financing has been obtained from several sources, such as National Bank for Agriculture and Rural Development (NABARD), Rural Infrastructure Development Fund (RIDF), National Cooperative Development Corporation (NCDC), Housing and Urban Development Corporation (HUDCO), Small Industries Development Bank of India (SIDBI), public sector banks and multilateral development banks. Over the years, the approaches to delivering rural infrastructure services have changed:

* Rural infrastructure is now viewed as a composite whole with significant multiplier effects.
* Even though government spending on irrigation and roads continues to be the highest, the urgency of addressing basic household infrastructure needs is better acknowledged.
* The need for a more concerted effort to address the needs of the most socially disadvantaged groups is also explicitly acknowledged. Tribal communities, particularly those in remote areas, have been disadvantaged in getting infrastructure access. The new Integrated Action Plan (IAP) launched in 2010 aims to accelerate development of Naxal influenced districts, predominantly inhabited by tribals.
* Government programmes are shifting focus towards sustainability and greening rural development, with an emphasis on watershed programmes, biodiversity conservation, solid and liquid waste disposal, and use of eco-friendly construction material.
* Responsibility for implementation, beneficiary selection and monitoring of rural infrastructure projects is being decentralized in accordance with the 73rd Constitutional Amendment and vested with the panchayats.
* State governments are being given greater flexibility in centrally sponsored schemes (CSS) to use central government funds in accordance with local needs. Based on the recommendations of the B. K. Chaturvedi Committee report, a new framework is being introduced for more flexibility, including setting up a Rural Development Flexi fund. In June 2013, the Cabinet approved CSS to have state-specific guidelines and reserve 10 per cent of the scheme outlays as flexi-funds. States can use the Flexi fund to supplement central government schemes or initiate their own innovative projects for rural development.

Objectives:

1. To examine the extent of infrastructure development in rural India
2. To study the extent of progress made in finance in rural India towards Infrastructural Development.
3. To look into the conclusion for rural infrastructure finance in India.

Financial services in rural areas:

Since the early 1980s, innovations in the delivery of financial services have enabled millions of people formerly excluded from the financial sector to gain access to these services on an ongoing basis. While there are overlaps in the financial sector among micro, rural and agricultural finance, it is important to understand how they differ and the various challenges they face:

Small industries Development Bank Of India (sidbi):

SIDBI has schemes designated for developing Industrial Infrastructure for Small Scale Industries (SSI) and Integrated Infrastructure. The former caters to small industrial parks, common facilities, warehousing and market facilities of up to Rs 10 crore and the latter caters to cluster development by creating or upgrading infrastructure facilities including water, power, telecom, industrial effluent plants, and others of up to Rs 5 crore in rural and backward areas. These schemes had provisions of grant funding from the Central and State governments and lending by SIDBI, but do not seem to have made a dent in infrastructure financing in India. SIDBI could have played a role complementary to NABARD–RIDF in the interests of creating an enabling environment for rural non-

ISBN No. : 978-81-906732-6-6

farm sector enterprises but has mainly confined its work to urban clusters.

Housing And Urban Development Corporation (hudco):

HUDCO is a national financing agency with a dedicated focus on housing for economically challenged sections of society. The non-housing portfolio of HUDCO includes sanitation and water supply, sewerage, drainage, solid waste management, roads, and bridges. While the infrastructure financing is increasing as a proportion of HUDCO's portfolio, the concentration is entirely urban. While HUDCO has lentover Rs 260,000 crore for infrastructure projects in urban areas, it currently provides finance only for shelters in rural areas. The expertise and resources of an apex institution can be better utilized by enhancing its scope to include rural infrastructure as well.

National Cooperative Development Corporation (ncdc):

NCDC was established in 1963 under the Ministry of Agriculture. It extends term loans to cooperatives for creation of infrastructural facilities like godowns, cold storages, equipment financing, transport vehicles, boats, and other tangible assets and also for establishment /modernization/expansion/rehabilitation/diversific ation of agro-processing industries. The scope of the NCDC's activities has been extended by an amendment to its Act, to include assistance for certain notified services in rural areas like water conservation, irrigation and micro irrigation, agri-insurance, agro-credit, rural sanitation, animal health, and so on.

Construction of Cold Storages and Ice Plants:

The NCDC provided assistance to build 313 cold storages (including capacity expansion) with a total capacity of 0.9 million tones as on March 2004. Of these, 285 cold storages, with a total capacity of 8.46 lakh tons, have been completed. The Corporation has, so far, provided about Rs 139.58 crore for establishment of cold storages. The assisted cold storages are mainly for storage of potatoes, though items like fruits, tamarind, spices, and milk products are also being stored.

Packing and Grading Sheds and Godowns:

The NCDC provided assistance to cooperatives at the primary level as well as at the mandi level and for the establishment of fruit and vegetable processing units. As on March 2004, 48 cooperative fruit and vegetable processing units were sanctioned out of which 39 have been installed. The NCDC has sanctioned Rs 41.3 crore for establishing such units.

Marketing Infrastructure including Retailing:

The NCDC provided a total investment of Rs 37.29 crore to assist 1431 cooperatives towards infrastructure and business development. The projects have helped in creating necessary infrastructure in the rural areas. Under the projects, 28 million tons of godown capacity has been created at the primary society level, besides which 212 strong room/lockers and 352 deposit counters have also been established for mobilizing the deposits in the rural areas and starting mini banking activities through village cooperatives.

While the financing efforts of NCDC are welcome, particularly as they go to financing user groups (exactly what cooperatives are supposed to ensure) the overall financing by NCDC in comparison to the unmet demand is rather small.

Private Funding:

With public sector resources under pressure due to prior commitments of the government on salaries, pensions and interest payments of past borrowings, there is need to raise funds from private sources for infrastructure creation. The economic reform process has not quite extended to rural India yet. Not surprisingly therefore, private funding for rural infrastructure has neither been systematically invited nor has it come forth save some experimental money, largely at the behest of development organisations. Public financial resources and the government's administrative capacity are overburdened, and private sector participation will help ease the situation in rural infrastructure.

The private sector stayed away from rural infrastructure daunted by long gestation periods, lack of information on risk profiles, perception of inadequate financial returns, regulatory restrictions, and ambiguity. Other hurdles include

ISBN No. : 978-81-906732-6-6

relatively low income density (income per square kilo metre, which is depressed both by lower income per household in rural areasas compared to urban areas as well as lower number of house holdsper square kilo metre) and high incidence of subsidized (though poorly performing) services leading to unchecked pilferage, as in the case of electricity. While the Government admits to limitations of budgetary support as the sole source of funding, and is taking steps to invite private funds for infrastructure,these steps are mainly for large industrial infrastructure Attracting private capital for rural infrastructure requires the policy-makers to rethink their approach and strategy and play a proactive promotional role.

Minor irrigation infrastructure has been significantly funded by private money, supplied through institutional sources and accessed by individuals. Groundwater, which forms the source of a large proportion of minor irrigation supply, is largely accessed through dug wells and tube wells, much of which is privately financed. Factors which contribute to rapid development of groundwater structures include new agricultural technology, better access to credit, and expansion of rural electrification. The down-side of these supportive factors and their largely unregulated expansion is that states such as Punjab, Haryana, Rajasthan, and Uttar Pradesh have already over-exploited their groundwater.

Prerequisites for Attracting Private Sector Finance:

While the past few decades have demonstrated mixed results in public–private partnerships in financing urban infrastructure, the rural context of India presents a set of additional challenges. The dispersed but vast population, a government induced culture of artificially low tariffs, culture of non-payment fors ervices, and therefore, relatively high risk perception, have kept private financing at bay. Attracting private investments requires a competitive rate of return for the risks associated with the investment.

Multilateral Agencies:

Multilateral aid agencies such as the Asian Development Bank (ADB) have schemes designed to lend to specialized institutions at the apex level, which on-lend to retail institutions to enable delivery of market-based housing finance to low income households. ADB offers a combination of long-term loans and technical assistance grants to financial institutions such as HUDCO, IDFC, ICICI, and NHB who are further entrusted with on-lending of these funds to institutions which work more closely with poor communities. The World Bank has also extended several loans to state governments for establishing irrigation projects and command area development endeavors, rural roads networks and agricultural produce market yards, apart from large power sector projects which also benefited rural areas to some extent. The World Bank has also funded the Karnataka Rural Water Supply Project in the mid-1990s, while experimenting with several models related to community participation and user fees.

Insurance Companies:

Insurance companies potentially have large pools of funds, and their long-term maturity matches the investment needs in infrastructure. Currently, except for the gigantic government owned Life Insurance Corporation (LIC), the total amount of investible funds is still small with private life insurance companies. As per the regulations of the Insurance Regulatory and Development Authority, 15 per cent of the investments of any insurance company should be in infrastructure.

Commercial Banks:

Commercial bank deficit in sectoral lending to agriculture is called forth by the GOI into the RIDF. This, in some ways, is their contribution to rural infrastructure lending, and a convenient one at that because the risks and transaction costs are very low. The direct lending by commercial banks to infrastructure in rural areas receives purpose-wise refinance from NABARD. The rural infrastructure loans disbursed by NABARD to Commercial Banks, RRBs, and Cooperative Banks included minor irrigation of around Rs679 crore, land development of Rs 291.3 crore, storage/market yards of Rs 32.3 crore across all these banks, and forestry development of Rs 7.1 crore.

That this is largely all that commercial banks have to offer to rural infrastructure is at one level understandable, because infrastructure financing

ISBN No. : 978-81-906732-6-6

requires a completely different set of skills from other types of credit. The existence of an extensive rural banking network, however, makes a worthy case for these banks to engage in infrastructure financing in rural areas. These banks need to be in centivized to finance infrastructure with innovative delivery mechanisms closely linked with the community and to extend finance with working arrangements with other agencies such as micro finance institutions.

Micro-finance Institutions:

Within infrastructure, micro-finance institutions (MFIs) in India have experimented with financing largely household level facilities including water and sanitation systems, shelter, and shelter improvement. Some MFIs have successfully lent for common facilities and revival of community level infrastructure such as lift irrigation infrastructure, in combination with some grant funds to undertake capital repairs. Association of Sarva Seva Farms (ASSEFA), an NGO in Tamil Nadu, has established several types of community infrastructure in rural areas of the state. BASIX gave loans to farmers to revive lift irrigation structures in Andhra Pradesh. BASIX has also designed a water and sanitation loan product which enables poor households to access piped water supply and build toilets. In infrastructure finance the role of MFIs is primarily to finance the household level demand, rather than to finance complete infrastructural facilities at the village level.

The strength of MFIs is close community contact, as a result of which they are in a position to be more demand responsive than other agencies. Also their understanding of the risk profile of customers and appropriate delivery mechanisms is inevitably sharper enabling them to provide innovative financing schemes for purposes of housing, water and sanitation, energy, market yards, cold storages, milk chilling plants, and so on. In India, most MFIs have an NGO background, and to that extent are well equipped in carrying out the grass root developmental work to ensure effective solutions for financing rural infrastructure. Moreover, MFIs can act as useful conduits for 'soft' funds for infrastructure financing, without contaminating the user community with effect of subsidies.

Infrastructure creation is complex and often beyond the technical capacity of the target community, which necessitates the involvement of other stakeholders such as energy companies, water and sanitation experts, local governments, and so on. Simple products such as house construction and house repair loans have been given successfully by NGO/MFIs such as ASSEFA and IASC. More complicated products however, require combination financing and management, for which MFIs need to partner with other agencies. Developmental organizations such as ASSEFA have designed multiple infrastructure products, each financed by a combination of relevant actors.

It is important to recognize the limitations of micro finance in infrastructure financing, as MFIs typically offer credit which is small in size and has a short tenure. The average term of a micro finance loan is one year and the total lending by all MFIs in India by the end of March 2013 is around Rs 8000 crore covering around 8 million households. Given the unmet demand for infrastructure finance in India, the current outreach and resources of MFIs are miniscule.The creation of infrastructure on a substantial scale, which often requires lumpy investments, is essentially beyond the purview of micro finance. For financing community infrastructure projects beyond the household level facilities, funds with medium to long term tenures are needed. In most cases, the MFI does not have access to such funds and external funds of such tenure would be necessary to avoid the termmis match. The value that MFIs can add is to develop small success cases and demonstrate these innovations in rural infrastructure financing to the mainstream players.

Community Financing:

The common assumption that the poor cannot or will not pay for infrastructure services is increasingly being proven incorrect. There are studies which show that rural customers dedicate a larger proportion of their disposable incomes to infrastructure services compared with their urban counterparts (Waughray and Moran, 2002). Thus it is possible to convince the community to contribute, provided there is a locally trusted organization such as an NGO or a good panchayat.

Community contribution is a meaningful

ISBN No. : 978-81-906732-6-6

strategy, not only from the perspective of generating additional funds but also for better management and governance of community projects. Community contribution brings a sense of ownership and leads to better management of commonly owned infrastructure. The user community could play a significant catalyzing role in inviting investor confidence by contributing funds. The community stake ensures that if systems are built appropriately the community can hold the other stakeholders accountable and demand proper service.

Community cost sharing needs to be done based on sustainable financial rules. While several government programmes do have community cost sharing modules in their design, often low levels of community contribution are arbitrarily fixed leading to failure in generating adequate stakes for the community. The concept of community cost sharing has to be translated into actual strategies, including building participatory structures at the local levels. Mandatory contribution by the community without adequate education and mobilization can lead to a situation where they use borrowed funds to meet their contribution and 'participation' becomes a burden rather than a step to empowerment. On the question of cost recovery through user charges, it is interesting to note the following data from a World Bank study in India. The World Bank has made assessments of costs associated with poor rural water supply services for six states. The opportunity cost of time spent in collecting water is Rs12 per household per day while that for time spent due to open defecation practices stands at Rs 9 per household per day. In addition, the health costs due to diarrhea and gastroenteritis diseases are likely to be around Rs 300 per household per year. This opportunity cost totals up to Rs 21.8 per household per day, close to half the daily income of a BPL household with one income earner. These estimates point towards the ease with which the community is likely to opt for.

Conclusion:

There is basic agreement on the fact that public resources are scarce, and also that they have not been used with a high degree of effectiveness till now. On the other hand, both due to the semi-public good nature of infrastructure and also the lack of precedence of complete private sector financing, it is unlikely that private funds will flow to rural infrastructure financing substantially. Also, while NGOs and MFIs are a good medium for devising and delivering rural infrastructure solutions to the community, they are not geared for large-scale financing given their limited resource base and organizational constraints.

Private capital has barely started flowing to the urban infrastructure sector in India, and it will take a long time before it finds its way to rural infrastructure. The constraints to flow of private capital are largely institutional, a term by which we mean the 'rules of the game' or norms, codified under laws, regulations, and specific contracts, by which all the stakeholders related to an infrastructure project, transact, and interact with each other. This can be something as simple as a norm that 'services used must be paid for' to something as complex as a contract that 'the return on equity exceeds the weighted annual average of LIBOR over 10 years, plus 500 basis points'. Establishing and enforcing such norms is the area of institutional reforms. This is happening, albeit slowly, with manyups and downs. Once satisfactory institutional arrangements are devised for urban projects, these will slowly diffuse to rural projects as well, though we should not underestimate the more difficult political economy of rural India.

The complexity of demand and supply gap, willingness to pay, and ability to pay for infrastructure services require financial orchestration which implies blending different sources of funds, such as government capital subsidy, community contribution, and private equity. Greater provision of rural infrastructure will require a paradigm shift towards recognizing the value that other players bring apart from the government—panchayats, private sector, and the user community. It will be necessary to define their roles and responsibilities and bring them proactively on board for creation and maintenance of rural infrastructure.

The government needs to create the space for financial orchestration and enable development of a collaborative framework to build and operate infrastructure in rural areas. Given the relative strengths and weaknesses of each set of institutions

ISBN No. : 978-81-906732-6-6

in delivering finance for rural infrastructure, it is imperative that we look for solutions in the 'middle-ground'.Even conceptually, the state and the market mechanisms are two extreme modes of functioning, and either of these, by themselves, cannot ensure development with equity. Solutions with the strengths of each side, which are balanced by civil society, are likely to be efficient, equitable, and sustainable.

References:

1 Mehta, M., Mukundan, K., Kesavan R. and S. Mukerjee (2003). 'Sustainable Private Financing of Community Infrastructure in India', mimeo, World Bank.
2 Monari (2002). Power Subsidies: A Reality Check on Subsidizing Power for Irrigation in India,
3 The World Bank. Morris, Sebastian (2003). 'Expenditure Accountability and the Society', India Infrastructure Report 2003, 3iNetwork.
4 The SARI/Energy Program—Resource center (2004). Retrieved July 29,2006 from http://www.sari-energy.org/ProjectReports. http://www.worldbank.org/html/fpd.
5 Vaidyanathan, A. (2003). 'Rural Infrastructure', India Infrastructure Report: Ensuring Value for Money, 3iNetwork and Oxford University Press, New Delhi.

****

ISBN No. : 978-81-906732-6-6

A Process and Utility of E-Governance

Mr. Shivprasad Anil Renake
Sanjay Bhokare Group of Institutes, Miraj

Abstract:

In India both government and enlightened citizen expect IT-driven public-private partnerships become the order of the day. The last couple of years have seen e-governance dropping roots in India offering government services to a large base of people across different segments and geographical locations. At present the status of e-Governance in India presents a wide variation in the level of computerization and the use of IT enabled applications within and outside the Government. E-Governance is a way to achieve good governance through ICT in order to have better citizen participation. The sole aim of E-Governance is to establish strong and transparent relationship between citizens, government organization and business organization so that a faith could be developed among all. Make all Public Services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man.

Keyword*:-E-Governance,E Government, ICT, technology, challenges,usage*

1. Introduction:

E-governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public and other agencies and for performing government administration activities. The actual term governance comes from an ancient Greek word kebern on which means to steer. In current usage to govern means to steer to control and to influence from a position of authority. E-Governance can be defined as the rule of information and communication technology by government to enhance the range and quality on information and services provided through government agencies. The use of information technology to free movement of information to overcome the physical bounds of traditional paper and physical based systems. The use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees. It is the application of Information and Communication Technology (ICT) for strengthening administration and management in higher education system in India. Improve delivery of services to citizens, businesses and employees Engage citizens in the process of governance through interaction Empower citizens through access to knowledge and information and Make the working of the government more efficient and effective. Results in enhanced transparency, convenience and empowerment,

Less corruption, revenue growth and cost reduction. The concept of e-governance has its origins in India during the seventies with a focus on development of in- house government applications in the areas of defense, economic monitoring, planning and the deployment of IT to manage data intensive functions related to elections, census, tax administration etc. The efforts of the National In formatics Center (NIC) to connect all the district headquarters during the eighties was a very significant development. From the early nineties, IT technologies were supplemented by ICT technologies to extend its use for wider sectored applications with policy emphasis on reaching out to rural areas and taking in greater inputs from NGOs and private sector as well. There has been an increasing involvement of international donor agencies under the framework of e-governance for development to catalyze the development of e-governance laws and technologies in developing countries

1.1 Definitions:

According to Former Secretary General of the United Nations: Kofi A. Annan,

"Good governance is perhaps the single most important factor in eradicating poverty and promoting development."

According to the World Bank:

"E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions."

According to UNESCO (2005):

E-governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. The idea is to move beyond the passive information-giving to active citizen involvement in the decision-making process through the use of information and communication technologies. This is believed to be the core or essential benefit that introduction and use of e-governance can bring to the society.

According to United Nations, 2006:

"The utilization of the Internet and the world-wide-web for delivering government information and services to the citizens."

Difference between E-Government & E-Governance :

This is the small or summarized difference between E-Government and E-Governance.

E-Government is the transformation of internal and external public sector relationships through Information and Communications Technology (ICT) in order to optimize government service delivery and citizen participation. Digital society is a society or community that is well advanced in the adoption and integration of digital technology into daily life at home, work and play. E-Governance is the development, deployment and enforcement of the policies, laws and regulations necessary to support the functioning of a Knowledge Society as well as of e-Government

1.2 Object of E-Governance:

S - The use of ICT brings Simplicity in gov-ernance through electronic documentation, online submission, online service delivery, etc.

M - It brings Morality to governance as immoralities like bribing, red-tapism, etc. are eliminated.

A - It makes the Government Accountable as all the data and information of Government is available online for consideration of every citizen, the NGOs and the media.

R - Due to Reduced paperwork and increased communication speeds and decreased comm-unication time, the Government agencies become responsive.

R - Technology can help convert an irresponsible Government Responsible. Increased access to information makes more informed citizens. And these empowered citizens make a responsible Government.

T - With increased morality, online availability of information and reduced red-tapism the process of governance becomes Transparent leaving no room for the Government to conceal any information from the citizens.

2. **Strategies for E-Governance in India:**

2.1. To build technical infrastructure across India.

Complete implementation of E-governance in India will include building technical Hardware and Software infrastructure. The infrastructure must be built by Government, Private Sector as well as individuals.

2.2.To make all information available online.

The Government has to publish all the information online through websites. This can be facilitated through centralized storage of information.

2.3. To popularize E-governance.

The whole world is moving towards e-governance but India still less in the literacy towards the e-governance. The people need to be educated and made e-literate for e-governance to flourish.

2.4 To build legal infrastructure.

For better implementation of e-governance, the Government will need to frame laws which will fully incorporate the established as well as emerging technology.

3. Features of E-Governance:

3.1 Information Management:

Information management is an integral aspect of E-commerce. It also proves essential for E-Governance. It helps transform the governing process in a business-like efficient and cost-effective process. Information management aims at reducing cost, improving performance, differentiating of products and services of Government, customized information and citizen focus.

3.2 Identity and Access Management:

Identity management is a set of processes and infrastructure for the creation, maintenance and use of digital identities for the purpose of access to E-governance portals and the information on those portals.

3.3 Content Management:

Content management is the process of organizing, distributing and tracking information through a website over the internet.

4. Stages in E-Governance:

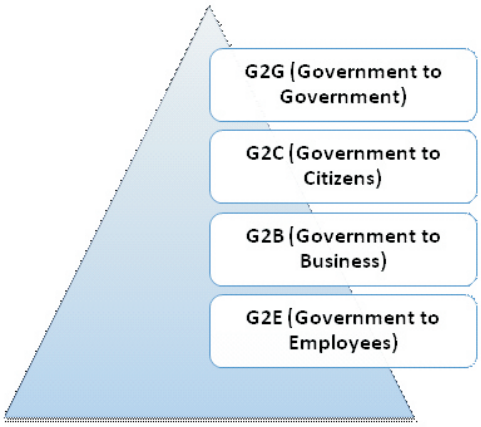
4.1 Computerization: In the first phase, with the availability of personal computers a large number of Government offices got equipped with computers

4.2 Networking: In this phase, some units of a few government organizations got connected through a hub leading to sharing of information and flow of data between different government entities.

4.3 On-line presence: With increasing internet connectivity, a need was felt for maintaining a presence on the web. This resulted in maintenance of websites by government departments and other entities.

4.4 On-line interactivity: A natural consequence of on-line presence was opening up of communication channels between government entities and the citizens, civil society organizations etc.

5. Types in E-Governance:



5.1 G2G (Government to Government)

In this case, Information and Communications Technology is used not only to restructure the governmental processes involved in the functioning of government entities but also to increase the flow of information and services within and between different entities. This kind of interaction is only within the sphere of government and can be both horizontal i.e. between different government agencies as well as between different functional areas within an organisation, or vertical i.e. between national, provincial and local government agencies as well as between different levels within an organisation. The primary objective is to increase efficiency, performance and output.

5.2 G2C (Government to Citizens)

In this case, an interface is created between the

ISBN No. : 978-81-906732-6-6

government and citizens which enables the citizens to benefit from efficient delivery of a large range of public services. This expands the availability and accessibility of public services on the one hand and improves the quality of services on the other. It gives citizens the choice of when to interact with the government (e.g. 24 hours a day, 7 days a week), from where to interact with the government (e.g. service centre, unattended kiosk or from one's home/workplace) and how to interact with the government (e.g. through internet, fax, telephone, email, face-to-face, etc). The primary purpose is to make government, citizen-friendly.

5.3 G2B (Government to Business)

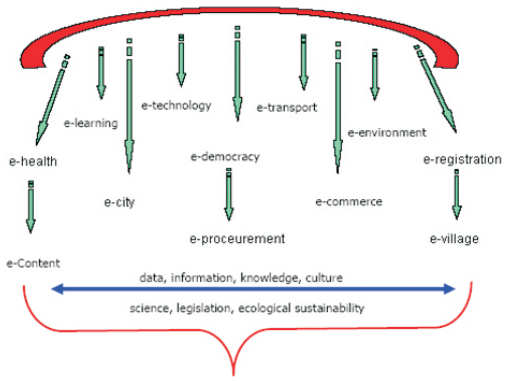
Here, e-Governance tools are used to aid the business community – providers of goods and services – to seamlessly interact with the government. The objective is to cut red tape, save time, reduce operational costs and to create a more transparent business environment when dealing with the government. The G2Binitiatives can be transactional, such as in licensing, permits, procurement and revenue collection. They can also be promotional and facilitative, such as in trade, tourism and investment. These measures help to provide a congenial environment to businesses to enable them to perform more efficiently.

5.4 G2E (Government to Employees)

Government is by far the biggest employer and like any organisation, it has to interact with its employees on a regular basis. This interaction is a two-way process between the organisation and the employee. Use of ICT tools helps in making these interactions fast and efficient on the one hand and increase satisfaction levels of employees on the other.

6. AREAS OF E-GOVERNANCE:

E-governance is generally considered as a wider concept than e-government, since it canbring about a change in the way how citizens relate to governments and to each other. E-governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities.



6.1E-democracy:

The term e-democracy refers to the processes and structures that encompass all forms of electronic interaction between the Government and the citizens. Online democracy includes access to elected officials, availability and use of discussion forums (e-participation), access to meetings and meeting documentation, voter registration, and ultimately online voting, also known as e-voting.

6.2 E-government:

E-governance is the development, deployment and enforcement of the policies, laws and regulations necessary to support the functioning of an e-government.

6.3 E-business:

Electronic business (e-business) refers to the processes and structures that define the relationship between governments and the markets.

7. Problems related to E-Governance in India:

7.1 Technical Educated:

There is general lack of technical literacy as well as literacy in countries like India.

7.2 Different Languages:

The dominance of English on the internet constrains the access of non-English-speak-ingpopulation.

7.3 Unawareness:

There is general lack of awareness regarding benefits of e-governance as well as the process involved in implementing successful G-C, G-G and G-B projects. The administrative structure is not geared for maintaining, storing and retrieving the governance information electronically.

7.4 Inequality(Rural and Urban):

Inequality in gaining access to public sector

ISBN No. : 978-81-906732-6-6

services between various sections of citizens, especially between urban and rural communities, between the educated and illiterate, and between the rich and poor.

8. The fields of Implementation of E-Governance are:

8.1 E-administration- refers to improving of government processes and of the internal workings of the public sector with new ICT- executed information processes.

8.2 E-services- refers to improved delivery of public services to citizens. Some examples of interactive services are: requests for public documents, requests for legal documents and certificates, issuing permits and licenses.

8.3 E-democracy- implies greater and more active citizen participation and involvement enabled by ICTs in the decision-making process

9. Current Status of Internet Users:

9.1 India:

Description:

IN - 1,236,344,631 population (2014) - Area: 3,166,944 sq km
Capital City: New Delhi - 11,279,074 population (2012)
195,248,950 Internet users for Dec 31, 2013, 15.8% penetration, per IAMIA.
62,713,680 Face book subscribers on Dec 31, 2012, 5.1% penetration rate.
5.55 Mbps Broadband download speed on August, 2014,

Source:http://explorer.netindex.com/maps?country=China

Source:http://explorer.netindex.com/maps?country=China

Description:

N - 1,355,692,576(*) population (2014) - Area: 9,806,391 sq km
Capital city: Beijing - population 10,189,875 (2012)
642,261,240 Internet users for June 30, 2014, 47.4% penetration, per CNNIT
633,300 Face book subscribers for Dec 31/12, 0.0% penetration.
23.22 Mbps Broadband download speed on August, 2014

Source: http://www.internetworldstats.com/asia.htm#cn

10. Conclusion:

In this Report on e-Governance, the Commission has examined various aspects of e-Governance reforms in India. The Commission is of the view that even in any e-Governance initiative, the focus has to be on governance reforms with the technological tools provided by ICT being utilized to bring about fundamental changes in the governmental processes. To fundamentally change as to how the government operates and this implies a new set of responsibilities for the executive and politicians.

References:

1 e-Governance: A Gateway to Smart Governance, DrM.K.Sharma
2 E-GOVERNANCE: Theoretical foundations and practical implications, Dobrica Savic
3 www.internetworldstats.com
4 Ministry of Information Technology (MIT)2001 'Electronic Governance — A Concept Paper', Ministry of Information Technology, India.
5 UNESCO: www.unesco.org .

****

A Study on Current Status of Regional Rural Banks in India

Mrs. Shubhangi S. Jagtap
ATS, Sanjay Bhokare Group of Institutes,
Miraj, Sangli (MS)

Abstract:

Regional rural Banks plays a vital role in the agriculture and rural development of India. The RRBS have more reached to the rural area of India, through their huge network. The success of rural credit in India is largely depends on their financial strength. RRBs are key financing institution at the rural level which shoulders responsibility of meeting credit needs of different types of agriculture credit in rural areas. At present, most of the regional rural banks are facing the problems of overdue, recovery, nonperforming assets and other problems. Therefore, it is necessary to study financial performance of RRBs in India. This paper attempts to analyze the current status with financial performance of RRBs in India as on 31st March 2011. The study is based on secondary data collected form annual reports of NABARD and RBI. An analytical research design of Key Performance Indicators Analysis such as number of banks and branches, deposits, loans, investments and growth rate index is followed in the present study. The study is diagnostic and exploratory in nature and makes use of secondary data. The study finds and concludes that performance of RRBs has significantly improved.

Keywords: *Regional Rural Banks, Key Performance Indicators, Growth Rate, Rural Economy, NABARD.*

1. Introduction:

In India Regional Rural Banks have been in existence for around 36 years in the Indian financial scene. The institution of Regional Rural Banks (RRBs) was created to meet the excess demand for institutional credit in the rural areas, particularly among the economically and socially marginalized sections. The Banking Commission (1972) recommended establish ana lternative institution for rural credit and ultimately Government of India established Regional Rural Banks as a separate institution basically for rural credit on the basis of there commendations of the Working Group under the Chairmanship of Shri M. Narashimham. In order to provide access to low-cost banking facilities to the poor, the Narashimham Working Group (1975) proposed the establishment of a new set of banks, as in stitutions which "combine the local feel and the familiarity with rural problems which the cooperative spossess and the degree of business organization, ability to mobilize deposits, access to central money markets and modernized outlook which the commercial banks have".

Subsequently, the Regional Rural Banks were setup through the promulgation of RRB Act of1976. The RRBs Act, 1976 succinctly sums up this overall vision to sub-serve both thedevelopmental and the redistributive objectives. The RRBs were established "with a view to developing the rural economy by providing, for the purpose of development of agriculture, trade, commerce, industry and other productive activities in the rural areas, credit and other facilities, particularly to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs, and for matters connected therewith and incidental thereto". Theirequity is held by the Central Government, Concerned State Government and the Sponsor Bank in the proportion of 50:15:35 respectively.

2. Review of Literature:

The study revealed that viability of RRBs was essentially dependent upon the fund management strategy, marg in between resources mobility and their deployment and on the control exercised on current and future costs with advances. The proportion of the establishment costs to total cost

ISBN No. : 978-81-906732-6-6

and expansion of branches were the critical factors, which affected their viability. The study further concluded that RRBs incurred losses due to defects in their systems as such, there was need to rectify these and make them viable. The main suggestions of the study included improvement in the infrastructure facilities and opening of branches by commercial banks in such areas where RRBs were already in function.

In the year 1989 for the first time, the conceptualization of the entire structure of Regional Rural Banks was challenged by the Agricultural Credit Review Committee (Khusro Committee), which argued that these banks have no justifiable cause for continuance and recommended their mergers with sponsor banks. The Committee was of the view that "the weaknesses of RRBs are endemic to the system and non-viability is built into it, and the only option was to merge the RRBs with the sponsor banks. The objective of serving the weaker sections effectively could be achieved only by self-sustaining credit institutions."

The Committee on Financial Systems, 1991 (Narasimham Committee) stressed the poor financial health of the RRBs to the exclusion of every other performance indicator. 172 of the 196 RRBs were recorded unprofitable with an aggregate loan recovery performance of40.8 percent. (June 1993). The low equity base of these banks (paid up capital of Rs. 25lakhs) didn't cover for the loan losses of most RRBs. In the case of a few RRBs, there hadal so been an erosion of public deposits, besides capital. In order to impart viability to the operations of RRBs, the Narasimham Committee suggested that the RRBs should be permitted to engage in all types of banking business and should not be forced to restrict their operations to the target groups, a proposal which was readily accepted. This recommendation marked a major turning point in the functioning of RRBs.

The contemporary literature on banking efficiency spells out two distinct approaches to measure efficiency (1) accounting measure (2) economic measure. Accounting measure refers to the use of various financial ratios that focus on one or more outputs and their relevant inputs to measure the performance of a banking unit. The financial ratio approach has been widely used by the researchers and working groups/committees to analyze the performance of RRBs. Most of the studies on the performance evaluation of RRBs concentrated on the banks in particular state/region. Further, Sherman and Gold (1985)noted that financial ratios do not capture the long-term performance. This measure also helps in the analysis of bank's performance in terms of individual parameters determining the overall efficiency level as it is difficult to precisely measure the efficiency of banks. There fore, in recent years, there is a trend towards measuring bank performance using economic measure. This measure provides accurate, composite and precise estimate of efficiency of banks comparing each bank against the top performers in the banking industry. A scan of the existing literature on the efficiency of Indian banks provides that there exists various studies that analyzed the efficiency of Indian commercial banks using most popularly used parametric technique of Stochastic Frontier Analysis (SFA) and non-parametric technique of Data Envelopment Analysis.

3. Objectives of the Study:

* To measure financial performance of Regional Rural banks in India.
* To analyze the key performance indicators of RRBs in India
* To make important suggestions to improve the working of RRBs.

4. Problems of the Study:

First and important problem of the research work is analysis of financial data. Information from NABARD and RBI was difficult to be obtained.

5. Significance/ Importance of the Study:

The research study is significant to evaluate financial performance of RRBs in India. The results / findings of the present study are useful to the policy planners in their efforts to improve the working of the RRBs in India. It covers all RRBs working in India. The study covers a specific period of 2010-2011 i.e. after globalization and amalgamation. There is macro evaluation of performance of all the RRBs in India.

6. Research Methodology:

The financial performance of the RRBs in

ISBN No. : 978-81-906732-6-6

India has been analyzed with the help of key performance indicators. The year 2010-2011 was taken as the current year and year 2009-2010 was base year for the calculation of growth rate. Analytical Techniques Employed-Growth rate analysis was undertaken with a view to studying financial performance related to the RRBs.

Research Design:

The present study is diagnostic and exploratory in nature and makes use of secondary data. The study is confined only to the specific areas like number of branches, district coverage, deposits mobilized, credits and investments made by the Indian Regional Rural Banks(RRBs) for the year 2010-11.

Method of Data Collection:

The present study is empirical in character based on the analytical method. The study is mainly based on secondary data which is collected, compiled and calculated mainly from annual reports of the NABARD and RBI. Other related information collected from journals, conference proceedings and web sites.

Source: Reports of NABARD and RBI. (Figures: - Rs in Crore)

7. Observation of the Study (Findings):

a) Sources of Funds:

The sources of funds of RRBs comprise of owned fund, deposits, borrowings from NABARD, Sponsor Banks and other sources including SIDBI and National Housing Bank.

b) Owned Funds:

The owned funds of RRBs comprising of share capital, share capital deposits received from the shareholders and the reserves stood at 13838.92 crore as on 31 March 2011 as against12247.16 crore as on 31 March 2010; registering a growth of 13.0%. The increase in owned funds to the tune of 1591.76 crore was mainly on account of accretion to reserves by the profit making RRBs. The share capital and share capital deposits together amounted to 4273 crore of total owned fund while the balance amount of 9566 crore represen-tedreserves.

c) Deposits:

Deposits of RRBs increased from 145035 crore to 166232.34 crore during the year registering growth rate of 14.60%. Gurgaon GB reported the highest deposit growth rate of37%. There are Sixteen (16) RRBs having deposits of more than 3000 crore each.

d) Borrowings:

Borrowings of RRBs increased from 18770 crore as on 31 March 2010 to 26490.81crore as on 31 March 2011 registering an increase of 41.10%. Borrowings viz-a-viz the gross loan outstanding constituted 26.8% as against 22.7% in the previous year.

e) Investments:

The investment of RRBs increased from 79379.16 crore as on 31 March 2010 to86510.44 crore as on 31 March 2011 registering an increase of 8.98%. SLR investments amounted to 45022 crore where as non-SLR investments stood at 41488 crore. The Investment Deposit Ratio (IDR) of RRBs progressively declined over the years from 72% as on 31.3.2001 to 52.04 % as on 31 March 2011.

f) Loans & Advances:

During the year the loans outstanding increased by 16098.33 crore to 98917.43 crore ason 31 March 2011 registering a growth rate of 19.4% over the previous year. Meghalaya Rural Bank recorded the highest growth rate of 35% during the year 2010-11.

Working Results;

* Profitability:

75 RRBs (out of 82 RRBs) have earned profit (before tax) to the extent of 2420.75 crore during the year 2010-2011. The profit was marginally lower than the previous year. After payment of Income Tax of 634.22 crore, the net profit aggregated to 1786.53 crore. The remaining 7 RRBs incurred loss to the tune of 71.32 crore.

*** Accumulated Losses:**

As on 31 March 2011, 23 of the 82 RRBs continued to have accumulated losses to the tune of 1532.39 crore as against 1775.06 crore (27 RRBs)

ISBN No. : 978-81-906732-6-6

as on 31 March 2010. The accumulated loss decreased by 242.67 crore during the year under review.

*** Credit Deposit Ratio:**

The a ggregate CDR of RRBs increased over the years from 57.10% as on 31 March 2010 to59.51% as on 31 March 2011. Eight of the RRBs reported CDR of more than 100%.

8. Problems (Weaknesses) of RRBs:

Although RRBs had a rapid expansion of branch network and increase in volume of business, these institutions went through a very difficult evolutionary process due to the following problems.

1. Very limited area of operations.
2. High risk due to exposure only to the target group
3. Public perception that RRBs are poor man's banks
4. Mounting losses due to non-viable level of operations in branches located at resource-poor areas.
5. Switch over to narrow investment banking as a turn-over strategy
6. Heavy reliance on sponsor banks for investment avenues with low returns barring exceptions, step-motherly treatment from sponsor banks.
8. Burden of government subsidy schemes and inadequate knowledge of customers leading to low quality assets
9. Unionized staff with low commitment to profit orientation and functional efficiency.
10. Inadequate skills in treasury management for profit orientation
11. Inadequate exposure and skills to innovate products limiting the lending portfolios
12. Inadequate effort to achieve desired levels of excellence in staff competence for managing the affairs and business as an independent entity

9. Suggestions (Recommendations) For Improvement of RRBs:

1.Government should encourage and support banks to take appropriate steps in rural development.
2. Efforts should be made to ensure that the non-interest cost of credit to small borrowers is kept as low as possible.
3. Policy should be made by government for opening more branches in weaker and remote areas of state.
4.Productivity can be improved by controlling the costs and increasing the income.
5. To participation cost, subsidy should be adjusted towards the end of the transaction for which loan assistance is sanctioned.
6. Government should take firm action against the defaulters and shouldn't make popular announcements like waiving of loans.
7. The RRBs have to make an important change in their decision making with regard totheir investments.
8. The RRBs have to be very careful and reduce the operating expenses, because it has been found from our study that these expenses have increased the total expenditure of the banks.
9. The RRBs have to give due preference to the micro-credit scheme and encourage in the formation of self help group.

Conclusion:

To conclude, the rapid expansion of RRB has helped in reducing substantially the regional disparities in respect of banking facilities in India. The efforts made by RRB in branch expansion, deposit mobilization, rural development and credit deployment in weaker section of rural areas are appreciable. RRB successfully achieve its objectives like to take banking to door steps of rural households particularly in banking deprived rural area, to avail easy and cheaper credit to weaker rural section who are dependent on private lenders, to encourage rural savings for productive activities, to generate employment in rural areas and to bring down the cost of purveying credit in rural areas. Thus RRB is providing the strongest banking network. Regional Rural Banks plays a key role as an important vehicle of credit delivery in rural are as with the objective of credit dispersal to small, marginal farmers & socio economically weaker section of population for the development of agriculture, trade and industry. But still its commercial viability has been questioned due to its limited business flexibility, smaller size of loan & high risk in loan & advances. Rural banks need to remove lack of transparency in their operation which leads to unequal relationship between banker and customer. Banking staff should interact more with their customers to overcome this problem.

ISBN No. : 978-81-906732-6-6

References:

1. Bagachi, K. K. and A. Hadi (2006), Performance of Regional Rural Banks in WestBengal: an evaluation, Serials Publications: New Delhi.
2. Bose, S. (2005) Regional Rural Banks: The Past and the Present Debate
3. Das, U.R. (1998) "Performances and Prospects of RRBs", Banking Finance November.
4. Gupta, S.K (1996) "Profitability and Regional Rural Banks", Kurukshetra, July.
5. Gupta and Sodhi (1995), "Economic Liberalization and Rural Credit", Kurukshetra, Vol. XLIII, No. 10, p-27-30
6. Horseman, S.B (2002), Performance of Regional Rural Banks, New Delhi,
7.Ibrahim Dr. M. Syed (2010) "Performance Evaluation of Regional Rural Banks inIndia", International Business Research Vol. 3, No. 4; p-203-211
8. Jham Poonam (2012) "Banking Sector Reforms and Progress of Regional Rural Banks in India (An Analytical Study)", Online published 11 January.
9. Khankhoje, D. and Sathye, M. (2008) "Efficiency of Rural Banks: The Case of India",International Business Research, Vol. 1. No.2, pp. 140-149.

****

ISBN No. : 978-81-906732-6-6

Indian Dairy Industry: Issues & Challenges

Prof. Mrs. Sneha S. Patil
Sanjay Bhokare Group of Institutes, Miraj

Abstract:

Dairy enterprise is considered a "treasure" of the Indian economy, particularly for rural systems. It provides nutrition, draft animal powder, organic manure, supplementary employment, cash income and a 'cushion' for 'drought proofing' in India. The sector involves millions of resource-poor farmers, for whom animal ownership ensures critical livelihood, sustainable farming & economic stability. Dairying in recent decades has been considered a vital component in diversification of Indian agriculture, where crop farming is beset with stagnating growth & low absorption of unskilled agricultural laborers. Rising human needs for milk and other livestock products have placed the environment in conflict with livestock. The rapidly increasing demand for dairy products in urban areas has given rise to haphazard growth of production centers in urban areas that are essentially detached from their supporting land base and often generate a large amount of waste that contaminates the soil and ground water.

Thus, the increase in demand for dairy products will put increasing pressure on dairy production systems. Traditional breeds & feeding practices are likely to give way to high yielding breeds, intensification of production systems, increased disease risks, pollution & animal health issues & a greater reliance on feeds & concentrates. This paper concentrates on the issues & challenges faced by Indian dairy, using the secondary sources of information drawn from various reports.

Keywords: *Dairy, rural, agriculture, production.*

1. Introduction:

Dairy is a place where handling of milk and milk products is done and technology refers to the application of scientific knowledge for practical purposes. Dairy technology has been defined as that branch of dairy science, which deals with the processing of milk and the manufacture of milk products on an industrial scale. Dairy industry represents a major segment of the food industry. Every individual consumes dairy product daily in various forms like curd, cheese, butter, ghee, milk and their increased attention towards health &nutrition has increased the demand of dairy products. The dairy farming has been transformed traditional farming to advanced farming where more tools & equipments are used to fulfill the increasing demand of customers & has enabled the manufacturers to present the dairy products in different forms like condensed milk, powdered milk, homogenized milk & pasteurized milk.

Dairying is an important part of Indian agricultural economy. India is the highest milk producer in the entire globe, accounting for more than 13% of world's total milk production. India is well known as the 'Oyster' of the global dairy industry, with opportunities galore for the entrepreneurs globally. It might be dream for any nation in the world to capitalize on the largest and fastest growing milk and milk products' market. The dairy industry in India has been witnessing rapid growth with liberalization. The main objective of the Indian Dairy Industry is to manage the national resources in a manner to enhance milk production and upgrade milk processing using innovative technologies.

The dairy sector in the India has shown remarkable development in the past decade and India has now become one of the largest producers of milk and value-added milk products in the world. The dairy sector has developed through co-operatives in many parts of the State.

In India, the dairy sector is important for various reasons. Among these it's complementarily with agriculture for example and a

ISBN No. : 978-81-906732-6-6

capability to enrich the protein diet of the vegetarian population is well documented. A contribution, which is not well recognized, is its role in balancing the rural inequity. In recent decades the dairy sector has emerged as an important source of rural employment and income in the country.

2.Evolution of Indian Dairy Industry:

The dairying in India is as old as the Indian civilization. The herbivores milch animals like cattle & buffalo were domesticated as an integral part of our social system. If you did not own a cow, often a farmer would come by each morning and dip milk out of a large container on his wagon and into your pan or pitcher. After awhile the farmers started using glass bottles. These were clear glass with the farmer's name embossed on them. The farmer would have a small building separate from the barn to house his bottle filling equipment. And, in the days before electricity, he would also have a water tank to chill the evening's milk, cooling the water in the tank with ice. Next, came the electric milk coolers. These held from two to twelve 40 quart cans, and cooled the milk to 44 degrees. These were a major improvement, but not enough to satisfy the Health Department, which required the milk to be pasteurized…..by being heated in a stainless steel tank to 143 degrees and held for thirty minutes. The milk was then chilled and bottled.

This process represented a sizable investment, so most farmers quit selling and delivering milk, and brought on the need for milk dealers. Usually the dealers had a sophisticated plant with pasteurizing and homogenizing equipment, but no cows. They purchased their milk from farmers and paid them a premium for high butterfat milk. The dealers then hired route men who would deliver the milk to the home. When World War II came, delivery was reduced to every other day. At that time the government also banned pint milk bottles, as a way to save labor for the war effort. Many small dealers quit delivery and took wartime jobs.

In early years the State issued a very limited number of milk licenses so that the quality of the milk could be supervised. Later, as the quality of all milk improved, the State expanded the licenses allowing dealers to deliver almost anywhere. This, along with the Pure Pak paper containers that came out after the war, had the effect of eliminating home delivery, and the local milk dealers.

Establishment of Milk Plants under the Five-Year Plans for Dairy Development all over India. These were taken up with the dual object of increasing the national level of milk consumption and ensuing better returns to the primary milk producer. Their main aim was to produce more, better and cheaper milk. Now, most milk is pasteurized by short-time equipment which takes four seconds, and is shipped in from the larger cities and even from out-of-state.

3. Significance of Dairy Industry to Society:

3.1 Total contribution to the economy/ sales

India as nation stands first in its share of dairy production in the international scenario. The industry contributes about Rs 1, 15, 970 to the national economy.

3.2 Employment opportunities

The Indian Diary industry which is in the developing stage provides gainful employment to a vast majority of the rural households. It employs about 8.47 million people on yearly basis out of which 71% are women.

3.3 Uses of byproducts

Every byproduct (dung / urine) can be sold. Manure; can be used to produce biogas on which household cooking can run OR dung can be used for vermin composting: which is a good source of fertilizer: useful in Agriculture. Possibility of generating electricity, if the number of animals are sizeable.

3.4Government incentives:- Incentives are available from the Government both Central as well as State.

4.Environment - Current Issues:

Many environmental issues currently challenge India: deforestation; soil erosion; overgrazing; desertification; air pollution from industrial effluents and vehicle emissions; water pollution from raw sewage and runoff of agricultural pesticides; the tap water is not potable throughout the country; and a huge and growing population is over straining natural resources.

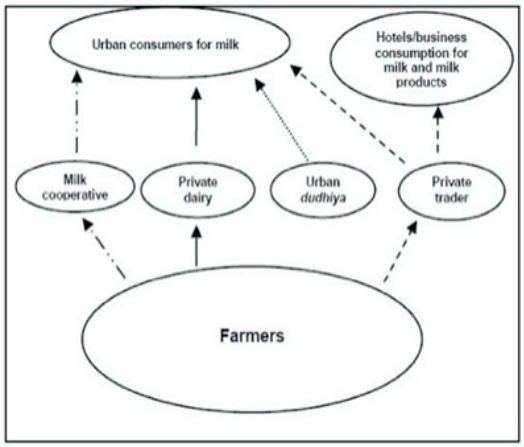
5 Milk Production:

In India the average farm size is between 1-3

ISBN No. : 978-81-906732-6-6

cows per farm, with 1,000 Kg/cow/year on average. Most milk is sold before entering a processing plant and the supply chain is long and complicated (IFCN 2012), in the next chart we can see the principals of the Indian milk supply chain:

Figure 1: Indian Milk Supply Chain



Source: De Laval India

The Indian dairy sector is characterized by high fragmentation. It is dominated by the unorganized sector comprising of 70 million rural households. The per capita availability of milk in India stands at 289.4 grams per day. Backed by strong domestic demand, the per capita availability of milk is anticipated to reach 336 grams per day in 2017. Dairy is sold in small unit rather than in bulk volumes.

Table 1: Trends in annual milk production and per capita availability, 1950-2013

Year	*Production (million tonnes)*	*Per capita availability (grams/day)*
1950-51	17.0	124
1960-61	20.0	124
1973-74	23.2	112
1980-81	31.6	128
1990-91	53.9	176
2000-01	80.6	220
2001-02	84.4	225
2002-03	86.2	230
2003-04	88.1	231
2004-05	92.5	233
2005-06	97.1	241
2006-07	100.9	246
2007-08	104.8	252
2008-09	112.2	266
2009-10	116.4	273
2010-11	121.8	281
2011-12	127.9	291
2012-13 (anticipated)	133.8	300

Sources: Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India, New Delhi. State Departments of Animal Husbandry, Veterinary Services & Dairy Development. Publishers of Dairy India, New Delhi.

6 Milk Consumption:

There is a long history and tradition of high dairy consumptions in India, as urbanization is an ongoing process there will be a shift from traditional to more commercial western dairy products as a result of changes in lifestyle. The consumption pattern of dairy products in India is quite unique as compared to some of the western countries. Consumption is primarily centered on traditional products; however, westernized products are gradually gaining momentum in the urban areas. Interestingly, buffalo milk accounts for the largest share of the total milk produced (55%) in the country. Since the pricing of milk is based on the fat content, buffalo milk offers higher profit margins as compared to cow milk as it contains higher fat.

Product	*Percentage*
Fluid Milk	46.0%
Ghee (clarified butter)	27.5%
Butter	6.5%
Yogurt	7.0%
Khoa (particularly dehydrated condensed milk)	6.5%
Milk Powder	3.5%
Paneer (cottage cheese)	2.0%
Other, including cream, ice cream	1.0%

Source: National Dairy Development Board Annual

India dairy is emerging as a strong consumption story, with the market growing at pace. Probably this trend will gain momentum over the next 4-5 years driven by increasing consumption of value-added products and the formalization of the value chain. The main factors driving growth are increased consumer interest in higher protein diets, greater affordability due to growing disposable incomes, and a rising awareness and availability of dairy through channels such as organized retail and food service segments.

7 Challenges Faced By Dairy Sector:

7.1 By Farmers/ Milk Suppliers:

* Shortage / poor quality feed
* Poor transport network
* Lack of capital

ISBN No. : 978-81-906732-6-6

* Water shortage
* Shortage of appropriate dairy breeds
* Diseases and parasites
* Inadequate extension and veterinary support* Stock-theft

7.2 By Milk Processor's:-

* Milk Quality Requirements
* Equipment financing
* Procurement of farm machinery
* Inadequate capital base
* Inadequate milk preservation facilities/ risk of contamination of milk
* Maintenance and repair of any tools used in production
* Training of staff and management of the dairy group
* Creating and Sustaining Superior Perfor -mance.

7.3 By Dairy Product Distribution Channel:-

* Inadequate human resource
* Inadequate marketing channels
* Inadequate transport facility

8 Malpractices in Dairy Industry:

8.1 Malpractices in dairy products:

* Mixing of water, urea & detergents in milk.
* Animal fats in desi ghee.

8.2 Malpractices with milking animals:

* Cows are repeatedly impregnated in order to yield more progeny, often through Artificial Insemination.
* Usually after 5 to 6 months of conceiving, animalstop giving milk but cattle breeders continue milking the cattle three to four months more by injecting Oxytocin."
* Today, more and more cows and buffaloes in India are milked by machines. Workers often do not pay attention while the machines are on; even after milk has been taken out, the machines often keep sucking the animals' dry udders, causing them a lot of pain.
* No attention towards buffaloes who were bleeding from their vaginas.
* Heaps of garbage could be seen lying near tables, posing a serious health hazard.

8.3 Malpractices in feed & fodder:-

* Poor/ low quality of fodder given to animals.
* Insufficient feed & fodder.

8.4 Unhygienic dairy Containers:

* Milk containers kept near open drainage, which could be the source of potential health hazards.

Strengths	How to build on them
Large number of small and marginal farmers involved in dairying An effective marketing channel helps to meet the demands of the urban consumer Very large number of animals and huge scope to enhance productivity Self-sufficiency in medicine production and do not have to rely on exports	Strengthen economic viability of dairy farms by interventions on the input side as well as ensuring more fair farmer prices Increase the link between rural production areas and urban markets Focus on strengthening the indigenous breed to help significantly enhance productivity Ensure availability of quality medicines by strengthening regulatory framework for quality

ISBN No. : 978-81-906732-6-6

Weaknesses	How to correct them
Large share of milk (70–85%) of marketable surplus goes through informal channel where quality is a big concern	Focus on quality issues even in the informal channel by training traders and by enforcing food quality regulations
Sometimes quality is an issue in the formal channel as well	Develop infrastructure and training for clean milk production
Very little competition to cooperatives because private sector was not allowed to participate in until recently	Support a fair playing field for the private sector
Farmers do not share in the benefits of high demand because of poor governance of cooperatives	Bring about changes in cooperatives to make them true representatives of farmers instead of functioning as parastatals.
Milk production is scattered over a large number of farmers producing miniscule quantities	Support to dairying as an enterprise to encourage commercial dairy farming and encourage production and productivity by extension and breed development
Milk distribution is limited to urban and peri-urban areas	Enhance packaged milk distribution in more areas
Low milk prices because of lower prices declared by cooperatives, which results in low prices of milk paid by all players	Strengthen dairy farmer cooperatives to enable farmers to get a higher price for milk
Ad hoc export policies and a ban on exports	Create rational export policy to enable farmers to take advantage of higher prices
Quality of milk and milk products are a barrier to entry to the export market, especially the EU and the USA	Strictly implement quality regulations and improve infrastructure and training for quality
Lack of policy focus on strengthening indigenous breeds	Strengthen the breed development programmes
Non-existent extension facilities	Strengthen extension facilities
Farmers' prices are not based on fat measurement, which affects their profitability	Create policy regulations to make mandatory testing as a basis for setting milk price
Because of low access to credit and risk-taking ability, farmers cannot increase their herd size	Increase access to credit through dairy farmer organizations and other agencies

Opportunities	How to pursue them
Increased farmer income by exploiting the high demand	Create policies and activities geared towards enhancing dairy farming activity by increasing, production, productivity and ensuring fair farmer price of milk
Increased consumer sophistication and awareness of quality reception of quality packaged products (though slowly)	Establish enabling policy environment to enhance investment
Entry of large corporations in retailing, which can lead to more investment	Create policy support to enhance governance of producer companies
Immense scope to enhance governance of dairy farmer organizations and thus enable dairy farmers to demand higher prices	Focus on quality issues that are a barrier to exports
Potential for exports due to low cost of production Overall positive growth environment, which is triggering the Government to enhance infrastructure.	Encourage private sector to increase investment in dairying

ISBN No. : 978-81-906732-6-6

Threats	How to avert them
Large portion of the population does not care about quality issues in milk Because of high price sensitivity for dairy products, people are not willing to pay for quality Significant increase in maize prices can increase feed prices Large informal markets that extend credit are constraining farmers Low productivity and scattered production leading to high cost of transportation Emphasis on milk fat and not on SNF content maintaining relatively lower prices of milk.	Initiate consumer education about the negative health impacts of unpackaged products Develop packaging in small quantities to meet the needs of the poor Increase milk prices in accordance with feed prices Support expansion of dairy farmer organizations Enhance productivity by breed improvement and extension Enforce price setting of milk based on fat and SNF content to encourage production of cow milk

The study of this SWOT analysis shows that the 'strengths' and 'opportunities' far outweigh 'weaknesses' and 'threats'. Strengths and opportunities are fundamental and weaknesses and threats are transitory. Any investment idea can do well only when you have three essential ingredients: entrepreneurship (the ability to take risks), innovative approach (in product lines and marketing) and values (of quality/ethics).

The Indian dairy industry, following its delicensing, has been attracting a large number of entrepreneurs. Their success in dairying depends on factors such as an efficient yet economical procurement network, hygienic and cost-effective processing facilities and innovativeness in the market place. All that needs to be done is: to innovate, convert products into commercially exploitable ideas. All the time keep reminding yourself: Benjamin Franklin discovered electricity, but it was the man who invented the meter that really made the money!

10. Conclusion:

Dairy has a lot of potential to improve rural incomes, nutrition and women empowerment, and hence is a very critical area for investment. A well-developed industry will enable millions of farmers to capitalize on the emerging opportunities and make a significant impact on rural incomes. On the flip side, weak efforts towards dairy development also can have a significant but negative impact on the dairy industry. The growth rate has been sluggish over the past few years. With an increase in demand on one hand and sluggish supply on the other, there is a likely shortfall in demand in the coming years. Major areas of intervention in the dairy sector have been highlighted in this review. Carrying out interventions requires resources and commitment from key actors – government, NGOs, development agencies and the National Dairy Development Board – to partner and work together.

11. References:

1.http://www.fao.org/docrep/011/i0588e/I0588E05.htm
2. Central Intelligence Agency, CIA World Fact Book 2013 retrieved from https:// www.cia .gov/library/ publications/the-world-factbook/
3. D. Tikku, Chairman, NDDB Dairy Services, report at the IDF meeting - 2012
4. International Farm Comparison Network (2012). IFCN Report.
5. National Dairy Development Board Annual Report 2011 – 2012 retrieved from www.nddb.org
6.http://www.milkproduction.com/Library/Editorial-articles/Milk-quality-in-India/

****

Economic Development of Rural India: Role of Commercial Banks

Snehil Gupta
B.E., M.B.A., DTIRM, CAIIB Officer,
Oriental Bank of Commerce, Nirmala Road Branch, Rajkot (Gujarat)

Abstract:

Commercial Banks encompasses- Public Sector Banks, Foreign Banks and Private sector Banks. These Banks play a significant role as an intermediary financial system for the economic development of rural India. Drastic changes in Banking structure and regulatory system have resulted due to wider geographical spread and deeper penetration of rural regions, increased mobilization of deposits, reallocation of bank credit to priority activities and lower operational autonomy for a bank management. In the commercial banking scenario of rural India, dominance of public sector commercial bank can apparently observed, for a consistent growth of rural India, commercial banks have to play a vital role. Keeping in view the immense need of constructive contribution of commercial banks in developing rural economy, the author has tried is study and throw some light on the topic selected.

Key words: *Rural Economy, Agricultural Credit, Economic Development*

The Economic Development of India as a whole and rural India is highly fascinating and highly interesting as it unfolds the development story to the world with its vast presence of human and natural recourses. In the recent past India has become the most preferred destination for quality work force and potential market place for domestics, multinational and transnational corporate. India is one of the fastest growing economics amidst worldwide uncertainties.

It has been observed during recent past that India's growth is primarily driven services sector and its share has been growing years on years while the contribution of agriculture to G.D.P. has been declining. As per recent figures, the contribution of Agriculture to GDP in 2014 was merely 11% while the service sector contributed to the tune of 76%. This trend apparently shows that the economic development has been largely limited to the urban population and is yet to widely percolate to the rural population.

Father on Nation Mahatma Gandhi has rightly said "India lives in village," and the agriculture and allied activities are back lone for the Economic development of the country. As Indian agriculture provides livelihood to 75% of the country's population (directly or indirectly), it seeks vital importance for addition. Agriculture provides significant source for row material for reversal industrial units. Hence agriculture is an important driver for Economic Development of India and essentially it needs rapid and consistent growth not only to achieve self-reliance but also to bring about equitable distribution of income, wealth and other resources to reduce the poverty levels as India houses 22% of world's poor.

Agriculture in India is still the 'gamble of rains" and needs "Credit" as one of the most critical inputs for its systematic developments. Credits capitalize farmers to undertake necessary requirements and to adopt latest technology. Relaying the vital significance of agriculture credit a well-organized linking system becomes an essential need of the day. As per the definition of banking mentioned in "banking regulation act of India, 1949", banking is accepting for the purpose of lending or investment of deposits of money from public, repayable on demand or otherwise or withdraw able by cheque, draft order or otherwise banking operations are governed and regulated by banking operations in India.

A commercial bank is the type of bank that provides services such as accepting deposits, making business loans, and offering fundamental products for investments. Commercials banks can also termed as a bank or a division of a bank that

ISBN No. : 978-81-906732-6-6

mainly deals with deposits and loans from corporation or large businesses as opposed to individuals from public in general. The share of commercial banks in total institutional credits to agriculture is almost 52% which is followed by 42%and RRB about 6%. But it is surprisingly shocking that in spite of various persuasions and efforts of new government, ordinary people have no access to institutional credit. With the introduction of "Jan-Dhan Yojana", the growth rate of deposits in commercial banks have reached to the tune of 21% as compared it 18% in past few years.

RBI has been taking various steps to increase indirect financing as well as support agriculture sector as the priority sector. Recently on 03rdFeb2015 during the sixth bi-monthly policy statement 2014-15presented by Dr. Raghuram G. Rajan Governor of Reserve Bank of India, following decision were taken

* To help the policy repo rate under the "Liquidity Adjustment Facility" (LAF) unchanged at 7.75 percent.
* To keep the "cash reserve ratio" of scheduled commercial banks unchanged at 4.0 percent of the "Net Demand and Time Liabilities (NDTL)
* To reduce the "statutory liquidity Ratio" (SLR) of scheduled commercial banks by 50 base points (from 22.0 percent to 21.5 percent)with effect from February 7th 2015.

As a result of the aforesaid policy statement, the revision in the base year for GDP and GDP calculation methods will tend to some revision in GDP growth numbers for 2014-15 as well as GDP forecasts. Domestic activity is likely to have remained subdued in Q3 of 2014-15, especially reflecting the shortfall kharif harvest as compared to a year ago. It is expected that agricultural growth is likely to pick up in Q4 with the late improvement in the north east monsoon and in rabi sowing. Never the less, growth expectation should be tempered as lead indicators such as tractors and motorcycles sales and showing rural wage growth all point to subdued rural demand. Also, one more factor affecting rural life seen is the retail inflation. Retail inflation, measured by year on year changes in the "consumer price index" (CPI), edged up in December on the expected reversal of favourable base effects that had tempered upside pressures since June 2014. A slight reduction in Cereal prices and sharp seasonal fall in vegetables prices moderated the tractor of head line inflation, despite persistent firmness in the prices of protein – rich items such as milk, meat and pulses. However, seasonal increases in vegetable prices which typically set in around March, will have to be monitored carefully. The decision if RBI to reduce SLR from 22.0 percent of NDTL to 21.5 percent will result into increased landing to productive sectors especially the agriculture so as to support rural development. It is expected that in the first bi-monthly policy statement for fiscal year 2015-16, some more "game changer" announcement will be there in order to foster the "rural development".

In order to fulfil the ratio-economic needs of rural India, the commercial banks perform varied functions which are "customer focus". In the modern connotation, the basic functions of commercial banks can be classified in to two categories. :

* Major functions
* Minor functions

Under the category of major functions of commercial bank are listed below:

* Accepting deposits
* Making advances
* Creating credits

Under the category of minor functions of commercial bank are:

* Cheque clearance
* Sale/ purchase of bonds or shares
* Transfer of money
* Perform of trusty
* Work as representative
* Accept or give money
* Provide letter of credit

As a part of major functions, commercial bank accepts various types of deposits from public especially from its clients. Which includes deposits in the saving account recurring deposits and fixed deposit. The second major function which commercial banks perform are providing loans and advances of various forms, including an overdraft facility, cash credit, will discounting money at call etc. They also provide the facility of drafts on demand (Demand Drafts). Term loans to all types of clients against proper security are also given.

The third major function of commercial Bank is "Credit Creation". It is a most significant

ISBN No. : 978-81-906732-6-6

function of commercial Banks. At the time of sanctioning a loan to acustomer they do not provide cash to the borrower. Instead they open a deposit account from which the borrower can withdraw. In other words while sanctioning a loan. They automatically credit deposit which is termed as "Credit Creation from Commercial Bank". The minor function of commercial banks encompass collection and clearing cheques dividends and interest warrant and to make payments of rent. Insurance premium etc. Dealing with foreign exchange trisection purchase and sell recur lies and to act as a trustee, attorney correspondent and executor and to accept case towards and cash return. The minor function also include niftily facility provided function providing lookers for safety of agreements documents etc., money transfer and issuing transfer cheque and is perform the role of a referees and it accept various bills for payment shone bills gas bills, water bills, electrical bills etc., to provide facility of merchant banking, provide cards Credit cards, Debit cards, Smart cards etc.

The commercial Banks has shown tremendous growth during the cash few years in terms of volume of business as well as complicity. Despite of making various efforts rush as laundering "JAN-DHAN-YOJANA" and other significant improvement in the areas relating to financial liability, profitability and competitiveness, there are concerns that banks have not been able to search and bring out vital segment of rural population under the ambit of basic banking services.

A significant skewness is observed in commercial bank branches distribution as approximately per branch population in urban area is 7000 people, while in rural areas it is estimated to be the tune of 22000 people in rural areas. Out of six lakh rural villages, the presence of bank branches with full-fledged services is available only in 46000 villages and more than 4 lakh villages remain with no banks in rural India because of structural, operational, geographical and other viability issues. It is a matter of serious concern that the rural India in spite of having 69% of country's populations its contribution to total deposit is 11% and advances is 9% is very low as compared to urban figures. However, the improved infrastructure throughout the nation has resulted into the blurring the geographical hurdles and making rural population at par with urban. Hence, the total set up of bombing system in rural areas needs a relook as their needs are beyond traditional products like "no frill" and "crop loans". Bombs may look forward for alternate cost effective business models with suitable structure to tap this "untapped" section of rural population.

In fact, a direct relationship can be observed between infrastructure development and aggregate agriculture productivity. Infrastructure in rural India, such as water shed development for irrigation, electrification, roads, markets, credit institutions, researches and extension of agriculture researches etc, combined by play an important role in determining the improvement of productivity. In the past few years the transport connectivity has been developed for connecting the villages, which has positively resulted into disparity between urban and rural India. This drastic change can be termed as a new revolution in rural India where development is not just creating the rich but also proving ample opportunities to help and uplift the financially weaker and excluded section. As middle income group has shown an increased presence in rural India, it is required that commercial banks should extend credit facilities at par with urban people and providing increased opportunities to the banks to extend credit facilities to non-farm sectors of rural India.

As the demand supply gap is perpetually increasing. The inflation in agriculture is consistently increasing. Therefore, it is imperative to improve productivity by enhanced use of farm mechanization. This alarming situation arrests the immediate intervention and a supportive land of commercial banks to address this problem and should take it as an opportunity to finance high tech agriculture production like agriculture biotechnology and farm mechanization along with the traditional lending like production loans etc.

As the consumption of food products such as milk, dairy products, eggs, meat, fruits, pulses, grains, vegetables etc. is going to increase drastically, increase in production is also needed. Therefore extending loans, credit facilities to encourage entrepreneurship for setting agro based industrial will be the solution of this problem and an opportunity for the commercial banks. Though,

ISBN No. : 978-81-906732-6-6

India is the world's largest producer of fruits and vegetables but it has been estimated that storage facilities for these products are inadequate which results into heavy losses of the products every year. Therefore, construction of rural god owns, cold storage and establishing agro process units will greatly help the rural farmers to generate revenue for themselves and also will provide employment to others. This process will require large investments and the young entre pruners will need a helping hand from commercial banks for required financial support and guidance.

The middle class segment of India is growing with the rapid stride in the coming years with salient features namely highly educated youth with higher employability and secured for bank ability. This will result into increased non-farm income which will ultimately add to the increased flow of saving to the banking system and will demand for enhanced retail banking services. Villager will also need money for affordable housing for which commercial banks are the only sources.

As the literacy rate has been increased (presently it is estimated to 71%) among rural people and recent government initiative of waiver of entire interest on educational loan during the education period is the students whose parental income is below 4.5 lakhs per annum had made education loan scheme quite attractive and enabled the banks to improve retail lending. In addition it given rise to strengthen the strong relationship between banks and young generation which is a prospective customer base for banks. In fact, the commercial banks should deeply involve in rural banking and en cash the opportunities to low cost effective business model to search the rural masses.

Commercial banks are now bound to adopt more cost effective diverse business models. The models may include following aspects;

* Extension and expansion of branches : this may have three types

1) Brick and motor branches (physical branches)
2) Ultra small branches (bank branch on wheel)
3) Branch –in –box through broadband satellite technology

* Technology driven service provider channels.

This may be classified under following categories:

1) Low cost micro at ms- only for cash withdrawal, deposition and balance enquiry
2) Biometric ATMs- Operation on thumb print or voice recognizing commands in vernacular language.
3) ATMs-on-wheels on periodic pr on regular intervals with bio-metric features
4) While label ATMs which are maintained and owned by independent service providers
5) Smart cards based on biometric authentications for pension payments, disbursals under rural employment generation programmer

*** Business correspondent model (BC model)**

In addition to the aforesaid business models in the recent years mobile banking is also being liked by rural masses. Mobile banking runs on interbank mobile payment service (IMPS) mode which enables the bank customers especially from rural regions to have access to their bank account and carry out banking transactions.

M – Wallet is like a prepaid account operated with the help of mobile phone for small money transactions in rural areas.

T – Banking is the banking operation carried out with the help of cable networks. Hence, it can be concluded that

The basic barriers of rural banking by commercial bank are:

* Lack of accessibility.
* Lack of easy reach.
* Lack of infrastructure.
* Lack of safety in remote village.
* Lack of effective information systems.
* Lack of literacy of rural people.
* Lack of foolproof identity.

And the solution is use of modern technology, optimum use of trained human resources and increased financial literacy of rural masses.

References:

1. Sixth bi-monthly monitory policy statement 2014-15, by Dr. G. Rajan. Governor of R.B.I.
2. Report on "low cost banking on mobile" by business standard.
3. Article of Dr. C. Rangarajan on "financial inclusion-not an option but conclusion"
4. Article by Mr. H. R. Khan on "mobile banking issues and challenges".
5. Article by K.R. Shetty on "profitability, risk and transparency in rural banking in India"

******

Cloud Computing in Agriculture for Rural Development with Special Reference to Sangli District (MS)

T. S. Dalvi
Department of Computer Science,
Research Scholar of Computer Science JJTU,
Jhunjhunu, Rajasthan

S. R. Kumbhar
Department of Electronics,
Willingdon College, Sangli

Abstract:

Cloud computing is emerging today as a commercial infrastructure that abolish the need for maintaining expensive hardware, software, IT resource, etc. Cloud computing will gives us great facility to store our data remotely and use that data on demand. Cloud computing technology is nothing but on- demand resource sharing technology. The term rural development suggests overall development of rural areas to improve the quality of life and standard of living of rural people. There are different approaches involved to rural development. It varies depending on time, space and culture. This paper is about rural development through cloud computing in agriculture for economic development of Sangli District (MS).

Keywords: *Cloud Computing, Krushi Mitra Cloud Model, IT resources, Rural Development.*

Introduction:

The main idea behind cloud computing is not a new one. John McCarthy in the 1960s already envisioned that computing facilities [1].will be provided to the general public like a utility. The term "cloud" has also been used in various contexts such as describing large ATM networks in the 1990s. However, it was after Google's CEO Eric Schmidt used the word to describe the business model of providing services across the Internet in 2006, that the term really started to gain popularity. Since then, the term cloud computing has been used mainly as a marketing term in a variety of contexts to represent many different ideas.[2] Now a day's lot of work is going on cloud computing in various research places. There are different types of clouds that one can subscribe, to depending on one's needs. As a home user or small business owner, they will most likely use public cloud services which was started by Bohem and et.al.

1. Public Cloud can be accessed by any subscriber with an internet connection and access to the cloud space.
2. Private Cloud - A private cloud is established for a specific group or organization and limits access to just that group.
3. Community Cloud is shared among two or more organizations that have similar cloud requirements.
4. Hybrid Cloud is essentially a combination of at least two clouds, where the clouds included are a mixture of public, private, or community.

There are three types of cloud providers that user can subscribe to:

* Software as a Service (SaaS)
* Platform as a Service (PaaS)
* Infrastructure as a Service (IaaS).

Software as a Service (SaaS) :- SaaS is a hosted set of software that you don't own but pay for the same element of utilization by user or some other kind of consumption basis here you do not have to do development or programming but you may need to come in and configure the software you don't have to purchase any software.[2]

Platform as a Service (PaaS):- This is the idea that someone can provide the hardware plus a certain amount of application software such as integration into common function.

Google App Engine is the best example.[2]

Infrastructure as a Service (IaaS):-IaaS is a delivery of hardware i.e. server, storage network and associated software operating systems, virtualization technology, file system as a service. The best suitable example is Amazon web server, EC2, Secure Storage Service (S3).

ISBN No. : 978-81-906732-6-6

Essential Cloud Computing Characteristics: [3]

1. On-demand self-service. A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.
2. Broad network access. Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations).
3. Resource pooling. The provider's computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location independence in that the customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state, or data centre). Some of the examples of resources include storage, processing, memory and network bandwidth [4].
4. Rapid elasticity. Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time[5].
5. Measured service. Cloud systems automatically control and optimize resource use by leveraging a metering capabilityat some level of abstraction appropriate to the type of service such as storage, processing, bandwidth, and active user accounts. Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service [6].

Rural Development through Agriculture Using Cloud Computing:

The success of agriculture is totally depending on different kinds of cycles i.e. seasonal, climatic, topographic, etc. Many time farmers from Sangli District may have to face with one of the above specified problems.

Agriculture, education and healthcare are essential aspects of economic development of the area. In Sangli District literacy ratio is approximately 82.62%. Considering literacy ratio it is much better than other district. Then the remaining two aspects are agriculture and healthcare.

This paper provides discussion on agricultural aspect as agriculture is backbone of Indian Economy. Due to global warming farmers have to face lot of problems to survive from the critical situations. So that it is necessary to provide all the essential information to the farmers regarding cultivation, use of fertilizers, market demands etc. To provide all these information at right time and at right place is necessary.

To overcome the problems faced by the farmers due to global warming i.e.

1. Increased frequency of weather extremes. (storms, flood and droughts)
2. Loss of bio diversity.
3. Long term fluctuation in weather pattern.

There are different schemes sponsored by government of India as well as NGO's. For example Pradhan Mantri Gramsadak Yojna, Pradhan Mantri Jan Dhan Yojna etc. These are some schemes sponsored by government of India which are usually used for rural development for all kind of people in rural area. Now focus on the rural development regarding agriculture government of India sponsored some ICT based schemes like Kisan Call Centre, agricultural portals which are helpful to the farmers but farmers has to face various types of problems like connectivity density is still low in some rural area from Sangli District. Taking all these points in to consideration it is proved that there is need of cloud computing for agricultural development is essential. As agriculture is a backbone of Indian economy, government of India has to concentrate on the development of agriculture. So to fulfil needs of farmers and considering his financial condition architecture of Krushi Mitra Cloud is designed.

Why is the Need of Krushi Mitra Cloud Model in Sangli District?

1. Weather Reports:-As farmers uses old methods to get weather reports like newspapers, radio's etc. Sometimes farmers cannot access weather report in time and accurate.
2. The main reason of designing the architecture of the KRUSHI MITRA cloud model is to improve

economic condition of farmers KRUSHI MITRA cloud model will helpful for those farmers who are having deficient production information. As this production information knows to the farmer that will use at the time of planting according to demands farmer that will decide what to be planted.

3. The KRUSHI MITRA cloud model will provide the adequate information about consumption trend.
4. Experts will communicate with farmers through KRUSHI MITRA cloud model so as to prevent major diseases and they will give the proper guidance to the farmer for better production due to this the quality product will directly affects the farmers economical status.

Change is the essence of life so change the routine and use the new technologies there are some barriers or some challenges that has to be faced are – illiteracy, computer literacy, Power supply, lack of awareness among farmer about cloud computing. etc. Considering all these points KRUSHI MITRA cloud model is designed but for implementation of this cloud required some kind of support from government of India like other countries.

Conclusion:

This Krushi Mitra Cloud is specially designed for Sangli District taking all the parameters about Sangli District under consideration i.e. type of soil, atmospheric conditions etc according to these parameters Krushi Mitra Cloud works for better results in outcomes. That is directly proportional to the economic condition of Sangli district and as economic condition increases automatically that will affect on Rural Development.

References:

1. Meera, S. N., Jhamtani, A., & Rao, D. U. M. (2004). Information and communication technology in agricultural development?: a comparative analysis of three projects from India Agricultural Research & Extension Network, (135), (pp 2–15).
2. Böhm, M., Leimeister, S., Riedl, C., & Krcmar, H. (2010). Cloud Computing and Computing Evolution. Cloud Computing Technologies Business Models Opportunities and Challenges(pp. 1–28).
3. Assunção, M. D., Costanzo, A., & Buyya, R. (2010). A cost-benefit analysis of using cloud computing to extend the capacity of clusters. Cluster Computing, 13, pp(335–347).
4. Hoy, M. B. (2012). Cloud Computing Basics for Librarians. Medical Reference Services Quarterly, 31(5), pp(84–91).
5. TongKe, F. (2013). Smart agriculture based on cloud computing and IOT. Journal of Convergence Information Technology, 8(2), pp(210–216).
6. Science, C. (2013). International Journal of Software and Web Sciences (IJSWS) Cloud Computing for Agricultural Information Management in India, pp(38–42).

****

Development and Promotion of Higher Education in Rural India

Prof. Mrs. A. S. Gaikwad
Bharati Vidyapeeth Deemed University, Pune
IMRDA , Sangli

Prof. Dr. P. P. Jamsandekar
Bharati Vidyapeeth Deemed University, Pune
IMRDA , Sangli

Abstract:

"Sarva Shikshan Abhiyan" Higher education plays a pivotal role in the development of a country, as it is viewed as a powerful means to build knowledge based society. In India, higher education imparted by universities is facing challenges in terms of Access, Equity and Quality. The Government of India has taken several initiatives during the Eleventh Five Year Plan to increase access to higher education by adopting state specific strategies, enhancing the relevance of higher education through Curriculum reforms, Vocational programs, Networking, Information Technology adoption and Distance Education along with reforms in governance. However in terms of Gross Enrollment Ratio (GER), India still lacks behind the worldwide average and emerging countries like Brazil and China.

The Indian Higher Education System has established itself as the largest system in the world in terms of number of institutions and third largest in terms of student enrollment. While several new institutions have emerged due to significant increase in private sector participation over the last few years, concerns remain regarding the quality of education being imparted to students. Support for education given by Indian Government is continued but still it faces problems. Problem sari selack of location, teaching aid, teacher's quality and so many other factors are affected on education. Now a day's students are more intelligent and have a smart brain but still in rural area education environment do not able to cater better services to develop them.

Key words : *ICT, e-learning.*

Introduction:

"Sarva Skishan Abhiyan" is given by Indian Government but still lacking in executing it in education systems in developed and developing countries conclusive evidence has been established that shows the critical role of the teacher in ensuring positive learning outcomes for students. Too many factors are left when our Government provides an education to all people in India.

1 Lack of concepts
2 Lack of Aids
3 Practical Knowledge
4 Soft Skill
5 Implementation
6 Road Map of Education
7 Teaching Techniques'

Government provided teachers but how to cater students as per the market demands is lacking in education.

"Flow with Life and Life Flow You"

The same concept is implemented in education. In the era of technology people started implementing e-learning through ICT. Now the question remains is it possible in rural area to implement such a technology? Government provided Teaching Aid for rural area and implemented it. It is useful for rural students when they use ICT for e-Learning and Online Course. Solution is there for higher education but can it implement in rural area? Is a question in front of Higher education board? Many rural area are developed and have a higher education like Engineering and master's degree courses. Rural area has grown up and developing but without promoting the higher education one cannot develop. To adopt the new technology and understand it's applications in every part of rural area is not at successful. For Promoting the higher education, education Society places new concepts and new technology in form of higher education

system in rural area. Indian Education from earl's 18th Century it is provided by Guru Dev and students are learning what the society required. King's Son study Education of war and Veda's,Carpenter child learn Carpenter concepts and so on. Next 19th Century Education system grown up and class room concepts were started. Students learn under one roof a same education.

The day's goes on and now 20th Century students are learning with new technology. In this century the education society promoting the education sectors and development goes on too many teaching Aides are available for student's education. Can teaching aid is enough for students learning only by providing good environment and facility can students grow up. Students are facing a problem when they do not understand a concept discussed in content of textbook. Aid is provided but still throughout education are help student to teach well. The answer is not at all simply it is aid which is provided supplementary and visualization. Another biggest problems in today's education is can we provided the real practical knowledge to students. Students are facing lot of problems when they completed their higher education like facing interview and Soft skill. Soft Skill is a basic requirement of companies still students are lacking these problems and underestimate the problems of rural students. Government take care of expand early education. Promote the acquisition of life skills by adolescents and youth. Expand adult literacy by 50 per cent by 2015.Eliminate gender disparities by 2005 and achieve gender equality in education by 2015.Enhance educational quality.

Is education implement on basis of Government norms? Is our generation get a practical knowledge and implemented in real life? The question remain as it is but still education goes on. The students are walking in dark path where they never seen a light of successes. Today's education depict that theoretically concepts taught thoroughly but practical approach and how to implement that knowledge in real life is least focused. Till 10th and 12thstandard the child understand what he/she should do. After that by their Parent and students walk always on the path that is shown.12th is a turning point in students education on that mode they decided where they want to go? As per their mark list they select career and take an admission for higher education. Now higher education part is started and students learn and grown up with technologies. In the rural areas so many factors are not available to act well education. While reaching the rural poor might appear to be more costly and time- consuming than reaching the urban or per-urban poor, we believe that this is a task that can no longer be neglected or postponed. If we want to contribute to building a world where peace prevails over war and terrorism, and prosperity over poverty, the cost-effectiveness of international aid for education for rural people needs to be analyzed in the long term and as part of a holistic approach.

A key message of this publication is that 'business as usual' and'more of the same' will not solve the education problem in rural areas. The challenge is to find specific modalities to address the demand and supply issues that education faces in these areas. The challenge is also to link education interventions with broader poverty reduction and rural development efforts. Education for All will never be achieved in area saffected by poverty, high mortality, gender and other forms of discrimination. But as we talk of reform and development, let us not forget the particular qualities of education for rural people that could be exported to schools in urban areas and make the latter richer – pedagogically, intellectually and academically precisely by being more practical in Rural life has fertilized education in many ways and this rich heritage should not be ignored and lost, but nurtured and enriched. Higher education institutions clearly need well-designed academic programme and a clear mission. Most important to their success, however, are high-quality faculty, committed and well-prepared students, and sufficientre sources. Despite notable exceptions, most higher education institutions in developing countries suffer severe deficiencies in each of these areas.

As per Report of the Higher education in India, issues related to Expansion, Inclusiveness, Quality and Finance, the access to higher education measured in term of gross enrollment ratio increased from 0.7% in 1950/51 to 1.4% in 1960–61. By 2006/7 the GER increased to about 11 percent. Notably, by 2012, it had crossed 20% (as mentioned in an earlier section). As a result, few perform to a consistently high standard. The proposal is provided for "Bharat Nirman

ISBN No. : 978-81-906732-6-6

Volunteers"(BNV) BNVs with a minimum 8/10th/ standard (pass) will be trained as PVs as per local needs. The proposed cadre of PV (Professional Volunteers) - first of its kind in the country Thought shift from employment to employability Imparting professional skills to foster sustainable development.

PVs to be trained in three (3) streams:

1) Rural Development Professionals
2) Master Trainers
3) Bare-foot practitioners.

National Council of Rural Institutes (NCRI)- Engaged in promoting Rural Higher Education since 1995.

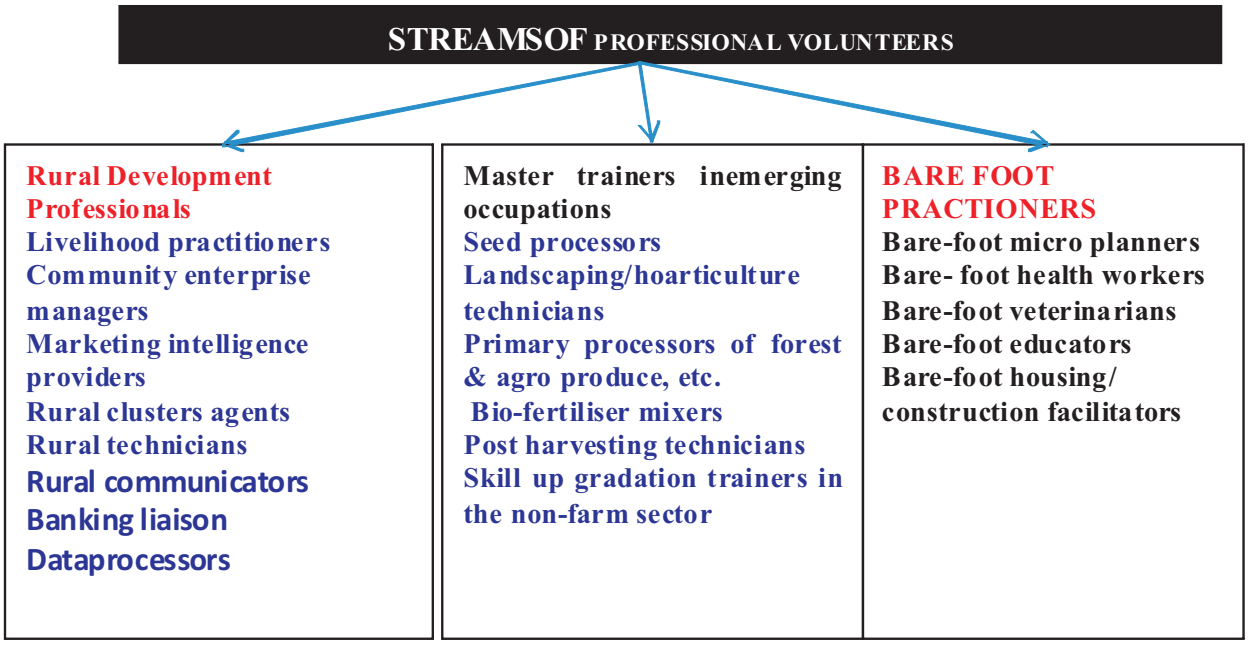


Fig**1**:-Streams of Professional Volunteers.

NCRI has necessary strengths to be recognized as a National Facilitating Agency (NFA) for training of Professional Volunteers, for reasons mentioned below:

* Wide network with Rural Institutes in all regions of the country
* Initiated several programmers through Rural Institutes
* Has been focusing on Rural Higher Education to train rural development professionals
* Has specialist units namely, RIF, GRTGSK, Micro-Planning, RRIC, DALC, SVCYP and The Wheel.
* Collaborating with IGNOU on a 6-12 week

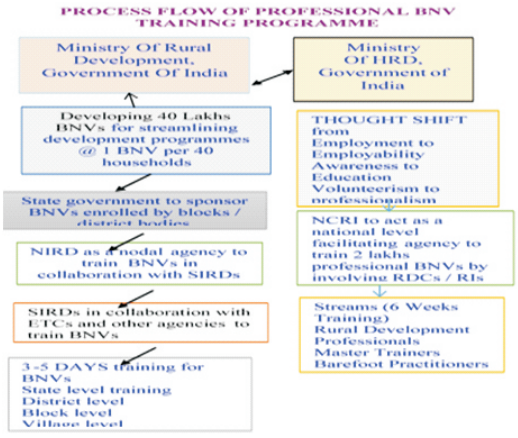


Diagram 2 Process flow of Professional BNV Training Program

ISBN No. : 978-81-906732-6-6

Internship Programmed to fill the practice deficit.

Networking with knowledge-partners (Rural Institutes, Universities, TCOs, EDIs and Research Institutions, etc.

National Council of Rural Institutes

Objective of Rural Higher Education

Encourage more pupils to go into Higher Education

* New Strategies to gain meaningful work and educational experience to create better jobs and stronger work force.

* Reducing skill gaps to provide youth with skills and work experience needed for jobs to meet future employment needs.

Rural Internship Programmer (RIP) Indian economy has been grappling with the challenges of shortage of people with skills required for relevant sectors. The acute shortage of skilled personnel became a major constraint. After entry into jobs, the skill-deficit made the Indian youth "skeptical" of their abilities and worth. Rural Internship Programmer (RIP) is designed to fill-up the practice-deficit of the existing academic programmers and enable the rural youth to enhance their employability. Many studies have been published that examine the extent, nature, policies, learning outcomes, and other issues associated with online instruction. While much of this literature focuses specifically on post secondary education with approximately three million students presently enrolled in fully online courses not as much has been published about students enrolled in fully online and blended courses in primary and secondary schools. This is one of the first studies to collect data and to compare fully online and blended learning in K-12 schools. The purpose of this study was to explore the nature of online learning in K–12schools and to establish base data for more extensive future studies. Issues related to planning, operational difficulties, and online learning providers were also examined. This study does not necessarily answer all of the issues raised but hopefully will promote further discussion and study of them.

Conclusion

It is imperative for India to emerge as a modern, developed nation. Objective of rural higher education to create better job and knowledge has to be practical oriented through ICT and e-learning. NCRI play a vital role in rural development in education. BNV also took steps to promote higher education in rural India. Teachers also take an important role with the help of e-learning to develop the rural area.

References:-

1) http://164.100.47.134/intranet/Minority_Educati.pdf
2) http://planningcommission.nic.in/plans/planrel/fiy/9th/vol2/v2c3-3.htm
3) http://www.ncbi.nlm.nih.gov/pmc/articles/ PMC-3180952/

****

Fuzzy Based Electronic Crop Water Treatment System

Atar K. D.
Laboratory of Soft Computing,
Department of Electronics,
Shivaji University, Kolhapur, (MS)

Mudholkar R. R.
Laboratory of Soft Computing,
Department of Electronics,
Shivaji University, Kolhapur, (MS)

Patil S. M.
Department of Computer Science
BVDU, IMRDA, Sangli,
Maharashtra

Abstract-

Water is essential element for all plant growth. In India the farmer faces a tremendous problem for providing water to the crops, because of scarcity of water. The aim of this paper is to provide enough water in to the crop, which helps to saving water as well as money. The entire work of the control system is PIC 16F877A, and peripherals like temperature sensor, soil moisture sensor, humidity sensor, sprinkler and sprinkler driver system. Required amount of water for each crop also each growing stage is different, in case this percentage is varies it directly affects on crop growth. Using this fuzzy controlled control system we reduce man power, wastage of water and increasing the crop yield.

Introduction.

The need of water is very important concept in every field also in our day to day life water is very essential part in human being. Now a day's, shortage of water is biggest problem of the world, in this situation Indian technology is growing on agriculture field. Agricultural field is a one of the field which requires water in tremendous quantity. Also in direct crop watering system requires more amount water, in traditional process up to 60 % water is waste. Many water conversational methods are developed likewise using water drip system we can save some amount of water but it is not enough in agricultural field. In each crop required quantity of water is different, which is very complicated concept. For better crop yield it requires enough water. Using this system we can provides enough water content at different crop growing stages.

Venkata Naga Rohit Gunturi [1] presented the micro controller based plant irrigation system. He pickup the sensor based input date and controls the sprinkler using electronic control system. Avraham Meiriet al. [2] introduced the short distance root watering system for paper plant. They concentrate on root and shoot growing systems such as balanced root system and maximal shoot growth. Stefanie von Westarpet al. [3] worked on low cost water irrigation system. They studied the recent introduction of low-cost drip irrigation (LCDI) in Nepal. Also they compared the varies water irrigation systems in same country.

Block Diagram of automatic crop watering system

The keypad, Temperature sensor, Humidity sensor and soil moisture sensor is the input interfacing parameter of the control system shown in figure 1. The Fuzzy source code is embedded into PIC micro controller through PIC-KIT-3 burning technique. Using real time input the present Fuzzy controller decides ON time of the sprinkler. This system is operated using computer or without computer.

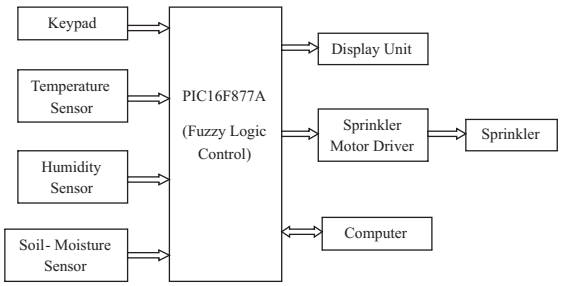


Figure1. Block diagram of automatic crop watering system

The real time data of the each input sensor is recorded and stored into computer for further research. This system provides only enough amount of water content reference with given set point. Fuzzy Logic In recent years there are wide varieties of Fuzzy Logic applications increased significantly. Its applications are consumer product, industrial control, medical instrumentation, decision support system and now agricultural field. It is possible to human thinking based basic ideas implement into actual

ISBN No. : 978-81-906732-6-6

hardware.Fuzzy Logic is a method of enhancement in the knowledge base reasoning process. It is computing based degree of truth rather than usual true or false. It follows three steps such as Fuzzification Fuzzy Inference and defuzzification. Figure 2 represent the automatic crop watering system FIS (Fuzzy Inference Scheme).

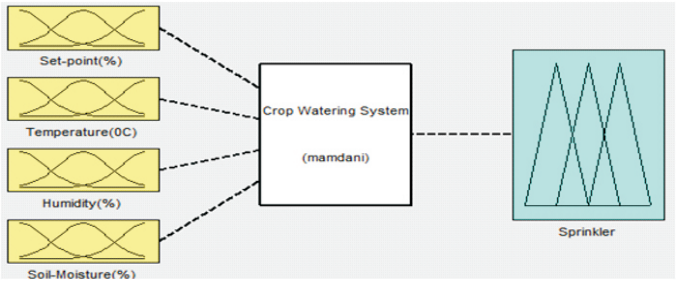
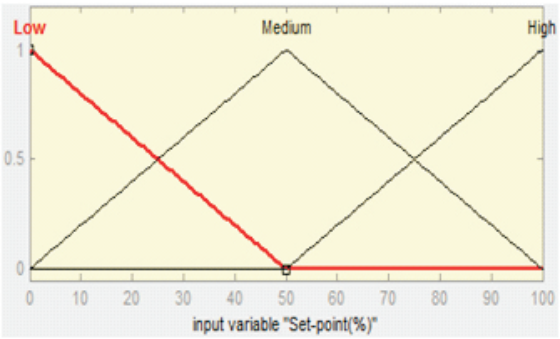


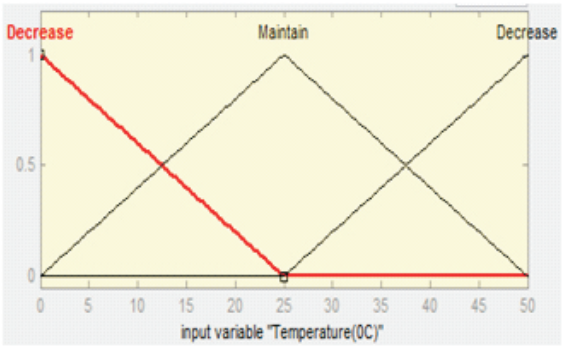
Figure 2. Multi-In-Single-Out Fuzzy Inference Scheme of automatic crop watering system

Fuzzification of input signal

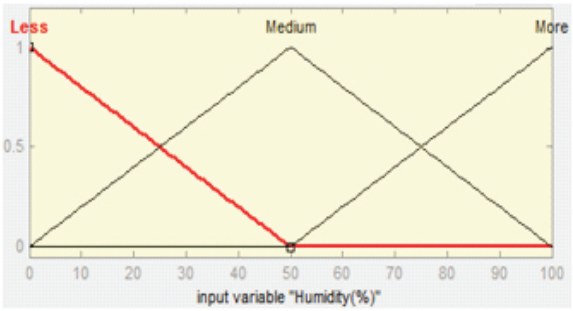
Fuzzification means the conversion of crisp value into fuzzy membership function. In present case each fuzzification signal is classified into three triangular shape linguistic variables. For set point fuzzification signal linguistic variable entitled as Low, Medium and High and its Fot print of Uncertenty (FoU) is 0 to 100 % shown in figure 3(a). Also for temperature fuzzification signal linguistic variable entitled as Decrease, Maintain and Increase and its FoU is 0 to 50 0C shown in figure 3(b). Similarly for input signal humidity, the linguistic variable entitled as Less, Medium and More and its FoU is 0 to 100 % shown in figure 3(c). and soil-moisture fuzzification signal linguistic variable entitled as Small, Medium and Large and its FoU is 0 to 100 % shown in figure 3(d).



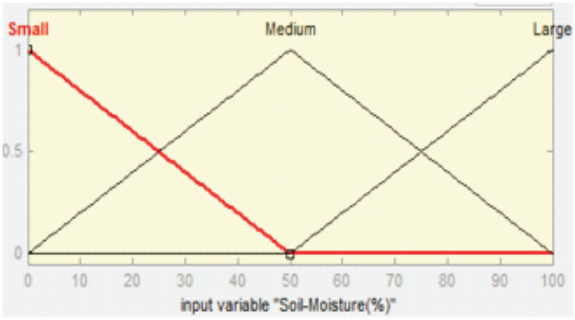
(a)



(b)



(c)



(d)

Figure 3 Fuzzification of input signal (a) Setpoint (b) Temperature (c) Humidity (d) Soil-Moisture

Fuzzification of Output signal

The output fuzzification signal entitled as sprinkler and its range is 0 to 1. This signal is fuzzify into two trapezoidal membership function named as OFF and ON which decides sprinkler ON OFF condition.

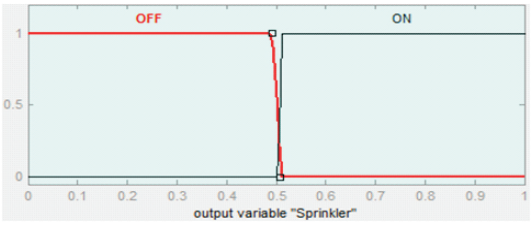


Figure 4. Fuzzification of output signal sprinkler

Fuzzy Inference

Fuzzy inference is a heart of Fuzzy Logic. In this process have simple rules in IF-THEN format. The active rules in input side are indicated in yellow color fill background and output side active rules indicated in blue color background. There are 28 membership functions are active at a time and finds the sprinkler ON OFF position.

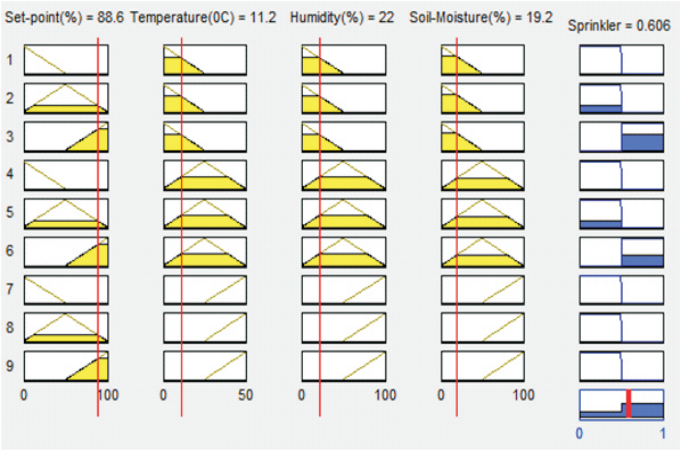


Figure 5. Rule viewer of automatic crop watering system

Defuzzification

Defuzzification means the conversion of fuzzy membership function into crisp value/actual decimal value. The numbers of defuzzification methods are available in market but centroid defuzzification is simple and common method. From figure 5, fifth number column and ten number row represent the defuzzification process. In present case it is 0.606.

Surface view

The surface view is a graphics of FIS, to see how output values varied with monotonic changes to the input variables [4]. It is representation of relation between input and output in 3-D form. We have taken four input and one output parameter for Fuzzy implementation. Where four inputs is involved and finds the all possible values of output shown in figure6. Each axis depicted by the individual input and output parameter.

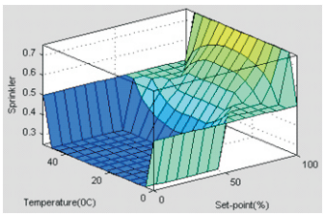


Figure 6. Surface view of automatic crop watering system

Concluding Remark

In different crops as well as each growing stage of crop, required quantity of water is different but present electronic crop watering system provides necessary water only. Enough water helps to crop growth and resultant crop yield is enhances. Due to this fuzzy based automatic crop watering system required quantity of water is less and as compare to traditional method using this method crop growing rate is more. The system is implemented in actual and gives better performance.

References

1 Venkata Naga Rohit Gunturi "Micro Controller Based Automatic Plant Irrigation System" International Journal of Advancements in Research & Technology, Vol. 2, No.4, April-2013.

2 Avraham Meiri, Boris Naftaliev, David Shmuel, Hana Yechezkel, Gregory Communar and Shmulik P. Friedman "Short-term watering-distance and symmetry effects on root and shoot growth of bell pepper plantlets" Agricultural Water Management, vol. 98 pp.1557– 1568, 2011.

3 Stefanie von Westarp, SietanChieng and Hans Schreier "A comparison between low-cost drip irrigation,conventional drip irrigation, and handwatering in Nepal" Agricultural Water Management Vol.64 pp.143–160, 2004.

4 Carolyn Heineken, Theodore Metzler, Rafael Ortiz and Ray Wonsewitz "Tuning A Fuzzy Expert System For Simulations Of Population Behavior" Proceedings of the IASTED International Conference Modeling and Simulation USA, pp.318-321.

5 Mustapha Gorai, WafaLaajili, Louis S. Santiago and Mohamed Neffati "Rapid recovery of photo synthesis and water relations following soil drying andre water ingisrelated to the adaptation of desertshrub Ephedra alata subsp. alenda (Ephedraceae) to a rid environments" Environmental and Experimental Botany vol.109 pp.113–121, 2015.

6 YU Wen-jin, Kitamura Ryo, Kato Katsuhiko, LI Lian-hua and Fukui Hirokazu "A Computer Program for Automatic Watering Based on Potential Evapo transpiration by Penman Method and Predicted Leaf Area in Miniature Pot Rose Production" Agricultural Sciences in China, vol. 9, no.3, pp.370-377, 2010.

****

e-Governanceand Rural Development of India

Babasaheb D. Patil
Research Scholar, Shivaji University, Kolhapur
Asst. Professor, BVDU IMRDA, Sangli (MS)

Dr. B. S. Sawant
Director
KBP Institute of Management, Satara

Abstract:

The empowerment of rural communities is crucial for the development of the rural India. Brining the rural people in to the mainstream of the digital technologies for the agriculture and rural development is a major concern now. The Information and Communication Technology (ICT) plays an important role in agriculture and rural development. Rural Development implies both, the economic development of the people and greater social transformation using electronic governance. In order to provide the rural people with better prospects and opportunities for economic development, agriculture development and management, Agriculture marketing; increased participation of farmers in electronic governance through information and communication technologies are envisaged. Information and communication technologies are viewed as an efficient tool for information delivering to the rural community including farmers in India. The e-Governance and wireless communication technologies can be used for empowering the farming communities and rural communities for economic development of rural region. The farmers can get the agriculture marketing information through e-Governance. The wireless communications can be used not only for the decision making in agriculture such as selection of crops, fertilizers, water requirement etc. but also for different agriculture services such as harvesting, marketing, processing etc. The application of e-Governancein agriculture sector is also helpful in management of database of agriculture labours, health of farmer etc. The rural areas are vulnerable to climate change affecting the agriculture production. The assessing and mitigating impacts of climate change is crucial for agriculture development. The ICT, Wireless Technologies ,e-governance plays an important role in agriculture development, management and climate change information delivery system in rural region . The use of e?governance is very effective for the management of agriculture and the database for the agriculture industries. This paper aims to explore the nature, role and relevance of the Electronic/Digital Governance using ICTs and wireless technologies for assessing the impacts of agriculture and rural development of India.

Keywords: *ICT, UNDP, NEGP*

Introduction:

Information and Communication Technologies (ICTs) play a key role in development & Economic growth of Rural India. Political, Cultural, Socio-economic Developmental & Behavioral decisions today rests on the ability to access, gather, analyze and utilize Information and Knowledge. ICT is the conduits that transmit information and knowledge to individual to widen their choices for Economic and social empowerment. In near future people will be carrying a handheld computer connected to the Web to get the information about the World at their fingertips. Government of India is having an ambitious objective of transforming the citizen-government interaction at all levels to by the electronic mode (e-Governance) by 2020.

A successful ICT application in e-Governance giving one-stop solutions for rural community is the need of the hour. ICT is crafted to enable the Electronic Governance through wireless communication, thus it's integrally interlinked. eGovernance - Rural Development Initiative:

India is a country of villages and to improve and sustain the overall prosperity, growth and development in the global competitive regime, National E-governance plan (NEGP) seeks to lay the foundation with various projects, starting from the grass-root levels, and provide impetus for long-term e-governance within the country. In this

direction rural e-Governance applications implemented in the recent few years have been demonstrating the importance of ICT in the concerned areas of rural development. Indeed, some of the schemes introduced in rural India have improved the government services immensely. Instances like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), e-office, e-Panchayat, Warana Project in Maharashtra, Online Income Tax, Online Central Excise, Unique ID, has accelerated growth of respective areas and contributing to country's economic development. Similarly, at state level the various rural e-governance projects such as SETU Project in Maharashtra etc, projects that have been providing excellent services and saving time and money of people as well as of government and are contributing their might to the socio-economic development of rural India. Being ICT a significant instrument in e-Governance and Rural Development, appropriate infrastructure/design is mandatory for proper functioning as follows:-

* As designed of citizen centric services, and dependable service delivery mechanisms.
* Selection of appropriate (dependable, maintainable, cost effective) technologies for rural connectivity and information processing solutions.
* As designed of cost effective delivery stations (kiosks) to build new services.
* Demonstration of transparency and efficiency to remove distrust and build confidence among the citizens on functioning of service delivery mechanisms.
* Invite private participation to reduce the burden on the central servicing agency, bring in the expertise, enhance the speed of implementation, and offer better value proposition to the citizens. The term e-governance focuses on the use of new ICTs by governments as applied to the full range of government functions. Thus e-governance is the application of information and communication technology for delivering government services, exchange of information, communication, transactions, integration, various stand-alone systems, and services between government and citizens, government and business as well as back office processes and interactions within the entire social and government frame work. The government being the service provider it is important to motivate the employees for delivering the services through ICT. e-governance seek to achieve Efficiency, Transparency, and Citizen's Participation. Enabling e-governance through ICT contributes to Good Governance, Trust and Accountability, Citizen's Awareness, and empowerment, Citizen's Welfare, Democracy, Nation's Economic growth. ICT is the biggest enabler of change and process reforms fade in face of what ICT has achieved in few years.

e-governance services through ICT refer to transactional services that involve local, state or national government. ICTs acts in speeding up the flow of information and knowledge between government and citizens and transforming the way in which governments and citizens interact. According to the United Nations Development Program (UNDP) the challenge for all countries is to create and develop a system of governance that promotes supports and sustains human development. Governments in many parts of the world have made huge ICT investments aimed at improving governance processes.

In India, e-Governance applications in the recent past have demonstrated their positive impact in minimizing the processing costs, increase transparency and support economic development by income generating ventures, increase in agricultural production, and improvements in health and education sectors, all of which promote the overall quality of life of rural people. ICT contributes in providing the transactional services for the rural people with the benefit of time and cost savings in obtaining the public services with efficiency and effectiveness and it also examines changes in agricultural productivity and improved quality of life due to the ICT services. In addition to the above AEPS, GPS etc. are pivotal in ICT services. The rural ICT applications attempt to offer the services of central agencies (like district administration, cooperative union, and state and central government departments) to the citizens at their village door steps. These applications utilize the ICT in offering improved and affordable connectivity and processing solutions. Several Government-Citizen (G-C) e-Government pilot projects have attempted to adopt these technologies to improve the reach, enhance the base, minimize the processing costs, increase transparency, and reduce the cycle times to half. A large number of rural e-Government applications, developed as

ISBN No. : 978-81-906732-6-6

pilot projects, were aimed at offering easy access to citizen services and improved processing of government-to-citizen transactions. The idea that the primary and the sheer object of ICT in e-governance and rural development is individual's motivation to collective mobilization for an integrated rural development.

Application to Agriculture Sector:

Title: Agriculture Mission Mode Project under NeG (NeGP – A)

Information needs of farmers have been traditionally catered to through schemes implemented by States / UT governments. The Government of India has been supporting the States by initiating and funding quite a few programmes. All these schemes have a component about information dissemination. There are a number of current IT initiatives/ schemes undertaken or implemented by DAC which are aimed at providing information to the farmers on various activities in the Agricultural value chain. However, these initiatives are not integrated and the information exists in silos because of which the farmer is unable

Fig. Digital Bridge for Rural Development

to make proper and timely use of the information available. The existing IT applications have been built on disparate IT platforms and the databases are not integrated leading to non-usage/ inefficient usage of existing applications. Moreover, there is little awareness among the farmers about current initiatives.

Client Name: Department of Agriculture and Cooperation, Ministry of Agriculture

Client Type: Central Government Project Genesis /Description:

Information needs of farmers have been traditionally catered to through schemes implemented by States / UT governments. The Government of India has been supporting the States by initiating and funding quite a few programmes.

All these schemes have a component about information dissemination. There are a number of current IT initiatives/ schemes undertaken or implemented by DAC which are aimed at providing information to the farmers on various activities in the Agricultural value chain. However, these initiatives are not integrated and the information exists in silos because of which the farmer is unable to make proper and timely use of the information available. The existing IT applications have been built on disparate IT platforms and the databases are not integrated leading to non-usage/ inefficient usage of existing applications. Moreover, there is little awareness among the farmers about current initiatives. NeGP-A aims to provide an integrated and seamless interface to the farmers for making informed decisions. Additionally, under the proposed scheme, information is proposed to be delivered using multiple delivery channels such

Fig. Digital Bridge for Rural Developmen as the internet, government offices, touch screens, Krishi Vigyan Kendras, electronic media, Kisan Call Centres, Agri-Clinics, Common Service Centres and mobile phones (broadcast, Interactive Voice Response System, interactive messaging using Unstructured Supplementary Service Data and Voice Recognition), which will enable easy access to information for the farmer. It would also help in effective monitoring of the targeted beneficiaries which will help in efficient utilization of funds in achieving intended goals of various schemes of DAC.

Project Vision:

The vision of the NeGP - A project is to create a conducive for raising the farm productivity and income to global levels through provision of relevant information and services to the stakeholders. In order to achieve the aforesaid vision, the department has also articulated key SMART (Specific, Measurable, Achievable, Realistic and Time-bound) objectives which need to be achieved through the Agriculture MMP. These can be identified as:

- Improve access of farmers to timely and relevant info & services throughout crop-cycle: By providing multiple delivery channels to access

ISBN No. : 978-81-906732-6-6

information By reducing time between generation and dissemination of information By providing information to the farmer through a uniform platform

* Bringing farmer centricity & service orientation to the programs by providing location specific and up-to-date crop management related information in terms of: Good Agricultural Practices – season specific, crop specific, location / zone specific Package of Practices – season specific, crop specific, location / zone specific Providing personalized advisory services
* Increasing effectiveness of Government service delivery in: Certification and licenses related to Manufacturing and Marketing through use of ICT providing easier and approachable channels for grievance registration and tracking
* More effective management of schemes of DAC through process redesign aimed at: Effective Monitoring of the Schemes (timeliness of implementation etc.) Reducing time required for data consolidation and reporting of schemes at all levels
* Enable private sector participation to benefit farmers by providing an integrated platform to promote value added services in: Extension, Marketing (both input and output) ,Post-harvest and Storage.

Role ISAP (NGO) in Rural Development: Indian Society of Agribusiness Professionals (ISAP) is a non-government, non-profit organization incorporated in 2001, under Section 25 of the Indian Companies Act. It is a network of agriculture and allied sector professionals in India and developing countries.

* Instill economic security and stability among farming community particularly small & marginal farmers through holistic development of agriculture and rural sector.
* Improve the livelihood pattern of small & marginal farmers by enhancing their access to appropriate and affordable technologies, market related information and linkages.
* Sustainability of extension services and expert advice through capacity building exercises effectively bridging the rural-urban divide.
* Associate all professionals' involved in different aspects of agriculture and rural development through national and international networks.
* Promote financial sector inclusion for farmers and small & medium enterprises in agri-sector through access to market capital and risk management tools.

Objectives of ISAP:

1. To coordinate, promote, develop and educate about technical services to all communities, organizations and individuals engaged in agriculture and rural development.
2. To provide query redress services for queries received from communities, organizations, farmers and individuals dealing in agribusiness and other related technical activities.
3. To provide market linkage activities to growers and producers and help create institutions which would strengthen marketing and value addition to primary produce.
4. To provide training, course content, know-how and managerial inputs for set -ting up and management of agribusiness clinics, rural service centers, providing content aggregation and dissemination services.
5. To provide all kind of recruitment services, training services, capacity building services, consultancy services and advisory services to all communities, organizations and individuals with regard to agribusiness, rural development and other related technical sectors.
6. To undertake advocacy campaigns and projects to promote financial inclusion amongst low income households especially in rural India.

1. Agri-Extension Services: ISAP agri-extension services involve bridging the knowledge gap through farmer awareness campaigns, resolving farmer queries through 'Query Redress Service', bridging the digital divide by expanding the ICT outreach, developing network among stakeholder and establishing knowledge delivery mechanism through promotion of community radio. For effective service delivery, ISAP undertakes extensive networking with different stakeholders, like development institutes, extension officers, agri-input and service providers, donor agencies, government departments and prominent state level NGOs. With support of the partners, ISAP conducts Farmers' Awareness Campaigns and Farmers Training to generate awareness among the rural farmers with the objective of expanding the outreach and revamp the extension services. ISAP has already trained 78,380 farmers at 2,064 locations in all the 48 districts of Madhya Pradesh.

ISBN No. : 978-81-906732-6-6

i) ICT Services in Agriculture: ISAP with support of Microsoft - Unlimited Potential Programme has established 'Community Technology Learning Centers (CTLCs)' in remote villages of Maharashtra to provide IT training to 45,000 farmers and unemployed youth. Under two-year programme, ISAP would be setting up 250 CTLCs at village level for imparting IT training to rural community and increase their income earning potential. ISAP is working on online weekly price monitoring system of herbal & medicinal plants with the funding support of National Medicinal Plant Board. ISAP gathers and manages authentic data about the weekly price and demand for 101 medicinal plants from 50-marketing centers in different states of the country. These data are weekly upgraded on the basis of prices and quantity offered for different medicinal plants.

ii) Community Radio Stations (CRS) :Timely availability of reliable information is the key to achieve sustainable food production and mitigate risks. Toward this community radio stations will act as an effective tool of communication and create platform to share experiences, perspectives and innovations to increase yield and reduce labor. ISAP has been identified as one of seven organizations in the country to establish community radio station. It will set up the first radio station at Shironj block of Vidhisa district in Madhya Pradesh.

iii) Query Redress Services (QRS) :Transfer of technical and scientific knowledge to the farmers is one of the primary functions of ISAP. QRS enables ISAP to provide solutions to farmer's queries pertaining to agricultural practices, problems, productivity improvement, scientific farming and improved technology for production to farming community. ISAP is running a query redress services (QRS) funded by One World South Asia (OWSA). The queries are received via electronic mail, by post and through telephone and responded within 24 hours. Currently ISAP receives more than 300 queries per day from farmers of Himachal Pradesh, Madhya Pradesh and Uttar Pradesh farmers, where it runs this service. Till today, ISAP has responded to various online queries besides many more through the offline medium. ISAP received National Award on E-governance 2007-08

iv) NGO Networking: ISAP provides agri-extension services to corporate sector, looking for end-to-end solutions in supply chain management with an effective involvement of farmer groups, producer companies and NGOs. It provides comprehensive extension services with knowledge transfer, technical advice on production and post-harvestmanagement to farmers so that the corporate bodies are assured of quality and farmers of remunerative returns on their produce.

2.Training& Entrepreneurship development:

ISAP imparts training primarily focusing on skill up-gradation, entrepreneurship development and domain knowledge on commodity futures and trading.

i) Entrepreneurship Development Program

This is being provided to unemployed agriculture and allied sector graduates in 9 states under the aegis of MANAGE.

ii) Skill Up-gradation Training Program

Skill up-gradation training is provided to enhance livelihood opportunity among Farmers', NGOs, SHGs and youth. Main objective of the training programme is to enrich skills among farmers, farm women, artisans, craftsmen and unemployed rural youth that will widen job opportunities and enhance their income generating potential.

3. Market Linkage Program

ISAP fosters market linkages between buyers and sellers for various agriculture, horticulture crops and their allied products. This enables to bring the marketing stakeholders on one platform. Such events have witnessed effective participation from central and state government agro-marketing agencies like APEDA, National Horticulture Board, KVICs, Farmer groups/Organizations, NGOs, Producers and major Buyers of different commodities not only from within the country but also abroad. The impact has been very good as many of the producer groups could finalize profitable deals with major buyers. Some of the national/ international events, organized by ISAP are:

* Apple and Temperate Fruits at Shimla (HP) and Srinagar (J & K).
* Banana Conference & Festival, New Delhi.
* Dairy Value Chain meet, Chennai.
* Honey Meet, New Delhi.
* International Buyer and Seller Meet on Medicinal

ISBN No. : 978-81-906732-6-6

& Herbal Plants, New Delhi.

* International Conference on Commodity Supply Chain Management, New Delhi.
* Pulses Meet, New Delhi.

.Fig. eKrishak

4. Industry Support

ISAP is accredited by Ministry of Commerce for issuing 'Certificate Of Origin' (Non-preferential). It acts as Chamber of Commerce for the benefit of exporters of agricultural produce, processed foods and also other items. The services include the following:

* Issue of Certificate Of Origin - Non Preferential (NP) for shipments from India.
* Special CCO (NP) for shipments to Mexico.
* Certifying translations of legal documents for sending to buyers abroad.

Tab - e-Krishak:

Tab - e-Krishak Sahyogi has been envisaged to address the problem of accessibility of useful and timely information by small and marginal farmers. This is an applet on tab offering gateway to solution of farm-specific queries of small farmers. Farmers can learn cropping techniques with modern technologies using high definition 3-D animation videos or multimedia slide-show videos. Also, they can access other relevant and timely information in the audio, pictures and text format. Besides, farmers can also do live conferencing with experts and can watch live auctioning of vegetables in mandis by using tablets with data access through 3G technology. This initiative helps saving their time as well as cost of traveling and enables them to exchange information on real time basis. Fig. e -Krishak. This is a modest effort by Indian Society of Agribusiness Professionals. ISAP is carrying out this pilot of e-krishaksahyogi in Jaipur district of Rajasthan, where it is working with 5000 vegetable growers. For this, ISAP has been actively supported by Wireless Reach Initiative of Qualcomm. Qualcomm's Wireless Reach Initiative is a strategic program that brings wireless technology to under served communities globally. Wireless Reach Initiative has 88 projects.

Conclusion:

In view of the wide range of e-Governance initiatives for rural development that have been carried out in India with varying degrees of success as well as the diversity of conditions in the country, e-Governanceprojects for rural development have to be designed for specificcontexts and environment. The review commission has analyzed the progress made as well as the lack of progress in several e-Governanceinitiativesincluding some components of the NeGP. It has tried to glean out from such experiences, certain general principles, cross-cutting issues and key constraints that are likely to be relevant for e-Governance projects in the country. Ultimately, the success of an e-Governance initiativelies in how efficiently it has enhanced people' sparticipation in government functioning through wideICT access, bringing government and the services it offers closer to its citizens, promoting accountability, transparency and responsiveness in government functioning and ensuring that government works better at lesser costs. These are the indicators for good governance and a vibrant democracy

References:

1. Bhatnagar S.C., "E-Government: From Vision to Implementation – A Practical Guide with Case Studies", SAGE Publications Pvt. Ltd., New Delhi, 2004.
2. Satyanarayana J., "E-Government .. The Science of the Possible", Prentice Hall of India Pvt. Ltd., New Delhi, 2004.
3. Bhoomi, Computerizing Land records, http://www.revdept01.kar.nic.in/Bhoomi/Home.htm,http://www.revdept01.kar.nic.in/BhoomiFaq. htm
4. Gyandoot: The Purveyor of Knowledge, http: //gyandoot.nic.in/ [

5. Sustainable Access in Rural India http://www.tenet.res.in/rural/sari.html
6. Richa Kumar, Jhunjhunwala Ashok, "Taking Internet to Village: A case study of Project at Madurai Region", United Nations Centre for Regional Development, 2002, http://edevelopment.media.mit.edu/SARI/papers/uncrd_report_7.8.021.pdf
7. CEG, IIMA, "An Evaluation of Gyandoot", http://www1.worldbank.org/publicsector/bnpp/Gyandoot.PDF , World Bank, 2002
8. CEG, IIMA, "Computerized Interstate Check Posts of Gujarat State, India, A Cost Benefit Evaluation Study", http://www1.worldbank.org/publicsector/bnpp/Gujarat.PDF , World Bank, 2002
9. CEG, IIMA, "Dairy Information Services Kiosk and Dairy Portal", Proceedings of CEG Workshop at IIMA, http://www. iimahd. ernet.in/ faculty/ centers_egov_ahtm
10. CEG, IIMA, "Citizen Services Portal", http://www.iimahd.ernet.in/faculty/centers_egov_a.htm
11. IT Action Plan Part III, Long Term National IT Plan, http://www.nasscom.org/download/action_plan_3.pdf
IT policies of Indian States http://www.indiasoftware. com/resources/states.html
12. nLogueCommunications,http://www.tenet.res.i/nlogue.html
13. Pico Peta Simputers Pvt. Ltd. http://www.simputer.org/simputer/
14. MS Swaminatahn Research Foundation http://www. mssrf.org/
15. Public Affairs Center, Bangalore, "Report Card on Service of Bhoomi Kiosk " http://www1. world-bank. org/publicsector /bnpp/ Bho mi.PDF , World Bank, 2002
16. APCIO Training Programme. http://www.iimahd.ernet.in/faculty/ centers_e gov_b.htm
17. Rama Rao, T.P., Venkata Rao, V., Bhatnagar S.C., and Satyanarayana J., "E-Governance Assessment Frameworks", http://egov.mit.gov.in , E-Governance Division, Department of Information Technology, May 2014.
18 Balmiki Prasad Singh,"Challenge of Good Governancein India: Need for Innovative Approaches", http://www.innovations.harvard.edu/cache/ documents/1034/103461.
19 Blechar, J., Constatniou, I. and Damsgaard, J. (2006) 'Understanding behavioral patterns of advanced mobile service users', Electronic Government, An International Journal, Vol. 3, No. 1, pp.93–104.
20 Candy Yiu and Suresh Singh (2009), "Empirical capacity of mmwave WLANs", IEEE Journal on Selected Areas in Communication, 27(8), pp.14791487.
21 Carlos Serrano-Cinca Mar Rueda-Tomas, Pilar Portillo-Tarragona(2009), "Determinants of e government extension", Online Information Review, Vol.33 lss:3, pp. 476-498.
22 Choudrie, J. and Papazafeiropoulou, A. (2006) 'Lessons learnt from the broadband diffusion in South Korea and UK: implications for future government intervention in technology diffusion', Electronic Government, An International Journal, Vol. 3, No. 4, pp.373–385.
23 Gorla, N. (2007) 'A survey of rural e-gove-rnment'

****

Mesmerizing Coastal Tourism: A Theoretical Outlook

Jagadish Patil
Assistant Professor and Research Student,
Bharati Vidyapeeth Deemed University,
IMRDA, Sangli

Dr. Rajesh Kanthe
Associate Professor & Research Guide,
Bharati Vidyapeeth Deemed University,
IMRDA, Sangli

Abstract:

Tourism industry is now a Multi-sectorial and multi-dimensional activity in the world. Twenty first century tourism has reached up to space when a Russian rocket carried the space vehicle of Dennis Tito, an American business Man and the world's first space tourist, to the space station. The craving for travel is inborn in every person, it is sound to analyze whether the tourism-beach tourism in kokan industry requires the marketing efforts as. in the case of other products. In fact, the tourism industry requires a trustworthy and operative communication system to define the wishes, needs, motivations, likes and dislikes of tourists. Moreover, tourism promoting measures are claimed to reach a large number of people of different needs, tastes and attitudes in various lands of unlike socio-economic structures.

Keywords: *Tourism, economic development, undiscovered, sea-shore.*

Introduction:

Maharashtra is the third state of India, both in area and population, located on the western coast of India with a 720 km long coastline along the lush green Konkan region. On a 720 kms long strip between the Western Ghats and the Arabian Sea, lie a host of hidden beaches and creeks. Only a few of them are known to the regular beach hopper. These lonely beaches, alongside the wild and green Western Ghats, are a quiet alternative to the more bouncing counterpart. During a drive between Mumbai, Ratnagiri, and Goa, one can see dozens of unmapped beaches with white sands, turquoise blue sea and calm and cooperative people. Maharashtra attracts many tourists from different states and foreigners too [1] and is the 4th most visited state by domestic tourists in country in 2010.Aurangabad is the tourism capital of Maharashtra. Major urban centers include: Mumbai, Pune, Nashik, Aurangabad and Nagpur. Hence the marketers of tourism products must necessarily have to adopt a distinct strategy for marketing various services." Marketing in tourism is to be understood as the systematic and coordinated implementation of business policy by tourist undertakings whether private or state owned, local or regional, national or international, level to achieve the optimum satisfaction of the needs of particular consumer groups and, in doing so, to achieve an appropriate return.

Tourism Marketing

"Marketing is the process of discovering the needs and wants of a market and translating these needs or wants into product, service or ideational specifications and then converting the demand for these products, services or ideas into a desired response". The general concept of marketing is applicable both to physical products and services. Marketing engross the co-ordination of all business actions to exchange customer's purchasing authority into effective demand for the company's offerings and hence the marketing concept aims at satisfying the customers. The main phase of the marketing process is creation of a desire for the product on the part of the customer. In the case of physical products, the desire of this kind must be created by introducing a sizeable product to the customer. 2However, in tourism, the mission of creating the ambition is somewhat basic as everybody has an intrinsic sense of nosiness to enjoy new tourist attractions and environments and interact with anybody with different cultural backgrounds. Having known that the desire for travel is inherent in every person, it is sound to analyze whether the tourism industry requires the marketing efforts as in the case of other products. In fact, the tourism industry requires a reliable and effective communication system to ascertain the

wishes, needs, motivations, likes and dislikes of tourists. Moreover, tourism promoting measures are purported to reach a large number of people of different needs, tastes and attitudes in various lands of diverse socio-economic structures. Hence the marketers of tourism products must necessarily have to adopt a distinct strategy for marketing various services.3 "Marketing in tourism is to be understood as the systematic and coordinated implementation of business policy by tourist undertakings whether private or state owned, local or regional, national or international, level to achieve the optimum satisfaction of the needs of particular consumer groups and, in doing so, to achieve an appropriate return.

BEACH TOURISM

Beach tourism means the utilization of the coastal environment in such a way as to attract tourists. The natural environment including the beach sand, the waves and the depth along these areas, security, the sights visible and ability to set up eco-friendly cottages are all important factors in beach tourism.4The product industry is different from the service industry and hence the marketing strategies followed by service industry would naturally be different. The important characteristics of service industry are its heterogeneity, intangibility and inseparability; perish ability and lack of ownership. Tourism product is an amalgam of various elements some of which are tangible and some others are intangible. The strategic marketing in tourism is a product strategy, pricing strategy, promotional strategy and allocation strategy. The tourism marketing activities are successfully adopted in many foreign countries. The World Tourism Organization, The Pacific Area Travel Association, The Indian Tourism Development Corporation, MTDC, Ministry of tourism is some of the organizations' engaged in the promotion of tourism. The tourism history of India dates back to the pre-vedic history. Konkan region famous throughout globe for its best quality of mangoes and also rich traditions fish market to attract overseas tourists to Ratnagiri. Even then the hindrances in Tourism marketing are mixed.

5 Beach tourism is one of the largest segments of tourism. Beaches have a tranquil and magnificence in themselves. Seashores have always been an attraction. The wonder on the seas, their contents, the wave and the surf, the desire trip of American tourists and European which concluded at the Mediterranean and Caribbean now encompasses to the beaches of Asia too.

6 The beaches along the Arabian Sea coast are idyllic for bathing, surfing and sailing. The white sand beaches and warm conditions along the kokan region in the east can draw millions of tourists from freezing Europe. The Andaman's and Lakshadweep are ideal for snorkeling. Thousands of sun deprived tourists visit India because it amazingly has the most varied diversities of beaches anywhere in the world. Equable backwaters and creeks, bays and rocked seas, marine bays with fish, crashing surf, powdery golden sand and palm fringed shores Unbelievable India has them all. Konkan is blessed with beautiful beaches which are the most important tourist attractions. The Maharashtra state has long coastlines, scattered with world's best cord of beaches. Well maintained, neatly kept and securely guarded, the beaches of Kerala are turning into an ideal beach vacation destination in India. Touring the beach sites of Kerala can make any beach holiday a delightful one, as Kerala's beaches are renowned for the gentle surf and blue waters. People from all over the world has acknowledged, experienced and written that water has a strange calming influence on everybody's mind and body and releases the senses and souls of those who seek relief on its shores. Tourism marketers must stay on the cutting edge of the industry, noting the different options for tourism that travelers want. Kokan beaches can be a form of specialty of beach tourism where the untapped beaches are very high and many tourists are not aware also. But they want to participate in trips that will allow them to challenge themselves through their travels.

14 A tourism marketer can creatively market trips to appeal to individuals who want to find aqua-adventure, perform community service, study, participate in marine activism, join an coastal tourism or otherwise involve themselves in a unique form of travel. The indicators of tourism demands on economic, environmental and socio-cultural impact on tourism development are pertinent to the future of tourism development.7. The important features of the tourism industry, its contribution to the national integration and creation of harmonious social and cultural environment and

ISBN No. : 978-81-906732-6-6

also suggests the promotion of arts, crafts and culture and brings about prosperity and sustainable development. Twenty first century is the age of information technology and tourism. She gives aspects and challenges of tourism in the Twenty first century. 8secondly the basic foundations of tourism planning and development caters to tourism designers, planners and developers of varied experiences and knowledge for planning of tourism industry in near future. He describes the concept of tourism planning, approaches, techniques and principles applied at various levels. Integrated approach and incremental increase in quality of tourism services and effective management of tourism. He gives transportation, services, information and promotion, physical environment and tourism organizations as the basic components for tourism planning and development in a particular region. He not only attempts to present an alternative tourism planning and development process which is sustainable, but also recommends for conceptualizing sustainable development.9Planning and assessment are important parts of sustainable development of tourism. He focused on issues of tourism development, particularly from economic, ethnic and environmental perspectives and also explained the Goals and strategies for effective tourism practices.10 key issues of carrying capacity and community participation. He also stated that role of tourism in rural development is fundamentally an economic one and can help to sustain and improve the quality of life in rural areas.11.The two significant sectors of modern day economy, tourists are honored guests and the hotels offer them the demanded hospitality. He also focused on the role of information technology in tourism industry.12the tourism industry also provides a number of job opportunities to the local people, adverse effect on the destinations; it contains vital information on tourism planning and management, crucial issues are given an elaborate treatment.13

The map ahead:

The relationships between stakeholders and thus the implementation of the key generic strategic objectives can be achieved by enhancing the long-term prosperity of local people and secondly by delighting the visitors by maximizing their satisfaction which will maximize profitability of local enterprises

* Collaborate: kokan stakeholders should partner with researchers and managers, working across private and public sectors to develop competitive advantage
* Understand Natural Resource Significance: Working closely with resource managers, fishing tourism operators gain a better understanding of coastal current conditions.
* Educate and interpret: branding of kokan should educate vendors and customers about sustainability; fisheries businesses and community tourism partners gain valuable resource knowledge from researchers and managers that can be used in interpreting coastal resources with visitors.
* Empower Community: The local Konkani community should empower the youth to become entrepreneurs and resource stewards. Restaurants and grocery stores serve and carry local food products.

Conclusion:

Competitive advantage for kokan region as a tourist destination burdens strategic locating of a tourism creation for the perseverance of achieving intentional aims and exclusive image that is progressively founded on foundation and distribution of larger significance. The need for new marketing approach based on relationship marketing enforces itself as unavoidability. Expansion of connection marketing creates the system in which added value is designed for all partakers. In mandate for this aim to be accomplished, it is very important to categorize the activities in the networks which contribute to value creation. The policy makers in tourism need to focus beaches of kokan as a competitive advantage along with a promising infrastructure for tourists. Which is not that difficult.

References

1 Sudheer S.V.(1991), "Tourism in Kerala-Problems and Prospects", Unpublished thesis, University of Kerala, 1991

2 Thomas Jacob(2004), "Adversities of Coastal Tourism-A Quantitative Approach", The Journal of Business Studies, Vol.2 No.1, December 2004 pg 40-44.

3 Thomas P.C and Gracious.J.(2004), "New Paradigms in tourism marketing", The Journal of

Business Studies, Vol.2 No.1, December 2004, pg 89.

4 Vijayan J.(2007), "Tourism Development and Involvement of local people at Destination" Unpublished thesis,IMK, University of Kerala, September 2007.

5 Day, S.G; Strategies for Surviving a Shakeout, Harvard Business Review, Mart-April, 1997, 93-102.

6 Prasad Purna (2008), "Tourism-A Catalyst for Economic Development"-Seminar Volume, Department of Commerce and History, Christian College, Guntur, Andhra Pradesh, October 24-25th 2008 pg 88-93.

7 Rajan Samitha (2003), "A Study on backwater tourism in Alappuzha District", M.Phil dissertation, University of Kerala, June 2003.

8 Ravichandran K,(2008), "Traveler's Perception on travel service providers in an Electronic Environment", Indian Journal of Marketing Vol. XXXVIII, No.6, June 2008 pg 21-28.

9 Reddy A.K. V.S (2008), "Tourism-A Catalyst for Economic Development"-Seminar Volume, Department of Commerce and History, Christian College, Guntur, Andhra Pradesh, October 24-25th 2008 pg 1

10. Chawla, Romila (2003) titled "Tourism in the 21st Century"Daya publishing house, newdelhi ISBN 978818886093

11 Kandari, O.P. & Chandra Ashish, (2004), Tourism Development Principles and Practices, Shree Publishers & Distributors, New Delhi. p - 124.

12 Narasaiah Lakshmi, M (2004), Globalization and Sustainable Tourism Development, Discovery Publishing House, New Delhi, p-56.

13 Khan, M.A (2005), Principles of Tourism Development, Anmol Publication Pvt. Ltd, New Delhi, p-250.

14 Sharma, J. K. (2000), Tourism Planning and Development, Kanishka Publisher, Distributor, New Delhi. p- 17.

****

ICT Based Library and Information Services: A Case Study of Management Libraries in Sangli

S. R. Mandale
Asst. Librarian. Bharati Vidyapeeth University, I.M.R.D.A. Sangli

Dr. Khot N. B.
Librarian, Br. Balasaheb Khardekar Library, Shivaji Vidyapeeth, Kolhapur

Abstract:

The study investigated the ICT based library and Information services: a case study of Management Libraries in Sangli District. The present study demonstrates and elaborates the primary way to learn about ICTs, the purpose of using ICT enabled library services, to assess to what extent users are utilized ICT based library services and facilities, various aspects of Internet usage, favorite search engines, and problems faced by the users in using the ICT in libraries. The papers also determine the satisfaction level of users regarding research work, online database services and infrastructure facilities. Suggestions have been given to make the service more beneficial in the library users of Management Libraries in Sangli District.

Keyword: *ICT, Management libraries, User studies, Sangli. India.*

1. Introduction:

Information has emerged as the prime in the 21st century. ICT has exerted a profound influence on Management academic libraries. They have no option but adapt themselves to new developments, especially due to cuts in budget allocation. Hence, networking of information centres is inevitable. The prime objectives of the library is pooling information resources and information related infrastructure and sharing them. The use of computers for library operation avoids respectively jobs and saves considerable amount of time, resources and labour. It also speeds up technical processing and information services. ICT has been a means to bring quality services. Systematic planning of its introduction and application will assure that the technology based information services are sustainable, and enhances the ability of library. In the present scenario, the library and information centers at global level are able to provide access to;

* Online databases across the country and worldwide
* Comprehensive statistical databases and content page services
* Full text information sources with key word searching

The academic libraries in Indian setup have been preparing themselves on a corporate basis; a platform for ICT based information services. Internet has transformed the ways and means of information service. Breaking the distance barrier, internet has emerged as a boon to the information seekers as well as libraries. It has become popular, easy to use and inexpensive teaching and research tool.

3. Objectives of the Study

The purpose of this study was to investigate the use of Information and Communication Technology products and services by the users of management libraries in colleges/instituteslibraries in Management Libraries in Sangli District. It specifically focused on the following objectives:

1. To study the present ICT products and services provided by Management Libraries in Sangli District.
2. To find out the different purposes of using ICT product and services.
3. To know the favourite search engines used by users.
4. To identify the type of problems faced by users when using ICT product and services in libraries under study.
5. To find out the user satisfaction with the ICT based products and services provided by the libraries under study.

4. Research Methodology:

The questionnaire method was used for the present study to collect the necessary primary data for evaluation and assessment. The questionnaire

ISBN No. : 978-81-906732-6-6

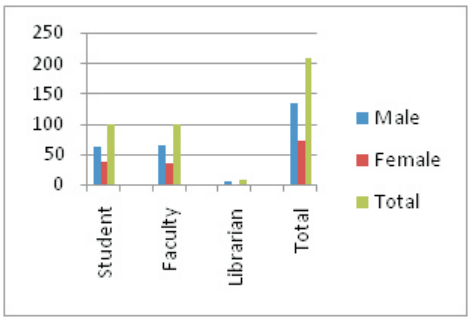
method has some limitation to collect the data, hence the investigator adopted interview and observation methods were used to collect required information to supplement to the questionnaire method and to bring more clarity to the data. It is not feasible to collect large of number data of each and every library user in their study; therefore samples were selected by using stratified random sampling method. Hence Investigator has selected 07 management colleges on the basis of Management Libraries in Sangli District. The questionnaires were distributed personally Among librarians and user.

5. Data Analysis

The paper deals with the analysis and Interpretation of data which were collected through Questionnaire. The data analysis means systematic gathering, recoding, manipulating and summarizing of data to obtain answer to the research problems. The collected data has been organized and tabulated by using tables, pie chat, histogram etc. The purpose of this analysis is to shape data to intelligible and interpretable forms, so that the relation of research problems can studied and tested.

Table 1.1 Male and Female percentage in different management colleges

Sr. No.	Users	Male	Female	Total
01	Student	63	37	100
		63%	37%	
02	Faculty	65	35	100
		65%	35%	
03	Librarian	06	01	07
		85.71%	14.28%	
04	Total	134	73	207



We have got 07 colleges' library data which is recorded in the table 1.1, and then it is categorized into three parts like student, faculty and librarian. After that we have divided the sethree sections into male female percentage. Now if we see the bar graph we can understand 63%male whereas 37% are female student in a college. Similarly if we considered the faculties then we can see 65% are male and remaining 35% are female. Last but not the least if we consider the librarian we can see it is 85.71% male whereas 14.28% comes under the female categories.

Table 1.2 Student and Faculty ICT users

Yes	No	Total
91	9	100
91%	9%	100%

Yes	No	Total
76	24	100
76%	24%	100%

If compare two diagram we can observed that most of the students (91%) as well as faculties (76%) uses ICT in a college. It means that in a management college application of ICT is very much essential but some colleges are their where faculty and student do not use ICT i.e.24%.

Table1.3 Primary way to learn about ICT

S r . No	Respondents	Teacher	Classmate	Friends	Library homepage	Library training	Subject Librarian	Others
01	Student	61	69	29	19	23	6	7
02	Faculty	49	59	17	13	7	9	11

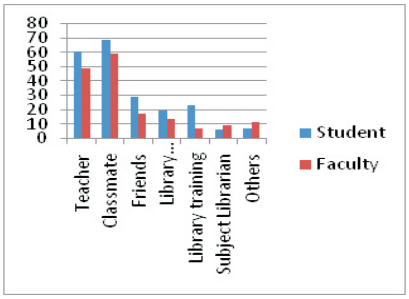


Table 1.3 examined that the researcher asked some students as well faculties that how they learn about ICT, so student and faculty give similar kind of response. Now if we see the column chart carefully we can understand that maximum respondent said they learn it through colleagues/classmates i.e. 69 students and 59 faculties. After that maximum people said they learn it through their teacher/supervisor whereas small number of respondent said they learn it by friends, library home pages and library training.

Table 1.4 Purpose of using ICT product

l.1 E-Mail & Document exchange
l.2 Electronic Journals
l.3 Electronic Books
l.4 Collect Data through Internet
l.5 Online Data Bases
l.6 For Career Development
l.7 Manuscripts Proposal & Papers
l.8 Search Webopacs/Opacs
l.9 Casual Internet Surfing

Sr.No.	Users	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
01	Student	79	39	27	49	42	63	11	19	33
02	Faculty	89	77	53	81	71	74	59	37	51

The above table shows that maximum response on email and document exchange (i.e. 79 students&89 faculties) There are others aspect of using ICT product like electronic journals (39students, 77 faculties), electronic books (27 student, 53faculties), collect data through internet (41students, 78 faculties), online database (39 student, 72 faculties), for career development (63 students, 74aculties) and so on.

Table 1.5 Know about ICT based library

Sr. No	Users	Online searching	Online Networking	Photocopy	Online information	News Clipping	Database Searching
01	Student	79	61	19	41	22	56
02	Faculty	93	72	33	66	38	78

On the basis of students and faculties opinion(Table.1.5) we have collected some data that shows maximum people know about ICT based library through online searching (79 students, 93 faculties), data base searching (56 students, 78 faculties),

online information (41 students, 66 faculties), and online networking (61 students, 72 faculties). There are also others ways like online reservation, news clipping searching, photocopying etc but it is not much effective as compare to above sources.

Table 1.6 Expertise in using ICT and the Library performance

Expertise in using ICT

Sr. No.	users	Excellent	Good	Average
	Student	29	79	02
	Faculty	41	54	05

Library performance

Sr. No.	users	Excellent	Good	Average
	Student	47	48	04
	Faculty	53	44	03

The analysis shows that the feedback about accessing point then we asked about the expertise in using library product. In that case 48students and 44 faculties mentioned as a good while 47 students and 53 faculties mention it is excellent.After that researcher put another question about the library performance by using ICT product and they give their views which can understand by this chart.

Table 1.7 Problem faced by ICT

Sr.No.	Users	Lack of Software	Lack of Training	Lack of Awareness	Lack of Time	Lack of Technical Knowledge
01	Student	29	19	27	39	17
02	Faculty	41	27	37	61	21

In every application there are some advantages as well as disadvantages. So when we asked about the problem related to the ICT, people have different opinion majority of student aswell as faculties said that the problem is generated as because of lack of time (39 students, 61 faculties), lack of software (29 students, 41 faculties), lack of awareness (27 students, 37 faculties), lack of training (19 students,38 faculties) and lack of technical knowledge (17 students, 21 faculties).

ISBN No. : 978-81-906732-6-6

Data Analysis for Librarians

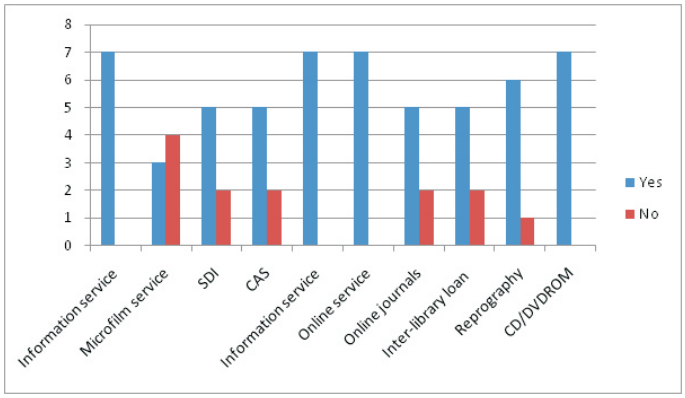
Table 1.8 Are the functions and objectives of the library specially laid down?

Librarian	Yes	No	Total
	05	02	07
	71.42%	28.57%	100%

To understand whether the functions and objectives of the library laid down or not for that we asked this question to the librarians of 07 colleges and 71.42% librarians said it has been laid down whereas 28.57% librarians said it not being laid down.

Table 1.09 Services offered by the Librarian

Sr.No	Services	Yes	No
01	Information service	07	00
02	Microfilm service	03	04
03	SDI	05	02
04	CAS	05	02
05	Information service	07	0
06	Online service	07	0
07	Online journals	05	02
08	Inter-library loan	05	02
09	Reprography	06	01
10	CD/DVDROM	07	00



The various services that is offered in the library are as follows: 7 respondents said that the maximum service used in library is online journals/database after that 07respondent said information services and 5 people said for CAS whereas 7 said online services, CD/DVDROM, and Inter-library loan facility now if we talked about the least used service then maximum respondent said about microphone services.

Table 1.10 Services undertaken by using computer

Sr.No.	Services	Yes	No
01	Accession list	07	-
02	Book order list	07	-
03	CAS	05	02
04	Circulation	04	01
05	Cataloguing	04	02
06	Bar-coding	04	01
07	Literature search	05	02

Now if we consider the Table 5.2.16 is all about services undertaken by using computer. From the column chart it is cleared that 29 respondent said for Accession list, 23 respondents said it is Circulation & Cataloguing whereas 22 respondents said Book order list, & Current awareness services. Rest 16 said it is for Document delivery, Respective literature search and Serial control.

Table 1.11 Following problems affecting the development of the library**?**

Sr.No	Problems	Total
01	Lack of planning	02
02	Shortage of staff	01
03	Inadequate budget	02
04	Lack of interest in library problem at the organization level	02
05	Untrained staff	02
06	Lack of adequate physical facilities	02
07	Lack of centralised library operations	03
08	Lack of subject specialist in library staff	03

ISBN No. : 978-81-906732-6-6

The majors' problems which is affecting in the development of the library are as follows: 28.57% librarian said it for in adequate budget, 1.42% mentioned it is for shortage of staff members after that 28.57% said it is for Lack of planning, Lack of adequate physical facilities, Inadequately trained staff. If we talked about the least affecting factor for the development of the library are Lack of subject specialist in library staff and Lack of centralized library operations.

Conclusion

This study sought to examine the use and awareness of The ICT based library and Information services. Most of the objectives are met within the results. It is clear from the study that most of the respondents are aware and use ICT application in computer, internet surfing, laptop etc. Majority of the respondents are experienced user frequently use ICT applications in computer centre. Most common ICT activities of the respondents are surfing internet, email, chat and preparing presentations etc, main purpose of using ICT applications is to look up information, electronic communication and prepare presentation. ICT help them to better informed and stay ahead. Importance of ICT in library can be realized from ICT application catalogues and audio visual services. ICT has a great importance in each and every sphere of life; now libraries are not left apart from the impact of ICT it dependence upon the attitude of librarian and the library professional.

References:

1 Cholin, V S. "Study of the Application of Information Technology for Effective Access to Resources in Indian University Libraries." The International Information & Library Review 37, no. 3 (2005): 189-97.

2 Ghosh, M. & Ghosh, I. "ICT and Informatio Strategies for a Knowledge Economy: The Indian Experience." Program: electronic library and information system 43, no. 2 (2009):187-201.

3 Hussain, Akhtar and Abalkhail, Abdul wahab M (2013) "Determinants of library use, collections and services among the students of engineering: a case study of King Saud University", Collection Building, Vol. 32 No 3, pp.100-110. DOI:110.10.1108/CB-07-2012-0033.

4 Ramzan, M. & Singh D. "Status of Information Technology Applications in Pakistani Libraries." The Electronic Library27, no. 4 (2008): 573-87.

****

Agricultural Micro-Planning: Applying Data Warehouse and Data Mining

Miss. Anjali Gautam Shinde
BCA III
BVDU, IMRDA, Sangli

Miss. Manisha Shinde-Pawar
Assistant Professor,
BVDU, IMRDA, Sangli

Abstract

Collection and dissemination of agriculture information with traditional data ICT implementation and infrastructure are real challenges in rural development. Moreover, there has been very little adoption of information technology. National, state level and industry related regulatory have realized potential of ICT in Rural Development.

Recently the Government of India has embarked on an ambitious project of designing and deploying a data warehouse for the agricultural sector with the intent of using the system for macro level planning decisions. The paper aims to discover agricultural success patterns with some of the possible data warehouse processes, relative end tools and data mining for convenient, responsible and reachable micro planning decisions.

Keywords*: Data Warehouse, Data Mining, Micro planning, Patterns*

.1. Introduction:

1.1 Agricultural Sector in INDIA:

Today, India ranks second worldwide in farm output. Agriculture and allied sectors like forestry and fisheries accounted for 13.7% of the GDP (Gross Domestic Product) in 2013, about 50% of the total workforce. The economic contribution of agriculture to India's GDP is steadily declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. Although India has attained self-sufficiency in food staples, the productivity of Indian farms is below that of Brazil, the United States, France and other nations.

The Indian Council of Agricultural Research, New Delhi under World Bank funded National Agricultural Technology Project has developed a data warehouse for some of these agricultural resources to (1) improve the Indian Council of Agricultural Research's organizational and management system efficiency, (2) enhance scientific research performance and effectiveness to benefit farmers, and (3) encourage farming community participation through innovation and improved technology management.

According to World Bank, "India Country Overview 2008", "Slow agricultural growth is a concern for policymakers as some two-thirds of India's people depend on rural employment for a living. Current agricultural practices are neither economically nor environmentally sustainable and India's yields for many agricultural commodities are low. Poorly maintained irrigation systems and almost universal lack of good extension services are among the factors responsible. Farmers' access to markets is hampered by poor roads, rudimentary market infrastructure, and excessive regulation."

1.2 Data warehouse:

A data warehouse (DW or DWH), also known as an enterprise data warehouse (EDW), is a system used for reporting and data analysis. DWs are central repositories of integrated data from one or more disparate sources. They store current and historical data and are used for creating trending reports for senior management reporting such as annual and quarterly comparisons. Since the 1990s, data warehouses have been an essential information technology strategy component for many medium and large sized, global organizations. Data warehouses provide the basis for management reports, decision support, and sophisticated on-line analytical processing and data mining. A data warehouse is a repository of data that is aggregated and summarized from operational systems to

provide decision making support and is subject-oriented, integrated, time-variant, and nonvolatile. Historically, data warehouses have been implemented in banking and financial institutions, retail marketing of consumable and non-consumable goods/services, and tele-communication services. The architectural designs for these types of warehouses are similar with differences usually occurring due to warehouse size and system analysis complexity.

The agriculture sector is one area that data warehouse technology can benefit tremendously to support regional, national and global decision making. Roughly 70% of the India's population depends on agriculture for its livelihood. Due to heterogeneous nature of regions, crops, sources, demands, seed, pest and different geographical conditions it is challenging to design agricultural data ware house. A data warehouse to congregate data from multiple sources into a single database so a single query engine can be used to present data. A data warehouse architecture is also implemented to maintain history for pest, pesticides, and meteorological data.

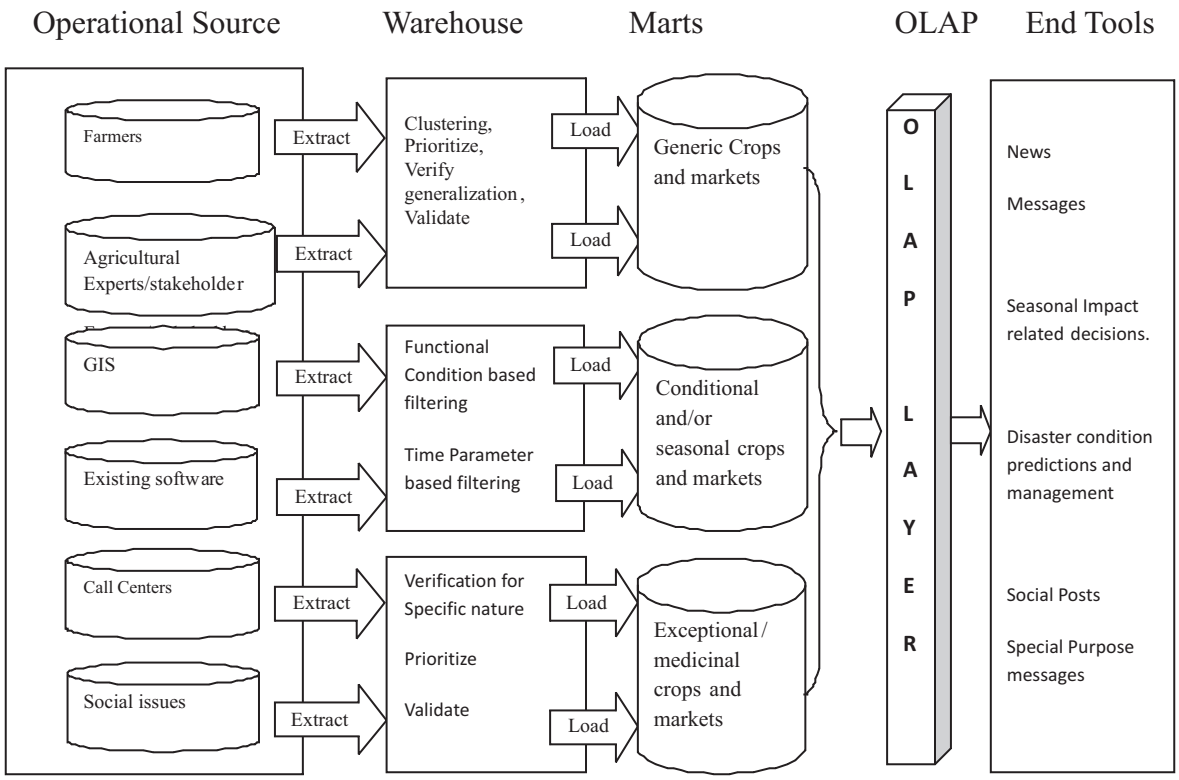
2. Goals of Data warehousing for micro planning decisions and farmers benefits

* To facilitate agri-based reporting as well as analysis to farmers.
* Maintain an organizations historical information about agricultural sector
* Be an adaptive and resilient source of information
* Be the foundation for decision making to experts, researchers, farmers

3. Methodology:

3.1Data warehouse Architecture comprises:

* Operational source system
* A data staging area
* One or more conformed data marts
* A data warehouse database



ISBN No. : 978-81-906732-6-6

As shown in above figure no. 1, different operational sources like farmers related transactions, agricultural experts, GIS, existing software and websites data, call centers and from related social issues information will be extracted to provide historical information to warehouse storage.Extracted information will be further processed by applying different classification and cleaning techniques for data management to load it to warehouse marts. As per requirement of end tools and outcomes possible classification of data marts to conform different needs and conditions of users may be as generic/ all-time, conditional/seasonal, exceptional/ medicinal crops and markets.

Based on these different marts rules for priorities can be predicted. As shown in Table No. 1, generic crop need will be for all time and everywhere required needs, so accordingly seed, water, fertilizers, pesticides, mainly micro planning of farmers can be helped with prioritized micro decision alerts and information. Experts and agriculture officers, researchers can use this information as foundation designing micro finance schemes and organic farming structures.

Seasonal Agriculture can be helped by applying Conditional and Seasonal Crop marts with diversified parameters for different regional and geographical changes in Meteorological data, pest, crops, and soil can be used for seasonal impact and decision management and yielding from crop rotation management.

3.2 Priority Predictions for Micro planning Decisions:

Sr. No.	Behavior for Clustering and Supervising	Micro planning Decision Predicted Priority
1	Mostly Referred Crops	Generic/All-time
2	Time or conditional Based	Conditional/ Seasonal
3	Exclusive Special Requirement	Exceptional /Medicinal

A shown in above table No.1, national, state level and other regulatory organizations, agri market experts, micro finance policy makers can help to government directly or indirectly with priority decisions. So Generic/ All Time crop decisions will have priority over seasonal or parametric decisions as it will be beneficial to more number of farmers.

Parametric Crop Decision can handle risky situations micro planning and decision to optimize or mitigate risk impact with improved or more precise input parameters.

Some type of Exceptional or mostly medicinal plants requires special attention, and specific nature of market, fertilisers exposure which need to be addressed under specialised expertise guidance and analysis. As it follows research approach mostly such Exceptional marts can help to technical farming methods.

4. Conclusion:

In this paper, researcher has studied possible architecture and classified data marts for agriculture sector needs and wants. Two-third of Indian agriculture sector dependents can be helped with the proposed data warehouse architecture with classified nature of decisions. Researchers has focused on diversified inputs from diversified sources in collective and processed format can help to farmers so as to increase productivity with precise and timely decisions and to reduce famers suicide attempt rate by helping them with another major growing sector Information Technology.

In future architecture design can be improved for state wise needs with more additional services and E Commerce and Mobile based technologies can be integrated to provide more improved model.

5. References:

1. http://en.wikipedia.org/wiki/Agriculture_in_India.
2. http://en.wikipedia.org/wiki/Data_warehouse
3. http://en.wikipedia.org/wiki/Data_mining
4. http://www.irma-international.org/viewtitle/33130
5. "Data Mining", A Tutorial Based Primer, Richard J. Roiger and Michael W. Geatz, Second Impression, 2008.Pearson Education.
6. Manisha Shinde- Pawar, "Discovering Software Reuse Patterns and Scaling Requirements using Data Mining", International Journal of Information Technology and Knowledge Management, January-June 2013, Volume 6, No. 1, pp. 89-92

Quality Improvement in Higher Education for Rural Development with Special Reference to Technological Development in Information Technology

Prof. A. T. Gaikwad
Associate Professor,
Dept of Computer Applications
BVDU Institute of Management, Kolhapur.

Dr. R. V. Kulkarni
Professor & Head Dept. of Computer Studies,
Chh. Shahu Institute of Business
Educa. and Research, Kolhapur

Abstract:

Quality enhancement through technological development is need of the time now. Students are now asking for the grades of various Institutes before taking admission. The Higher education is now important sector which serves the young generation of the country. Various quality control bodies are playing important role in a managing quality activities .Accrediting bodies for the accrediting of the Institutes in Higher education sector is the need of the education sector since quality awareness has been seen in the minds of stakeholders like parents, students, companies/employers and society at large. In the country higher education has become the important sector which shapes the academic career of the youth. In India NAAC, NBA and ISO are widely accepted accrediting agencies with number of Institutes going for accreditation. This trend is growing rapidly. The awareness of quality in higher education has forced the Institutions to go for accreditation from different bodies.

The Rural Development is not possible without quality education and at higher education where the youth directly serves the nation by various forms. The main drawbacks of rural youth are level of confidence, language knowledge and financial problem. If these problems are solved at early age the productivity of the youth can be improved.

Keywords: *Quality, Quality Policy, RuralDevelopment, Higher Education, AICTE, NAAC,NBA, ISO, Assessment,*

1. Introduction:

The Higher Education is important sector in India which is huge in size and difficult to manage. The Higher Education in India is in state of transition. The market of the Higher education is increasing and attracting the stakeholders to take the benefit of the global marketing in higher education sector. The Institute have to provide best education in minimum cost. The students also are attracted to good Institutes only. In order to implement the quality measures the agencies have to look into facility of infrastructure provided for training. The quality of the faculty in terms of teaching capability and research attitude, Social attachment and relevance to the society, uniformity in accreditation and placements of the students in the good companies are the major demands of the education system. The role of government is also very important in terms of providing the concessions, controlling the activities of the Institutes providing grants to faculty in research and extension activities. The Rural development is linked with education and if education sector provides skilled youth the resources of rural villages can be utilized properly to get the benefit of the available resources and reduce the load of burden on urban cities.

The Educational Institutes and Rural Development:

Education is backbone of any development. Rural development cannot be achieved without involvement of educational Institutes. Role of IT in Technological Developments with respect to Information Technology: Various IT tools are available which include hardware, software, operating systems and special purpose system to check the quality of the higher education sector. AICTE web portal is one of the portal which takes online forms from all the technical Institutions in India for affiliation.

ISBN No. : 978-81-906732-6-6

Hierarchy of Software Systems used in business organizations

* Transaction Processing System
* Management Information System
* Executive Information System
* Decision Support System
* Expert System

2. What Are Advance Software's:-

Software's which are developed on advance technologies performing crucial task in the organization like MIS Packages, ERP Packages. Online Software's, Intelligent Programs, Knowledge base system, Robotics and Expert Systems, Real Systems. These software's are now used in many developed countries and nor developing countries are also afford such software in the business process.

3. What are the drawbacks of Students from rural Area?

1) English Speaking and Communication Problem.
2) Low Confidence Level
3) Exposure to GK is less
4) Financial Problem
5) Availability of Resources for education

4. How to overcome these problems?

These are the important solutions to make rural youth confident about

1) Improve English by special efforts in keeping separate subject I higher education
2) Improve the level of confidence by keeping positive set of mind.
3) General Knowledge Books and classes can be started in villages.
4) Special Grants from UGC and AICTE can be given to Rural Students
5) Special Infrastructure can be built to create the facilities in villages

5. improving Quality of Higher Eduaction Through Accredition

5.1 Quality parameters which can be identified are (Ref. NAAC Quality Parameters)

i. Curricular aspects.
ii. Teaching-learning and evaluation
iii. Research, Consultancy and extension
iv. Infrastructure and learning resources
v. Student support and progression
vi. Governance and leadership and
vii. Innovative practices as the basis for its assessment procedure.

5.2 Accreditation Concept and Meaning:-

Accreditation is a process in which certification of competency, authority, or credibility is presented to the applicant organization. Recognition or accreditation of courses of study is under the authority of a set of professional councils established by statute and other autonomous coordinative or regulatory bodies established or recognized by the University Grants Commission

* All India Council for Technical Education (AICTE) to be superseded by the National Board of Accreditation (NBA) for technical and management colleges
* Quality Council of India (QCI)
* Distance Education Council (DEC)
* National Council for Teacher Education (NCTE)
* Indian Council of Agricultural Research (ICAR)
* Bar Council of India (BCI)
* Scientific Institute and Research Organizations (SIROs)
* National Council for Teacher Education (NCTE)
* Rehabilitation Council of India (RCI)
* Medical Council of India (MCI)
* Pharmacy Council Of India (PCI)
* Indian Nursing Council (INC)
* National Council for Indian Education (NCIE)
* Dental Council of India (DCI)
* Central Council of Homoeopathy (CCH)
* Central Council of Indian Medicine (CCIM)
* National Assessment and Accreditation Council (NAAC)
* Ministry of Human Resource Development (MHRD)
* Association of Indian Universities (AIU)

5.3 Why accreditation is necessary?

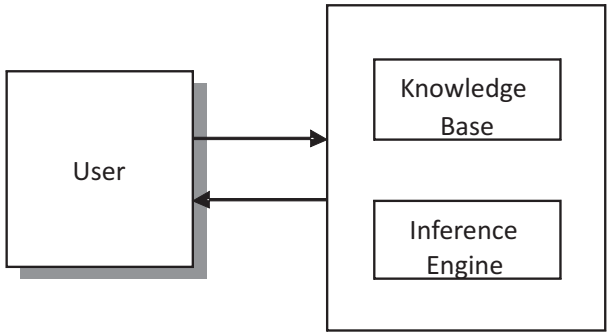
* Encourages quality improvement initiatives by Institutions. Helps the Institution in securing necessary funds from govt. bodies.
* Enhances employability of graduates.
* Facilitates transnational recognition of degrees and mobility of graduates and professionals.
* Motivates faculty to participate actively in

ISBN No. : 978-81-906732-6-6

academic and related Institutional or departmental activities.

The measure to improve the quality of Higher education is through accreditation of the Institutes. But Institutes still are going for accreditation process

Expert System for Quality Improvement A Sketch
Figure 1.0



1. Figure 1.0,the figures shows the general sketch of Expert System which illustrates the basic concept of a knowledge-based expert system. The user supplies facts of other information to the expert system and receive s expert advice or expertise in response. Internally, the expert system consists of two main components. The knowledge base contains the knowledge with which the inference engine draw conclusions. These conclusions are the expert system's responses to the user's queries for expertise.

Conclusion:

The Indian Scenario in Higher education is having pressure from political and money power interferences right from the time a college is established. Affiliation is issued by inside or outside forces by affiliating bodies. Now the force to make these Institutes go for accreditation will only change the scenario and give more benefit to stakeholders of higher education.

There is a long way to go for Indian Education System to acquire the quality at Higher education. The rural population has to include in higher education to get the benefit of the youth from villages. The Government has to frame the rules which help these students to take admissions in higher educational Institutes. Poor quality education will directly hamper the academic career of the young generation in India.

7. References:

1. Gayatri Doctor and Smitha Ramchandran: Institutional Repositories: Preserving the Intellectual Capital of Management Institutions: The ICFAI Journal of Knowledge Management.
2. Joseph Benjamin "Evaluating the Ranking – grading Criteria for sustaining Quality in Higher Educational Institutions" University News May-27 – June 02, 2013 p.8-9
3. Kothari C.R- research methodology and techniques, second edition,wishwa prakashan New Delhi.
4. Mohd Masood Ahmad, April 2011"Expert talk about improving Higher Education system" Digital Learning Journal Article.
5. Sheela Ramchardan and HemaNalini"The Roadmap to Competency and Quality in Higher Education" University News New Delhi 51(04) Jan-Feb-2013 Page 2-3 ISSN -0566-2257.
6. www.naac.gov.in
7. www.ugc.ac.in
8. www.aicte-india.org

****

Overview of Data Mining Techniques in Agribusiness

Prof. Sujata Mulik
Assistant Professor,
BVDU IMED Pune

Dr. Ajit More
Professor,
BVDU, IMED Pune

Abstract:

This paper discusses use of various data mining techniques and tools in agriculture business sector. It is used it to solve yield estimation of crop. Crop yield estimation needs to be crop planning maximize crop production & food security. Farmers need to have a good idea of which crops needs to be taken in which season. This research will guide farmers to select correct crops in particular seasons. So crop production will increase and automatically affects on agribusiness. At the country level, yield forecasting is used in the determination of national food security, crop insurance policy, import and export plans, and government aid for farmers. Yield estimation means predicting the crop productivity. Generating rules with higher accuracy for agriculture databases can be done using different techniques of data mining.

Keywords: *Data Mining, Data Warehouse, Prediction, Yield Estimation, OLAP*

1. Introduction:

Agriculture can be defined as an art, science and business of cultivating the soil, crops and raising livestock for economic purposes. Using records of data mining technique gives some economical beneficial information to the organization. To best apply these advanced techniques,

They must be fully integrated with a data warehouse as well as flexible Interactive business analysis tools. Agriculture is a key sector of the economy and continues to play a vital role in India's economic growth. About 70 percent of India's population lives in its villages and a majority of rural households depend on agriculture and related activities for their livelihood. Agribusiness activities are support farmers at every step, from seed supply to crop care to crop distribution. Agriculture product is contributing to the growth of Indian agriculture. The food chain in India from farmer to the consumer involves several intermediaries leading to handling multiple points.

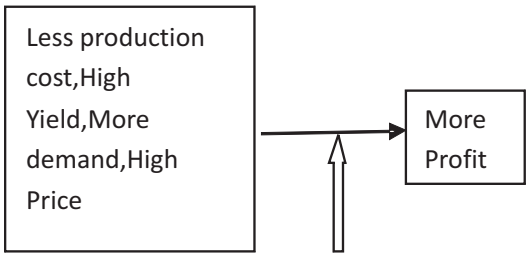
Data mining is a process of extracting knowledge from large data repositories. Indian agriculture is known for its diversity which is mainly result of variation in resource and climate, to geography and historical, institutional and socio economic factors. It has been used to analyze large data set and establish classification and patterns in the data set. Data mining is mainly categorized as descriptive and predictive data mining. But in agricultural area predictive data mining is mainly used. There are two main techniques namely classification and clustering. Data mining and knowledge discovery in database (KDD) are concerned with extracting patterns and models of interest from huge databases. KDD is used in agriculture to show the statistical information about soil condition, climate conditions, past crop yield, Government strategies, all the information about pesticides, fertilizer. So the farmer should understand what types of information are useful? And how they used in their farm? KDD refers to the overall process of discovering useful knowledge from data while data mining refers to particular step in the process. Agriculture can require substantial knowledge transfer to and among farmers, including information about successful farming practices, new technologies or controls of pest and disease outbreaks, and new markets.

1.1 Agriculture As Business Of Crop Production:

In agriculture, the field is the workshop from where greater returns are obtained. To obtain these returns, the factors like land, labour and capital and various natural resources, inputs are utilized in such

a way that greater profits are obtained from less investments. Agriculture has been mechanized and commercialized with the main object of promoting business to greater profits.

Leads To



For efficient, economic fast and more profit, factors like production, consumption trade ,employer and employees, marketing, transportation, taxation etc. needs to be taken care of and to earn greater profits ,agriculture is mechanized and commercialized to run it as a business.

1.1 Contribution to GDP Over The Year:

Agriculture is the heart of the social development of our country. Agriculture is much vital because it provides lively hood for majority of the population, most contributing to national income, gainful employment. Agriculture is a source of livelihoods for 86% of rural people in India and it provides 1.3 billion jobs for small-scale farmers and landless workers. So it is important to concentrate more on agriculture sector. Agriculture is an important sector of Indian economy as it contributes about 17% to the total GDP. Indian agriculture has registered impressive growth over last few decades. The food grain production has increased from 51 million tones (MT) in 1950-51 to 250MT during 2011-12, highest ever since independence. So it is indispensable to concentrate more on agricultural sector.

Table No.1: Contribution to GDP overthe Year

Sector	1980	1990	2001	2003
Agriculture	38.1	31.1	24.7	22.2
Industry	25.9	29.3	26.4	26.8

2. Importance of Data Mining In Agribusiness:

* The amount of data is so large that there may be some important patterns hidden in it these pattern should to extract the knowledge from agriculture database.
* It is not possible to manually interpret all the data.
* It is also very difficult to formulate queries to extract the exact information needed of crop production effect on agribusiness.
* The extraction of information must be quick and timely to be really useful for agribusiness.
* It is useful for analyze accurate crop production and it helps for increasing agri-business.

3. Type of Databases Can Be Used In Agriculture Sector:

Data mining is applicable for any kind of information repository. However, algorithms and approaches may differ when applied to different type of database. data warehouse, Relational Databases , Transactional Databases , Object Relational Databases, Temporal Databases , Sequence Databases, Time-series Databases , Spatial Databases, Spatiotemporal Databases , Text Databases and Multimedia Databases , Heterogeneous Databases and Legacy Databases even flat files. Here are some examples in more details.

3.1 Relational Databases:

It is a collection of tables, each of which is assigned a unique name. Relational data can be accessed by database queries written in a relational query language such as SQL. Which allows retrieval and manipulation of the data stored in the tables, as well as the calculation of aggregate functions such as Select Min (production) ”Production” from area; Data mining algorithms using relational databases can be more versatile than data mining algorithms specifically written for flat files, since they can take advantage of the SQL could provide, such as predicting, comparing detecting deviations, etc.

3.2 Transactional Database:

It consists of file where each record represents a transaction. A transaction average, sum, min, max and count etc. we implement nested query as well as group by and having clause.

ISBN No. : 978-81-906732-6-6

Figure No. 1 Fragment of some relations from a relational database for agriculture. Table: Area

	Area in "00" ha., Production in '00' Tonnes. Productivity in Kg/ha.		
Crop Name	**Crop Area**	**Crop Production**	**Crop Productivity**
Kh.Jowar	1128	2050	1817
Rb. Jowar	1532	813	531

typically includes a unique transaction identity no.(trans_id) and a list of the items making up the transaction(such as which crop we can cultivated in maximum crop area)

3.3 Object Relational Databases:

Object Relational Databases are constructed based on an object – relational data model. Objects that share a common set of properties can be grouped into an object class. Each object is an instance of its class .object classes can be organized into class /subclass hierarchies. In agriculture crop is a class and the khar if crop and rabbi crop these are the subclasses. In metro logical data rainfall, humidity, temperatures are the instances of class.

4. Temporal Databases:

A temporal databases typically stores relational data that include time-related attributes .these attributes may involve several time stamps. In agriculture sector we collect data like temperature, rainfall, humidity, crop production etc. from different time period of the year. Data mining techniques can be used to find the characteristics of object evolution or the trend of changes for objects in the database. Such information can be useful in decision making and strategy planning.

3.5 A Time Series Databases:

A time-series database stores sequences of values or events obtained over repeated measurements of time (e.g. hourly, daily, weekly)Example: data collected from the stock exchange, inventory control, observation of natural phenomena (like temperature & wind)

3.6 Spatial Databases:

Spatial databases contain spatial related information. Examples geographic map database, satellite image database or regional positioning. Geographic database have numerous database applications. Data mining may uncover patterns describing the characteristics of crop area located a specified locations. Other patterns may describe the climatic conditions of region. Spatial classification can be performed to construct models for prediction based on the relevant set of features of the spatial objects. Such spatial databases present new challenges to data mining algorithms.

Example- geographic (map) database

3.7 Flat Files:

Flat files are simple data files in text or binary format with a structure known by the data mining algorithm to be applied. The data in these files can be transactions, time-series data, scientific measurements etc. (2)

3.8 Data Warehouse:

A data warehouse is a repository of data. We collected data from different multiple sources (Heterogeneous) and is integrated to be used as an under unified schema. A data warehouse gives the option to analyze data from different sources under the same roof. We can store data of different crop production of different villages according to crop

ISBN No. : 978-81-906732-6-6

area. We could store information of weather parameters like temperature, humidity, rainfall.

On Line Analytical Processing (OLAP):

OLAP is an approach to swiftly answer multi-dimensional analytical queries. Data mining is a part of OLAP with application suc has forecasting or prediction in agriculture. It provides an opportunity of viewing agriculture data from different points of view to better understand what that data means OLAP has been used extensively for analysis of Soil physical characteristics. The recent advances in data base technology and data warehouses, the multi dimensional data base, OLAP and data mining technologies are being successfully applied to the management of Agriculture resources.

An OLAP (On-Line Analytical Processing) server enables a more sophisticated End-user business model to be applied when navigating the data warehouse. The multidimensional structures allow the user to analyze the data as they want to view their business summarizing by product line, region, and other key perspectives of their business.

4. Techniques of Data Mining For Agribusiness:

4.1 Classification:

Classification modules were developed which classifies crop productivity based on weather condition. Classification is designed for classifying unknown samples using information provided by a set of classified samples. We classify the different crop according to season. Data mining techniques are often used to study soil characteristics. It is the example of supervised learning.

4.2 Clustering:

Clustering means splitting a set of unknown samples into cluster. We can make cluster of rainfall, temperature humidity parameters. These parameters are affecting on crop yield productivity. By using this technique we find out similar kind of objects in one group and dissimilar group of objects in another group. It is the example of unsupervised learning

4.3 Association:

Association analysis is best technique in agriculture sector. For this we consider crop area, crop production, crop duration crop productivity, year and weather parameters like temperature, humidity, rainfall etc. We can find out association of these parameters. We find out the relation of crop duration and productivity ratio of crop and also check the impact of weather parameters on productivity of crop. Through the Supports and confidence associate the different Products for the economical benefit.

4.4 Regression:

It is a data mining technique used for multi variate equation for the training data set. It is used for predict the value of crop production based on weather parameters, crop age, and pest. Multi variate optimization method minimizes inconsistency and errors in yield prediction. A multiple regression was developed to predict yield using climate variables such as temperature, rainfall, humidity, wind speed, solar radiation. Several researches have been conducted in predicting crop yield using regression techniques. [5]

4.5 Artificial Neural Network:

Artificial neural network is a new technique for crop forecasting. In this technique we collect weather data and crop area, crop production and crop name, crop productivity. We identify the functional relationship among the data even if the relationship is unknown or hard to describe. ANNs can correctly infer the unseen part of population even if data contain noisy information. As a forecasting is performed via prediction of future behavior. (3)

4.6 Decision Tree:

Tree-shaped structures that represent sets of decisions. These decisions generate rules for the classification of a data set. Specific decision tree methods include Classification and Regression Trees (CART) and Chi Square Automatic Interaction Detection (CHAID).

5.Software Tools for Data Mining:

5.1 Weka:

Weka supports several standard data mining tasks, In data preprocessing, clustering, classification, regression, visualization, and feature

selection. Weka's techniques are predicated on the assumption that the data is available as a single flat file or relation, where each data point is described by a fixed number of attributes(normally, numeric or nominal attributes, but some other attribute types are also supported). It provides access to SQL data bases using Java Database Connectivity and can process the result returnedby a database query. Comprehensive set of data pre-processing tools, learning algorithms and evaluation methods. Machine learning/data mining software is written in Java, Used for research, education, and applications or agriculture sector. Its developed by University of waikato, New Zealand. It is Open Source Software. Graphical user interfaces and data visualization.

5.2 Rapid Miner:

It provides integrated environment for machine learning, text mining, predictive analytics and business analytics. It is used for business industrial applications and agriculture sector.

5.3 Ghost Miner:

It is data mining suite, including k-nearest neighbors, neural nets, decision tree, neurofuzzy, SVM, clustering, and visualization. It is used to make clusters of rainfall and according to rainfall group we can estimate crop yield.

5.4 WITNESS Miner:

A graphical data mining tool with decision trees, clustering, discretisation, feature subset selection. We can take picture of crop area and we can predict the crop yield.

5.5Advanced Miner Professional:

It provides a wide range of tools for data transformations, Data Mining models, data analysis and reporting.

6. Factors Effect on :

Crop Growth and Agribusiness: Crop growth of plant is related to time. Generally two factors affected on the crop growth. Automatically these factors decrease crop production. It affects on agribusiness.

6.1 Genetic Factors:

Yield potential is determined by genes of the plant. A large part of the increase in yield over the years has been due to hybrid and improved varieties. Genetic engineering is now becoming an important tool in changing a plants potential.

6.2 Environment Factors:

Agriculture yield primarily depends on weather conditions. All external conditions and influences affect the life and development of a crop. The temperature, humidity, rainfall, soil aeration, soil structure. Crop growth occurs in a fairly narrow temperature range 60-100 degree F .Temperature also affect soil organisms nitrifying bacteria inhibited by low temperature. PH may decrease due to activities of microorganism.

7. Conclusion :

In this paper we focused on data mining techniques for agriculture. We discussed what type of databases? We can be used in agriculture sector. This is a relatively novel research field and it is expected to grow in the future. Data mining application will help for crop yield estimation/ prediction or managing agriculture information purpose. In view of this there is a need for an objective methodology for pre-harvestforecasting. Using data mining techniques we can face the challenges like: Knowledge assessment, knowledge processing, and knowledge implementation Increases in crop production by using data mining, automatically there will be increase in agribusiness and once agribusiness will rapidly increase, agriculture will get more value and will be more focused.

8.References:

1 P. Revathi 1, Dr.M.Hemalatha 2, "Categorize the Quality of Cotton Seeds Based on the Different Germination of the Cotton Using Machine Knowledge Approach", International Journal of Advanced Science and Technology Vol. 36, November, 2011.

2 Latika Sharma, Nitu Mehta," Data Mining Techniques: A Tool for Knowledge Management System inAgriculture", International Journal of Scientific & Technology Research Volume 1, Issue 5, June 2012.

3 Ranjana Agrawal and S.c. Mehta, "Weather Based Forecasting of Crop Yields, Pests and Diseases - IASRI Models", Indian Agricultural Statistics Research Institute, New Delhi Issues2007.

4 Raorane A.A., Kulkarni R.V, "Data Mining: An effective tool for yield estimation in the agriculture sector", International journal of Emerging Trends & Technology in Computer Science, ISSN volume1,Issue2 July –August2012.

5 Maria Rossana C., de Leona Eugene Rex L, "A Prediction Model Framework for Crop Yield Prediction", Southern Luzon State University, Lucban.

6 Raorane A.A.1 Kulkarni R.V, "Review- Role of Data Mining in Agriculture", International Journal of Computer Science and Information Technologies, Vol. 4 (2), 2013.

7 Ramesh1, B Vishnu Vardhan2, "Data Mining Techniques and Applications to Agricultural Yield Data", International Journal of Advanced Research in Computer and Communication Engineering Vol. 2, Issue 9, September 2013.

8 Dr. Rahul Thakar1, Prof. Bhavesh Patel2, Dr. Bankim Radadiya3,"Data Mining and Agribusiness" Global Journal for Research Analysis Vol. 3, Issue 11, Nov.2014

9 Data Mining Concepts and Techniques, Jiawei Han and Michelin Kamber.

****

ICT model and its Role in Rural Development

R. S. Pujari
Department of Computer Applications,
BVDU, IMRDA, Sangli

S. R. Kumbhar
Department of Electronics,
Willingdon College, Sangli

Abstract:

Information Communication Technology (ICT) brings social transformation providing the services and information to the people. It is the part of the development strategy used in developed or developing nations. Now a days almost all the sectors are using the ICT for the development of the organisation and nation. In order to meet the needs of growing population ICT plays vital role. As we know that various resources available are limited and these must be harnessed in respectable manner. If not harnessed properly or efficiently the adverse effect will be seen on the human life. The ICT empowers the use of various resources and services which are very useful for the economical development. ICT also helps to keep new ways of participation of civil people to become self-sufficiency.

In country like India the services like economic, educational and health benefits plays vital role in rural area, The ICT plays interface between government and people. The problem before India is to implement the various services for the benefits of people is difficult task. Dense population, illiteracy, and poverty in the rural area are the major problems of implementation of ICT. To maintain the sustainability of various services and implementation in various parts of the country. ICT may help the people to integrate and unite together. This will help to provide the information for the settlement of life and sustainable e-governance in rural area. Certain steps must be taken and a proper model must be implemented for the rural development. This paper present the brief view of ICT development model in rural area.

Keywords: *ICT, Rural development, ICT reforms,ICT policy, ICT role.*

1.Introduction:

The various technologies such as telephone, mobile, PC, internet services, digital devices are used now a days for communication. ICT is electronic technology which is flexible, adaptable, capable, and enable for the transform and reform the social benefits for the rural people [1]. It also highlights the facilities of rural development. The efficient services for health and education with literacy and provides helping hands to the farmers, traders, artisans for getting timely information. Radio, TV, mobile and internet services have paved the ways of improvement in rural area [4, 5]. Initially radio was the means of communication of faster information to all the listeners. Afterwards during 1970s television was used in education and rural communication for audio and visual information. The government made policy decisions to inform people through TV media in the various sectors such as health, education, agriculture, and technology and community development. The NGOs with radio broadcasting is part of the development and many broadcasting stations were established. B. C. Agarwal [2] briefly discussed communication technology and rural development in which social cultural perspectives with current scenario. He also highlighted on government nativities in the rural development and ICT use in rural sector. However A. kelles [3] briefly given the role of ICT in governing rural development. The people are always aware of their rights, entitlement and availability of government schemes.

2. ICT in Rural Development:

ICT lays vital role in rural development. It gives the information for various schemes and need of various services to the rural people. It puts the highlight on the kind of services useful for improving the lifestyle. The market updates, jobs, product information, travel information, land records, tribal information, grievances are also

updated using ICT. Lack of transport and other facility affects the development in rural area. The poor becomes poor and they will be kept away from their rights. For getting certain records and information they will have to spend more time and money and becomes the pray of bribes. The ICT will reduce these and keep watch on such events by avoiding the number of visits and helps to speed up the process. ICT plays active role in government developing plan, socially as well as politically. ICT is improving the lifestyle of habitant of poor and the socially backward people. It also helps to maintain the records of different schemes and inform to the people. To access the information in the rural area is difficult but now a days ICT is giving easier access of documentation.

3. ICT Reformation:

The information access is important part of functioning of rural development practices. It is individuals right to access the information and make use for its development of life style. The government is providing some information about the public interest as well as the country's development perspective. The flow of information must be correct and meaningful and is one of the challenge before government from the point of knowledge. Government has to bring some reforms in the knowledge transformation along with guidelines in the transparent manner. Free flow of right information is required and for this purpose some regulations must be laid down.

Policy development for poor people is backbone of the development in ICT. It helps to adopt, enable and implement with the telephone, mobile or other digital source of media. The long run policy for the poor must be considered and not only a technology driven bust should it help in actual way in their life. For such development a careful study, survey, demand, consultations, economical status, political and geographical study is essential. The flow of easy and free information will also help to improve the poor people development. To develop a strong network a reliable and applicable policy must be established. The ICT must be easy to access and available as and when required with the lowest rates. This give the quick information of market, metro logical information, political situation information and different government schemes formed by the government. For this the proper infrastructure model is necessary.

1.ICT Structural Model:

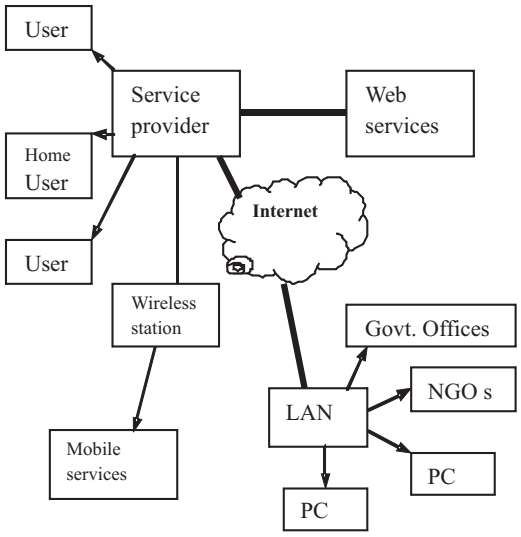


Fig. 1 ICT structural model

The above developed ICT model is suitable for user in rural area to access the information. The government must provide the various services with minimum cost through internet medium. The information of various policies and services flows through the internet various users and NGOs, government departments, etc. There is a special need to improve the internet service in rural area and for this purpose government must establish standard plan or policy. Through the LAN network various government offices, NGOs, PCs are connected. Through internet all the offices are linked to service provider and using the web sites the information flows to the user. The service providers will provide the information the user at their home using the modem. These services are also available on the other digital devices like mobile and TV. The government must establish the block or region wise communication network that must be easily accessible with least cost and flow must be as a when required. The access must be provided with powerful instruments with local languages.

The must ICT have to play prominent role in the following services.

1. Making availability of required services.
2. Provides backbone services with backend process.

ISBN No. : 978-81-906732-6-6

3. Faster service delivery

4. Capability to reach to all

5. Private participation in ICT

6. Cultural and social reforms services.

7. Cheaper services

The above mentioned services are the backbone of ICT in rural area. The developed model provides the better efficiency and services to the people in the rural area. The user is bale to get the service direct from the government office through the internet. Any individual can obtain the desired service through internet.

1. Conclusion:

To deliver government policies and services for development of rural people ICT model is plays vital role. All people with different professions use the model for improving the lifestyle. ICT provides the better services at lower cost to all the rural area. The ICT has the greater potential to provide the information to develop the needs of live hood. It also helps to enhance the change in the society. It supports the information acquisition in local language as and when required. The local community localization lacking is overcome by the ICT.

2. References:

1. Ajit Ghosh, Initiatives ICT for rural development in Indian perspectives, Global Media Journal, Indian Edition, ISSN 2249-5835, Winter Issue, 2001, pp 1-8.

2. B. C. Agarwal, Communication technology and rural development in India, Indian Media study Journal, Vol. 1, No. 1, July Dec. 2006. pp1-9.

3. Anita Kelles, The role of ICT in Governing Rural Development, IFAD workshop, Innovation challenges for rural development, Rome Nov. 2005, pp 11-14.

****

Green Marketing In Rural India – Opportunities And Challenges

Mrs. Sabiha Mainuddin Shaikh
(B.Sc, PGDBM, MMS),
Bharati Vidyapeeth English Medium School, Pune

Dr. Mainuddin S. Shaikh
Assistant Registrar,
University of Mumbai, Mumbai

Prof. Shehbazbanoo Salim Khan
(MMS & PhD. Student), Faculty,
Joshi Bedekar College, Thane

Abstract:

As resources are limited and human wants are unlimited not only in India, but also all over the world, it is important for the marketers to utilize the resources efficiently without waste, as well as, to achieve the organization's objective. So green marketing is inevitable. Green marketing is the process of selling products and/or services based on their environmental benefits. Such a product or service may be environmentally friendly in itself. Green marketing is a very powerful marketing strategy if it is done on the right way. Three keys to successful green marketing are 1) Be genuine 2) Educate your customers 3) Give them the opportunity to participate. Green Marketing ensures sustained long-term growth along with profitability.

It saves money in the long run, thought initially the cost is more. It helps in accessing the new markets and enjoying competitive advantage. Presently Green Markets provides resources through its website to help build knowledge about carbon market logistics and opportunities and about other mechanisms to support the expanded use of renewable energy, energy efficiency, and other climate protection options. Green Markets works to enhance understanding about the climate protection attributes of renewable energy and energy efficiency applications and to build knowledge about innovative financial mechanisms for small-scale sustainable energy technologies. Areas of focus have included solar water heating, PV Solar home system and Renewable and Hybrid Mini-grids. Though there are various advantages of green marketing, green marketing is facing some of the challenges in terms of high cost, confusion in the minds of consumers relating to product or business practices, increasing cost for recyclable and renewable of material, technology etc. Some time what happens consumers are not willing to pay a premium for green products.

Shifting of conventional marketing to green marketing appears to be expensive in the short period of time, while, in the long term, it will certainly prove to be indispensable and advantageous and cost-wise too.

Introduction:

According to the American Marketing Association, Green marketing is the marketing of products that are presumed to be environmentally safe. Thus green marketing incorporates a broad range of activities, including product modification, changes in the production process, packaging changes, as well as modifying advertising. Green marketing involves developing and promoting products and services that satisfy the customers' wants and needs for quality, performance, affordable pricing and convenience without having a detrimental impact on the environment and also the growing awareness about the implications of global warming, harmful impact of pollutants, biodegradable solid waste etc. But shifting of conventional marketing to green marketing appears to be expensive in the short period of time, while, in the long term, it will certainly prove to be indispensable and advantageous and cost-wise too.

The term Green Marketing came into prominence in the late 1980s and early 1990s. The American Marketing Association (AMA) held the first workshop on "Ecological Marketing" in 1975. The proceedings of this workshop resulted in one of the first books on green marketing entitled "Ecological Marketing". The first wave of Green Marketing occurred in the 1980s. Corporate Social Responsibility (CSR) Reports started with the ice cream seller Ben & Jerry's, where the financial report was supplemented by a greater view on the company's environmental impact. In 1987 a document prepared by the World Commission on Environment and Development defined sustainable development as meeting “the needs of the present without compromising the ability of future

ISBN No. : 978-81-906732-6-6

generations to meet their own need", this became known as the Brundtland Report and was another step towards widespread thinking on sustainability in everyday activity. Two tangible milestones for wave 1 of green marketing came in the form of published books, both of which were called Green Marketing. They were by Ken Peattie (1992) in the United Kingdom and by Jacquelyn Ottman (1993) in the United States of America.

Objective of the Study:

1) To know and understand the concept of Green Marketing and its importance in Rural India
2) To study the opportunities and challenges of Green Marketing.

Need of the Green Marketing:

Green marketing refers to the process of selling products and/or services based on their environmental benefits. Such a product or service may be environmentally friendly in it or produced and/or packaged in an environmentally friendly way. As resources are limited and human wants are unlimited, it is important for the marketers to utilize the resources efficiently without waste, as well as, to achieve the organization's objective. So green marketing is inevitable. There is growing interest among the consumers all over the world regarding protection of environment. Worldwide evidence indicates that people are concerned about the environment issues and are changing their behavior. As a result, green marketing has emerged which speaks for growing market for sustainable and socially responsible products and services. It is really scary to read these pieces of information as reported in the Times recently: "Air pollution damage to people, crops and wildlife in he US totals tens of billions of dollars each year". "More than 12 other studies in the US, Brazil Europe , Mexico , South Korea and Taiwan have established links between air pollutants and low birth weight premature birth still birth and infant death".

Thus the growing awareness among the consumers all over the world regarding protection of the environment in which they live, People do want to bequeath a clean earth to their offspring. Various studies by environmentalists indicate that people are concerned about the environment and are changing their behavior pattern so as to be less hostile towards it. Now we see that most of the consumers, both individual and industrial, are becoming more concerned about environment-friendly products. Most of them feel that environment-friendly products are safe to use. As a result, green marketing has emerged, which aims at marketing sustainable and socially-responsible products and services. Now is the era of recyclable, non-toxic and environment-friendly goods. This has become the new mantra for marketers to satisfy the needs of consumers and earn better profits. Green marketing is a vital constituent of the holistic marketing concept. It is particularly applicable to businesses that are directly dependent on the physical environment; for example, industries like fishing, processed foods, tourism and adventure sports. Changes in the physical environment may pose a threat to such industries. Many global players in diverse businesses are now successfully implementing green marketing practices.

The object of green marketing is that potential consumers will view a product or service's "greenness" as a benefit and take their buying decision accordingly. The not-so-obvious assumption of green marketing is that consumers will be willing to pay more for green products than they would for a less-green comparable alternative product - an assumption that, in my opinion, has not been proven conclusively. While green marketing is growing greatly as increasing numbers of consumers are willing to back their environmental consciousnesses, it can be dangerous. The public tends to be doubtful of green claims to begin with and companies can seriously damage their brands and their sales if a green claim is found to be false or contradicted by a company's other products or practices.

As per Mr. J. Polonsky, green marketing can be defined as, "All activities designed to generate and facilitate any exchange intended to satisfy human needs or wants such that satisfying of these needs and wants occur with minimal detrimental input on the national environment." Green marketing is a very powerful marketing strategy when it's done right. Three keys to successful green marketing For green marketing to be effective, you have to do the following three things:

1) Be genuine 2) Educate your customers 3) Give them the opportunity to participate.

1) Be genuine means a) that you are actually doing what you claim to be doing in your green marketing

campaign and b) that the rest of your business policies are consistent with whatever you are doing that's environmentally friendly. Both these conditions have to be met for the business to establish the kind of environmental credentials that will allow a green marketing campaign to succeed.

2) Educating your customers it is just a matter of informing the people that you are doing whatever required to protect the environment, but also a matter of letting them know why it matters. Otherwise, for a significant portion of your target market, it's a case of "So what?" and the green marketing campaign goes nowhere.

3) Giving your customers an opportunity to participate means personalizing the benefits of the environmentally friendly actions, normally through letting the customer take part in positive environmental action.

Green Marketing Mix:

Every business / company has its own favorite marketing mix. Some have 4 P's and some have 7 P's of marketing mix. The 4 P's of green marketing are that of a conventional marketing but the challenge before marketers is to use 4 P's in an innovative manner.

Product:

The ecological objectives in planning products are to reduce resource consumption and pollution and to increase conservation of scarce resources (Keller man, 1978).

Price: Price is a critical and important factor of green marketing mix. Most consumers will only be prepared to pay additional value if there is a perception of extra product value. This value may be improved performance, function, design, visual appeal, or taste. Green marketing should take all these facts into consideration while charging a premium price.

Promotion:

There are three types of green advertising:

1) Ads that address a relationship between a product/service and the biophysical environment
2) Those that promote a green lifestyle by highlighting a product or service
3) Ads that present a corporate image of environmental responsibility

Place:

The choice of where and when to make a product available will have significant impact on the customers. Very few customers will go out of their way to buy green products.

Evolution of Green Marketing:

The green marketing has evolved over a period of time. According to Peattie (2001), the development of green marketing has three phases. First phase was termed as "Ecological" green marketing, and during this period all marketing activities were concerned to help environment problems and provide remedies for environmental problems. Second phase was "Environmental" green marketing and the focus shifted on clean technology that involved designing of innovative new products, which take care of pollution and waste issues. Third phase was "Sustainable" green marketing. It came into prominence in the late 1990s and early 2000.

Benefits of Green Marketing:

Today's consumers are becoming more and more conscious about the environment and are also becoming socially responsible. Therefore, more companies are responsible to consumers' aspirations for environmentally less damaging or neutral products. Some of the advantages of green marketing are:

* It ensures sustained long-term growth along with profitability.

  It saves money in the long run, thought initially the cost is more.
* It helps companies market their products and services keeping the environment aspects in mind.
* It helps in accessing the new markets and enjoying competitive advantage. Most of the employees also feel proud and responsible to be working for an environmentally responsible company.
* Companies that develop new and improved products and services with environment inputs in mind give themselves access to new markets, increase their profit sustainability.
* Presently Green Markets provides resources through its website to help build knowledge about carbon market logistics and opportunities, and about other mechanisms to support the expanded use of renewable energy, energy efficiency, and other climate protection options.

ISBN No. : 978-81-906732-6-6

* Under the sustainable energy acceleration program, Green Markets has worked to enhance understanding about the climate protection attributes of renewable energy and energy efficiency applications, and to build knowledge about innovative financial mechanisms for small-scale sustainable energy technologies. Areas of focus have included Solar water heating, PV Solar home system and Renewable and Hybrid Mini-grids.

Strategies:

The marketing strategies for green marketing include:

* Marketing Audit (including internal and external analysis)
* Develop a marketing plan outlining strategies with regard to 4 P's
* Implement marketing strategies
* Plan results evaluation It is observed that for environment protection some countries are using Photovoltaics, Wind, CFL lightbulb, Car sharing services, Electronics sector, Products & Services etc.

Following are some of the examples of Green Marketing.

CFL lightbulb:

Philips Lighting's first shot at marketing a standalone compact fluorescent light (CFL) bulb was Earth Light, at $15 each versus 75 cents for incandescent bulbs. The product had difficulty climbing out of its deep green niche. The company re-launched the product as "Marathon," underscoring its new "super long life" positioning and promise of saving $26 in energy costs over its five-year lifetime. Finally, with the U.S. EPA's Energy Star label to add credibility as well as new sensitivity to rising utility costs and electricity shortages, sales climbed 12 percent in an otherwise flat market.

Car sharing services:

Car-sharing services address the longer-term solutions to consumer needs for better fuel savings and fewer traffic tie-ups and parking nightmares, to complement the environmental benefit of more open space and reduction of greenhouse gases. They may be thought of as a "time-sharing" system for cars. Consumers who drive less than 7,500 miles a year and do not need a car for work can save thousands of dollars annually by joining one of the many services springing up, including ZipCar (East Coast), I-GO Car (Chicago), Flex Car (Washington State), and Hour Car (Twin Cities).

Electronics sector:

The consumer electronics sector provides room for using green marketing to attract new customers. One example of this is HP's promise to cut its global energy use 20 percent by the year 2010. To accomplish this reduction below 2005 levels, The Hewlett-Packard Company announced plans to deliver energy-efficient products and services and institute energy-efficient operating practices in its facilities worldwide.

Products & Services:

Now companies are offering more eco-friendly alternatives for their customers. Recycled products for example, are one of the most popular alternatives that can benefit the environment. These benefits include sustainable forestry, clean air, energy efficiency, water conservation, and a healthy office. One example, is the E-commerce business and office supply company Shoplet which offers a web tool that allows you to replace similar items in your shopping cart with greener products.

Introduction of CNG in Delhi:

New Delhi, capital of India, was being polluted at a very fast pace until Supreme Court of India forced a change to alternative fuels. In 2002, a directive was issued to completely adopt CNG in all public transport systems to curb pollution.

Challenges of Green Marketing:

* Many organizations want to turn green, as an increasing number of consumers' and to associate themselves with environmental-friendly products. Alongside, one also witnesses confusion among the consumers regarding the products. In particular, one often finds distrust regarding the credibility of green products. Therefore, to ensure consumer confidence, marketers of green products need to be much more transparent, and refrain from breaching any law or standards relating to products or business practices.
* Green products require renewable and recyclable

ISBN No. : 978-81-906732-6-6

material, which is costly
* Requires a technology, which requires huge investment in R & D
* Water treatment technology, which is too costly
* Majority of the people are not aware of green products and their uses
* Majority of the consumers are not willing to pay a premium for green products

Despite the challenges, green marketing has continued to gain adherents, particularly in light of growing global concern about climate change. This concern has led more companies to advertise their commitment to reduce their climate impacts, and the effect this is having on their products and services.

Opportunities of Green Marketing:

There are five reasons for which a marketer should go green marketing.

They are:
* Opportunities or competitive advantage
* Corporate social responsibilities (CSR)
* Government pressure
* Competitive pressure
* Cost or profit issues

a. Opportunity:

In India, around 25% of the consumers prefer environmental-friendly products, and around 28% may be considered healthy conscious. There fore, green marketers have diverse and fairly sizeable segments to cater to. The Surf Excel detergent which saves water (advertised with the message—"do bucket paani roz bachana") and the energy-saving LG consumers durables are examples of green marketing.

We also have green buildings which are efficient in their use of energy, water and construction materials, and which reduce the impact on human health and the environment through better design, construction, operation, maintenance and waste disposal. In India, the green building movement, spearheaded by the Confederation of Indian industry (CII) - Godrej Green business Center, has gained tremendous impetus over the last few years. From 20,000 sq ft in 2003, India's green building footprint is now over 25 million sq ft.

b. Corporate social responsibilities (CSR):

Many companies have started realizing that they must behave in an environment-friendly fashion. They believe both in achieving environmental objectives as well as profit related objectives. The HSBC became the world's first bank to go carbon-neutral last year. Other examples include Coca-Cola, which has invested in various recycling activities. Walt Disney World in Florida, US, has an extensive waste management program and infrastructure in place.

c. Governmental Pressure:

Various regulations rare framed by the government to protect consumers and the society at large. The Indian government too has developed a framework of legislations to reduce the production of harmful goods and by products. These reduce the industry's production and consumers' consumption of harmful goods, including those detrimental to the environment; for example, the ban of plastic bags in Mumbai, prohibition of smoking in public areas, etc.

d. Competitive Pressure:

Many companies take up green marketing to maintain their competitive edge. The green marketing initiatives by niche companies such as Body Shop and Green & Black have prompted many mainline competitors to follow suit.

e. Cost or profit issues:

Reduction of harmful waste may lead to substantial cost savings. Sometimes, many firms develop symbiotic relationship whereby the waste generated by one company is used by another as a cost-effective raw material. For example, the fly ash generated by thermal power plants, which would otherwise contributed to a gigantic quantum of solid waste, is used to manufacture fly ash bricks for construction purposes.

Conclusion:

It is a need of hours to implement Green marketing in India in order to protect the environment. For this purpose, the Government should address the issues relating to environment concern and awareness among the people should be made. Green marketing should not neglect the economic aspect of marketing. Marketers need to

ISBN No. : 978-81-906732-6-6

understand the implications of green marketing. You must find an opportunity to enhance product's performance and strengthen the customer's loyalty and command a higher price. Green marketing is still in its initial stage in India and a lot of research is to be done on green marketing to fully explore its potential. While shift to "green" may appear to be expensive in the short term, it will definitely prove to be indispensable and advantageous, cost-wise too, in the long run. Marketers have the responsibility to make aware the customers the need for the benefits of green products as compared to other non-green products. In green marketing customers are ready to pay more for the benefit of the society in maintaining a cleaner and greener environment.

To facilitate participation and broaden the benefits, several barriers must be overcome, including, a lack of market awareness among stakeholders and prospective participants; specialized, somewhat complicated participation rules; and the need for simplified participation mechanisms for small projects. If the barriers are adequately addressed, greenhouse gas trading can play an important role supporting activities that benefit people's lives and the environment.

References:

1. Chopra, S. Lakshmi (2007), "Turning Over a New Leaf", Indian Management, Vol-64, April-2007
2. Ottman, J.A. et al, "Avoiding Green Marketing Myopia", Environment, Vol-48, June-2006
3. www.greenmarketing.net/stratergic.html
4. www.epa.qld.gov.au/sustainable_ industries
5. http://www.greenbiz.com/news/2009/10/15
6. http://en.wikipedia.org/wiki/Green_marketing
7. https://www.prnewswire.co.uk/
8. http://www.ftc.gov/bcp/grnrule/guides980427.htm
9. http://www.articlesbase.com/marketing-articles/green-marketing-opportunities-challenges-1146893.html
10. http://www.green-markets.org/programs.htm
11. http://www.oppapers.com/essays/Greeen-Marketing/136465

****

An Evaluation of Manufacturing Technology Management in Selected Manufacturing Engineering Units in Kolhapur District

Mr. Sanjay A. Jadhav
Asst. Professor,
B.V.D.U., I. M. Kolhapur

Dr. U. M. Deshmukh
Professor, Chh. Shahu Institute of
Business Education and Research, Kolhapur

Abstract:

In the last two or three decades, technology has made tremendous progress, particularly in the areas of automation and computerization. To match these advances, improved systems of production are also being used and fun their developed. In the automated factory of Yamazaki Machinery works in Nagoya, Japan it is stated that only one person in employed as a watchman for the night shift. While 18 machining centers keep on working in the 18 million flexible manufacturing facility of course, such facilitation exit mainly in the developed countries and comparatively few have been adopted in India. Modern production management practice consists of use of information technology tools and techniques which are useful to production manager for improving productivity.

Introduction :

Yet advancement in technology is also inevitable if we are to be a part of the changing scenario in the rest of the world. For the past several decades and continuing into the present, in the global market India has taken a niche as a low cost products of items that are either primary or are at the lower end of technology. This is also true of its computer software products. Much of our research and development taken place in the government sector and very little in the private organization. But, it must be well understood that being a low cost low tech producer is not a very sustainable position in the global market. There is somebody else tomorrow who will figure out how to do it cheaper. Hence, we must be open to advancements and evolve our own strategy for technological change suited to our special needs and special environment while assessing current and future impacts.

Objectives of Study

1 To study modern production management practices and information technology trends in manufacturing companies.
2 To understand product technology in manufacturing industries.
3 To understand process technology management in manufacturing industries.
4 To study to the manufacturing technology management and its various impacts on output of production.

Hypothesis

1 Use of product technology in manufacturing units result in accurate product design and development.
2 There is qualitative relationship between information technology and production activities,

Methodology :

The methodology followed for this study includes.

1 Exploratory Research design :

As term suggests, and exploration research design is rather informal and a type of exploration which develops along with several ideas. An exploratory research almost always gives scope for further research. Therefore exploratory research study is complete in order to generate new ideas.

Sampling Design:

Here samples include the large manufacturing companies in Kolhapur region. Sample size for the purpose of this research study is minimum 5 manufacturing industries from Kolhapur region is selected at random.

Data Collection Method:

The primary data is collected by personal contacts, interviews questionnaires etc. Sampling method is utilized to the primary data collection. The simple sampling was suitable for a homogenous selected for the selected manufacturing units. Observation is also involving

ISBN No. : 978-81-906732-6-6

the collection for data relating to the selected research. With the primary data collection secondary method is also used which us included all published figures facts and other needs.

Data Analysis & Interpretation

The respondents are manufacturing and design engineers, manufacturing managers, manufacturing and production engineer and senior executives in manufacturing industries. From five manufacturing units, 50(fifty) respondents are randomly selected. 50 respondents responding by filling question papers, collected data has analyzed by using some statistical techniques and form that required interpretation has made. Respondent gaves their opinions on various factors which are influencing on new product design and development.

TABLE NO. 1

Opinion about the competition factors which are influencing on new product design & development.

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1	Competition in Niche Markets	19(38)	5(10)	5(10)	18(36)	3(6)	50(100)
2.	Growing National Competition	34(68)	-	-	10(20)	6(12)	50(100)
3.	Growing Domestic Competition	21(42)	-	8(16)	19(38)	02(4)	50(100)
	Grand total	**74**	**5**	**13**	**47**	**11**	**150**
	Percentage	**49%**	**4%**	**7%**	**32%**	**8%**	**100%**

In the above table and in bracket shown percentage of respondents which is influencing in new product design and development.

Interpretation:

From the table, we found that, in niche market maximum 38% respondents are responding that there is a critical influence in product design and development. Also in growing national competition 68% respondents are saying that there is a critical influencement in product design & development. At domestic level, maximum 42% respondents are saying that there is a critical influence in product design & development. At the end, we found that 49% respondents are saying that there is critical influence of competition in product design development and 32% respondents are saying that there is a marginal influence of competition in product design and development and only 4%respondents are saying that there is a significant influence of competition in product design and development.

TABLE NO. 2

Opinion about the following financial factors which are influencing in new Product Design & Development.

FINANCIAL

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1.	Relatively high costs for low quality components	03(6)	25(50)	12(24)	10(20)	-	50(100)
2.	Ability to produce cost effective products	20(40)	04(8)	09(18)	06(12)	11(22)	50(100)
3.	Correct Pricing	14(28)	20(40)	10(20)	06(12)	-	50(100)
4.	Building adequate Sales	21(42)	10(20)	03(06)	09(18)	07(14)	50(100)
5.	Predictability of Suppliers Cost	18(36)	02(4)	15(30)	10(20)	05(10)	50(100)
6.	Controlling costs	20(40)	10(20)	10(20)	10(20)	-	50(100)
7.	Cash flow – stocking issues	25(50)	10(20)	10(20)	05(10)	-	50(100)
8.	High initial costs on relatively low sales	24(48)	10(20)	05(10)	05(10)	06(12)	50(100)
	Grand total	**145**	**91**	**74**	**61**	**29**	**400**
	Percentage	**36%**	**23%**	**18.5%**	**15%**	**7%**	**100%**

Interpretation:

From the table we can say that there are the maximum 50% respondents are concluding that there is a significant influensement of high cost for low quality components in new product design and development. And lowest 6% (minimum respondents are responding that there is a critical influence of relating high coasts for low quality components. And remaining opinions of respondents in percentage which is shown in bracket and indicated in respective columns.

Second factor influence in new product design is like this way, 40% respondents are saying that there is a critical influence of factor ability to produce cost effective products in new product design and development. And lowest 8% are saying that there is significant influence of ability to produce cost effective products in new product

ISBN No. : 978-81-906732-6-6

design and development.

Next factor building adequate sales influencing in new product design & development is like this way maximum 42% respondents are responding towards the critical influence. And lowest 6% are responding towards the important influencement.

Next factor – stocking issues – cash flow, maximum 50% respondents are saying that there is a critical influence of stocking issues in new products design & development and lowest 10% respondents are saying that there is a marginal influencement of stocking issues in new product design & development.

At the end, we can interpret that maximum 36% respondents are responding towards the critical influence of Financial in product design and development. And lowest 7% are responding that there is a negligence influence of financial factor in new product design and development.

TABLE NO. 3
In Product Design and Development opinion about the Premises Factor.
PREMISES

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1.	Affording new premises	-	02(4)	10(20)	18(36)	20(40)	50(100)
2.	Finding new premises	25(50)	14(28)	09(18)	02(4)	-	50(100)
3.	Finding replacement lease holder	03(6)	15(30)	08(16)	09(18)	15(30)	50(100)
4.	Property maintenance	03(6)	16(32)	04(8)	14(28)	13(26)	50(100)
	Grand total	**31**	**47**	**31**	**43**	**48**	**200**
	Percentage	**15%**	**23.5%**	**15%**	**21.5%**	**24%**	**100%**

Interpretation:

From the above table, we can say that maximum 40%respondents are responding that there is a significant influence of affording new premises in product design and development. And the lowest 4% respondents are saying that there is a significant influence of affording new premises in product design and development.

About next factor, that is finding new premises 50% respondents are saying there is a critical influence of finding new premises in new product design and development. And lowest 4% are conducting that there is a marginal influence of findings new premises in new product design and development.

After next factor, 30% respondents are saying that there is a significant influence of factor finding replacement lease holder in new product design abs development. And lowest 6% respondents are responding that there is critical influence of factor finding replacement lease holder in new product design and development.

At the end we can interpret, that there is a 41% respondents response is significant influence of premises factor in new product design and development, again 48% respondents are saying that there is a negligence influence of factor premises in product design and development.

TABLE NO. 4
Opinion about the design related factors which are influencing in new product design and development. DESIGN

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1.	Waiting for industrial design to come through	10(20)	21(42)	07(14)	09(18)	03(6)	50(100)
2.	Public perceptions of product efficacy	31(62)	07(14)	02(4)	08(16)	02(4)	50(100)
	Grand total	**41**	**28**	**9**	**14**	**5**	**100**
	Percentage	**41%**	**28%**	**9%**	**17%**	**5%**	**100%**

Interpretation:

From above table, we can interpret that 41% respondents opinion that there is a critical influence of design factor in new product design and development. And lowest 4% respondents are saying that there is a negligence influence of design factor in new product design and development.

TABLE NO. 5
Opinion that the following technical factor affecting in new product design and development.
TECHNICAL

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1.	Technical risk components	-	28(56)	03(6)	07(14)	12(24)	50(100)
2.	Variable impact on sound quality	20(40)	10(20)	11(22)	04(8)	05(10)	50(100)
3.	Production of technical manuals	20(40)	07(14)	14(28)	09(18)	-	50(100)
4.	Technology development risks whitest on timeline	10(20)	17(34)	14(28)	09(18)	-	50(100)
	Grand total	**50**	**62**	**42**	**29**	**17**	**200**
	Percentage	**25%**	**31%**	**21%**	**14.5%**	**8.5%**	**100%**

ISBN No. : 978-81-906732-6-6

Interpretation:

From the above table, we can say that 56% respondents are saying that there is a significant influence of technical risk components in new product design and development. And lowest 6% respondents are responding that there is an important influence of factor technical risk components in new product design and development.

Next factor – variable impact on sound quality 40% respondents are saying there is critical influencement of his factor in new product design and development. And lowest 8% are responding that there is a marginal influence in new product design development.

At the end, we can interpret that 31% respondents are saying that there is a significant influence of technical factor in new product design and development. And lowest 8.5% respondents are saying that there is negligence influence of Technical factor in new product design and development.

TABLE NO.6

Opinions about Market factor which are influencing in New product design and development.

MARKET

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1.	Reaction of customers	21(42)	03(6)	10(20)	10(20)	06(12)	50(100)
2.	Sales direct Vs. Shops	19(38)	05(10)	19(38)	04(8)	03(6)	50(100)
3.	New Market	31(62)	-	09(18)	06(12)	04(8)	50(100)
4.	Developing scope of markets	35(70)	-	04(8)	08(16)	03(6)	50(100)
5	Seasonality of Products	31(62)	-	10(20)	09(18)	-	50(100)
	Grand total	**137**	**08**	**52**	**37**	**16**	**250**
	Percentage	**55%**	**3%**	**21%**	**15%**	**6%**	**100%**

Interpretation:

1) Relation of Customers:-Maximum 42% respondents are saying that there is a critical influence of reaction of customers in new product design. And lowest 6% respondents are responding that there is a significant influence in new product design and development.
2) New Market:-Maximum 62% respondents are responding that there is a critical influence of New Market factor in new product design and development. And lowest 8% are view of negligence influence of New Market factor in new product design and development.
3) Developing Scope of Market:- More number of respondent s that is 70% are saying that there is a critical influence of developing scope of market factor in new product design.
4) Seasonality of Products: Maximum 62% respondents are saying that there is a critical influence of seasonality of products in new product design and development.

Overall, at the end we can conclude that maximum 55% respondents are in their opinion that there is a critical influence of Market factor in new product design and development.

TABLE NO. 7

HR factor is also one of the factor influencing in new product design and development, opinions about that.

Sr. No.	Name of Factor	Critical	Significant	Important	Marginal	Negligence	Total
1.	Retention of key personnel	09(18)	21(42)	04(8)	06(12)	10(20)	50(100)
2.	Internal competencies	02(4)	24(48)	02(4)	03(6)	19(38)	50(100)
3.	Internal Organizational change	19(38)	09(18)	05(10)	05(10)	12(24)	50(100)
4.	Impact on staff through change of location	05(10)	19(38)	05(10)	06(12)	15(30)	50(100)
	Grand total	**35**	**73**	**16**	**20**	**56**	**200**
	Percentage	**17.5%**	**36.5%**	**8%**	**10%**	**28%**	**100%**

Interpretation:

1 From the table, we can conclude that maximum 42% respondent are saying that there is a significant influence of retention of key personnel in new product design and development. And lowest 8% are in this opinion that there is a important influence of factor retention of key personnel in product design and development.

2 Internal competencies factor influencing significantly in new production design and development (48 % respondents Opinion). Lowest respondents 4% opinions is that there is critical and important influence of factor internal competencies in new product design and development.

3 Factor – Internal Organization Changes:- Maximum, 38% respondents are saying that there is a critical influence of this factor new product design and development. Next 24% respondents areopinions are negligence influence of this factor in new product design and development.

At the end, we can interpret that maximum

ISBN No. : 978-81-906732-6-6

36.5% people are in this opinion that HR factor significantly influencing new product design and development. And lowest 8% responding that there is a importantly influences of HR factor in new product design and development.

Findings:-

1 It is found that 49% respondents are in this opinion that, there is a critical influence of competition factor in product design and development.
2 It is observed that, Financial factor influencing Critically in product design and development.
3 It is found that 41% respondents saying that Premises factor affecting significantly in product design and development. And also 48% respondents' opinion are there is a negligence influence of Premises factor in product design and development.
4 It is noted that maximum percentage of respondents are in this opinion that there is a critical influence of design factor in product design and development.
5 It is found that, significant influence of Technical Factor in new product design & development observed.
6 It is observed that move numbers of respondents are in this opinion that there is a critical influence of market factor in accurate product design & development.
7 It is observed that, HR factor influencing significantly in accurate product design and development.
8 As from one manufacturing unit, from their production record system table, it is found that there is a qualitative relationship between information technology and production activities.

Suggestions:-

Day to day technology management is traditionally linked to creative design investment but has never been qualified in a detailed way and the literature surrounding for evaluation of technology management quiet about design. This may be due to a variety of factors including the relatively imprecise nature of both consumer response and quality of designers' performance in relation to products design & development, for creative manufacturing companies. Researcher wants to suggest that almost all factors which are influencing in product design and development affecting critically. These factors want to manage efficiently & effectively critically advanced manufacturing technology also by applying modern principle management. (Practices) CAD/CAM/CAE technology should be applied in mfg. units to modify production specification quickly and accurately means that firms can customize their products and attain economics of scope based on low volume and low cost production.

Company should adopt Advance Manufacturing Technology and itsproper management offers firms the potential to new innovativestrategies.

References :

1. Armstrong, J.A. 1993. University-Research-New Goals, New Practices. Issues in Science and Technology. Vol.9 (2): 50-53.
2. Attaran, M, 1986. Flexible manufacturing systems: implementing an automated factory. Information systems management. Vol.9. No. 2:44-7.
3. Association of American Universities. 1986. Trends in Technology Transfer are Universities: Report of the Clearinghouse on University-industry Relations, (Washington, DC).
4. Atkinson, R 1991. Innovation policy making in a Federalist system: lessons from the states for US Federal Innovation Policy Making. Research Policy Vol. 20(6) :559.
5. Audretsch, D.B. and M. Vivarelli. 1996. Firms size and R&D spillovers: evidence from Italy. Small Business Economics, Vol.8(3) :249-258.
6. Author, C.S.V. Murty, 2006, Technology Management; Himalayas publication House.

****

Agro and Rural Tourism

Patil Sarika P.
Assistant Professor,
Faculty of Agriculture Engineering,
RCSMC, ABM, Sangli.

Abstract:

Introduction Global economic restructuring has created a climate in which many local economies have to adjust, in order to maintain or enhance their socio-economic viability. As Butler et al. (1998) note economic and social forces operating at the global level are determining both the nature and form of the rural landscape and how we value and use it. These changes, coupled with new ideas and approaches to leisure and recreation time are encouraging tourism development in rural areas at an ever increasing pace (Williams 1998: Reid et al. 2000). Rural tourism development in areas not traditionally considered tourism destinations per se occurs incrementally; either as a result of entrepreneurs developing businesses that attract visitors or as a result of visitors discovering the area and thereby generating a demand for tourism related activities to which local entrepreneurs respond. The Indian Agriculture and Tourism Industry Scenario India is known as "Land of villages". More than 77 crore farmers live in 5.5 lakhs of village (2001). Agriculture contributed about 18.5% of the national income (2006-07) as compared to a high 50% in 1950. 85% of population of India still depends on Agriculture hence Agriculture is not mere business, but is still the "True Culture of India".

Key words: *Agro and Rural tourism, entrepreneur, rural landscape, culture.*

1.0 Introduction:

Defining Rural Tourism The definition of rural tourism has been the subject of many debates in the literature without arriving at any firm consensus (Pearce 1989; Bram well 1994; Seat on et al. 1994). First of all, rural areas where rural tourism occurs are difficult to define since criteria used by different nations vary enormously

- Rural tourism and agri-tourism (each of these categories is a derivative of the subsequent one, like concentric circles). • Tourism is termed rural when the rural culture is a key component of the product on offer. Depending on the primary activity component of this product, the terms used are agro-tourism, green tourism, gastronomic, equestrian, nautical, hunting, adventure, historical/ cultural tourism and so on.

1.2 Objectives:

The objectives of this paper are follows:

1. To examine the importance of agro-tourism development in Maharashtra.
2. To identify the problems of the agro-tourism and make suggestions to establishment and operations of agro-tourism.

1.3. Concept of Agro and Rural Tourism:

Rural Tourist Destination – A Product There are some critical factors responsible in the evaluation and development of rural tourism as a product. Some of these are – Changes in the preferences and needs of visitors. Destination of the natural and manmade environment. Change or disappearance of those attractions, which brought tourists to the area. Identification of potential consumer. Understanding the rural tourists buying behavior. To be competitive rural tourism destination must possess basic tourist requirements such as hygienic accommodation and catering. It should be connected with the farm accommodations well as the cultural elements and traditions. Moreover, this activity brings visitors closer to nature and rural activities in which they can participate, be entertained and feel the pleasure of touring.

A term 'Agro-tourism' is a new face of tourism. An agro-tourism is farm based business that is open to the public. These specialized agro-tourism destinations generally offer things to see, things to do, and produce or gifts to buy, and are open to the public. Agro-tourism is defined as "Travel that combines agricultural or rural settings

ISBN No. : 978-81-906732-6-6

with products of agricultural operations – all within a tourism experience". According to Mr. Pandurang Tavare (ATDC, Pune) - "Agro-tourism is that Agro-Business activity, when a native farmers or person of the area offers tours to their agriculture farm to allow a person to view them growing, harvesting, and processing locally grown foods, such as coconuts, pineapple, sugar cane, corn, or any agriculture produce the person would not encounter in their city or home country.

1.4. Agro and Rural Tourism Opportunities in India:

1.4.1. Indian tourism industry is growing @10.1% - The World Tourism organization has estimated that the tourism industry is growing at the rate of 4% a year and that by the year 2010 there will be more than one billion tourists visiting various parts of the world. But the Indian tourism industry is growing at the rate of 10% which is 2½ times more that the growth rate at global level. By introducing Agro-tourism concept, not only present growth rate is sustained but also this value addition contributes to further growth.

1.4.2. India has entered amongst top 10 tourist destinations list (Conde Nast Travellor – A leading European Travel Magazine) - India is already established as one of the top tourist destination in the world. Value addition by introducing novel products like Agro-tourism would only strengthen the competitiveness of Indian tourism industry in global market.

1.4.3. India has diverse culture and geography:

Which provides ample and unlimited scope for the growth of this business. India has diverse Agro-climatic conditions, diverse crops, people, culture, deserts, mountains, coastal systems and islands which provides scope for promotion of all season, multi- location tourism products.

1.5. Advantages of Agro-tourism:

1.5.1. It brings major primary sector Agriculture closer to major service sector tourism expected to create win-win situation for both the sectors.

1.5.2. Tourism sector has the potential to enlarge.

1.5.3. Agriculture sector has the capacity to absorb expansion in Tourism sector.

1.6. Basic Principles of Agro-tourism:

1.6.1 Have something for visitors to see: Animals, birds, farms, culture of the village, dress and festivals.

1.6.2. Have something for visitors to do: Participating in agricultural operations, riding camel, buffalo, cooking and participating in the rural games i.e. gillidanda, gotti (marble etc.).

1.6.3. Have something for visitors to buy: Rural crafts, dress materials, farm gate fresh processed food are few items.

1.7. Scope of Agro-Tourism:

Agro-tourism has great scope in the present context for the following reasons:

1.7.1. An inexpensive gateway:

The cost of food, accommodation, recreation and travel is least in Agro-tourism. This widens the tourist base. Present concept of travel and tourism is limited to urban and rich class which constitutes only a small portion of the population. However, the concept of Agro-tourism takes travel and tourism to the larger population, widening the scope of tourism due to its cost effectiveness.

1.7.2. Curiosity about the farming industry and life style Curiosity about the farming industry:

The urban population having roots in villages always have had the curiosity to learn about sources of food, plants, animals, raw materials like wood, handicrafts, languages, culture, tradition, dresses and rural lifestyle. Agro-tourism which revolves around farmers, villages and agriculture has the capacity to satisfy the curiosity of this segment of population.

1.7.3. Strong demand for wholesome family oriented recreational activities: Villages provide recreational opportunities to all age groups i.e. children young, middle and old age, male, female, in total to the whole family at a cheaper cost. Rural games, festivals, food, dress and the nature provides variety of entertainment to the entire family.

1.7.4. Health consciousness of urban population and finding solace with nature friendly:

Modern lifestyle has made life stressful and average life span has come down. Hence, people are in constant search of pro-nature means to make life more peaceful. Ayurveda which is a pro-nature medical approach has roots in villages. Indigenous medical knowledge of villagers is respected. Organic foods are in greater demand in urban areas and foreign countries. In total, health conscious

ISBN No. : 978-81-906732-6-6

urban population is looking towards pro- nature villages for solutions.

1.7.5. Desire for peace and tranquility: Modern life is a product of diversified thinking and diversified activities. Every individual attempts to work more, in different directions to earn more money to enjoy modern comforts. Hence, peace is always out of his system. Tourism is a means for searching peaceful location. Peace and tranquility are inbuilt in Agro-tourism as it is away from urban areas and close to nature.

1.7.6. Interest in natural environment: Busy urban population is leaning towards nature. Because, natural environment is always away from busy life. Birds, animals, crops, mountains, water bodies, villages provide totally different atmosphere to urban population in which they can forget their busy urban life.

1.7.7. Disillusionment with overcrowded resorts and cities: In resorts and cities, overcrowded peace seekers disturb each other's peace. Hence, peace is beyond cities and resorts. Even though efforts are made to create village atmosphere in the sub urban areas through resorts, farm houses, it looks like a distant replica of the original.

1.7.8. Nostalgia for their roots on the farm: Cities are growing at the cost of villages. Villagers are migrating to cities in search of jobs and to seek the comforts of modern life. Hence, yesterday's villagers are today's urbanites. Deep in the heart of urbanites lies the love and respect for their ancestors and villages. Hence, visit to villages satisfies their desire. This is also expressed through the hatred of urbanites to flat culture and love for farmhouses located in the outskirts of cities. Any opportunity to visit villages and spend time with family is dream of any urbanite. But, minimum decent facilities are always problem. Agro-tourism attempts to overcome this problem.

1.7.9. Rural recreation: Villages provide variety of recreation to urbanites through festivals and handicrafts. Villagers (farmers) lifestyle, dress, languages, culture / traditions which always add value to the entertainment. Agricultural environment around farmers and the entire production process could create curiosity among urban taught. Places of agricultural importance like highest crop yielding farm, highest animal yielding farm, processing units, farms where innovations tried add attraction to the tourists. Agricultural products like farm gate fresh market, processed foods, organic food could lure the urban tourists. As result of this agri – atmosphere in the villages, there is scope to develop Agro – Tourism products like agri-shopping, culinary tourism, pick and own your tree / plot, bed and breakfast, pick and pay, bullock cart riding, camel riding, boating, fishing, herbal walk, rural games and health (ayurvedic) tourism.

1.7.10. Educational value of Agro-Tourism: Agro-tourism could create awareness about rural life and knowledge about agriculture science among urban school children. It provides a best alternative for school picnics which are urban based. It provides opportunity for hands on experience for urban college students in agriculture. It is a means for providing training to future farmers. It would be effectively used as educational and training tool to train agriculture and line department officers. This provides unique opportunity for education through recreation where learning is fun effective and easy. Seeing believes, doing is learning. This experience based concept is the USP of Agri- Tourism.

1.8. Basic Principles of Agro-Tourism:

Agro - Tourism should ensure the following three basic principles.

1.8.1. Have something for visitors to see: Animals, birds, farms and nature are few things which Agro-tourism could offer to the tourist. Apart from these, culture, dress, festivals and rural games could create enough interest among visitors in Agro-tourism.

1.8.2. Have something for visitors to do: Participating in agricultural operations, swimming, bullock cart riding, camel riding, buffalo riding, cooking and participating in the rural games are few activities to quote in which tourists can take part and enjoy.

1.8.3. Have something for visitors to buy: Rural crafts, dress materials, farm gate fresh agriculture products, processed foods are the few items which tourist can buy as memento for remembrance.

1.9. Requirements to Agro-Tourism Centers:

Researcher has identified the minimum requirements for the agro-tourism center. To develop an agro-tourism in their farm, the farmer / farmers must have basic infrastructure and facilities in their farm as follows:

1.9.1. Infrastructure:

* Accommodation facilities at same place or alliance

ISBN No. : 978-81-906732-6-6

with nearest hotels.
* Farmhouse, which has the rural look and feel comfortable along with all minimum required facilities.
* Rich resources in agriculture namely water and plants at the place.
* Cooking equipment's for cooking food, if tourist have interested.
* Emergency medical care's with first aid box.
* The well or lake or swimming tank for fishing, swimming
* Bullock cart, cattle shade, telephone facilities etc
* Goat farm, Emu (Ostrich bird) farm, sericulture farm, green house,

1.9.2. Facilities Should Provide:
* Offer authentic rural Indian / Maharashtrian food for breakfast, lunch and dinner.
* Farmers should offer to see and participate in the agricultural activities.
* Offer an opportunity to participate in the rural games to the tourist
* Provide information them about the culture, dress, arts, crafts, festivals, rural traditions and also give possible demonstration of some arts.
* Offer bullock cart for riding and horse riding, buffalo ride in the water, fishing facility in your pounds or nearest lake.
* Offer fruits, corns, groundnuts, sugarcane and other agro-products as per availability.
* Show local birds, animals and waterfalls etc and give authentic information about them.
* Must provide safety to tourists' with the support of alliance hospitals.
* Arrange folk dance programme, Shekoti folk songs bhajan, kirtana, lezim dance, dhangarigaja, etc.
* Available some agro-product to purchase to the tourist

1.9.3. Other Miscellaneous:
* Offer pollution free environment to the tourists
* Try to create interest about the village culture for the future tourism business.
* Introduce the tourists with imminent persons of your village.
* Employ well-trained staff or funny (comedy) persons with good communication skill to entertain the tourist.
* To have authentic information regarding to the railway and bus time table for the help of tourists. Farmer can also provide other additional facilities to their requirements for the better satisfaction of tourists.

1.10. Benefits of Agro-Tourism Centers: Agro-tourism has the potential to change the economic face of traditional agriculture. The benefits of agro-tourism development are manifold. It would bring many direct and indirect benefits to the farmers and rural people. Some of the benefits are following:-
* Employment opportunities to the farmers including farm family members and youth
* Additional income source for the farmers to protest against income fluctuation.
* Cultural transformation between urban and rural peoples including social moral values
* Farmers can improve their standard of living due to the contacts with urban peoples.
* Benefits to the urban peoples, they can understand about the rural life and know about the agricultural activities.
* It support for rural and agricultural development process.
* Help to the reduce burden on the other traditional tourist centers.

1.11. Problems of the Agro-Tourism:

The Maharashtra has a greater potential of the development of the agro-tourism centers due to the good natural and climatic conditions. But there are some problems in the process of agro-tourism development in the state. Major challenges and problems are follows;
* Lack of perfect knowledge about the agro-tourism
* Weak communication skill and lake of commercial approach of the small farmers
* Lake of capital to develop basic infrastructure for the agro-tourism
* Ignorance of the farmers regarding to the such type of activities
* Presence of unorganized sector in the Agro-tourism industry.
* Ensuring hygiene and basic requirements considering urban visitors
* Lakhs of farmers have small size holding, low quality land and little or no access to credit or irrigation. Have to negotiate with consistent drought.
* 148 of the 355 Talukas in the state are consistently drought prone

1.12. Key Techniques for Success in Agro-Tourism: Agro-tourism is a one of the business activity. So,

ISBN No. : 978-81-906732-6-6

farmers have must of commercial mind and some marketing techniques for the success. For the better success in the agro-tourism you should follow the following things;

* Give a wide publicity of your tourism center by new papers, television etc Use all possible advertisement means.
* Develop contacts with the schools, colleges, NGOs, clubs, unions, organizations etc.
* Train your staff or family members for reception and hospitality
* understand about the customers wants and their expectations and serve
* Charge optimum rent and charges for the facilities / services on the commercial base.
* Do the artificially use local resources for the entertain / serve to tourist.
* Develop your website and update time to time for attract foreign tourist
* Take their feedback and comments about the service and suggestions to more development and modification
* Develop a good relationship with the tourist for future business and chain publicity
* Develop different agro-tour packages of for different type of tourist and their expectations.
* Preserve a address book and comments of the visited tourists for future tourism business
* Behave sincerely with the tourists and participate with them / him
* Small farmers can develop their agro-tourism centers on the basis of cooperative society.

1.13. Conclusions:

1. Development of agri-tourism in Maharashtra rural areas is still in its nascent stage. For the agri tourism to succeed, it is imperative that the tourists must have:
2. Something to see: Animals, birds, farms, culture of the village, dress and festivals. Something to do: Participating in agricultural operations, riding camel, buffalo, cooking and participating in the rural games i.e. gilli-danda, gotti (marble etc.).Something to buy: Rural crafts, dress materials, farm gate fresh processed food are few items.
3. It is a good opportunity to develop an agro-tourism business in Maharashtra. But there is a problem of low awareness about this business in the farmer and problem of the finance and proper view in the farmers of the Maharashtra. Hence, the agriculture departments of the districts', Agriculture Universities should try to give orientation about it and provide some innovative ideas regarding to the Agro-tourism.
4. The government should try to provide optimum financial aids to the agro-tourism activities in the Maharashtra by the grants and institutional finance. Bank should provide optimum financial help for the agro-tourism activities in the Maharashtra. Union of the agro-tourism service providers is also another need of these farmers which helps to the agricultural tourism network in the India including Maharashtra.

References:

1. Gopal, R., ShilpaVarma and Rashmi Gopinathan. 2008. Rural Tourism Development: Constraints and Possibilities with a special reference to Agro - Tourism a Case Study on Agro -Tourism Destination – Malegoan Village, Taluka Baramati, District Pune, Maharashtra.
2. Kumbhar, V.M.2009. Agro-tourism: scope and opportunities for the farmers in Maharashtra. Indiastat.com Sept.-Oct., socio - economic voice.
3. Taware, P.2008.Agro–tourism: innovative supplementary income generating activity for enterprising farmers.
4. www.agritourism.in
5. www.ncagr.com

****

Rural Marketing : 4A are still Challenges or Myth?

Abstract

Census of India defines rural as any habitation with a population density less than 400 per sq. km., where at least 75 percent of the male working population is engaged in agriculture and where there exists no municipality or board. In India an around 70% population still leaves in rural area which is still untapped. Slowly this untapped market is becoming first choice for all the marketers. But this market has its own limitations such as difficult distribution system, low awareness, price sensitivity and acceptability also known as 4A challenges.

But now rural India is moving towards drastic change. Previous year's data supports that rural consumers are ready to accept changes both economically and psychologically. Government policies, reach of telecommunication and media, NGO initiatives etc. are changing rural scenario. So this paper is trying to identify whether 4A are still challenges for rural market or myth. Data has been collected by interview method from the villages around Mumbai.

Key words: *Rural Market, Challenges, Marketing Strategies.*

Introduction

Rural marketing is a known conceptand gaining significance due to the change in external and external factors. Internal factors includes changing lifestyle, attitude, behaviour, perception etc. while political, social, economical and social factors known as external factors. Government policies, NGO initiatives, reach of media and telecommunication are impacting these internal and external factors in a positive way. With untapped huge population, saturated urban market, increasing development in rural areas are some of the fascinating factors for growing business in rural area. But rural market faces some challenges too which are different from urban market popularly known as 4A. Where 4A stands for availability, acceptability, awareness and affordability.

Literature Review

Rural market and Rural Consumers Census of India defines rural as any habitation with a population density less than 400 per sq. km., where at least 75 percent of the male working population is engaged in agriculture and where there exists no municipality or board. According to National Council of Applied Economic Research (NCAER) reports, rural India is home to 720 million consumers across 627,000 villages. Seventeen per cent of these villages account for 50 per cent of the rural population as well as 60 per cent of rural wealth. The fact is that nearly 70% of India's consumers are in rural areas and more than half of the national income is generated by rural India. Though Indian rural market is widely scattered, about half of India's rural population lived in just one sixth of 6, 00,000 villages. As its huge potential but they have low disposable income (Kripalani, 2002) as well as highly dependent on monsoon (Kanaan, 2001).Lot of hurdles in distribution such as poor roads and unreliable electricity etc. (Kripalani, 2002). Major transportation include camels, bulldrawn carts, bicycles, trucks, and trains (Prahalad and Lieberthal, 2003).

A paper by Prahalad & Hammond (2002) gives importance to focus on untapped market of poor people including rural population. HUL, Citi group, are some examples are successfully capturing this opportunities. Gyandoot, Apetch's Vidya ,ITC's E-Choupal are some of the successful web based program in rural India. Sharma and Kasturi (2004) observed that non availability of

product creates tension among rural consumers and push them to select the alternatives and compromise on quality. Jain and Rathod (2005) found that rural consumers are facing problem of cheap quality of products, spurious products, non-availability of promotional offers. Madhavi and Arulkumar (2006) also gave stress on quality of products. As generally assumed that rural consumer on very much price sensitive, this study suggest that quality is more important than comes price.

Changing Rural Scenario Deepak & Halan (2003)mentioned that rural prefer quality and variety products over price. Lokhande (2003) suggested that rural consumers are changing and changing their lifestyle. Thanks to government policies, new communication technologies and information technology that now rural consumer aspire above for lifestyle products. But still other factors such as income, caste, religion, education and gender are considerably important. According to a report by Internet and Mobile Association of India and market research firm IMRB in June 2012,38 million(4.6%) of rural India has accessed the internet at least once in their life while 31 million have accessed the internet once in last one month .Out of that 3.6 million(12%) access the internet using a mobile phone and shown the increment of 7.2 times in the past 2 years and growing. Other access points include Community Service Centers and Cyber café and home. Rana and Ahuja (2014) suggested that Rural families have different pattern of consumption. They spends huge amount on weddings, pilgrimages visits, constructions etc. and ready to pay the factual price for factual product. Old retailing techniques has been replaced by new and companies have to make separate strategies for rural market. Paper also gave focus on different strategies adopted by different companies such as Vodafone, HLL, Dabur, Amul ,Coke, Colgate and concluded that for penetrating rural market different strategies need to be developed.

Research Design

To identify the challenges unstructured interviews were conducted in villages around Mumbai. Retailers were chosen for interview because they are the contact point with customers and with their interview information about all 4A can be collected.

Result and Findings

All the questions in unstructured interview were asked with reference of confectionary and FMCG products. Retails were local general stores. Villages covered are Titwala ,Manda, Uran, Bhivpuri Road, Goveli, NerePada , Mhasa, Kongoan.

Findings after Retailers interview

* Around 95 % retailers are aware about original products and spurious products.
* Distribution of spurious products are better than original branded products.
* 80% distributors keeps both original and spurious products. Depending on customers demand they offer products.
* There are more margin in fake products then branded products. In some cases it is up to 25-35 %. So if customer is not specific about brand most of the shopkeeper offer fake products first.
* Both price sensitive and quality sensitive consumers exist in villages.
* Villagers are ready to pay more for branded products, but percentage of those type of customers are very less, around 25%.
* Keeping products in shops depends upon customer demand and availability of product or supply of products.
* Distribution of products from nearby markets such as Karjat, Panvel, Vithalwadi, Ulhasnagar etc.
* Customer do very frequent shopping of small packets.
* Most of the Customers are aware about brand name, but might be not able to differentiate between original and fake.
* Packaging attracts consumers.

Suggestions

After analysing the finding we can conclude that awareness and acceptability are not now major hurdles. Even literature review give stress on changing rural consumers in different aspects such as acceptability and awareness about products. Consumer are aware about different brands and ready to use or consume products. But availability is still challenge. So companies need to design proper distribution channels to cater this market. And the biggest challenge still is the price. Though rural consumers are overcoming this challenge but a major portion is still have small amount money to

spend. So companies need to work on it by providing small packages or credit system.

Scope and limitations

Study is restricted to Maharashtra market and that too, close to Mumbai so to reach on conclusion in-depth study need to be done.

Conclusion

Understanding the scope of rural markets companies are working towards over coming the challenges. DSCL's hariyali Kisan Bazar, Godrej's Aadhaar, HLL's project Shakti, ITC;s e-choupal are some of the model for new rural retailing. So rural population are getting connected to the world through internet and media , now they are ready to accept the changes and look for quality products so we can conclude that traditional 4A are not major hurdles now for growth of business in rural market.

References

1. Jain, A. & Rathod, R.M. (2005).Distribution and Retailing Trends in Rural Markets :A Study in Villages of Gujarat. India Journal of Marketing, 35(9),17-20.
2. Kripalani, M. (2002). Rural India, have a coke. Business Week, 30-1.
3. Lokhande, M.A (2003).Rural Marketing a Study of Consumer Behaviour Trends. The Indian Journal of Commerce, 56(2&3),129-135.
4. Madhavi. C & Arul Kumar S (2006).Rural marketing for FMCG.Indian Journal of Marketing, 36(4),19-23.
5. Prahalad, C. K., & Hammond, A. (2002). Serving the world's poor, profitably. Harvard business review, 80(9), 48-59.
6. Prahalad, C. K., & Lieberthal, K. (2003). The end of corporate imperialism. Harvard business review, 81(8), 109-17.
7. Rana, J., & Ahuja, S. (2014). Tapping the potential of Indian rural market through marketing strategies. International Journal of Research in Finance and Marketing, 4(5), 1-9.
8. Sharma, (Dr) V.V.S & Kasturi, R. (2004).An application of attribution in consumer decision-making and defence against post purchase dissonance- a study of rural consumer behaviour.

Reports-

1. IMRB Report (2012)
2. National Council of Applied Economic Research (NCAER) reports,

****