Role of ICT Enabled Systems and their Services in Agricultural Development of Rural India

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Abstract

Agricultural development is prior intention of every nation. Agricultural information problems and their underlying cause has indicated that the limited impact which agricultural information and communication. It is because of the ways used in dissemination and access the information by farmers. Indian rural farmers still suffer from the absence of right information at the required time. This paper describes the importance of ICT enabled systems and their services in agricultural development. It also explains some measured constraints in terms of agricultural benefits cum technological outcome of ICT enabled systems. The adoption of ICT enabled systems are most useful in India to acquire extensive information, focusing particularly on those rural areas that are currently least affected by the latest advances in the digital revolution.

Keywords: *ICT, Communication, adoption of ICT, revolution.*

1) Introduction

Agriculture is the key sector of the Indian economy. It provides principal means of livelihood to most of Indian population. Agriculture sector is witnessing radical changes and challenges at national and global level. Now a day's Indian agriculture is faced with the challenge of providing adequate and sustained livelihoods to more than hundred million farm families spread across the country, under changing social, economic and environmental conditions. Small scale farming not only limits efficiency but also effectiveness due to the limited scope for capital and technological inputs. Agricultural production has evolved into a complex business requiring the accumulation and integration of knowledge and information from many diverse sources. In order to remain competitive, the farmer often relies on agricultural specialists and advisors who provide information for decision making. Agriculture problems requires information and application of knowledge from different interacting fields of science and engineering to make a suitable decision making that in turn depends on interplay of these data and knowledge. This needs agricultural specializations and technical awareness in experts to help the farmers in decision making. Information is an essential ingredient in agricultural development programs but farmers rarely felt the impact of agricultural innovations because it is poorly disseminated. Farmers are simply out of reach from useful agricultural information because of either inadequate or lack of appropriate agricultural information system or technologies to access relevant information. Agricultural information and communication indicates limited impact because of the ways used in dissemination and access to this information by farmers. The technology generation and development plans do not sufficiently address actual needs of farmers.

Farmers facing many challenges in regards to information dissemination and accessibility to help them in increased agricultural knowledge. These include lack of information and communication facilities, poor information delivery channels, low use and adoption of existing information, low use of existing technologies. However these challenges have caused a big block to farmer's agricultural awareness. Hence rural farmers and their complex systems pose special research challenges and demand appropriate technologies to aid them in decision making. It is becoming evident that the

success of any agricultural development programme requires a well-organized and functional integrated information delivery system.

Whenever new knowledge is created from the research centre, it is difficult to transfer the expert's knowledge to farmers and extension agents because this needs huge budget, large number of experts to train farmers and extension agents to share the knowledge created from the research centre. Expert's knowledge is being concentrated in research centers but due to lack of information and communication sources, rural areas neither have direct access to that knowledge nor do the instruments take advantage of existing data. Over the last two decades, India emerged as the most preferred destination for outsourcing of ICT services. The vibrant ICT industry is contributing information about latest technology agricultural sector. However, Indian rural agriculture of the economy is lagging behind in utilizing Information Communication Technology. ICT in agriculture is an emerging field focusing on the enhancement of agricultural and rural development in India. It involves application of innovative ways to use ICT in the rural domain. It can provide with accurate information necessary for the farmers which facilitates better agricultural output. ICT enabled services are diversely changed with agricultural extensions. There are many primary and auxiliary aspects of agricultural extension for which farmers are depending. Farmers are changing their trends in disseminating information from many diverse sources. Farmers from rural places are thinking about instant help available on different information disseminating sources. However, there are many things because of which sufficient and timely information is not reached up to farmers.

In the present article an attempt is made to represent various information dissemination sources from which farmers disseminating the information. The hindrances to adopt knowledge of experts at farmers level through these sources. This paper reports on the availability, use and information seeking behaviour of a farming community with specific reference to Information and Communication Technologies (ICTs).

2) ICT Enabled Information Dissemination Sources and their Services

Now a day's many information dissemination sources are available such as Print Media or Printed Manuals, Television, Radio, Internet, Agricultural Colleges, KrishiVigyanKendras, Kisan Call Centre, Mobile Services, Native Farmers, Agricultural Consultants and Experts to provide help to the farmers in all the aspects. These sources are helpful to provide various services and applications associated with them, such as broadcasting, telecasting, videoconferencing and distance learning etc. Extension is the most important instrument for agricultural development; hence, extension reforms scheme may be up-scaled at the farmer's level. Since all the districts have Krishi Vigyan Kendras (KVKs), generally one per district, the mandate and functioning of KVKs not clearly defined. They are not able to play a key role in support of the Mass Media and ICT initiatives at root farmer's level.[18] Radio programs are popularly used in communicating agricultural information but such type of information is not always available and sufficient. The Community Radio Centre's may be established at each KVK so as to provide location specific information to the farming community.

Many agricultural television programs are available on TV channels but they do not provide information as per the requirement of farmers. It is not possible to implement the solutions directly given through these channels. Farmers may not receive complete information about particular problem. A dedicated TV channel for agriculture may be launched, if feasible. Online help for concise information is available anywhere and anytime on internet where comparative searching is possible. It provides help in various formats like Text, Image, Audio, Video files. But lack of technologies and resources rural farmers are remains out of loop from these help. Access of this type of information is expensive for rural farmers. ICT attempts by public, private and NGOs in the field of agriculture and related sectors need to be converged and shared among them. Printed media such as news papers or manuals are in use for agricultural information in minimum cost but updated information is required to enhance knowledge of farmers. Progressive farmers from different commodity groups may be identified,

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trained by the use of most helpful information dissemination systems at root level. They may be recognized as resource persons in extension activities, further promoting the farmer-to-farmer extension. Wide publicity is required for popularizing Kisan Call Centers among farming community and other stakeholders.

ICT in agriculture is an emerging field focusing on the enhancement of agricultural and rural development in India. It involves application of innovative ways to use ICT in the rural domain. It can provide with accurate information necessary for the farmers which facilitates better agricultural output.

3) Literature Survey on ICT in Agriculture

In India, ICT for rural agricultural development has a huge potential. Various NGOs, private organizations, corporate bodies and governmental organizations have generally taken the initiatives to extend the growth in agricultural and rural development. Learning from the ongoing projects should be taken into account while formulating the strategy or action-plan for future for overall development of agriculture. From the perspective of agricultural field of rural area and information technology, ICTs can be seen as useful in improving linkages between research and extension systems. Agricultural extension brings information and new technologies to farming communities, allowing them to improve their production, incomes and standards of living. Extension has a major role in pointing the way to increasing the use of knowledge and information through its people orientation.

Leonard (1977) illustrate that, the rise in the demand for agricultural services, many variants of approaches, models and methods have been evolved to connect researchers, extension agents, producers and consumers. Buford (1990) pointed out, agricultural extension depends to a large extent on information exchange between and among farmers on the one hand, and a broad range of other actors on the other hand. Richardson (1997)found that, ICT is necessary for accessing required information and knowledge in strengthening the more complex and time-urgent pathways of information and knowledge-sharing on which agricultural innovations depend. Roller and Waverman (2001), Waverman, Meschi, and Fuss (2005) states that, ICTs have a demonstrably positive effect on income growth in developing and developed countries.[1] Rivera, Qamar, Van Crowder (2001), Birner and Anderson (2007), Anderson (2007) and Raabe (2008) states that, India has been experiencing major changes in agricultural extension system since the 1990s.[1]

Anderson and Feder (2004) found that, In the T&V and FFS systems, extension workers passed information to selected contact farmers who shared information with other farmers.[2] Davison et al (2005) conclude that, ICT can help in enabling rural development workers to gather, store, retrieve, adapt, localize and disseminate a broad range of information needed by rural families.[3] Lio and Liu (2006)found that, in rural areas, ICTs can raise incomes by increasing agricultural productivity and introducing income channels other than traditional farm jobs. [3] Jensen (2007) and Goyal (2010)states that,ICTs for agriculture improve incomes and quality of life among the rural poor [5] Ananda jayasekerametal. (2008) find out that, agricultural service delivery in developing countries started with production-oriented limited extension services for export crops. The attention was diverted in the fifties to food production and improved farming techniques.[5] Fraol Lemma (September 2009)find out that, ICT plays important role in the agricultural knowledge management systems in BURE, GOMA, ALABA AND ALAMATA[20] Asenso Okyere and Davis (2009)found that, the Integrated Agricultural Research for Development concept puts farmers and users at the center of innovative practices.[20] P. Adhigurua, P.S. Birthalb and B. Ganesh Kumar (2009) found that, for vital information on animal healthcare, farmers depend largely on neighborhood sources (other farmers) than extension workers.[20] Claire J. Glendenning, Suresh Babu, KwadwoAsenso-Okyere (2010) concludes that, the organizational innovation presented by agriclinics in integrating the provision of several services to farmers. [7] Anwesha Banerjee (December 2011)pointed out, ICT is the future of Indian Agro economy too; if it needs to be all round success more & more initiatives need to be taken and have to make it work in grass root level.[20] Deven J. Patel and Kapil K. Shukla (December 2014) stated that, ICT plays important role in information dissemination in India, however

there are many challenges opportunities for ICT Initiatives.[7]

4) Some ICT initiatives for rural agricultural development in India:

* Application of Satellite Communication for Training Field Extension Workers in Rural Areas (Indian Space Research Organisation).
* Agrisnet
* Automated Milk Collection Centres of Amul dairy cooperatives (Gujarat).
* Computer-Aided Online Registration Department (Andhra Pradesh).
* Gyandoot project (Madhya Pradesh).
* IFFCO Kisan Sanchar Limited
* Information Village project of the M S Swaminathan Research Foundation (MSSRF) (Pondicherry).
* iKisan project of the Nagarjuna group of companies (Andhra Pradesh).
* IT Mediated Agri. Extension
* ITC –eChaupal
* Land Record Computerisation (Bhoomi) (Karnataka).
* Knowledge Network for Grass Root Innovations – Society for Research and Initiatives (SRISTI) (Gujarat).
* KissanSoochna Kendra
* Kissan Call Center
* Kisan Kerala
* Famers Call Center (FCC)
* Online Marketing and CAD in Northern Karnataka (Karnataka).
* Soochna Se Samadhan (Lifeline)
* Warana Wired Village project (Maharashtra).

Government, non- government organizations and corporate have initiated the above ICT initiatives in agriculture in India. Many of them are funded and run by initiator agencies but few of them have been sustained on their own. [8]

5) Observations on the ICT Initiatives

The following are the some observations on the ICT initiatives worked for delivery of information to the farmers:

5.1) Mobile based initiative

* Information should be provided through both voice and text SMS (in regional language) as farmers are more comfortable with voice mode than in text mode because of the problems of language barriers and levels of literacy.
* Farmers need to be registered with their farm details so that personalized care can be provided to each farm.
* In most of the cases the information provided is one way i.e. from top to bottom. It should include the two way communication system.
* Information should be provided as per the requirement of the farmers in the local language, in convenient mode and in the convenient time.
* An application to send the images / videos through mobile phone may also be developed, so that the farmer can also send the images/videos as and when required.
* Dissemination of information through mobile alone is not sufficient, it should be augmented with other extension services e.g. follow-up visits by the crop experts coupled with quality farm inputs.

5.2) Internet based initiative

* Illiteracy among the farmers is one of the major drawbacks for accessing the information through internet. Regular training and orientation is necessary for farmers regarding usage of internet technology.
* Websites / portals are not updated regularly and also the information available is generic nature. The portals should be user friendly and the information should be in regional languages and location specific.
* More agriculture based services have to be developed / implemented to run on the available internet based kiosks for the farming community. The centers should be set up in rural areas rather than urban centers.
* A provision should be given to the farmers to consult directly with the experts as it would be more beneficial for them as they can get immediate solutions for their critical problems.
* The internet kiosk may also act as a one stop shop for the farmers; they should provide linkages with all the service providers i.e. financial service, input dealers, output procurement agencies, warehousing agencies etc.

5.3) Community Radio Station (CRS)

* Radio Stations provide one way communication, thus farmers cannot ask for the immediate solutions to their specific problems.

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* The major challenges in CRS are competition with the other commercial stations, limited time of broadcasting, and repetition of the programs and sustainability of the community radio stations.
* CRS has a limited frequency, thus to reach larger people, the content may need to be recorded and sold / distributed in CDs.
* Coordination is required with local government agencies, agriculture universities and research centers involved in agriculture development to provide need specific programmes on agriculture to the beneficiaries
* More promotional and awareness activities are required to increase awareness followed by the participation of the progressive farmers.
* More involvement of community is required in identification of issues and need of the area.

5.4) Call Centre / IVRS

* General information is provided instead of area specific information.
* Lack of background information and farmer's database (farm and farming details).
* The feedback mechanism requires to be more effective so that it ensures quality..This will in turn ensure effectiveness of the responses farmers get from the experts.
* Poor feedback mechanism and quality control system.
* The mode of information should include voice and image, video and text mode, this will enable the farmers and expert to communicate & understand the exact problems in specific cases.
* Lack of close monitoring and field visit by the agriculture experts. Number of Scientists or experts should be increased and they should visit the field at regular intervals.[8]

6) ICT Portals Used in India for Agricultural Information Dissemination:

* Digital mandi (ITC promoted)- It offers the farmers all the information they need to enhance farm productivity by using better technology, improve farm produce price realization and cut transaction costs.[16]
* Agriwatch- This website provides the SMS facility for message alerts on prices of particular commodities.
* Tarahaat (Graphics)-Tarahaat utilizes fine graphics and animations to convey general introductory information about their services.
* Krishiworld.net
* toeholdindia.com
* Agriwatch.com
* ITCs Soyachoupal.com
* Acquachoupal.com
* Plantersnet.com.

7) Benefits to the Farmers from ICT Enabled Services

Farmers from Rural India will be benefited in various terms of the agricultural field. Following are some measured constraints in terms of agricultural benefits cum technological outcome of ICT enabled services.[13]

* Cultivations of proper crops at right time.
* Effective forecasting on the basis of continuous ICT access patterns.
* Accurate policy decision can be done.
* Farmers will be informed of the accurate current prices and the demands of the products.
* It is vital that the local information to be relayed to the farmers must be simplified by the access to agriculture information.
* Increasing the level of access of farmers is very vital in order to simplify contact between the sellers and the buyers, to publicize agricultural exports, facilitate online trading, and increase the awareness of producers on potential market opportunities including consumer and price trends by the access to national and international markets.
* The flow of information regarding new techniques in production would open up new opportunities to farmers by documenting and sharing their experiences to increase production efficiency.
* The flow of information from the farmers to policy makers, a favorable policy on development and sustainable growth of the agriculture sector will be achieved.
* Question-and-answer services where experts respond to queries on specialised subjects ICT services to block and district-level developmental officials for greater efficiency in delivering services for overall agricultural development.
* Up-to-date information, supplied to farmers as early as possible, about subjects such as packages of practices, market information, weather forecasting, input supplies, credit availability, etc.
* Provision of awareness at right time about disease/pest problems, information regarding rural

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development programmes and crop insurances, post harvest technology, etc.

* Services providing information to farmers regarding farm business and management.
* Tele-services for farmers by wireless communication.
* Making the latest information available to extend and forecast by obtaining the feedback.
* Instant information will be made available on mobile phones.

8) Challenges with ICT for Indian Agricultural Development

There is a requirement for an integrated approach which should cater to the problems of farmers in using ICT applications in agriculture such as accessibility, acceptability, simplicity, timely & useful information in simple local languages. It is from the choice of inputs in the farming system to marketing of the farm products.[7]

* There is a need to cater to the farmer queries in multimedia mode i.e. voice mode (i.e. in local language) along with text, image and video.
* Requirement of farmer friendly and simple interfaces to access information and advisory services in effective manner preferably through smart phones.
* Need is to develop an interactive system so that the communication can be possible from farmers to expert and vice versa.
* Requirement for interlinking of location specific information from various service providers to cater the specific needs of the farmers
* Requirement for interlinking of location specific information from various service providers to cater to the specific needs of the farmers
* Requirement of maintaining farmer's database with their farming details, by referring to it an expert can provide appropriate solution to concerned farmer's query.
* Requirement of expert support system which has user friendly interfaces and reference content for fast and proactive delivery of advices. The system should also facilitate an expert to be virtually available by giving him any time anywhere access.

9) Conclusion

This paper point out that, ICT enabled systems works as information dissemination sources for the farmers. There are many ICT initiatives and portals which makes information available in different formats. Generally farmers need timely information through human interface that are local and actively solved problems by participatory communication methods. It is essential to have interactive systems so that communication can possible in both ways. The information requirement from farmers also differs from one area to another, which is rarely addressed by existing information dissemination sources. There is need to have integrated and interlinking information systems. Many farmers are facing problem of illiteracy or language because of which they unable to adopt available information. Hence, there is need to have farmer friendly and advisory systems. The relevant information that is available at the expert or research level remains inaccessible by farmers. There is gap between higher level expert's knowledge and farmers. Hence, to adopt knowledge of experts at farmers level there is need knowledge based expert systems.

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Role of Knowledge Management in Agriculture Sector

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Abstract

The Agricultural sector has the greatest potential for rural development and also for society development. Government of INDIA seeks to increase yields of small land holder farmers by disseminating knowledge and information. The Information and Communication Technologies (ICT) and knowledge management that could play important roles in challenges related to creating, filtering sharing knowledge and technologies. ICT allows the proper technique of handling the information and knowledge available for Agriculture.

Knowledge management allows to codify inherited agricultural knowledge which is in the form of tacit. KM and ICT transform tacit knowledge into explicit one. Km helps in decision making for farmers by providing right knowledge at right time.

Adoption of Agricultural Knowledge management System provides a proper channel to create, filter, store and disseminate the knowledge among the farmer society. Effective Knowledge Management System with ICT provides a solution for creation and dissemination of knowledge. ICT based KM techniques transform this sector by improving productivity.

Keywords: *Rural development, Knowledge Management, Knowledge capture, disseminate.*

Introduction

India agriculture has an extensive background which goes back to 10 thousand years. At present, in terms of agricultural production, the country holds the second position all over the world. In 2007, agriculture and other associated industries such as lumbering and forestry represented around 16.6% of the Gross Domestic Product of the country. In addition, the sector recruited about 52% of the entire manpower.

India holds the second position in production of wheat, rice, cotton, sugarcane, and groundnuts. It is also the second biggest harvester of vegetables and fruit, representing 8.6% and 10.9% of the overall vegetable and fruit production in the world correspondingly.

Regardless of the fact that there has been a gradual slump in its contribution to the gross domestic product of the country, India agriculture is currently the biggest industry in India. Development strategy and policies, particularly those focused on agriculture and rural areas, would be a critical factor influencing the agricultural scenario as it actually unfolds in the decades to come. The central and state governments and the associated bodies engaged in the task of formulation of policies have adequate in-house facilities for high quality policy analyses. Our attempt is to identify tasks focusing on which could help the farmers in strengthening the policy-making process itself so that policies gain in relevance, reach and impact on intended beneficiaries.

ICT In Indian Agriculture

ICT in agriculture is an emerging field focusing on the enhancement of agricultural and rural development in India. It involves application of innovative ways to use Information & Communication Technologies (ICT) in the rural domain. The advancements in ICT can be utilized for providing accurate, timely, relevant information and services to the farmers, thereby facilitating an environment for more remunerative agriculture.

Given the development scenario in Indian Agriculture, ICT movement is still evolving. However, all the ICT initiatives are not uniform with disparities between regions in the level and quality of telecommunications, information and the effort of individuals, public and private organizations, and differentiated nature of demand of the farmers in different areas. As a result, there have been many successes, failures, lessons learned and experience gained, so far. While these initiatives are intended to address the needs of the farmers through ICT, their actual usage and their ability to bring significant impact on the farm productivity and socio-economic development of the intended beneficiaries is to be understood. It is relatively unknown as to whether the ultimate beneficiaries actually use the facilities provided for them meaningfully to meet their needs. The common problems in adoption of ICT in rural segments are ICT illiteracy, availability of relevant and localized contents in their own languages, easy and affordable accessibility and other issues such as awareness and willingness for adoption of new technologies among the rural peoples etc. One critical aspect in the usage of ICT's for farmers and their groups, as seen in some of the ICT driven initiatives, is the involvement of human interface at the last mile indicating that there is a human dependency in transmission of Information /Knowledge to farmers.

Some existing ICT systems for agriculture sectors are

* e-Sagu : IT based agro advisory system by IIIT , Hydrabad
* Computer to Mobile SMS Broadcast Service
* Community Radio, Krishi Vigyan Kendra, Bhawasar, Pauri, Uttarakhand
* Strengthening of IT apparatus in agriculture and cooperation in states and UTs (AGRISNET);
* Agricultural Resources Information Systems (AgRIS);
* Kisan Call Centres.

Some of the following portals developed for agriculture sectors.

(a) AGMARKNET Portal (http://agmarknet.nic.in)
(b) DACNET Portal (http://dacnet.nic.in);
(c) DAC Portal (http://agricoop.nic.in);
(d) INTRADAC Portal (http://intradac.nic.in);
(e) SEEDNET Portal (http://seednet.gov.in);
(f) Agricultural Census Portal (http://agcensus.nic.in).

The Department of Agriculture and Cooperation is supporting e-governance activities at the state Agriculture and allied departments through AGRISNET, a state sector mission mode project, which aims at providing improved services to the farming community using Information and Communication Technology (ICT). Agricultural Resources Information System (AgRIS) project has been launched for implementation in two pilot districts of Rohtak (Dairy Typology) in Haryana and Banaskantha (Arid Typology) in Gujarat. Kisan Call Centres initiative aims to provide information to the farming community through toll-free telephone lines. Usage of GIS satellite imaging in India had been happening since a long time in India.

Thus, there are ICT systems still The farming community was facing problems throughout the different stages of their farming system, for instance they were unable to obtain their critical information needs or an understanding of the applications for promoting productive, equitable, and sustainable agriculture. There is a need to understand as to how far the ICT initiatives are able to address the farmers need so that better solutions can be developed to address those unmet needs. Knowledge Management (KM) plays vital role in sharing of best practices between people involved in agriculture sector.

Knowledge Management

Knowledge Management is one of the hottest area today in both the industry world and information research world. In our daily life, we deal with huge amount of data and information. Data and information is not knowledge until we know how to dig the value out of it. This is the reason we need knowledge management.

Knowledge Management (KM) refers to a multi-disciplined approach to achieving organizational objectives by making the best use of knowledge. KM focuses on processes such as acquiring, creating and sharing knowledge and the cultural and technical foundations that support them.

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Km In Agriculture

Information and Knowledge Management remains a huge challenge for agricultural development in INDIA. These challenges include; small farm sizes, remote and scattered nature of farms, infrastructural limitations, increased global competitiveness, climate change, and the loss of agricultural biodiversity to name a few. The critical issues is in Indian agriculture at present is the knowledge deficit and infrastructure deficit, especially in the rural areas. Problems related to that add significant cost to farmers' operations. Another issue is lack of delivery mechanisms. There are a number of schemes aimed towards developing agriculture. We don't have effective delivery mechanisms that can translate those into effective facilitation at the ground level, in terms of increasing productivity or decreasing cost or increasing price realization. Inadequate government support exacerbates these issues.

The Knowledge Management have to play prominent role in the following areas.

1. Identify various types of agricultural indigenous knowledge and to establish the role of indigenous and exogenous knowledge in the farming systems.
2. Study the current status of managing agricultural Tacit Knowledge.
3. Identify the agricultural information and knowledge needs of farmers.
4. Find out how farmers access the agricultural knowledge.
5. Identify the role of ICTs in providing access to agricultural knowledge.
6. Propose a KM model that could be used to manage agricultural Knowledge.

CONCLUSION

There is a great potential to implement Knowledge Management System in order to improve rural livelihood in the agriculture sector. Knowledge management system facilitates to increase the agricultural productivity. Effective use of Knowledge and information management in the agri sector will be achieved through right information delivery at right time for farmer community. KM also enables to integrate tacit knowledge of farmers with ICT and further disseminate this among society. Integrating ICT and KM in agriculture sector increase the productivity. The effective use of Knowledge Management System provides better solution to stakeholders in agriculture sector.

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Cyber-Crime: Open DOORS to DANGER on Social Network

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Abstract:

Social networking sites are a type of virtual communication that allows people to connect with each other. People join SNS because it create a virtual profile and connect with virtual friends across the world and you can stay connected with old friends and family members. Now a day SNS become a reason for anxiety. Once you uploaded photos, videos and personal details on the SNS sites, you are helpless to control its circulation. When someone starts blackmailing using your personal profile, your personal life starts affecting. This study focused on Section 66E and Section 72A to deal with cyber-crime, and also discuss how adolescent girls are affected by cyber crimes in social networking sites and also explore its negative impact on personal life.

Keywords: *Cyber Crimes, S.66E, S.72 A, Social Networking, cybernetic.*

Introduction

With social networking sites allowing the young users the opportunity to mix with a huge network of known as well as unknown friends. Today youngsters facing a new type of Facebook addiction, they are goes wrathful behind it. They being immersed in cybernetic life and forgetting about the physical world around them. (Example of addicted mother: Alexandra V. Tobias, a mother from north Florida, killed her own child because the boy was crying that make her anger while she was playing Farmville on Facebook). Accessing the internet through the mobile phones has made it easier for the young generations to get logged-in into Facebook, Orkut, Twitter and WhatsApp most of the time and post updates about their daily activities. Making impressive profile on SNS and sharing personal information is also one type of fame among the youngsters, especially female uploaded their personal photos on SNS and update their status regularly. They didn't aware about that the crime knock their door. Knowingly or unknowingly we aspect the friend request from strangers and start chatting with them. Sometime cybercriminal make a fake account and try to attract a female between age group of 16-20. This is an age of immaturity and girls belong to this age group fall in the virtual relationship. In a similar case, Ashleigh Hall, a 17 year old girl, accepted friend request from a 33 year old man on Facebook. She had no idea that actually he was a convicted rapist who created a Fake profile as a teenager. And Finally, Ashleigh was murdered by that person ("Facebook – crime," 2010). The current study focuses on the impact of cybercrime by the inappropriate use of social networking sites on female's life.

Review of Literature

Willard (2007) in the article 'Social networking: Are cyber teens in danger?' feel concerns related to teen use of social networking sites include unsafe disclosure of personal information, risky sexual behavior, 'cyber bullying', involvement with dangerous communities and groups, and posting 'cyber threats'. San Diego News (2007) in the article titled 'Social Networking Sites Could Open Doors to Danger' reports that the regular users might be surprised to find their information is not as private as they think and that could be dangerous. Tan (2008) in the article 'social networking: Danger -

Warning for Teens' says to parents: 'One of the first things that you may want to discuss with your child is who they are talking with online. Your child should fully read and try to understand the content of their friend's online profiles. This will enable them to watch out for inconsistent stories or any inaccurate information. Brenner (2009) states in the article 'Social networking dangers exposed" that through a variety of easy tricks, attackers can hijack a person's social network account to use as a launching pad for additional attacks against other users. Bharkavi and Sheeba (2009) in their study 'Safety issues in Orkut for Girls' found out that most girls do not take much precautionary steps to stay safe on Orkut, they were not very suspicious about strangers sending them friend requests until they were affected. (Wallbridge 2009) It is difficult to balance the right of privacy and control of personal information when individuals voluntarily place personal information on their profile. Once information is placed on public domains users can easily lose control over who sees it and who may use it. While privacy settings are there to protect users, in practice this is not always the case, whether it is because of slack web design or through lack of knowledge or care by the user. (Moreno 2010) For young people to be aware and vigilant they have to be informed about the pro and cons which has to be done by the SNS managers who should clearly and legibly give information (not disclaimers) in the social networking sites about security concerns and privacy issues while avoiding legal nonsense so that it is clearly understood especially by young people, so that the cyber world becomes a safer

Cyber crime

Cyber crime refers to any crime that involves a computer and a network. The computer may have been used in the commission of a crime, or it may be the target. (Seth, 2007) Criminals simply devise different ways to undertake standard criminal activities such as fraud, theft, blackmail, forgery, and embezzlement using the new medium, often involving the Internet. The Act has termed certain offences as hacking, publishing of obscene materials in the net, tampering the data etc as punishable offences (Halder, 2006). Nappinai (2010) in "Cyber Crime Law in India: Has Law Kept Pace with Emerging Trends? An Empirical Study says that ?India was shocked out of its complacent conservatism due to the widespread circulation of a MMS clip shot by a Delhi school boy 17. This case took an unexpected twist when this clip was circulated on Bazee.com and its Chief Executive Officer of American origin was arrested. S.66E has now been introduced under the ITA, 2008 for the protection of physical or personal privacy of an individual. This section makes intentional capturing of the images of a person's private parts without his or her consent in any medium and publishing or transmitting such images through electronic medium, a violation of such person's privacy punishable with imprisonment of up to three years or with fine up to Rupees Two Lakhs, or both. Service providers on the Internet, social networking sites, Companies, firms, individuals and other intermediaries ought to now be careful in the collection, retention and dissemination of personal data. Interactive websites and P2P site operators also have to be extremely careful to ensure that the provisions of S.66E & S.72 A are not violated. Such crimes may threaten a nation's security and financial health.

Section 66E: Punishment for violation of privacy

Whoever, intentionally or knowingly captures, publishes or transmits the image of a private area of any person without his or her consent, under circumstances violating the privacy of that person, shall be punished with imprisonment which may extend to three years or with fine not exceeding two lakh rupees, or with both Explanation.- For the purposes of this section

1. Transmit - means to electronically send a visual image with the intent that it be viewed by a person or persons;
2. Capture - with respect to an image, means to videotape, photograph, film or record by any means;
3. Private area - means the naked or undergarment clad genitals, pubic area, buttocks or female breast;
4. Publishes - means reproduction in the printed or electronic form and making it available for public;
5. Under circumstances violating privacy - means circumstances in which a person can have a reasonable expectation that
6. He or she could disrobe in privacy, without being concerned that an image of his private area was being captured; or

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7. Any part of his or her private area would not be visible to the public, regardless of whether that person is in a public or private place.

Section 72A:

Punishment for Disclosure of information in breach of lawful contract. Save as other wise provided in this Act or any other law for the time being in force, any person including an intermediary who, while providing services under the terms of lawful contract, has secured access to any material containing personal information about another person, with the intent to cause or knowing that he is likely to cause wrongful loss or wrongful gain discloses, without the consent of the person concerned, or in breach of a lawful contract, such material to any other person shall be punished with imprisonment for a term which may extend to three years, or with a fine which may extend to five lakh rupees, or with both.

Case Studies:

Swati , 19 years, currently student of First year Engineering : She has her SNS account for more than 2 years now. She used daily to post pictures in her profile. One day when she was browsing the net, she got her pictures in the title of call girl. she immediately call one of her friends saying that she had seen her picture in a call girls list and asked his to view it immediately. She was amazed and immediately went to that profile. She was shocked for a moment because she did not even know who did such nonsense with her. She did not know what to do. Her friend suggests her to remove the picture immediately and go to the police. She did not want to make a big issue out of it; she preferred not going to the police. Instead, she took the aid of her friends to resolve the issue. After the incident, her parents had insisted that she should not post her pictures on SNS. Her parent knows about cyber laws, but they think it was only for very severe cases like hacking, phishing etc. Komal , 21 years, Final year student of B. Com. : Her scrapbook was available to public until that particular incident happened. One guys on SNS started scrapping her obscene messages. She did not even know who he is. These scraps were in Hindi Bengali and in English. She read Hindi and English scraps and all the scrap was good about her but didn't understand Bengali so she ignores it. She not gets it what was written in these scrap, one day she got a person who speak in Bengali. She talks about her Bengali massages and show her scrapbook. When her friend translated those scrap from scrapbook and told her about disgust. She felt bad of herself. She immediately put her scrap book to private, and deleted those obscene scraps. She sought her friend's help to track down; the friend lodged a complaint with the cyber crime officials. The officials tracked down the person who was doing this. After the incident, she locked her scrap book, photos, videos and testimonials only allowing her name to be displayed. She also learnt that her safety is in her hands and she needs to monitor and control it herself without allowing anybody to disturb her! Harshada , 23 years, final year, MBA student : About a 5 year ago, her SNS profile was hacked by somebody and that person started uploading adult (sexy) videos on her profile. She did not know about it first because she was 12th science student and she were concentrating on her studies. One of her friends told her that she was screening sexy videos from her profile. She was shocked and immediately after going home she tried logging into her profile and was unable to do so. She then realized that her profile has been hacked and she immediately removed it. She told her parents and friends about the incident for help her. Her parents did not want to make a big issue out of it; they did not going to the police. After the incident, her parents had insisted that she should not make any profile on SNS. She did not know about the cyber laws when the incident happened but now she says she is well aware of it. As a result, now she has her account on SNS. As a safety she stopped joining too many communities and stopped posting any personal information in her profile. She suggests the same to the girls who want to safeguard themselves on SNS.

How to remain safe in SNS

While using social networking sites you must be aware of certain things when discussing your private life in public. These are some of the tips that can make you and your family safe on the networking sites.

1) Keep your information private and accessible only to people in your friend list.
2) Don't accept stranger's friend request.
3) Don't post very personal information like your email id, date of birth, contact number, home

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address and information about your family members on the profile.

4) Be cautious while posting your photo.

5) Don't post your current location when on a tour, this information will inviting criminals.

6) Don't post negative things about your life or somebody's life.

7) Don't trust on any virtual friend, he/she may be bogus user on SNS.

8) Don't fix meeting appointment with virtual friends, until you know about him/her.

9) Don't share your emotions with virtual friends; they may get advantage of it.

Conclusion:

Facebook have its biggest bunch of users in between the age group of 15 to 25 years. The growth of social networking sites shows a significant change in the social and personal behavior of Internet users. SNS has become an essential medium of communication and entertainment among the young adults, but youngsters are not concerned with giving personal data or placing detailed information on their profile pages. Posting updates is the favorite pastime for the youngsters, later it was found that the young users account had been hacked and someone else was posting these updates on (Female) her name. The incidences of pornography, identity theft and other types of privacy concerns is increased. On the contrary, parents should aware about cybercrime and cyber low and insist their sons/daughters to aware about it in order to ensure social networking sites better protect its young participants. In order to reduce the incidence of cybercrime, the young users are required to be aware and attentive while using SNS. Because a change in teen culture is questionable, the worries behind social networking sites must act with more responsibility. Action must be taken to reduce the incidence of pornographers, identity theft and other types of privacy concerns.

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Regulatory Provisions for Safety of Residential Buildings (Rural Housing) Shortcomings and Modifications for its Role in 21st Century

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Abstract

The Rules and Regulations and its existence is the support system of the existences of Life on earth and part of natural instinct to control the happening of activities in the surrounding. Its need was felt to ensure and safeguard life, property and the very existence of all resources and ecosystem that supports life. Residence is another aspect which plays a very vital role in the Life Cycle of a living being and in particular a Human Being as he is considered to be most intelligent living being on Planet Earth. Humans evolved over a period of time from primitive stage to the modern world of 21st Century after undergoing a lot of change in their requirements, way of living and rules and regulations governing them.

Rules and Regulations is a must to maintain discipline and safe performance of any act for a desired output. They changed over a period of time as the requirements changed and need felt. Those who framed and strictly observed the implementation of regulations were able to build a better and safe society and are called as Developed Countries. Development can happen and sustain on strict enforcement of set down rules by Rulers and proactive approach by Residents in implementation of rules. Building a safe society starts from building safe residences and in turn towns and cities which are governed by Development Control Regulations (DCR) for that region. DCR is guideline and can be amended to suite the changing requirements of region. The development in rural areas is governed by Maharashtra Town Planning Act 1966, and Model Guidelines For Development & Building Construction Including Safety Provisions for Natural Hazards in Rural Areas. It is observed that the regulatory provisions are rarely followed in rural areas for construction of residential buildings or planning the towns and villages. This is because of lack of awareness about quality aspects of construction and more dependency on local contractors who are non technical personal. Over and above the approach of constructing a shelter at minimal cost is important than quality constructed house. In present world Monetary Gains prevail over value of life of Human being, resulting in worst construction practices. Mode of construction in rural areas is changing from Load bearing structures to RCC framed structures. Though technological advancement has given an edge to enhance the safety of people it is rarely observed in rural areas. Non availability of reinforcement steel conforming to IS standards, low quality of concrete due to improper mixing and casting, and many more aspects, result in weaker construction having low span of life. The unregulated construction of low cost residential buildings results in disasters during earthquakes as like in Latur in Maharashtra, Bhuj in Gujarat. The involvement of non technical personnel in construction is proving to be dangerous as quality of construction is not taken care to required standards.

Keywords – *Development Control Regulations, Safe Building Construction, Safety of Human Life, Unified Law of Land & Strict Enforcement*

1.0 Introduction

In 21st Century the erstwhile towns are growing to larger cities and cities to mega cities and metro cities. The fast growing urbanization has increased the need of shelter and subsequently the increased demand for residential buildings developed in a mass scale in form of town ships or individual building. The increased demand for Residential and Industrial land development led to

* Increased demand for change of land use from Agricultural / Forest / Salt Pan etc to Non Agricultural.

* Amendments to Development Control Regulations
* Changes in Development Control Plans.
* Amendments to existing rules and regulations after due deliberations in context to the prevalent situation.
* Formation of various departments and offices of authority to implement the improvised laws.

The objective of forming DCR applicable for Municipal Corporations / Council and Town Planning Act for small and large cities was

* To ensure the land use is made for purpose assigned
* Proportionate and appropriate land allocation for Commercial, Residential, Institutional, Recreational, Community Welfare, Industrial purposes.
* Planning and providing services and infrastructure to cater to growing population.
* Avoid unregulated development.
*Create a safe and healthy environment for the residents / occupants.
* Preserve the natural habitat in overall process.

The focus and attention in is given to the study of Rules and Regulations formulated by various statutory bodies and its current stature in context to Residential Buildings. Residential building forms the integral part of human development, care, upbringing, and most important the very existence of healthy and safe society. Those circumstances which pose risk / threat to life of any kind are unsafe. For human kind the place where he lives, works and the residence where a Family stays is more important. To build a safe society, mere existence of rules and regulations does not help, it is equally important for its residents to follow it in a responsible manner.

1.1 Problem Statement:

The existing laws are falling short to cope up with the speed of development and also its implementation and monitoring. Of the various facets of development that are happening one very important part which forms crucial for individuals and family members is his / her residence.

There are more challenges to be faced with changing environmental conditions and global warming as they are directly affecting the life and property. In order to face challenges and keep pace with the fast developing world, we as responsible citizens on earth should ensure that we follow the guidelines honestly and diligently. In spite of the available rules and regulations and enforcing agencies it is observed that there is rampant practice of flouting the rules and regulations by developers, builders, and constructors. There is lack of responsibility towards the mankind and it's Safety. In present world Monetary Gains prevail over value of life of Human being, resulting in worst construction practices.

The common flaws / shortcomings in regulatory provisions of DCR for different cities are observed which results in absolute no control on

* Adherence to DCR and Town Planning acts by constructors.
* Strict monitoring and penalizing the defaulters
* Checking the technical qualification of persons involved in construction.
* Quality Control and management of construction activity to deliver safe residence.
* Periodic check on quality by regulatory authorities
* Provisions for third party check during all stages of construction. Population in the rural areas is more prone to safety hazards as there is absolute lack of knowledge and control on way construction work is carried out.

Problem under study can be summarized as

* To identify flaws in existing regulatory provisions for Planning Design and Construction aspects of low Rise Residential Buildings in different cities of Maharashtra.
* To study Fire Safety Regulations and its shortcomings in context to current scenario of human population, its density, and rampant unsafe building construction happening.
* Compare existing regulatory provisions for similar structures in developed countries.

1.2 Objectives:

The aim of study was realized through the following objectives:

* Study the concept of Regulatory provisions for safety in Residential Buildings.
* Investigate the current regulatory provisions for construction of Low Rise Residential Buildings
* Prepare and develop a framework comparing current regulations which had flaws and shortcomings against the regulatory provisions in developed countries.
* Based on study and investigation of the literature,

draft the recommendations and suggestions for making necessary changes and further implementation in existing regulatory provisions.

1.3 Significance Of Study:

The study is significant in several ways as it highlights and emphasizes on,

* Shortcomings in existing regulatory provisions for planning, designing and monitoring construction of low rise residential buildings, with respect to high rise buildings.
* Need of fixing responsibility and accountability on builders, developers, and contractors.
* Strict punishment for non adherence of rules and regulations. Need of mandatory provisions for insurance and maintenance of buildings.

2.0 Literature Survey

The study relates to regulatory provisions and its shortcomings in regard to its role in 21st Century. The literature under study comprises of the Regulatory documents which act as guideline for the developmental activities in the India, International study papers on safety aspects of buildings, safe practices in construction adopted internationally. The documents referred under study are as below

Indian Regulatory Documents

* National Building Code 2005
* Maharashtra Regional Town Planning Act 1966
* Development Control Rules Navi Mumbai Municipal Corporation
* CIDCO Development Control Regulation – 1984
* Model Guidelines For Development & Building Construction Including Safety Provisions for Natural Hazards in Rural Areas

International Regulatory Documents

* Hong Kong Code Of Practice for Fire Safety
* The Statues of The Republic Of Singapore – Building Control Act Chapter 29

Research Papers

* Staircase Width Study by - Jake L. Pauls, John J. Fruin, and Jeffrey M. Zupan
* Stair Safety: Causes and Prevention of Residential Stair Services – Published by National Safety Council – Department of Design and Environmental Analysis, Cornell University.

Study of Indian Regulatory Documents specified above was undertaken to get first hand information on whether safety aspects for lesser height residential buildings are covered considering the current situation and speed of development works happening. In the current scenario fast urbanization resulted in a haphazard development in suburban areas. The safety aspects during construction process and of design were violated leading to disasters of building collapse. Low quality construction resulted in reduction of building life to 1/3 of its estimated life. Current construction quality specifically of low height residential buildings is very poor due to the involvement of non technical people and lack of supervision and moral responsibility of developers. Absence of strict regulations and its enforcements has lead to such a disastrous situation.

2.1 National Building Code – 2005 (NBC)

Construction, both public and private, accounts for about fifty percent of the total outlay in any Five Year Plan. Half of the total money spent on construction activities is spent on buildings for residential, industrial, commercial, administrative, education, medical, municipal and entertainment uses. It is estimated that about half of the total outlay on buildings would be on housing. National Building Code came into existence to unify the building regulations throughout the country for use by Government departments, Municipal bodies and other construction agencies. The then Indian Standards Institution (now Bureau of Indian Standards) was entrusted by the Planning Commission with the preparation of the National Building Code. The Guiding committee with help of expert panels of various fields drafted the first National Building Code in 1970. NBC comprises of different sections based on provisions for various facets of building construction and is as below.

* Administration
* Development Control Rules
* Fire and Life Safety
* Building Material
* Structural Design
* Construction practices and Safety
* Building Services

2.2 Maharashtra Regional Town Planning Act 1966

The above regulation is part of Regional Control on Developmental activities and acts as

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guideline for setting up regulatory provisions for Municipal corporations, Municipal Councils and Regional development Authorities.

2.3 DCR Navi Mumbai Municipal Corporation and CIDCO Fire Protection Regulation 1984

Navi Mumbai is a well planned city with various nodes which are further divided into sectors. Initially the development in city was governed by CIDCO and currently by DCR for Navi Mumbai Municipal Corporation.

2.4 Model Guidelines For Development & Building Construction Including Safety Provisions for Natural Hazards in Rural Areas

These provide guidelines for development activities in rural areas. It details out the construction process to be followed for load bearing structures by providing bands at different levels to ensure the stability of structure. It defines various safety aspects to be followed while constructing residences out of local available materials. The guidelines define the authority provided with Gram Panchayat to regulate the construction activities and provide approval for necessary construction. In rural areas it's hardly followed and the local skilled workers and so called experienced foreman undertake construction activity which is of substandard quality as certain construction methods are not followed.

2.5 International Regulatory Documents –

These documents are studied to understand the Fire safety norms being practiced in those countries. It also specifies the strict monitoring of the entire construction process from inception to the completion. The regulations strictly set down the mandatory requirements of qualified, technically strong and experienced people in the construction process.

3.0 Methods / Approach

The research work involves defining safety aspects of building to be studied and systematic approach adopting suitable methodology for desired output. The methodology involves,

* Extensive literature review to study the regulatory provisions in context to safety of residential buildings.
* Comparison of regulatory provisions with respect to those adopted in developed countries
* Data collection on implementation of safety aspects for structures constructed and under construction
* Flaws in the existing regulations with context to current situation of fast urbanization supported by unregulated construction activity
* Suggest amendments and new concepts for controlled quality construction activity

The literature review is undertaken to identify the various safety aspects to be considered in building construction process briefed as below.

Safety aspects of a building are based on

* Location and its ground stability
* Structural Stability
* Occupational Safety
* Fire Safety Provisions
* Safe Evacuation Provisions
* Safe access and exit

Safety aspects are checked at various stages as below,

* Planning and Designing
* During Construction
* Pre Occupancy
* Post Occupancy

The safety provisions covered in planning are

* Access to and from building from adjacent road
* Movement areas such as corridors, staircase, lifts
* Fire Safety installations

The Design stages involves

* Seismic zone and soil data report of proposed location
* Structural design as per applicable codes.
* Specifying materials considered in design stage for use in building construction. During construction, safety of building can be ensured by monitoring, supervising the works as per laid down procedure by
* Supervision by qualified Engineers & Supervisors
* Use of Quality materials
* Adopting correct sequence of operations
* Quality check of materials and works completed at various stages
* Third party testing of material and works

Compliance of non conforming activities

* Third Party check of the completed works by conducting NDT procedures
* Making change in the process if required for getting the desired results.

3.1 Recording Flaws

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In order to study and record the flaws in current construction, below process shall be adopted

* Study the reports and findings of structural consultants for deteriorated and damaged structure
* Testing of major material of buildings under construction i.e Reinforcement Steel Concrete cast at site - By having core cuts of the concrete and testing it for its porosity, strength of concrete.

The above is to be adopted randomly for residential buildings spread over areas. The results obtained shall reveal the exact nature of completed construction in terms of quality, sustainability and durability.

3.2 Presentation of Flaws Recorded To Regulatory Authorities . To present the findings of above tests and investigations to the regulatory authorities, in order to highlight the defective and unsafe construction being done. Highlight flaws in the construction process and monitoring activities by the developers and constructors.

Flaws in regulatory provisions which do not have provision for

* Monitoring the overall construction process.
* Control on quality aspect of material to be used.
* Accountability and responsibility undertakings from the developers, builders, planners and designers for quality and safety of building in terms of safety and life of building.
* Issuance of Occupancy Certificate for specific period and renewal on checking the health of building once again.

3.3 The third part of methodology shall cover the coordination and communication with the statutory bodies which are responsible for framing the rules and regulations for effecting necessary changes.

4.0 Results

The results shall be evolved in two steps

* Findings of investigation done and identifying causes for construction of unsafe buildings.
* Amendments to the existing regulatory provisions making those involved more accountable for the construction done in terms of its safety for desired life span of building.

5.0 Conclusion

Safe building is a need and basic requirement for safety of occupants and protecting national wealth. Safe building can be constructed by developing a proactive approach of moral responsibility of protecting fellow residents. With more job opportunities in urban areas, cities are growing at a tremendous speed. It has resulted in unregulated construction activity with no quality control measures. First time developers are only interested in exploiting the situation. The supply demand gap of affordable housing has resulted in residents opting out for cheaper and non quality construction endangering their investments and also life. To ensure safe building construction and its upkeep for longer life the developer and constructor must follow rules and regulations, process defined in NBC and different IS codes. The existing fire safety regulation cater for only high rise building over and above 16m height which needs amendments as below

* Staircase – Minimum Clear width of 1.0 mt for any type of building Treads 300 mm wide and Risers 150mm high Railing on both side of stairway Non slippery flooring for staircase Mid landing and landing width 1.5 mt RCC shear wall construction for staircase core Segregating fire staircase from lift core and residents exit points
* Fire Safety installation - Min provision of fire water tank, fire pump, fire hydrant and a hose reel for any type of building.

Fire extinguishers a must for all residents

Fire doors for fire staircase Periodic check of fire safety installations for its functioning Provision of fire rated doors for main exit of individual residence Sprinklers and fire detection, a must for commercial buildings of any height In addition to above making the planners, designers, developers and constructors responsible for construction shall be the top priority of regulatory authorities.

* Existing formats of undertakings and completion certificates issued by designers shall be revised suitably.
* Additional undertakings shall be evolved to make the developers more accountable towards overall quality of construction, and sustainable development.
* The amendments shall be issued as notifications for implementation and enforcement during execution of the projects.

All above requires a political will of policy makers to amend the laws and make it stricter to ensure building a safe and sustainable society. Eco

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friendly and sustainable development is need of hour in the fast changing atmospheric conditions due to global warming. By building safe and long lasting structures we are contributing to the saving of national wealth and natural wealth of country. Generation of wealth also means preserving the existing wealth and investment by middle class in the residential sector is the hard earned money and need to be taken care by providing them safe buildings which can last longer worth the value paid for it.

6.0 References

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* Maharashtra Regional And Town Planning Act 1966
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* Model Guidelines For Development & Building Construction Including Safety Provisions for Natural Hazards in Rural Areas
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* Navi Mumbai Municipal Corporation Fire Protection (Control in NMMC) Regulations
* Maharashtra Fire Prevention and Life Safety Measures Act 1966 – Act No III of 2007
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Stair Safety – Causes and Prevention of Residential Stair Injuries

* Jake l Pauls, John Fruin, Jeffery Zupan - Research Papers on Staircase Design
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Role of Education in Rural Population Empowerment

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Abstract:

Education and training are two of the most powerful weapons in the fight against rural poverty and for rural development. Farmers with basic education are more likely to adopt new technology and become more productive. With basic education they are better equipped to make more informed decisions for their lives and for their communities and to be active participants in promoting the economic, social and cultural dimensions of development. Education in every sense is one of the fundamental factors of development. No country can achieve sustainable economic development without substantial investment in human capital. Education enriches people's understanding of themselves and world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances.

Keywords: *Education, Rural, Empowerment, Development, etc.*

Introduction:

Education is one of the mechanism to empower people to take part in poverty reduction. The main issue in rural development is how to tackle rural poverty. More than 70 percent of the poor population are to be found in rural areas, where hunger, literacy, and low school achie-vement are common problems. Education for large number of people in rural areas are crucial for achieving sustainable development (UNESCO-2002).As the majority of the world's poor, illiterate and undernourished live in rural areas, it is major challenge to ensure their access to quality education . Hence total education needs to be integrated and updated within all aspects of rural development.

What is Rural?

Rural can be defined as -

* A space where human settlement and infrastructure occupy only a small share of the landscape;
* Natural environment dominated by pastures, forests, mountains and deserts;
* Settlements of low population (about 5-10,000 persons);
* Places where most people work on farms;
* The availability of land at a relatively low cost;
* A place where activities are affected by a high transaction cost, associated with long distance from cities and poor infrastructures. Rural population empowerment encompasses agriculture, education, infrastructure, health, capacity-building for other than on-farm employment, rural institutions and the needs of vulnerable groups. Rural empowerment aims at improving rural people's livelihoods in an equitable and sustainable manner, both socially and environmentally, through better access to assets (natural, physical, human, technological, and social capital), and services, and control over productive capital (in its financial or economic and political forms), that enable them to improve their livelihoods on a sustainable and equitable basis. Challenges of these kinds are always overlooked. Poverty and illiteracy remain overwhelmingly rural phenomena. Poverty in rural areas is closely linked to illiteracy as well as to other forms of deprivation such as malnutrition, infant mortality, and poor access to water.

The rural poor faces three fundamental problems:

1. Few opportunities for productive employment in

agriculture and non-agricultural activities

2. Inadequate nutrition, poor health services and absence of quality education.
3. Lack of sufficient levels of organization needed to lobby effectively for rural interest Education has emerged as an essential prerequisite for reducing poverty and living conditions of rural population. Recent research shows that improvements in education boost local development prospects (Echeverria,1998) Education has a desirable controlling influence over development of rural individual, community, and society leading to reduced poverty, income and controlled unemployment (Navaratnam,1986).

The contribution of education to rural empowerment:

The development theoreticians of the 1960s viewed agricultural growth as the principal force driving a nation's development. For example, Arthur Lewis wrote in 1954, "if agriculture is in a slump, it offers only a stagnant market and hampers the development of the rest of the economy. If agricultural development is neglected, it becomes more difficult to develop anything else: this is the fundamental principle of balanced growth (Lewis, 1954)". The idea that agriculture plays an important role in the overall economic growth of developing countries seems to be confirmed by the existence of a correlation between increased agricultural yields and increases in total output. Out of the 68 countries for which we have reliable data, 30 saw their agricultural production increase by over 3 per cent annually during the 1970s and 1980s. In all of these countries, the average GDP growth rate was at least 2.5 per cent during the period, and two- thirds of the countries with strong growth of agricultural output also recorded very high rates of economic growth (above 5 per cent a year).

In view of this a question arises that which factors are favorable to an increase in agricultural productivity. In one of the seminal works of human capital theory, Schultz (1961) observes that education explains the greater part of total factor productivity. Human capital theory regards education as an investment "like any other", and as a generator of externalities. For example, individuals make individual choices concerning their education, but this choice has a strong economic impact through the resulting increase in total factor productivity.

According to human capital theory,

Educational level of the agricultural labour force has an influence on agricultural productivity. This relationship may take three forms:

* Education can improve the quality of farmers' labour by enabling them to produce more with their available stock of production factors (other than labour);
* Education can increase the efficiency of resource allocation;
* Education can help farmers to choose more effective means of production by adopting new techniques.

Basic education:

the whole range of educational activities take place in different settings and that aim to meet basic learning needs as defined in the World Declaration on Education for All (Jomtien, Thailand, 1990). It thus comprises both formal schooling (primary and sometimes lower secondary) as well as a wide variety of non-formal and informal public and private educational activities offered to meet the defined basic learning needs of groups of people of all ages.The recognition of basic education as a prerequisite of sustainable rural development is also visible within the FAO which launched, in 2002, in collaboration with UNESCO, an 'Education for All' flagship on Education for rural people (http://www.fao.org/ sd/2002/KN0801_en.htm). Action to promote basic education in rural areas involves:

(i) targeting multiple stakeholders, focusing on 'Education for All' in harmony with the renewed commitment made by the international community at the World Education Forum held in Dakar, 2000 and on 'Food for All' as stated at the World Food Summit;

(ii) Contributing to placing education at the core of the global and national development agenda and food security agenda, by focusing on the following priorities:

* expanding access to education and improving school attendance in rural areas;
* improving the quality of education;
*finding appropriate ways to incorporate rural development and food security in the basic education curriculum.

(iii) Strengthening institutional capacity in planning and managing education for rural development and food security.

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Non-formal education:

Any organized and sustained educational activities that do not correspond exactly to the above definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out-of-school children, life skills, work skills, and general culture. Non-formal education programmes do not necessarily follow the 'ladder' system, and may be of differing duration.

Thinking about the contribution of education to development extends far beyond the school context. As early as the 1970s, the notion of 'basic education' was defined with respect to the minimum educational requirements needed to enable all individuals to assume their responsibilities as adults (Faure, 1972; UNESCO, 1974; World Bank, 1974). This minimum level of education varies from one group of individuals to another and it refers to the acquisition of knowledge and know-how in complementary fields such as food, nutrition, hygiene, health, family planning, etc. By extension, perceptions of the relationships between education and rural development are broadened through the acquisition of knowledge and of functional capacities that are useful for family life and necessary for the improvement of living conditions (Botti, 1977). The idea of a continuum encompassing formal, non-formal and informal education, which is widely accepted today in the context of lifelong learning, has its roots in the well-known distinction made by Coombs (1973). Non-formal education is defined as "any organized and systematic educational activity situated outside of the traditional education system and aimed at providing certain types of education to specific population groups, adults as well as children. One of the objectives of non-formal education is to expand the learning opportunities of children not enrolled in the traditional school system and to meet the needs of the population more effectively. The multiplicity of forms and the flexibility of non-formal education are major assets that promote the adaptation of programmes to various rural contexts. Non-formal education projects are characterized by great diversity, in terms of teaching methods, the subjects taught, financing, objectives, target population and the qualifications of teaching staff.

Rural development thus demands an integrated approach which, in addition to facilitating access to education and to new technologies, mobilizes a range of factors such as access total quality education, efficient skilled employees and adequate health services etc. From this prospective, it is evident that education has significantly contributed to the mobilization and distribution of human capital by creating opportunities for the people.

Conclusion:

Inclusive development is possible only when rural population is actively involved in economic activities. For this a well-educated rural mass is a must. So it is but proper that the rural population is economically and social empowered through good and total education.

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Cultivation of Medicinal and Aromatic Plants: A Boost for Rural Development

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Abstract:

India has vast Natural Resource; one of the Natural resource is Medicinal and Aromatic plants. These Medicinal and Aromatic plants have different application in different industries like Pharmacy, Cosmetics, Food, Color, and Perfume industry. Demand for these Medicinal and Aromatic plants in increasing globally, as people need medicine and healthcare product to product themselves from increasing pollution and its effects. In India nearly three-fourth of the population is dependent on agriculture as a whole-time occupation, for its livelihood. Few farmers are cultivating medicinal and Aromatic plants, but they are facing the marketing problems as the marketing of these plants is unorganized and secretive. For the proper utilization of natural resource- medicinal and aromatic plants government and NGO's are supporting to promote this sector, which may result in development of rural area of Maharashtra. Pharmaceutical industries processing drugs are becoming aware of the emerging trend of herbal medicines and are trying to access to this market. Such companies are already releasing purely herbal based drugs in the market. On account of this, it is evident that the future of medicinal plants industry is bright in India. Also there is a vast scope for export of these products. But at present this sector is mainly unorganized.

Key words: *medicinal plants, Aromatic plants, Pharmaceutical*

Introduction:

Cultivation of Medicinal plants is a new concept to Maharashtra, but it is essential for the fulfillment of the need of the MAP industry. Medicinal plants are traded mostly as bark, stem, root, leaves, flowers, fruits and seeds. The increasing demands of the pharmaceutical industry have created problems of supply and one of the major limitations experienced is obtaining sufficient quantities of medicinal plants for the manufacture of genuine formulation.

Herbal drugs world scenario

(Table no.1)There is wide demand at global level for Green Medicines, due to following reasons-

* Comparatively more safe
* Comparatively cheap
* More eco-friendly
* Only cure where modern drugs are either unavailable or unsatisfactory
* Only source of health care for 80 percent population in the developing world
* Besides health benefits medicinal and aromatic plants provide crucial live hood options for millions of rural people, particularly women, tribal and the poorest of the poor.
* In India 35 million workdays of employment per year are contributed by collection and processing of medicinal plants.
* 95 percent of medicinal and aromatic plants are harvested and collected from the wild.
* 25 percent modern medicines derived from the plants.
* International Market is more than 60 billion US $
* Growth rate (annual) is around 7 percent.
* Expected international market by 2050 will be 6 trillion US$ 2

The need of the industry can be fulfilled by cultivating medicinal and aromatic plants in the fields. Few farmers and companies are cultivating medicinal and aromatic plants in the fields. They were successful in growing the medicinal plants, but have many difficulties in marketing of medicinal plants. The marketing of the products for

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medicinal plants is highly disorganized. The majority of the supply of medicinal plants comes from the wild which is channel through a network of contractors and agents. The tribal and local villagers living around places, where these plants grow are primarily the people who collect them from the wild. Sometimes, the contractors themselves with their hired labor collect from the wild sources. These contractors or agents then sell the product to the exporters or commission agents who then ship it to the markets abroad. The contractors also sell to leading drug companies in India. Some of the easily cultivable and profitable species are being grown in fields as cash crops. Such growers undertake the production of medicinal plants which are in great demand in the foreign and the domestic markets. Pricing for products of medicinal plants in both domestic and export markets are subject to extreme fluctuations. It is this uncertain condition in the medicinal plant sector, which is holding off the expansion of medicinal crop industry in India.

Graph no.1

Traditional Medicine in India

India has its own tradition of medicine, she is well known for the ayurvedic treatments and panchkurma from thousands of years. Our ancestors used different medicinal plants, so called jadibuti for the treatment of various diseases. The every village had its own vadiya who use to treat the villagers with the collected medicinal plant from nearby forest. Ever house in the village use to grow necessary medicinal plants like tulsi, Neem etc in the backyard of the house and were used for the medicine use. Treatments like aromatherapy were very commonly used by the royal families for healthy living and long life.

India has one of the world's richest medicinal plant heritages with around 2.4% of world's area, India has over 8% of world's biodiversity. In India, around 25,000 effective plant based formulations are used in traditional and folk medicines. Presently about 1000 single drugs and about 3000 compound formulations are registered in the country. Herbal industry in India uses about 8000 medicinal plants. It is estimated that more than 1.5 million practitioners uses traditional medicinal system for health care in India. An estimated over 7,800 manufacturing units are involved in the production of natural health products and traditional plant based formulations in India. [4]

Table no.2

As the trend of using medicinal and aromatic plants as medicine is increasing, the demand for medicinal and aromatic plants is also increasing; the above twenty one plant species are showing a continuous increase in demand from year 2001 to 2005.the annual growth rate for many species ranges from 8% to 21% growth in demand. This clearly shows that the demand for medicinal and aromatic plants in increasing not only in foreign countries but also in India.

SWOT Analysis of Medicinal and Aromatic Plants:

The SWOT analysis describes the Maharashtra MAP sector in terms of:

·Strengths: assets and advantages regarding organization and sector;

· Weaknesses: failures proper to the MAP sector;

· Opportunities : benefits offered to the MAP sector;

· Threats: are the constraints restricting the MAP sector development.

STRENGTHS:

* Rich and diverse flora, with high potential to grow.
* Ecosystems offering conducive ecological conditions
* Our ancestral had the knowledge regarding MAP applications.
* 'Maharashtra's MAP fame recognized at the international level
* Several existing Institutions and Research centers working on MAP in Maharashtra.
* Important association network including NGOs interested in the MAP sector
* Increase in domestic and export market demand for MAP.
* Government schemes for cultivating and marketing of MAP

WEAKNESSES:

* Production is dominated by wild plants with very limited area under "cultivation".
* Low added value generated at the production level: MAP is generally produced under the form of dried leaves and crude essential oils -intended to the international markets.
* Predominantly traditional production infrastructure and weak investments efforts not allowing

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strengthening and modernizing the production devices.
* Distribution markets obscurely organized with multiple intermediaries not favoring information transparency and fluidity.
* Poorly developed local market, and completely ignored by MAP sector professionals, despite many development opportunities.
* The existence of several stockholders in the MAP sector, results lack of coordination. (Administration, professionals, NGOs, education research institutions, medias, local collectivises)
* Lack of rigorous and enabling rules and regulations.
* Absence of a consensual development strategy for the MAP sector.

OPPORTUNITIES
* A continuously growing world demand for MAP consumption. Several studies show that interest for natural products and remedies based on medicinal plants is currently increasing in the market. The demand for natural products associated to alternative medicine is growing by nearly 15% to 25% per year.
* Industries using MAP for sustained development: agro-foods, pharmaceuticals, and cosmetics,
* Research and development are available to increase products quality and productivity.
* The international market became more and more demanding regarding compliance with sustainable management criteria for natural resources.
* Free trade agreements with other countries.

THREATS:
* Emergence of new international competitors (Eastern Europe, Turkey, South America, China, India, Central Africa.)
* Marketing problems like of middlemen, lack of proper marketing structure.
* Volatile global markets and prices and marketing constraints making it difficult to meet success conditions over foreign markets
* Lack of processing facilities available for higher processing of MAP to farmers.
* Specifically Maharashtra MAP products are not currently protected against their domestication by other countries or multinational firms
* Nearly the entire MAP exploited and marketed volume (over 90%) is from wild, which is dangerous for the resource and reduces its development potential.
* Climatic variation is often unfavourable, impactingavailability and regularity of market supply.

The growing use of chemical products and pesticides might harm MAP quality and natural potential.

The above SWOT analysis shows that the strengths for MAP sector are more as government and NGO's are providing several schemes for cultivation and marketing of MAP. In Maharashtra the climatic conditions are also favorable for MAP. In the weakness we can find that, in spit of several stockholders there is no coordination among them. There are many problems in marketing of MAP like lack if proper infrastructure and marketing system. Lack of awareness about the knowledge of MAP MAP sector has large opportunity as market demand for natural products is increasing and government schemes for MAP sector are available. Many MNC are entering in this sector of MAP. The demand for natural products is increasing through the globe. Threats for MAP sector in Maharashtra are due to growing global competition. Variation in chemical composition of medicinal plants, due to use of chemical fertilizers and pesticides. Most of the markets are in the hands of middle men and private big pharmaceutical companies. The SWOT analysis helps in understanding the strengths, weakness, opportunities and the threats of medicinal and aromatic plants with the help of which further decisions on strategic management of medicinal and Aromatic plants can be taken. Medicinal and Aromatic plants can boost the rural development as there is demand for these plants at domestic as well as global market.

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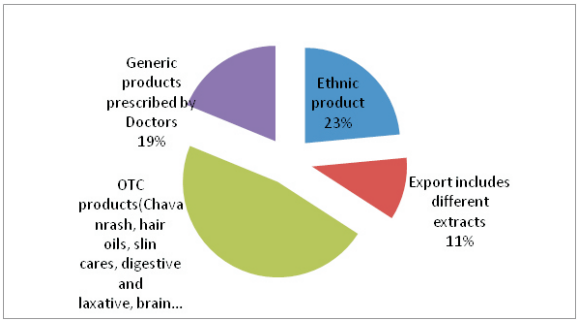
Table No.1
Market for Medicinal Extracts

Country	Market(US$ billions)	Share (%)
Global	16.5	100
Europe	7.5	45
Germany	3.6	22
France	1.8	11
Italy	0.8	5
UK	0.5	3
Spain	0.3	2
Holland	0.1	1
Others	0.4	2
North America	4.0 (3.0)	25 (18)
Asia	4.0(3.0)	25(18)
Others	1.0 (3.0)	10 (18)

Graph No1. Status of herbal market in India:



(Source: Planning commission- Task force Report, 2010.)

Table No.2
Annual demand of medicinal plants (India) for selected species:

Sr.No.	Species	Demand (in tones)	Annual Growth (%)	
		2008-2009	2010-2011	
1	*Emblicaofficinalis (Amla)*	22729.5	41782.9	22.5
2	*Withaniasomnifera*	9127.5	9127.5	9.1
3	*Aconitum heterophyllum (Atis)*	270.1	448.4	18.4
4	*Phyllanthusamarus (Bhumiamalak)*	2212.6	2985.3	10.5
5	*Bacopamonnieri (Brahmi)*	3822.5	6621.8	20.1
6	*Swertiachirayita (chirata)*	965.2	1284.7	10.0
7	*Berberisaristata(Daruharidra)*	1187.3	1829.7	15.5
8	*Tinosporacordifolia (Giloe)*	2258.3	2932.6	9.1
9	*Nardostachysgrandiflora (Jatamansi)*	674.9	866.8	8.7
10	*Gloriosasupberba (Kalihari)*	65.4	100.5	15.4
11	*Andrograpispaniculata (Kalmegh)*	2005.0	2197.3	3.1
12	*Saussureacostus (Kuth)*	1414.1	1826.3	8.9
13	*Picrorrhizakurrooa (Kutki)*	220.3	317.0	12.9
14	*Solanumnigrum (Makoy)*	2077.9	2192.2	1.8
15	*Glycyrrhizaglabra (Mulethi)*	873.4	1359.8	15.9
16	*Coleus barbatus (Patharchur)*	37.8	60.8	17.2
17	*Piper longum (Pippali)*	3992.5	6280.4	16.3
18	*Cassia angustofolia (Senna)*	6462.5	11677.3	21.8
19	*Asparagus racemosus (Shatavari)*	10942.7	16658.5	15.1
20	*Ocimum Sanctum (Tulsi)*	3296.8	5402.9	17.9
21	*Aconitum ferox (Vatsnabh)*	322.3	3426.8	30.0

(Source: Science Tech, Entrepreneur, July 2011)

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Role of Government Schemes in Promoting Women Entrepreneurs in Sangli District with Special Reference to PMEGP Scheme

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Abstract:

The main aim of this paper is to understand the role of government schemes in promoting entrepreneurship with a special reference to the scheme named Prime Minister Employment Generation Program (PMEGP). This will thus help in knowing the number of members opting PMEGP plan and thus a comparison of number of male and female opting loan under PMEGP can be obtained. Thus this paper examines the awareness, effectiveness and utilization of PMEGP plan among women's. The data collected here is based on the secondary source obtained from District Industry Centre (DIC), Sangli. Where the evaluation is made for the five consecutive years ie (2008 to 2013) who have availed loan through this scheme. With the help of tables percentage analysis is done to understand the number of males and females opting loans. With the help of the tool SPSS cluster analysis is applied to understand the various clusters in the data who have availed loan. The cluster framed were with respect to gender, category and location. Where, it is observed that the number of women's opting for self-employment is increasing. Through this study it is found that women living in urban area of Sangli district are availing loan for self-employment.

Keywords: *Women Entrepreneurs, DIC, Scheme, Loan, PMEGP.*

Introduction:

Small and micro enterprise plays an important role in economic development of a country. Government policies and schemes play a vital in shaping the landscape of a nation. These plans provide ignition to a person to try out something which he wishes to person. These schemes help in solving poverty, unemployment and inequality in the society. In advanced countries, majority of the small enterprises are managed by women. Women-owned firms represented nearly 40% of all firms in the US and employed approximately 27.5 million people (NFWBO, 2001). Further, women are starting businesses at a faster rate than their male counter parts. It has been seen that women outnumber men by at least double particularly when it comes to starting business in China. There are over five million self-employed women constituting one-fourth of all entrepreneurs in China. In Japan too, a similar trend has been noticed. The percentage of self-employed women increased from 2.4% in 1980 to 5.2% in1995. However, the trend in India does not go along the same lines. At present, 9.5%self-employed women are managing small enterprises in India (Government of India, 2001) as per Kumar(2008). This paper mainly focuses on the effectiveness of Prime Minister Employment Program for empowering women in particular. Here the researcher has attempted to identify the number of women who have availed loan through this scheme ie from 2008 to 2013 and to find out the successfulness of this scheme.

Objectives:

* To understand Prime Minister Employment Generation Program (PMEGP) scheme.
* To understand the impact of PMEGP schemes in promoting women entrepreneurs.
* To find maximum loan approved cluster with respect to gender, category and location.

Hypothesis: For availing loan

* Ho -Place of origin and gender are independent to

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each other.

* Ha-Pace of origin and gender are dependent to each other.

Review of Literature:

Khaire (2011) in her study "The critical analysis of the statutory policies for women empowerment and its impact on women entrepreneurship" has performed exploratory research. The sample selected is from the state of Maharashtra with total seven district and 66 talukas as Ahmednagar, Aurangabad, Jalgaon, Nashik, Mumbai, Pune, and Thane. The present study is conducted on the basis of multi stage sampling where the sample selected comprises of seven hundred women entrepreneurs. Primary data is collected with the help of a well structured, close ended questionnaire, filled up through personal interview methods is used for this research. The objective of this research is to find the policies related to women empowerment and various problems related to women entrepreneurship. It is found that the there is one policy related to women empowerment. The policies are found to be targeted towards welfare of women rather than developing women entrepreneurship. Where it is also found that more stress is given to SHG but the potential of individual is still untapped and motivation for achievement is needed to be created. Thus it has been opined by the researcher that central as well as state Government has to formulate the women empowerment policies and also should design tailor fit policies according to the region profile. It provides the base for NGO's as well as Government agencies to develop training programs or orientation programs for aspiring women entrepreneurs. And appropriate motivation strategies should be adopted to empower more women for undergoing women entrepreneurship. Manisha (2008) in her thesis "A Study on Emergence and Development of Women Entrepreneur in Kolhapur" have studied on women entrepreneurs in industrially less developed area. The researcher has tried to find the factors that motivate the women entrepreneurs and the role of government agencies supporting women. The study done is based on sectors like Professionals, Service, Manufacturing, Trading with the help of structured questionnaire. The result obtained showed the various factors affecting women entrepreneurship and the need for improvement role of government agencies. Rani (2012) Ph.D thesis, "Role of Women in Family Finance Management in Urban Management" has studied the role of women in financial management practices in different income groups. The study is based mainly on the primary data which has been collected from two Class-I cities of Punjab, namely, Ludhiana and Patiala. The sample of the study included 360 married women in all, 180 each from both Patiala and Ludhiana cities with their representation as 60 each (30 working and an equal number of non-working women) from the LIG, MIG, HIG categories. Multistage random sampling technique was used to select the sample. A well-structured descriptive questionnaire (Appendix-I) was used to collect the data. Where the researcher has come out with suggestions like the need of more opportunities to be made available to women so that they can easily supplement the income of their families, which in turn will help in improving the personality and status of women. Support services like creches should be enhanced to create a favorable environment for women. The researcher has also focused on the difference that is created between house wives and earning women where non working women face problems in their families with regard to income contribution. Kumar (2008) in his paper titled "Awareness of Supporting Agencies among Women Entrepreneurs in Small Businesses" has examined the role of government agencies in creating awareness, utilization and satisfaction among women entrepreneurs of five sates of Northern India with 450 respondents. The researcher in his study has found that there is a low level of awareness of schemes provided by the government. He has suggested the use of modern communication media to increase the awareness which in turn will help in increasing the usage of these schemes. The researcher has also found that small proportions of women are dissatisfied with the service provided by the government agencies.

Conclusion:

Thus from the above literature it can be inferred that government schemes are playing a vital role in pulling persons towards entrepreneurship.

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Methodology:

To study the above objective, data is collected from DIC of Sangli for the year 2008 to 2013 for the scheme PMEGP (Prime Minister Employment Generation Program)which is analyzed to understand the number of women opting for loan under this scheme. With the help of percentage and chi square analysis the figures are drawn for better interpretation. With the help of SPSS tool cluster analysis is performed to understand the clustering patterns in those who have availed loan.

About PMEGP Scheme:

Government of India has approved the introduction of a new credit linked subsidy programme called Prime Ministers Employment Generation Programme (PMEGP) by merging the two schemes that were in operation till 31.03.2008 namely Prime Ministers Rojgar Yojana (PMRY) and Rural Employment Generation Programme (REGP) for generation of employment opportunities through establishment of micro enterprises in rural as well as urban areas. PMEGP will be a central sector scheme to be administered by the Ministry of Micro, Small and Medium Enterprises (MoMSME). The Scheme will be implemented by Khadi and Village Industries Commission (KVIC), a statutory organization under the administrative control of the Ministry of MSME as the single nodal agency at the National level. At the State level, the Scheme will be implemented through State KVIC Directorates, State Khadi and Village Industries Boards (KVIBs) and District Industries Centres (DICs) and banks. The Government subsidy under the Scheme will be routed by KVIC through the identified Banks for eventual distribution to the beneficiaries / entrepreneurs in their Bank accounts. The Implementing Agencies, namely KVIC, KVIBs and DICs will associate reputed Non Government Organization (NGOs)/ reputed autonomous institutions/Self Help Groups (SHGs)/ National Small Industries Corporation (NSIC) / Udyami Mitras empanelled under Rajiv Gandhi Udyami Mitra Yojana(RGUMY), Panchayati Raj institutions and other relevant bodies in the implementation of the Scheme, especially in the area of identification of beneficiaries, of area specific viable projects, and providing training in entrepreneurship development.

Entrepreneurship Development Programme (EDP):

The objective of EDP is to provide orientation and awareness pertaining tovarious managerial and operational functions like finance, production, marketing, enterprise management, banking formalities, bookkeeping, etc. The duration for EDP under REGP was only 3 days, whereas, under PMRY it was 10 days. During various meetings, discussions and recommendations of Department Related Parliamentary Standing Committee for Industry (DRPSCI) it was felt that 3 days were not adequate for providing this inputs effectively and, hence two to three weeks period has been provided under PMEGP which will include interaction with successful rural entrepreneur, banks as well as orientation through field visits. The EDP will be conducted through KVIC, KVIB Training Centers as well as Accredited Training Centers run by Central Government, NSIC, the three national level Entrepreneurship Development Institutes (EDIs), i.e., NIESBUD, NIMSME and IIE, and their partner institutions under the administrative control of Ministry of MSME,State Governments, Banks, Rural Development and Self Employment Training Institutes (RUDSETI) reputed NGOs, and other organizations / institutions, identified by the Government from time to time. EDP will be mandatory for all the PMEGP beneficiaries. However, the beneficiaries who have undergone EDP earlier of duration not less than two weeks through KVIC/KVIB or reputed training centers will be exempted from undergoing fresh EDP. The training centers / institutes will be identified by KVIC and extensive publicity will be provided about the training centers/ institutes, content of courses available, duration, etc. by circulating the same to all the Implementing Agencies.

The following estimated targets have been proposed under PMEGP during the four years, i.e., from 2008-09 to 2011-12

Year	Employment (in Nos)	Margin Money (subsidy)(Rs.crore)
2008-09	616667	740.00
2009-10	740000	888.00
2011-12	1418833	1702.60
Total	3737500	4485.00

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Note:

1. An additional amount of Rs. 250 crore has been earmarked for backward and forward linkages.
2. To begin with, the targets would be distributed between KVIC (including State KVIBs) and State DICs in the ratio of 60:40 to ensure comparatively greater emphasis to micro enterprises in rural areas. The margin money subsidy would also be allocated in the same ratio. DICs will ensure that at least 50% of the amount allocated to them will be utilized in the rural areas.
3. The annual allocation of targets would be issued State-wise to the implementing agencies.

Objectives:

(i) To generate employment opportunities in rural as well as urban areas of the country through setting up of new self-employment ventures/ projects/ micro enterprises.

(ii) To bring together widely dispersed traditional artisans/ rural and urban unemployed youth and give them self-employment opportunities to the extent possible, at their place.

(iii) To provide continuous and sustainable employment to a large segment of traditional and prospective artisans and rural and urban unemployed youth in the country, so as to help arrest migration of rural youth to urban areas.

(iv) To increase the wage earning capacity of artisans and contribute to increase in the growth rate of rural and urban employment.

Data Analysis:

Table 1: Gender Wise loan sanctioned under PMEGP for the past five years

S No	Year	No of loans sanctioned	Gender	Percentage		
			Male	Female	% of Male	% of Female
1	2008-2009	7	6	1	86%	14%
2	2009-2010	114	60	54	53%	47%
3	2010-2011	44	27	17	61%	39%
4	2011-2012	20	14	6	70%	30%
5	2012-2013	33	20	13	61%	39%
6	2013-2014	9	7	2	78%	22%

Source: DIC Office Sangli

The above information is collected from DIC Sangli region, which is responsible for providing loan approved by central government for the persons who want to go into entrepreneurship. In the above table year wise loan sanctioned details can be observed for the year 2008 to 2013. Where for the year 2008-09 the number of loan sanctioned is just seven, in which male 86% and 14% of loan was sanctioned to female members. Likewise a sudden rise can be seen in the year 2009-10 where number of loan sanctioned is 114 with 53% male and 47% of female members respectively. For the 2010-11 there is a sudden fall in number with only 44 loan sanctioned where male constitute 61% and female with 39% of sanctioned loan percentage for the year 2011-12 still a fall in loan availing members can be seen with 20 loans sanctioned where male percentage is 70% and female with 30% of loan sanctioned. Likewise for the year 2012-13 the number of loan sanctioned were 33 with 61% loan approved for male members and 22% with female members is observed. From the above data it can be inferred that the number of loan sanctioned is decreasing considerably every year.

Table 2: Gender wise amount sanctioned under PMEGP Scheme:

S No	Year	Total Amount of loan sanctioned	Amount sanctioned to male members	% of loan sanctio ned	Amount sanctioned to female members	% of loan sanctio-ned
1	2008-2009	49,09,675	46,98,675	95.7%	2,11,000	4.29%
2	2009-2010	4,08,23,424	2,20,42,428	53.99%	1,87,80,996	46%
3	2010-2011	1,05,01,700	75,98,200	72.4%	29,03,500	27.6%
4	2011-2012	1,46,75,216	73,82,006	50.3%	72,93,210	49.7%
5	2012-2013	3,18,73,592	1,51,14,342	47.4%	1,67,59,250	52.6%

Source: DIC Office Sangli

From the above data it can be observed that in the year 2008-2009 the amount sanctioned to women members is very less as compared to male. Around 96% of the total loan sanctioned is for male and 4.29 % of the total amount was sanctioned to female member. For the year 2009-2010 around 54% of loan of the total amount was sanctioned to Male member and 46% to female member. This shows a considerable increase in the percentage of loan sanctioned as compared to the previous year. For the year 2010-2011 again a drip in numbers can

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be seen as far as female members are concerned. Likewise for the year 2011-2012 it can be seen that women also constitute half of the total loan sanctioned. For the 2012-2013 it can be seen that women were sanctioned around 53% as compared to male with 47% of total loan sanctioned.

Table3: Place of Origin and gender wise classification:

S No	Place of Origin	Male	Female
1	Rural	36	28
2	Urban	91	63

Source : DIC office Sangli

Chi-square = 0.15, df = 1, and Significant at 5% level.
Table value = 3.84
Chi-square < Chi square 0.01, 5
0.15 < 3.84
Ho is rejected at 5% level of significance
So, we accept HA

Ha For availing loan place of origin and gender are dependent to each other

Thus from the above table it can be inferred that place of origin and gender are dependent to each other when we talk about availing loans.

Table 4Clustering of loans approved (Gender, Category and Location wise Classification):

Initial Cluster Centers

	Cluster		
	1	2	3
Gender	1	2	1
Category	1	4	6
Location	2	2	1

Iteration History[a]

Iteration	Change in Cluster Centers		
	1	2	3
1	1.021	.595	.848
2	.328	.125	.424
3	.123	.016	.118
4	.000	.000	.000

a. Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate change for any center is .000. The current iteration is 4. The minimum distance between initial centers is 2.449.

Number of Cases in each Cluster

Cluster	1	48.000
	2	127.000
	3	43.000
Valid	218.000	
Missing	.000	

Final Cluster Centers

	Cluster		
	1	2	3
Gender	1	2	1
Category	2	4	5
Location	2	2	2

To verify the third objective cluster analysis is applied on the data sets (Gender, Category and Location) to understand the potential of each category. With the help of SPSS tool cluster analysis is done. The data set framed with gender male as 1 and female as 2. Category wise bifurcations were NT, General, SC, open, OBC and Minority were numbered from 1 to 6. Likewise location rural as 1 and urban as 2 were denoted. It is observed from the analysis that cluster 2 ie gender female, category open and location urban is found to be the biggest cluster who have availed loan. From the above analysis it can be interpreted that female who are living in urban areas are utilizing government schemes like PMEGP for self-employment.

Findings:

* Number of members availing loan under PMEGP scheme is increasing every year.
* Number of female availing loan is less that 50%.
* Percentage of amount sanctioned to female is increasing every year.
* People living in urban part of Sangli were availing more loan under this scheme as compared to members of rural area.
* Female who are living in urban and whose category is open is found be the biggest cluster who have availed loan under this scheme.

Conclusion:

From the above study it can be inferred that women availing loan is increasing year after year. This provides us with a positive signal that more and more women are attracted towards entrepreneurship. Women who are living in urban areas were found to be more prone for availing loan for doing business.

The hidden potential of women to become entrepreneurs is increasing at a greater speed. The

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number of women coming out of their daily chores of family responsibility is fast changing where they are confident enough to balance their professional with their personal life. Over the recent past, spread of education, increased urbanization and advancement in technology have generated social awakening among women which has helped in breaking the old customs and taboos of restrictions. Women have started asserting for their rights at par with men. Despite all these development measures and the constitutional legal guarantees, women have still lagged behind men in almost all the sectors. Women in India have to struggle to establish an identity and create a life space in social as well as work organizations even today. Unlike women in previous generations, when many believed they could rely on their parents or spouse to provide for their financial security, today's women are taking charge of this monetary destiny amid asignificant set of societal changes.

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Need of Watershed Development and Management Programs in India

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Abstract:

The fresh water available for human consumption for social, economic and cultural needs for environments is rapidly becoming scarcer. In 1950 only a handful of countries faced water shortage ,now in late 1990 the number of countries facing water deficit has grown to 26 with a total populations of 300 million (M.A.Abu Zeid). On this background the water deficit in India is also growing. Most of the challenging tasks of the indian economy are to maintain the GD Prate, blooming of industrialization, agriculture water demand and challenges of EInino that threating the monsoon rainfall.

Introduction:

The average annual rainfall in the country is 1170 mm, which correspond to an annual precipitation of 4000billion cubic meters (BCM). Out of this volume of precipitation ,1869 BCM appears as average annual flow in rivers .Due to various constraints, only 1123BCM is assessed as the average annual utilizable water (690BC Mfromsurface water and 433 bcm from groun water). The present total water use is 643BCM of which 83% is for irrigation .This is projected to grow to 813BCM by 2010,1093 BCM by 2025 and 1447 BCM 2050,against utilizable quantum of 1123 BCM as regards in the number of wells (tube and open wells). The average rate of increase in numbers of wells per year in india was 2.3%.the number of tube and open wells increased at the rate of 6.3%and 2.4%per year, respectivaly. it is estimated that currently there are 19 million wells in the country, out of which 16 million wells are in use and drawing about 213 BCM of water (Government of india,2007).

The population in India is expected to stabilize around 1640 million by the year 2050,as a result , gross per capita water availability will decline from 1820m^3/yrin 2001 to as low as ~1140m^3/yr in 2050as result, gross per capita water available will decline from ~1140^3/yr in 2050.total water requirement of the country for various activities around the year 2050 has been assessed to 1450m^3/yr. This is significantly more than current estimate of utilizable water resources potential (1122m^3/yr) through conventional development strategies .

In some recent decades the dependency on the surface and subsurface water is increased which leads to exploitation of both of these resourses . Specifically technological interventions in the ground exploitation have been increased at alarming rate. Groundwater is an important source for irrigated agriculture as it generally furnishes reliable and flexible inputs of water. To this extent, groundwater is instrumental in managing risk and optimizing food production in the rain fed areas.however, this realiane upon shallow aquifer systems for irrigation has turned to dependency. Depleting groundwater is a serious problem throughout asia and more so in india as more than 22 million wells are operational in india supporting the economy (suhas p . wani et .al)

Indian government has taken tremendous efforts to harness the water through various optimistic schemes. In a bid to conserve rain water and recharge groundwater for drought proofing , indian government gas mounted the watershed approach to rainwater harvesting and conservation in a big way. Over US$ 3.5 billion are being spent

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by the government ,bi and multi lateral agencies . However drought have kept pace with the investment – increasing in frequency (sharmas – 2001). In the maharashtra state the drought intencity is up to the mark of average of 05 years and about 148 blocks have been affected with drought. To overcome the water scarcity problem various types of program have been designed by the government of india . It is hypothetically and practically belived that soil and water conservation measures will be inevitable part of the development is the strategy adopted in the country for sustainable development of dry land areas and a recent comprehensive assessment of watershed programes in india. wani et al reported that, studies undertaken by ICRISAT –led consortium revealed that integrated watershed can become the growth engine for sustainable development of dry land areas by improving the performance of 2/3 rd watershed in the country (wani et al.2008) Recognizing towards the potential of the monsoon rainfall and only taken in consideration the assessment of the rooftop rain water harvesting to meet the domestic water demand , It is possible to harness adequate water which will satisfy the demand of indian family . Studies conducted by the sudhirender sharma reports that , technically , it is possible to drought proof the entire country, even if half of the average annual rainfall of 1170 mm is captured on 1.12 hectares of land in each of the country 5,87,226 villages , 6.57 million liters of rain water thus collected in each village can meet the annual cooking and drinking needs of the populations of 1200 "(sudhirendar sharma - 2001).Such studies narrates the importance of the rainwater harvesting potential of the rooftops in the indian government .

In the number of examples where with the watershed development based on the over exploitation of groundwater by the community , depleted groundwater to levels lower than those before the watershed development .increased number of wells (open and bore wells)along with the increased number of pumping hours pose a serious threat for sustaining the development in the watershed , the results fom the watershed case studies from Andhra Pradesh , Madhya Pradesh, Rajsthan , Maharashtra and Gujrat are used to derive the conclusions (Batchelor et al.2000) In order to assess the performance of various ongoing projects / programs of watershed development , a series of evaluation studies have been conducted by ICAR (Indian Council of Agricultural Reseach)institutes ,state Agricultural Universities (SAUS) , National Remote Sensing Agency (NRSA) etc .Besides , impact assessment studies were carried out by the ministry of Agriculture , ministry of rural development , planning commission , ICRISAT (international crops research institute for semi arid tropics) and the technical committee constituted by the department of land resourses (DOLR). These studies support the observation that in sevral watershed , the implementation of the programme has been effective for natural resoure conservation by increasing the productivity of the land , bringing additional area under agriculture , employment generation and social upliftment of beneficiaries living in the rural area . But these successes have been sporadic and intermittent . The overall impact at the state and national levels has generally been inadequate . additional demand and supply driven socio – economic and risk managing paradigms are emerging (common guidelines 2008) to overcome the failure the indian government has shifted the focus of the watershed program on the management rather than development .

Various studies have been pointed out that ' increased water availability also had a positive impact in improving welfare for the women , reduced drudgery , and protected the environment . In few well managed watersheds , the priductivity per unit of land and water increased substantially " (Wani et al 2003) in the kadwanchi village of jalana dist , under indo – german watershed development program (IGWDP) , the watershed activities have been carried out . Change in land use is spelled by increase in area under cultivation to 111% seasonally irrigated two crops to 897 ha , perennial irrigation to 190%vegetables 240%,decrease in fallow lands by 58% increase in use of farm implements and 294 micro irrigation sets are in use two fold increase in crossbred cows and three fold decrease in indigenous cows is observed due to increase in fodder availability by 1.5 times . Agriculture has shown a new avenue to the people . area under coarse cereals is reduced to around half and new crops are introduced like horticulture ginger etc .

The crop yield for pearl millet & grams is

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increased by 150% while area under cotton & wheat is increased from 199& 347 &28to 99 ha respectively. Area under horticulture is increased from 3 ha to 198 ha .The distress migration have been fall at zero as a result of regular employment generation of forty lakhs . In most of the developed watershed with concerted efforts to manage rainwater , the groundwater availability is improved not only in the watershed , but the downstream areas also benefited with increased groundwater recharge (Wanietal 2003 , sreedeviet al 2006 ,pathak et al .2007).Along with the increased surface and groundwater availability and concomitant private investments also substantiially increased in the developed watershed , resulting in the increased incomes as well as improved livelihood (sreedevi et al 2006 ,2008 and pathak et al ,2007).most of these cases recorded in the handful village in the country e.g kottapli in Andhra Pradesh , Gontamar in the Karnataka ,Relegansiddhi and Hiware bazar in the Maharashtra .In the Hiware bazar village the fodder have been increased from 400 metric tons (mt) to 6000 mt which leads to generate the milk of 4500 liters improved the socio- economic conditins of the village .

Over all assessment of the country in the DPAP area where watershed program have been completed and overall its impact in the country have been summarized in report of the planning commission the year 2001 , which claimed that " it has been experinced that in successful watershed when the availability of the water increased ,peoples changed their cropping pattern from less requiring to more water requiring cropping sequences .This has resulted in scsrcity of the water in the other areas of the watershed and has affected overall production . Therefore as far as possible : cultivation of the high water extracting crops should be avoided in the watersheds , choice must given to crops solely dependent on rainfall . Besides , efforts should be made to enhance the water use efficiency ". (planning commission ;2001;para 4.6.3)

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Case study on Takari Part of Krishna Koyna Lift Irrigation Project in Drought Prone Area

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Maharashtra is one of the most important states of India, which mostly rely on agriculture. The Government of Maharashtra has been giving utmost importance for developing the irrigation projects and providing irrigation facilities to the command area for transforming the under-utilized dry lands into perennial green fields. Under its efforts, the state has formulated a few Irrigation Development Corporations in different regions of Maharashtra. Under this policy and as per the stipulations made by the KWDT to utilise the Krishna water upto 2000 AD, the Maharashtra Krishna Valley Development Corporation (MKVDC) has been formulated for increasing the irrigation potential of the Krishna valley basin in Western Maharashtra. The MKVDC has undertaken a few major, medium and minor irrigation projects by means of construction of dams, barrages, and lift irrigation schemes depending on the nature of terrain in the command area, quantum of yield from catchment areas, forming a reservoir with possibly least submergence area for storing water, location and ground levels the source of with reference to the command area, etc.

Agriculture is the backbone of the command area proposed for the present expansion under the existing Krishna Koyna Lift Irrigation Project. Most people in this area are poor and economically backward. Though several lands are fertile, the farmers are left to the mercy of erratic monsoon for want of dependable irrigation facility. The population increase in the study area coupled with depletion of agricultural resources and erratic monsoons have been exerting tremendous pressure on several farmers in search of alternative livelihood. In order to meet the demand of food, the farmers are leveling and cultivating all possible types of upland areas and satisfying with whatever the land produces and facing miseries. Unemployment looms large in almost all sections of the society, particularly on the agricultural labourers who totally rely on mercy of landowners for their livelihood, particularly during drought periods, and compelling out-migration of a large number of agricultural labourers, small and marginal farmers to various towns and cities only to become unorganized labourers. Other than land, there are no other natural resources such as forests, mineral bearing areas or major industry in the entire project area. Also, no other major skills or options are available for people for their economic development. Irrigation at present is at a very poor status on account of poor and erratic rainfall and poor exploitation of even the available water resources in the area. Due to absence of any assured irrigation facility, farmers are following dry agricultural practices; and only rich and progressive farmers affording private lift irrigation facility based on the un-assured wells and bore wells for water supply are irrigating small extents of their lands. Provision of assured irrigation by construction of new irrigation projects and strengthening of the existing minor and medium irrigation schemes are the only alternative for economic development of this totally backward area. Hence, there is an immense need for undertaking any major irrigation project to provide assured irrigation facility for enabling farmers to take multiple crops, increase in the crop area and agricultural output for development of farmers and one of the worst-hit drought prone regions of Maharashtra.

The Existing Krishna Koyna Lift Irrigation Project

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Krishna River travels through Satara, Sangli and Kolhapur districts, and has potential for providing further irrigation to new command areas in these districts within the share of water allocated for Maharashtra State. KKLIP is located in the tail end portion of Krishna River within Maharashtra State and no other irrigation project exists within the State downstream of Mhaisal pump house.Hence it is desirable to utilize the most possible quantum of water allocated for Maharashtra through this project. Alamatti dam in Karnataka State is the nearest dam on Krishna River in downstream of KKLI Project. Krishna is the only river having some sort of perennial flows supported by the releases of water from Koyna reservoir to support assured irrigation in the region throughout the year and all other rivers and streams are confined to monsoon or a smaller post-monsoon periods and several times adequate water flows are not available in them even during monsoon. Due to the prevailing terrain conditions, construction of any major dam or large reservoir for storage of adequate water for irrigation is not possible in the region. Hence, any new irrigation project or expansion of the presently existing irrigation projects in the region essentially need to rely only on Krishna River for water source, that too within the allocated water by the GoM from its total share allocated by the Krishna Water Disputes Tribunal constituted under the Central Water Commission, Government of India (GoI). The existing Krishna Koyna Lift Irrigation Project is a major irrigation project initially proposed for providing lift irrigation facility to about 68908 ha irrigable command area in 5 talukas of Sangli district namely Walva, Khanapur, Tasgaon, Miraj and Kavathe Mahankal. It consists of two parts i.e. Takari part and Mhaisal parts named after their pump houses and having independent pump houses, rising mains, canal systems and proposed distribution networks. Takari pump house is located in Takari village of Walwa taluka in Sangli district and Mhaisal pump house is located in Mhaisal village of Miraj taluka of the same district, both on Krishna River. The location of KKLIP is in Sangli district of Maharashtra

KKLIP was originally initiated in 1984 and augmented in different phases, based on approvals from GoM as well as Environmental Clearance from the Ministry of Environment and Forests (MoEF), Government of India, New Delhi. and thereafter the project construction was initiated. Though the main components of the project such as barrage/KT weir, pump houses, major length of main canals have been completed, water is yet to be supplied to its command area, as the distribution system is yet to be provided. The distribution system of the project would be provided by the Command Area Development Authority after completion of the entire canal system. Hence priorities are given for completion of the already sanctioned project.

In Maharashtra, Co-operative sugar factories were started in the year 1955-56. On the banks of various rivers with view of development of rural areas by great leaders Padmshri Vikhe Patil Padmabhushan Vasantrao dada Patil, Barrister Gulabrao Patil and so many other leaders. At that time, sugar cane was grown on the banks of rivers only and small lift irrigation schemes were started to increase the production of sugar cane. Considering the topography of the area, there was no alternative to augment irrigation water supply to the drought prone area by lift irrigation scheme only. Accordingly, in the year 1984, first time, the Maharashtra Government took a decision to design a lift irrigation scheme in Sanglidistrict under the leadership of Padmabhushan Vasantrao dada Patil to give benefit of ample Krishna river water to the people in the drought prone talukas viz. Walva, Khanapur, Tasgaon, Miraj, and Kavathe Mahankal. As per chart no. 1

The Concept behind designing the LI Scheme in the Sangli district was its the average rainfall from west to East goes on decreasing. The benefitted area of Krishna Koyna Lift Irrigation Project is North East Region of Sangli district and South west region of Solapur district. Geographically, the talukas viz. Jat, Sangola, Khanapur, Mangalwedha, Kedepur is on higher level from Krishna river water level. The people in that region only depend upon rainfall which is very low. The rainfall is irregular and uncertain. Due to this type of rain fall uneven in the rainy season, the rivulets are dry. For irrigation no availability of optional irrigation source. Sometimes all the crops get burned or get small amount of earnings. From farming, due to insufficient production, there is no availability of employment. So the people were

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migrating in another regions for searching employment. This region is permanently drought prone area and there is no suitable space to construct a dam to give flow irrigation in that region. In this region, after every 3 to 4 years, the drought is occurred& there is scarcity of water. At the same time, the Krishna river over flowed. To use this ample water there is no alternative rather than lift Irrigation scheme. Due to this to give benefit of irrigation from the higher rainfall region of Sangli district to low rainfall of west region of Sangli district, the Krishna Koyna Lift Irrigation project was under taken

Basic project report of KKLIS is approved by Govt. in the year 1984 to irrigate only Takari Part to irrigate 36615 hectors which was costing 82.43 crores. But growing demands from drought prone areas by public representatives and beneficiaries the project expanded from time to time and changes in water planning are made and due to this projected irrigation area is increased as per chart no. 2 Present changes in the drought prone area due to the Krishna Koyna Project Takari Part . Before 2003, in the benefited area of Takari project there was no cultivation of cash crops. After commissioning Takari Project in that area, the cultivation of sugarcane is increased on large scale and four Sugar factories viz. Sonhira Sahakari S.K. Wangi, Ken Agro Energy India Ltd., Raigaon, Kranti S.S.K.L. Kundal and Udgiri Sugar and power ltd., Pare-Bamni are established and these sugar factories every year are crushing averagely 5 lakhs metric tonnes of sugar cane. As per the available data for the year 2011 -12, the above three sugar factories have crushed 14.15 lakh metric tonnes sugarcane. For sugarcane if the minimum rate is considered as Rs. 2000/- per tonne and considering 60 % production of sugarcane from Takari project, it has benefitted farmers with an income of approximately Rs. 175 crores. In the same year 2011-12 there was scarcity of water. In that condition, to cater for the needs of drinking facilities of 0.94 lakh population as well as irrigation facilities, 34 K.T. weirs and Percolation tanks in 32 villages were filled by means of Takari Project.

Also the cash crops like grapes, Banana, Pomegranates cultivation is increased on large scale. As well as short term crop production and cultivation is also increased in large scaleAs per chart No. 3 & 4

In above sugar factories simultaneously with the production of sugar, spirit and electricity is also produced and the extra income source is made available to the farmers. From the year 2004-2012 the state and central Govt. had got a revenue of Rs. 135.50 crores as shown in chart 5

Due to Takari Project fresh cattle feed as well as stored cattle feed is available on large scale. So due to this, the animal husbandry industry is growing rapidly and giving indirectly cash income source to farmers. The vehicles, Trackers, trucks & two wheelers are increased. Similarly the cost of land is also increased These are the indirect benefits from Takari Project.

Benifits during scarcity in 201 –2012 by Takari Project

In the year 2011-12 for the period 10-08-2011 to 15-06-2012 Takari Project lifted 6.70 TMC water from Krishna river to over come water scarcity problem as shown in chart no 6.

From the above information it is seen that the Takari

Lift Irrigation Project has made a drastic change in the standard of living of people in the drought prone talukas, Kadegaon, Khanapur & Tasgaon in Sangli district considerably. Also, the socio economics in this region is tremendously changed. Considering the above benefits, the L.I. projects are proved to be useful to drought prone areas.

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Chart No. 1 Krishna Koyna Lift Irrigation Project

Sr. No.	Part of Project	District	BenifittedTakulas	No. of Villages	Area in hect	water requirement in TMC.
1	Takari Part	Sangli	Walva	3	129	0.030
			Palus	1	727	0.20
			Kadegaon	22	11857	3.20
			Khanapur	15	8232	2.23
			Tasgaon	11	13072	3.53
			Miraj	3	380	0.10
Total of Takari Part			6	55	34397	9.29
2	Mhaisal Part	Sangli	Miraj	49	33540	7.03
			Tasgoan	9	2380	0.50
			K'Mahankal	28	13964	2.92
			Jath	76	22888	4.79
		Solapur	Sangola	8	4060	0.85
			Mangalwedha	7	6090	1.27
Mhaisal Part Total			6	177	82922	17.36
KKLI Project Total			12	232	117320	26.65

Chart No. 2 Scope and cost of Project

Sr. No.	Administrative approval	Year	Rate	Scope		cost		
				Description	Area in Hect	Takari Part	Mhaisal Part	Total
1	Original	1984	1983-1984	Takari Part	36615	82.43	0	82.43
2	1St Revised Approval	1986	1984 - 1985	Takari&Mhaisal	68908	86.90	101.00	187.90
3	2nd Revised Approval	1997	1995 - 1996	Takari Part + SonsalL.B.Canal	40386	402.12		1312.21
				Mhaisal Part + Khanderajuri Br. Canal + Stage 6 Sangola&MangalwedhaTaluka area	65634		910.09	
4	3rd Revised Approval	2004	2003 - 2004	Takari Part + Yeral River 4 KT Weirs	27430	646.70		1982.81
				Mhaisal Part + Dongarwadi ,Banewadi ,Agalgaon, Jakapur, expanded Gavan &Agrani River 12 KT Weirs	81697		1336.11	
5	As per C.W.C. Approval	2009	2005 - 2006	No. change of scope	---	684.55	1540.21	2224.76
6	Update Cost of Project		2012 - 13	No change of scope	----	831.56	2210.92	3452.52

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Chart no. 3 :- Income from cash crop to the Farmer

			Sugar Cane								Banana & Grape etc.				
Sr. No.	Year	Irrigated Area	Rate			Production		Expen. 30 % Hect	Profit	Total Profit	Irrigated Area	Produ.	Expen.	Profit	Net profit
		Hect	Sonhira	Kranti	Av.Rate	T/h	Rs	Rs		Rs.Core					
1	04-05	908	1275	1275	1275	80	102000	30600	71400	6.48	59	1000000	40000	60000	0.35
2	05-06	1932	1300	1415	1358	80	108600	32580	76020	10.58	100.08	1500000	60000	90000	0.9
3	06-07	1824	900	975	937.5	80	75000	22500	52500	9.58	139.67	200000	80000	120000	1.68
4	07-08	2114	950	1050	1000	80	80000	24000	56000	11.84	122.16	250000	100000	150000	1.83
5	08-09	2250	1800	1830	1815	80	145200	43560	101640	22.87	184.38	250000	100000	150000	2.77
6	09-10	3139	2060	2560	2410	80	192800	57840	134960	42.36	165.3	300000	120000	180000	2.98
7	10-11	3662	2100	2275	2188	80	175000	52500	122500	44.86	138	400000	160000	240000	3.31
8	11-12	3677	2050	2050	2050	80	164000	49200	114800	42.21	130	500000	200000	300000	3.90
										190.78					17.72

chart No. 4 :- Income from Bhusar Rabbi &Kharip Crops

Sr. No.	Year	Irrigated Area	Production	Expenses	Profit	Net profit
		Hect	Rs.	Rs	Rs	Rs crore
1	04-05	26.23	19000	4000	15000	0.039
2	05-06	4.83	18750	4000	14750	0.007
3	06-07	15.71	22500	4500	18000	0.028
4	07-08	491.67	25000	5000	200000	0.983
5	08-09	437.11	27800	5500	22300	0.975
6	09-10	363.99	33000	8000	25000	0.910
7	10-11	416.00	38000	8500	29500	1.227
8	11-12	1107.0	47500	10000	37500	4.151
					Total	8.321

Chart No. 5 :- Revenue collected from Sugar Factory to Govt. of Takari Project Command Area

Sr.No.	Year	Sonhira (75 % Rs. in Crores)			Ken Agro (50 % Rs. in Crores)			Kranti (50 % Rs. in Crores)			Total
		Central Excise	Vat	Total	Central Excise	Vat	Total	Central Excise	Vat	Total	Rs. crores
1	04-05	1.19	0.42	2.41	0	0	0	1.51	0.47	1.98	4.39
2	05-06	2.93	2.17	5.10	0	0	0	2.52	1.30	3.82	8.92
3	06-07	3.53	0.61	4.14	0	0	0	3.40	0.96	4.36	8.50
4	07-08	5.35	2.47	7.82	0	0	0	5.15	2.69	7.84	15.66
5	08-09	6.16	2.82	8.98	1.1	0.29	1.39	6.44	3.99	10.43	20.80
6	09-10	6.53	4.63	11.16	0.78	0.19	0.97	6.17	3.55	9.72	21.85
7	10-11	7.70	4.96	12.66	4.14	0.91	5.05	7.93	0.33	8.26	25.97
8	11-12	11.30	3.13	14.43	6.86	1.82	8.68	6.07	0.23	6.30	29.41
	Total	45.49	21.21	66.70	12.88	3.21	16.09	39.19	13.52	52.71	135.50
				50.03			8.05			26.36	84.44

The 75 % command area of Sonhira Sugar Factory comes under Takari Project command area. Hence Revenue collection taken as 75 % similary ken Agro 50 % &Kranti 50 %.

Chart No. 6 :- Benifits during scarcity in 2011- 2012 by Takari Project

Sr.No.	Taluka	Village Name	Remarks
1	Kadegaon	Asad,Padli,Sonkire,Deorashtre,Hingngaon,Sonsal,Chinchni, Chikhli,Shirasgaon,Bhikawadi,(k)Wadiaraibag,Ambegaon, Amarapur,Shirgaon,ramapur,Shelakbaw,Mohitewadgao n, Hanmantwadiaye,Yewalewadi, Wangi,Kumbhargaon,AmbakKadepurNewari.	Irrigated Area 5185 Hectors & Drinking Water to 68417 population
2	Khanapur	Balawadi, Alsand, BhalwaniKarwe, Mangrul	Irrigated Area 200Hectors & Drinking Water to 21000 population
3	Tasgaon	Limb HatnoliChikhalghotan	Irrigated Area 60 Hectors & Drinking Water to 7000 population

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Imperatives to Make Farming Activity a Real Business

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Abstract:

The views that are applied while doing manufacturing or service business, same should be considered for farming activity. Whenever profit % reduces or company comes in loss, that time industries & business companies take drastic measures to improve its conditions but this thing is not happening with farming as there is no much scope in doing this because limited control on influencing factors on agriculture. To boost the rural economy every aspect should be considered with economic point of view. The market in the country should grow the way it is. Government should not intervene into it. The majors to develop a platform for making farming a real business are study of market, reforms in education system, profitable price in leave of minimum support price (MSP),simplicity of the scheme for agricultural development ,increasing participation of small farmers in trading through commodities exchanges, promotion of farmers producers organisation (FPO).

Keywords*: Profitable price, farmers producers organisations, commodityex changes, support mechanisam*

Introduction:

Indian food grain production increased from 50 million tonnes in 1950 to 264.38 million tonnes in 2013-14. The phenomenal success through green revolution transformed the country from a food deficit region to a food surplus nation. It was possible because of a coordinated effort by various Ministries of the Central and State Governments and private industries associated with agricultural development. Though the efforts were made to develop an efficient value chain, yet marketing of agricultural produce remained weakest link in Indian agriculture.

Activity of Agricultural production in India suffers due to several factors. Over 75% farmers being small holders, they have very little surplus to sell. Whatever little surplus they grow, does not fetch better price in the local market, added in it is the heavy transportation cost that accrues to him due to small quantity. In the absence of remunerative prices, small farmers are not motivated to increase their production, particularly by investing in expensive external inputs. There are many small farmers who avail of credit from local moneylenders or traders during the cropping season with heavy interest rates. All this makes activity of farming difficult to be called as business. Reason is though there is a production, there is no guarantee to sell it to a particular fixed price well above production cost which normally happens in other businesses.

Realising the difficulties faced by the farmers in selling there produce for good price, the Government of India assured minimum support price for major food grains and established procurement centres for a few important crops like paddy and wheat in advanced states like Punjab and Haryana. State like Maharashtra is playing same role for cotton produce in the state.

It is feared that withdrawal of procurement system may pull down the price, which may reduce the production. This highlights the problem of agricultural marketing in the country. In the absence of a fair and efficient marketing system, neither the farmers will get a good pricing for their produce nor can the country could benefit effectively from procurement system.

Problems of Marketing Agricultural Produce in India:

Marketing of agricultural commodities suffers

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due to several factors. Following are the major problems encountered by farmers in marketing their produce:

Seasonal production:

Most of the agricultural crops have seasonal production while the demand is spread all round the year. Therefore, abundance of supply is there in the market when the produce is harvested, natural phenomenon of it is fall in the price. The price starts rising again as the volume of supply drops after a few weeks or months. In the absence of storage facility or ability to stock their produce, most of the farmers sell the produce immediately after the harvest, earning lower income or even resulting in losses.

Unpredictability about supply quality and quantity:

There happens to be large variations in the quality of the agricultural produce. Variation is in shape, size, colour, taste and nutritional composition, depending on the variety, weather, soil fertility, moisture availability, exposure to agro- chemicals and post-harvest handling. Observation also observed in timing and yield. This happens because production is dependent on nature, while the consumers expect certain standard quality produce all round the year. This makes it difficult to enter into a contract of selling for farmer.

High cost of Transportation:

Most of the agricultural commodities are bulky and fragile. Fruits and vegetables are with 80 - 90% moisture content, which are required to be transported in loosely packed containers. Roads connecting to rural India are bumpy therefore are prone to increase damage to agri. produce in transportation. Refrigerated containers are necessary for avoiding wastage & retain freshness. It is expensive and beyond the reach of small farmers with small quantity.

Short Shelf life:

Most of the fruits and vegetable are highly perishable and are subject to damage during harvesting, packing, storing and transportation. It is estimated that there has been 25 - 30% wastage in post harvest period1. As a result, causing heavy loss to farmers, which can be reduced through careful handling, neat packing and better infrastructure of roads, cold storage and specialised vehicles for transportation.

Lack of Storage and Grading facilities:

In the absence of proper storage facilities, either at the farm or around the market, farmers are compelled to sell the produce immediately after the harvest, when the prices are generally at the lowest level. If there is any opportunity to hold the stock for a few weeks, the inflow of the produce to the market would reduce and there would be a steady rise in the price. If these products are properly graded into different categories and packed in small packages of different weights, then the price realization can be higher by 15 - 20%, adding to the profit of farmers.

Need for Credit Facilities:

Many farmers do not have the capacity to hold the stock and wait for better price, unless they get some advance cash against their stock, to settle pending debts and even to arrange grading and transportation. Facilities for availing loan for crop production can empower them to enhance crop yield and quality. Private moneylender take undue advantage of non-availability of easy credit to farmers which leads to exploitation of farmers.

Social & Political systems compulsion:

Our society is divided into occupational sections what one section in the society wants, the other section of the society stands opposite to it. i.e. There are conflicting interests in the society. This is especially true related to agricultural sector. When the prices of the essential agricultural produce increases there lies a chance for the farming community to get a good return for their produce. But then the other sections of the society resist it & protests. Such kind of conflicting interests are becoming hurdles for the development of rural community. Political system is expected to be a medium of problem solving, but rather than that it is producing many problems. Instead of firm decisions on development, the political parties are taking short sighted view useful to serve their power seeking interests. Well known example of this is prices of onions and agitations over it. May it be then from the urban areas to reduce the prices and from rural areas against the reduction in the prices. In response to this then the government does

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the clumsy work of importing the commodity or announcing minimum support price and purchasing centres to the commodity usually lately.

One section of the society is getting high income security like government employees & elected peoples representatives like MP's & MLA's, on the other hand the farming community is left with natures mercy and biased market situations to get their returns from. Other than agricultural commodities doesn't face much price reductions though the cost of their input raw material reduces. E.g. When prices of raw cotton soured high in 2011, the prices of inner ware increased & doubled, but later when cotton prices reduced & became half of the 2011 prices, the inner ware prices were not reduced. This indicates biased nature of market for the agricultural commodities & other than agricultural commodities.

Peoples concerned with agrarian economy has a hope with the new ruling party at the centre but so far in its eight months tenure no good change or effects has been realised which we can say the remarkable one. Because of the recession kind of situation in the world market, the prices of the agricultural products especially the produce like cotton, soybean and sugar are currently low. While the natural environment for the crops largely remains hostile, increasing the cost of production thereby reducing the margin left with the farmers if the cash crops are facing this fate then average returns from food grains can be gassed for their poor ability to give returns. If we compare the current prices of some of the commodities with the prices 40 years back then it can be easily observed that, commodity prices of agricultural produce has increased with less rate then other commodities and average salary of the government employees. This indicate that other classes of the society are more protected than farming community. From the above table if compare agricultural pr-oduce prices with other commodities like gold, petrol & average salary of the government employee, then we can see that prices of others things than agricultural produce increased manifolds. It indicates that farming is less remunerative than other businesses. The sensex which was stable on 18000 for long time, now raised to 26000 and at the same time incidences of farmers suicides are increasing. Is this paradox due to our economic system or due to politics?

Imperatives to make farming a business:

The views that are applied while doing manufacturing or service business, same should be considered for farming activity. Whenever profit % reduces or company comes in loss, that time industries & business companies take drastic measures to improve its conditions but this thing is not happening with farming as there is no much scope in doing this because limited control on influencing factors on agriculture. To boost the rural economy every aspect should be considered with economic point of view. The market in the country should grow the way it is. Government should not intervene into it. Fair competition is important in the complete market. The competition leads to quality. With quality every element in the link gets negotiable power. This controls the monopoly. This means scope should be given to the competition in the market. The resources from the rural areas should be used to develop ent-repreneurship.

Table (A) : Prices of commodities in different periods.

commodity	1972 price/quintals	2014 price/quintals	Rise in price
Jowar	160	1450	9 times
Tur	100	7300	73 times
Cotton	275	4,050	15 times
Gold (10 grams)	250	27430	109 times
Minimum salary of govt. employee	175 per month	12236.25 per month	70 times

Source: indiankanoon.org/doc/1054059 date 16/01/2015

Table (B) : Prices of commodities in different periods.

commodity	1976 price/quintals	2014 price/quintals	Rise in price
Paddy	160	1310	8 times
Wheat	100	1400	14 times
gram	275	3000	11 times
Gold (10 grams)	432	27200	63 times
Petrol	Rs.3.20/- Per lit.	66/-	21 times

Source: Reserve bank of India, District socio-statistics information bureau

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The role of Government should be to develop a support mechanism which should be dependent on economic model. Center and state Governments marketing boards can play god role in it so that one section in the society will not encroach upon other sections interest. The fair play in the market will lead to speeding up of the economy.

The Government of India has now introduced Model Laws on agricultural marketing. Under these Laws, provision have been made to operate private market yards and direct purchase centres, such as e-Chaupals,Ryat Bazaars and Public Private Partnership in market yard management. Market Standard Bureau has also been established to set standards for various produce and issue quality certificate for graded produce. Several Marketing Boards and Federations have been established to provide marketing support to growers. Most of them are managed by the Government with varying degree of success but their sustainability without the involvement of the Government, is doubtful. Options are opening up to supply to retailers or to other private entrepreneurs under the contract farming agreement. However, there is a long way to go before small farmers across the country become part of the value chain to get a fair deal.

As efficient marketing of agricultural produce has direct impact on the productivity and profitability of small farmers, it is necessary to address their marketing problems on priority.

Study of Market:

In this world of competition it is of high importance to study the market for the product that we produce. In the agricultural produce there is heavy fluctuation in the prices of commodities so bringing the produce at the right time in the market is important. Group farming, collective storage, collective bargaining is important for the purpose. Some of the important things related to market are -

Regular Market Survey on daily and weekly basis on demand and supply of various agricultural commodities with their price ranges and transmission through radio, TV, internet and newspapers, can give a clear idea about the demand and supply situations during different months and on different occasions. This data will be helpful to farmers and Agricultural Extension agencies to organise sowing of crops which can be harvested when the demand is high. Information of market prices on daily basis, can empower farmers to bargain for higher price.

Education System:

The present educational system in India is favorable to teachers and not to the students. There is a vast difference between what we need to study for business or for undertaking a good profession and what we actually study. Education system is largely theory based & has got its use in cities & business areas. There is a need to increase focus on education which will increase and promote rural resource based development.

Profitable Price in leave of minimum support price (MSP):

The National Commission on Farmers, chaired by Prof. M. S. Swaminathan commission established to give recommendations to improve state of Indian farmer, recommended 50% hike on the price of the agricultural commodity over the cost incurred to produce it. To bring this thing into practice the state government like Haryana prepared a report & demanded to the central government for profitable price instead of Minimum Support Price. If the other state government also pursue for the same to the central government & work cohesively then with central & state governments contribution a scheme could be brought to give fair prices to farmers especially for staple food crops. To reduce the economic burden on the government this scheme could be applied to farmers according to their % of sowing area for that crop in a region.

Simplicity of the scheme for Agricultural Development:

Schemes for the development of farmers should be simple to bring into action. E.g. Scheme for developing water resources like well, farm lake in the farm land is linked with Mahatma Gandhi Rojgar Yojna Scheme. Getting labours for this scheme is difficult at many places & it becomes herculean task to get the project done. So reforms should be made to make scheme simple & easily implementable. The subsidies for scheme like polyhouse/ greenhouse erection project need to distributed immediately after initial sanctions. Delays in it makes farmer to bear cost of interest on the loan amount.

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

Increase in covered agricultural practice:

Covered agricultural practice like poly house &green house farming will increase moreassured output from agricultural as it regulates inputs of the farming. This agricultural practice will will generate more guaranteed returns to farmers because of the increased yield. So government has to bring more subsidies & schemes for this.

Increasing Participation of small farmers in trading through commodities exchanges:

Commodity exchanges can play a role in giving fair price to the produce of the farmers. Schemes have been designed by the Multi Commodity Exchange (MCX) & National Commodities Derivatives Exchanges (NCDEX) so that small farmers could participate in futures contract for selling their goods. To make this effective & increase the participation of farmers actually, means should be identified constantly.

Promotion of Farmers Producers Organisation (FPO):

To maintain economic viability in the business, consideration of economies of scale is important. Farmers producers organization can make this happen. Farmers can come together can form a business company for trading or processing their produce. In Maharashtra, Maharashtra competitive agricultural development project (MACP) & NABARD are trying to promote Farmers Producers Organisation. The World Bank also contributing its fund for this purpose. Farmers need to avail this facility.

Promotion of Agricultural Insurance:

For small & marginal farmers & all the farmers who are taking yearly crops there is need of insurance policy against risk of loss due to pests, natural calamities, draughts etc. A different plans should be evolved to suit to different cropping patterns & situations.

Consolidation of Agricultural Lands:

Due to small & marginal land holdings, there happens to be limitations on capital investment. Also effective farm mechanization is not possible due to small holdings. In India small & marginal farmers are large in numbers & therefore some scheme should be brought to consolidate land of nearby farmers &making a consortium of them for effective farming.

Conclusion:

For the betterment of farming community, the occupation of farming needs to be seen as business. Because of lack of capital among small & marginal farmers, support mechanism from the government is imperative. Depending on the regions need & demand, these support system should be evolved & losses to the farming community should be avoided.

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Organic Farming: A Cost Effective Farming

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Abstract

India needs an "Evergreen Revolution" to increase productivity without harming the environment. - Agricultural Scientist Dr. M.S. Swaminathan.

The Indian economy considered as the agrarian economy though the agriculture as main occupation has reduced its percentage over the last two decades. Feeding to such huge population is a gigantic task. Thus, meeting the economic requirements of the individual farmer along with the nation's economic development is a need of an hour. The organic farming is one of the means by which a farmer can get a regular income & the nation a sustainable source contributing towards betterment of the economy. As said by Dr. M.S. Swaminathan- without harming the environment means use of chemicals free farm inputs. Therefore, organic farming is the farming which does not harm the environment. The Organic farming is the cost effective farming as the cost incurred on bio-fertilizers and bio-pesticides is very less compared to the chemical ones. The financial efficiency ratios help to know the cost effectiveness of the organic farm along with profitability. For this purpose the researchers have chosen the"Vastukamal Organic Farms, Islampur". The small and marginal farmers can adopt the organic farming method to get a regular income by the way of multi commodity farming.

Keywords: *organic farming, cost effective farming, multi commodity farming.*

Introduction

The Organic Farming is considered as the sustainable way of farming. It is the ancient way of farming in Indian Sub-continent. Indian agriculture is blessed with the availability of productive land and the Monsoons. The history has its famous quotes on these abundant resources- "the smoke of gold from Indus Land", and many more. The eminent scientist and former chief of ISRO late Dr. Vasant Gowarikar once confidently made a statement about the Monsoons, "Monsoon can never deceive India". Although the resources are plenty and easy to access, it is the time to use it in disciplined manner. This is possible and can be achievable with a little effort by practicing the organic farming. According to FAO (Food and Agriculture Organization), India, the organic farming can be defined as "Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs" (NCOF). The organic farming is the cost effective farming. It is a 365 days farming. This means that for every season- summer, rainy and winter; a farmer can get a regular income. This is done by the crop rotation method in once own farm land. Organic agriculture is one technique to reduce the production cost as much as possible up to 75%. The paper focuses on reduction of the production cost in an organic farm. For this the researchers have collected the data of the "Vastukamal Organic Farm, Islampur, District: Sangli". Since last four years the farm is producing agricultural commodities by practicing the organic farming methods.

Objectives

The primary objective is to study the cost effectiveness by adopting the organic agriculture

technique that is without use of chemicals.

In line with the primary objective, the secondary objectives are as follows:

1. To monitor the cost reduction in agricultural inputs.
2. To ascertain the crop rotation as a regular income source.
3. To do the SWOT analysis of the organic farm.

Literature review

A farm is socio economic as well as decision making unit. Income as well as a source of livelihood makes farming a socio economic entity. The modernization of agriculture in terms of equipments and communication technology made it commercial. Hence, the farmers or farm managers need to improve the managerial abilities. Farm management is defined as the art of managing a farm successfully as measured by the test of profitableness(Gray)[3]. The profitability can be known and increased by keeping a farm record. Planning of what to sow, how much to sow, market price for the products, research and government policies, credit facility and most importantly input management has to be recorded. [3] The farm efficiency is known by calculating farm efficiency ratios such as physical efficiency ratios, financial efficiency ratios, etc. . The ratios help to the financial condition of the farm. Whether it is profitable or not? [3],[5] Though the agriculture sector is moving towards commercialization on a large scale, but the small and marginal farmers are not aware about this concept. The reasons are- a) smallness of land holdings, b) financial constraints, c) communication gap. Increasing productivity of the available land can be achieved through some measures like cooperative farming, contract farming and with government help. [4] The organic farming is one of the solutions to increase the farm productivity. It is a cost effective farming. If the crop rotation methods are used then the farming can be a regular source of income. For every effort to promote organic farming could be invalidated if individual farms do not reach adequate productive and efficiency level. The organic farming must strive to be efficient both productivity and economically. The role of the Government is critical in motivating the farmers towards organic farming in the country. Some of the major suggestions for expansion of organic farming are: creation of separate for marketing of organic foods; announcement of premium prices for organic staple food crops; creation of demand by more awareness programs.[1]

Data Analysis and Interpretation

1. Growth of area under organic management

Table No 1

Sr. No	Years	Area under Organic management in Ha
1	2003-04	42,000
2	2004-05	76,000
3	2005-06	1,73,000
4	2006-07	5,38,000
5	2007-08	8,65,000
6	2008-09	12,07,000
7	2009-10	10,85,648

Source: National Centre of Organic Farming, Ghaziabad [2]

The statistical information provided by the NCOF gives the incerasing populaity of adopting the organic farming methods.

2. Total area under organic Certification process (in Hectors)

Table No 2

Region	Organic	In - Conversion	Total
All States	757978.7	327669.749	1085648
Maharashtra	105172.6	45295.12	150467.7
		Percentage	13.85%

Source: National Centre of Organic Farming, Ghaziabad[2]

The Maharashtra state has contributed the highest area of land converted into the organic farm practicing. The state has its 13% of share in the country.

3. Farm Inputs: Bio-fertilizers and Bio-pesticides

Table No 3

Farm Inputs	Quantity Provided Per Acre Per Month
Bio-fertilizers:	
Vermi Compost	12 tones
Bacteria Culture	150 kg
Plant Hormone	120 kg
Bio-Pesticide (Various 10 types of plant extracts available on the farm)	13 Liter

Source: Farm Records of the Vastukamal Farms,Islampur.

The data provided is of the bio-fertilizers and bio-pesticides used in the farm on monthly basis.

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

4. The costs of Bio-fertilizers and Bio- pesticides for 3 years

Table No 4

Farm Inputs	2010-2011 (In Rs.)	2010-2012 (In Rs.)	2012-2013 (In Rs.)
Bio-Fertilizers	42,000	42,000	52,000
Bio-Pesticides	6,800	33,600	33,600

Source: Balance sheet of the Vastukamal Farms,Islampur.

The table has provided the information of the total cost of the organic fertilizers and pesticides used in the last three years. The cost of bio-fertilizers has not changed during the first two years while the cost bio-pesticides have remained the same for last two years. Also the farm is self-sufficient in producing the plant tonics. These tonics provide the resistance power to the plants. This has increased the soil fertility and provided a healthy base for the other crops in crop rotation.

5. The Cost Ratios for 3 years

Table No 5

Ratios	Years		
	2010-2011	2011-2012	2012-2013
Operating Ratio	0.38	0.64	0.56
Fixed Ratio	0.05	0.08	0.06
Gross Ratio	0.43	0.72	0.62

Source: Balance sheet of the Vastukamal Farms

The table shows the movement of ratios in all the three types of cost ratios. The operating ratio has increased in the second year but on the third year it has came down. This shows that the farm efficiency is increased. On the other hand the fixed ratio has slightly come down in the third year. It is highest in the second year which gives the fact that the fixed assets are used productively. The gross ratio is high in the second year but it has come down in the third year. All the ratios are less than one which indicates that the farm business is running profitable. The farm has started with only 2 crops in the beginning. From second year the crop rotation started with 3-4 crops per year. The multi commodity farming helped to diversify the farm activity and proved to be 365 days income generation farming. The overall expenses on the bio-fertilizers and bio-pesticides have been constant and less cost incurring.

Findings

SWOT Analysis

Strength	Weakness
➢ Low Input cost by using organic fertilizers and pesticides ➢ Self-sufficiency in producing bio-fertilizers and bio-pesticides ➢ Subsidy is provided by the government on the production unit of bio-fertilizers and bio-pesticides ➢ Crop rotation or multi commodity farming helps to get income generation throughout the year.	➢ No Specialized market for the organic agri-commodities ➢ Scarcity of recourses: labor, land,machinery, etc.
Opportunity	**Threats**
➢ Cooperative farming and Contract farming can be done due to lack of land. ➢ Exports. ➢ Livestock.	➢ No proper guidance about the use of agricultural inputs. ➢ No syllabus covers the organic farming techniques. ➢ Lack of awareness.

Conclusion:

The researchers tried to look at the organic farming as a cost effective farming technique. "The Vastukamal Organic Farm" is running profitably by the commitment towards the organic farming methods. The farm has met its input requirements on its own. This shows that the self-sufficiency in the farm input management by saving the input cost. The diversification of the farm by crop rotation technique has proved to be an income generation throughout the year. Lack of awareness is a threat to the organic farming. To overcome this threat to some extent the small and marginal farmers can come together to do cooperative farming or contract farming.By implementing the organic farm methods the "evergreen revolution" is not far away.

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Rural Consumer & Satisfaction with regard to Food & Beverages

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Abstract:

Customer is the reason why businesses exist. Today human need have become a more sophisticated and complex in nature. This has given rise to rural market which are essentially for the marketing strategies with a view to serve and satisfy the customer to countering competition and at the same time retain into the business. The consumer goods are one of the fastest growing sectors in India. There is a change in the mind set of rural consumer and now looking at "Money for Value" rather than "Value for Money". The purpose of this paper is to carry out depth study of rural consumer and their satisfaction with regard to Food and Beverages in Kolhapur district which influence the buying behavior. The factors related to behavioral attributes, marketer attributes and 7Ps have been taken for the study and discussed comprehensively in order to know perception and satisfaction level of consumers. Findings have also been drawn on different aspects of the study which perceived beneficial in understanding and enhancing satisfaction level of consumer. The appropriate recommendations have been made in the light of primary data analysis and interaction with various respondents.

Keywords: *Behaviour, Customer, Needs, Rural, Satisfaction, Strategies.*

1) Introduction:

For succeeding in business an entrepreneur, first and foremost needs good marketing skills. There are several good reasons for studying marketing. Marketing issues are important in all areas of the company. Customer is the reason why businesses exist. Marketing always helps to company become more savvy consumers. As we enter the twenty first century, the marketing functions remain concerned with serving customers and consumers effectively. In earlier period, the problem of human being revolved around the question to survival and at later periods of human civilization. Perhaps for centuries, human beings were mostly concerned about taking care of their primary needs. However industrial revolution, change all and metamorphic changes in human behavior continued at awful speed of recent times. Today human need have become a more sophisticated and complex in nature. This has given rise to market which are essentially for the marketing activities with a view to serve and satisfy the customer and consumers to countering competition and at the same time retain into the business.

The globalization has brought vast change in Indian Industry. The consumer Goods is one of the fastest growing sectors in India. The marketing function seeks to fulfill the need and want of each individual customer and satisfy to each individual consumer. A consumer packaged goods (FMCG) is among high growth industry with Household, Personal care and Food & Beverages products in India. The size of the Indian food processing industry is day by day increasing with value added products. Also the health products &beverage industry is growing with unexpected demand of bread, biscuits, chocolates, ice creams. The size of the semi-processed/ready-to-eat food segment is more and more. The Indian beverage industry faces over supply in various segments. Indian hot beverage market is a tea dominant market. Consumers in different parts of the country have heterogeneous tastes. The total soft drink (carbonated beverages and juices) market is highly seasonal in nature with consumption varying. The market is predominantly urban with 25 per cent contribution from rural areas. Mineral water market

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in India is also hot with an average the monthly consumption.

The needs and wants of consumer vary according to the regional, cultural, socio-economic variables which influence the consumer demand and spending patterns. Today marketing must be understood not in old sense of 'making a sale' but the new sense of "satisfying customer needs, wants and buildup the relation". Many people think that marketing means only as selling and advertising. However selling and advertising is only the tip of marketing iceberg. Marketing is the proper combination of its mix and managing profitable customer relationship. The twofold goal of marketing is to attract new customers by promising superior value and to keep and grow current customers by delivering satisfaction. With view to above discussion the present paper focus on the consumer satisfaction with regard to Food & Beverages in Kolhapur district. The objectives of the present study is-

- to study the impact of behavioral attributes on customer satisfaction.
- to study the marketers influencing factor to customer satisfaction.
- to study the consumer satisfaction with respect to 7Ps.

2) Literature Review:

A review of literature is important and helpful as a background for the research work undertaken. A summarized literature review is as follows:-

According National Council for Applied Economic Research (NCAER), the income of the average villager is rising. Recession is hardly possible in rural India. Also, rural education levels are rising because the efforts to the states. The rural markets remain untapped because of three D's: distance, diversity and dispersion. He has observed that it is very hard to design a communication strategy as the marketer's have little understanding of folk media. Mass media reaches only the upper end. Genuine efforts should be made to exploit the rest of the market potential. Pareek (1999) had explained in his article that the Indian rural market has immense untapped potential. Jiwarjka (2004), Chairman, Federation of Indian Chamber of Commerce & Industry(FICCI) has stated that the rural markets have been a vital source of growth for most companies. For a number of FMCG companies in the country, more than half of their annual sales come from the rural market. There is a need to generate superior data on rural marketing system, the haats, melas, mandis, village and small town income levels and consumption patterns. They need to learn how to use existing market places to arrange demonstrations of products. He reveals that despite the hurdles that the rural economy presents, corporate-rural partnership can overcome these and bring about positive results for both the entities.

Dick and Basu (1994) had stated that the consumer loyalty plays a central role in marketing strategy, and marketing planning in the achievement of store loyalty in the retail sector. Hence the forming marketing strategy, firms should consider the consumer and their needs and expectations which lead to the satisfaction. Verhoef, Franses and Donkers (2002) had discussed the changing perception and behavior in context to customer relationship that customers adjust their behavior based on changes in perceptions that result from new experiences with the supplier. This implies that a change in satisfaction levels affects customer referrals in the first period, but the effect of this change is also important in subsequent time periods. Fornell and Bitner (1992) had explained that the satisfaction is typically measured as an overall feeling or as satisfaction with elements of the transaction in terms of its ability to meet customers' needs and expectations. Lynch (1993) has described customer delight as the capacity to provide the satisfaction with experience that transcends normal standards of quality service. Customer satisfaction (CS) is one of the most unassailable concepts of modern management practice. It is an indicator of satisfaction with a product and or service, offered during the purchase and post-purchase period. It is largely influenced by perceived value of the product/service that the customer experiences while purchasing and consuming the product/service(Anderson, 1994). Hence the research hypotheses for the present study are -

- There is no association between the physical evidence and satisfaction.
- There is no relation between the people and satisfaction.
- There is no significance between the process and satisfaction.

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3) REARCH METHODOLOGY:

Stressing the prime importance on survey method, the required data is collected by personally visiting a substantial number of consumers and customers. The methodology adopted comprises: Data collection, Selection of study areas, Sample Design.

i) Data Collection: The methodology of data collection for study is planned in such a manner that every bit of information pertaining to different aspect of consumer satisfaction has been collected. The secondary data necessary has been gathered by the review of past literature and the statistical information is collected by personal visits to various offices, libraries and through internet. Primary data is collected through –interview and structured questio1nnaire. In order to elicit relevant data from the respondents the researcher prepared the structured questionnaire in two parts: Part I consists brief introduction to Profile of the consumers, Part II contains the statements related to consumer satisfaction with Five point Likert Scale ratings were used as under Strongly Agree to Strongly Disagree with maximum rating of 5 and minimum rating of 1 with equal interval scale of 1.

ii) Sample Area: The researcher has taken into consideration regional variances before proceeding to the selection of sample study area and accordingly determined to select such region which represents aforestated variances. To study the present subject, selected fast growing boundary region Kolhapur district from Maharashtra which is located in Maharashtra & Karnataka boundary.

iii) Sample Size: After determining the study area, the researcher has selected five sample talukas from each district on the basis of the population of talukas. By following the simple random sampling, the researcher has selected 108homes as sample respondents from each taluka place. Thus the total 540respondents are surveyed.

4) DATAANALYSIS & DISCUSSION:

540 respondents were taken as a sampled from five different talukas of Kolhapur district whom questionnaires were distributed and interviewed accordingly. For interpreting the mean score together with percentile value a rating scale is developed on the following –Excellent: above 80.01%, Good: above 60.01- 80%, Average: above 40.01- 60%, Poor: above 20.01- 40%, Very Poor: Below 20%.The collected primary data has been analyzed detailed in term of presentation of results, tabulation and analysis of descriptive statistics and reliability of data and testing of hypothesis.

Table No. 1: Reliability Statistics

Cronbach's Alpha	N of Items
.987	62

Through this analysis, Reliability of data was found by 98.7 percent which was collected through questionnaire from Kolhapur district.

Table No.2: Impact of Behavioral & Marketer Attributes

N	Statements	TR	TS	Avg	M	SD	%	Ranks
Behavioral Attributes								
1	Culture	540	1977	395	3.66	1.11	73.22	I
2	Social	540	1657	331	3.07	1.14	61.37	V
3	Life style	540	1891	378	3.50	1.08	70.04	II
4	Personality	540	1443	288	2.67	1.27	53.44	VII
5	Role	540	1647	329	3.05	1.22	61.00	VI
6	Status	540	1871	374	3.46	1.08	69.30	III
7	Taste & habits	540	1843	368	3.41	1.16	68.26	IV
Marketer Attributes								
1	Quality	540	2256	451	4.18	0.83	83.56	I
2	Quantity	540	1707	341	3.16	1.12	63.22	VI
3	Price	540	1999	399	3.70	1.14	74.04	III
4	Packaging	540	2215	443	4.10	0.93	82.04	II
5	Advertising	540	1912	382	3.54	1.10	70.81	IV
6	Promotional Activities	540	1737	347	3.22	1.20	64.33	V
7	Service	540	1635	327	3.03	1.21	60.56	VII

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation,

Table No.2 indicates the impact of behavioral and marketer attributes on satisfaction with regard to Food &Beverages. Behavioral attributes develops consumer's attitude & perceptions which shapes their pre& post purchase behavior.The study shows that the most important behavioral attribute influences satisfaction level is culture with 3.66 mean values. Secondly, life style is affected to consumer satisfaction with mean value 3.50.Followed by status is on third rank and taste or habits are on forth rank with 3.50 &3.41 mean values.Social and role is the fifth and sixth rank

whereas with lowest mean value 2.67 Personality is on seventh rank.On the other hand the most important marketer attributes influences the consumer satisfaction is quality of product with mean value 4.18. Packaging of the product is on second rank with 4.10 mean values. Thirdly, price with the mean value 3.70 followed by advertising and promotional activities are Fourth and Fifth rank with 3.54 and 3.22 mean value each. Quantity and service attributes are the Sixth and Seventh rank.

Table No. 3: Consumer Satisfaction towards Product with regard to F&B

N	Statements	TR	TS	Avg	M	SD	%	SL
1	The product range is comprehensive.	540	2001	400	3.71	1.15	74.11	Good
2	There is consistency in quality of product.	540	1597	319	2.96	1.24	59.15	Average
3	There is no variation in quantity printed and actual.	540	1709	341	3.16	1.21	63.30	Good
4	The freshness of products is exceptional.	540	1968	393	3.64	1.17	72.89	Good
5	The customer avails the replacement facility.	540	1516	303	2.81	1.21	56.15	Average
6	The packaging of products is fair &convenient to handle.	540	1788	357	3.31	1.10	66.22	Good
7	The packaging of product attracts the attention of customer.	540	2000	400	3.70	1.08	74.07	Good
8	The brand names are appreciable.	540	1876	375	3.47	1.15	69.48	Good

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD-Standard Deviation, SL-Satisfaction Level

Table No. 3, it is observed that there is comprehensive rage in products and appreciable brands whereas towards consistency in quality of product is average. It also reveals that most of respondents feel that there is no variation in quantity printed and actual. The satisfaction level towards the packaging and packaging attracts the attention of consumer is at Good with 3.31 mean value. Further, the freshness of the product is exceptional in food & beverages whereas Average satisfaction level towards the replacement of product.

Table No.4: Consumer Satisfaction towards Price with regard to F & B

N	Statements	TR	TS	Avg	M	SD	%	SL
1	Supplier offer cheapest price.	540	1456	291	2.70	1.24	53.93	Average
2	There is no variation in printed price and chargeable price.	540	1493	298	2.76	1.19	55.30	Average
3	The price is reasonable in relation to benefits.	540	1610	322	2.98	1.28	59.63	Average
4	The price is equitable in relation to Quality	540	1831	366	3.39	1.21	67.81	Good
5	Pricing diff. between branded and unbranded is justifiable.	540	1808	361	3.35	1.27	66.96	Good
6	I am very satisfied with price I paid for what I bought.	540	1549	309	2.87	1.29	57.37	Average

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation. SL-Satisfaction Level

The study of table no. 4 shows that satisfaction level towards the price is equitable in relation to quality and pricing difference in unbranded and branded is Good. Supplier offer cheapest price, no variation in printed and actual price, reasonable price in relation to benefit and overall satisfaction towards price is Average.

Table No.5 Consumer Satisfaction towards Place with regard to F&B

N	Statements	TR	TS	Avg	M	SD	%	SL
1	The store located conveniently.	540	2084	416	3.86	1.05	77.19	Good
2	Time of stores is convenient.	540	1994	398	3.69	1.12	73.85	Good
3	There is regularity of availability of product.	540	2072	414	3.84	1.06	76.74	Good
4	The storage facility is good.	540	1866	373	3.46	1.16	69.11	Good
5	The order processing & order cycle is fair in store.	540	1611	322	2.98	1.29	59.67	Averag e
6	Home delivery facility of product is Satisfactory.	540	1522	304	2.82	1.24	56.37	Averag e

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation. SL- Satisfaction Level

Table No. 5 indicates that satisfaction level towards the place. The satisfaction level towards location of stores, working hours are convenient, regular availability of product, storage facility is at Good scale whereas order processing, order cycle and home delivery of product is Average.

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Table No. 6: Consumer Satisfaction towards Promotion with regard F &B

N	Statements	TR	TS	Avg	M	SD	%	SL
1	Ads provide satisfactory information to buyer.	540	1710	342	3.17	1.28	63.33	Good
2	Ads campaigns are excellent.	540	1677	335	3.11	1.25	62.11	Good
3	Ads motivated to buy	540	1873	374	3.47	1.16	69.37	Good
4	The impact of TV ads is more than print ads on buyer.	540	1983	396	3.67	1.21	73.44	Good
5	The display of products in shop is attractive and fair.	540	1777	355	3.29	1.23	65.81	Good
6	Promotion sche.are reliable.	540	1866	373	3.46	1.16	69.11	Good
7	The customer avails gifts, Discount, free goods etc.	540	1781	356	3.30	1.23	65.96	Good

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation. SL-Satisfaction Level

Table No. 8: Consumer Satisfaction towards People with regard F&B

N	Statements	TR	TS	Avg	M	SD	%	SL
1	The retailers treat the customer with respect.	540	1918	383	3.55	1.16	71.04	Good
2	The Sales person's response is reliable and positive.	540	1758	351	3.26	1.19	65.11	Good
3	Sales person provides wide & qualitative information.	540	1731	346	3.21	1.23	64.11	Good
4	Interactions of sales person while buying are inspired.	540	1669	333	3.09	1.24	61.81	Good
5	Prompt and good service.	540	1811	362	3.35	1.22	67.07	Good
6	The sales person's behavior is cooperative& Courteous.	540	1800	360	3.33	1.16	66.67	Good
7	The outcome of my complaint is fair.	540	1498	299	2.77	1.40	55.48	Average

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation. SL- Satisfaction Level

Table No. 6 illustrates, satisfaction level of consumer towards ads provide satisfactory information, excellent ad campaigns, motivated to buy, impact of TV ads are more, display of products, sales promotion schemes and avail sales promotion is at Good scale.

Table No.8 illustrates the satisfaction towards people with regard to Food & Beverages. Satisfaction level towards behavior of retailer, sales person response, wide & qualitative information by sales persons, service, and salesperson's behavior is at 'Good' whereas 'Average' towards outcome complaint.

Table No 7: Satisfaction towards Physical Evidence with regard F&B

S	Statements	TR	TS	Avg	M	SD	%	SL
1	The products are solving the problem and fulfill the need.	540	1869	373	3.46	1.03	69.22	Good
2	The products are suit to the changing preferences.	540	1846	369	3.42	1.06	68.37	Good
3	The products improve the Standard of living.	540	1774	354	3.29	1.27	65.70	Good
4	Consumer involvement in buying.	540	2218	443	4.11	0.87	82.15	Excell ent
5	The brand awareness of products is fair.	540	1804	361	3.34	1.15	66.81	Good
6	Supplier must have high standard of hygiene.	540	2023	404	3.75	1.13	74.93	Good
7	The products must be environmentally responsible.	540	1759	351	3.26	1.05	65.15	Good

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation. SL- Satisfaction Level

Table No.9: Consumer Satisfaction towards Process with regard F &B

N	Statements	TR	TS	Avg	M	SD	%	S L
1	Product modification.	540	1887	377	3.49	1.14	69.89	Good
2	Pricing trends are balanced.	540	1450	290	2.69	1.22	53.70	Average
3	Information onschemes.	540	1710	342	3.17	1.30	63.33	Good
4	Quality of distribution system.	540	1726	345	3.20	1.27	63.93	Good
5	The products enhance the state of exciting life.	540	1905	381	3.53	1.14	70.56	Good
6	Service of retailer & sales staff is good.	540	1916	383	3.55	1.11	70.96	Good
7	The companies serve customer by offering value.	540	1752	350	3.24	1.25	64.89	Good

Source: Surveyed Data, TR-Total Respondents, TS-Total Score, M-Me an, SD, Standard Deviation. SL- Satisfaction Level

Table No. 7 indicates consumer satisfaction towards physical evidence. Most of the respondents involvement in buying is excellent whereas satisfaction level towards products fulfill needs and solve the problems, suit to changing preferences, improve standard of living, standard of hygiene, brand awareness, environmentally responsible is at Good scale.

Table No. 9 indicate the satisfaction level towards process. The satisfaction level towards distribution systems, informational strategies, product strategies modification, promotional, service by retailer, value offering by companies and enhance state of exciting life is at 'Good' whereas 'Average' towards pricing strategies and trends.1) TESTING OF HYPOTHESIS:

Hypothesis 1:

There is no association between the physical evidence and satisfaction.

Table No. 10 : Chi-Square test for Hypothesis – 1					
Probability	Respondents	Cal. Chi-Square	DF	t Value@ 5%	Conclusion
S D	28	26.05	4	9.4877	Rejected
D	72				
N	152				
A	171				
S A	118				

Since the calculated chi-square value is greater than critical value at 5%, the null hypothesis is rejected. Therefore, there is association between the physical evidence and satisfaction.

Hypothesis 2:

There is no relationship between the people and satisfaction.

Table No. 11 : Chi-Square test for Hypothesis – 2					
Probability	Respondents	Cal. Chi-Square	DF	t Value@ 5%	Conclusion
S D	63	50.055	4	9.48773	Rejected
D	88				
N	154				
A	136				
S A	99				

Since the calculated chi-square value is greater than critical value at 5%, the null hypothesis is rejected. Therefore, there is relationship between the people and satisfaction.

Hypothesis 3:

There is no significance between the process and satisfaction.

Table No. 12 : Chi-Square test for Hypothesis – 3					
Probability	Respondents	Cal. Chi-Square	DF	t Value@5 %	Conclusion
SD	57	57.888	4	9.48773	Rejected
D	87				
N	152				
A	143				
SA	101				

Since the calculated chi-square value is greater than critical value at 5%, the null hypothesis is rejected. Therefore, there is significance between the process and satisfaction.

1 **Results & Discussion:**

After the analysis of data, it is observed that behavioral attributes culture, life style, status having major impact on consumer satisfaction with regard to Food & Beverages in Kolhapur district whereas marketer attributes quality, packaging and price found major impact on satisfaction level of consumer. The satisfaction level is high towards the products but at the same time satisfaction towards consistency in quality, replacement of products is medium. There has been low satisfaction level found towards price and there is variation in price printed and chargeable by retailer. Satisfaction towards place has been found high but there is average satisfaction towards order processing and home delivery facility. It also reveals that satisfaction towards promotion and Physical evidences is high. There has been high satisfaction level found towards people with sales person's response, wide and qualitative information and motivated interaction. The satisfaction towards the process is high with product modification process, promotional strategies, distribution activities; services provided by retailers, companies offering value and enhance state of existing life whereas satisfaction towards the outcome of complaints is low.

2 Recommendations:

Based on above aforestated scenario and the findings presented, an attempt is made to put forth the constructive recommendation with a view to:

1 The companies take regular consumer research with context to satisfaction which helps to them understand the changing profile and characteristics of consumer and develop the strategies.

2 The consumers are more prices conscious. Therefore, the marketer should focus of the pricing strategies and offer products which are affordable to villagers, and at competitive prices. Mostly low priced products will be more successful in these areas due to the mind set of the consumer.

3 Village retailers play a vital role in the movement of products to remote areas. Village retailers are the most crucial channel members who have special relation with the customers and therefore, marketers have to focus on them to market their product effectively.

4 The satisfaction towards outcome of complaints is low. So the companies should constraint on how the

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minimize the complaints by consulting the retailers and sales persons.

5 There are some mal practices in availability of sales promotion tools, charging printed price, replacement of products by some of the retailers. So the companies make analysis and take care of such type of activities which are harmful in developing the values and buildup the relationship.

6 The satisfaction level towards the order processing time and home delivery of product is low. So the retailer should focus on the order processing time and home delivery facility. This will be give edge to them to improve the relation and performance of business.

Conclusion:

The basic belief to marketing oriented firms is customer is the hub around which the business revolves. So there is need to understanding what & how your customer is buy which play vital role in part of business success. It means to survive in ever changing marketing environment, there is a growing concern among companies to go for careful study of the consumer and always keep them satisfies.

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Health Care Entrepreneurship in India

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Abstract:

It's a great time to be a healthcare entrepreneur in India. While not great statistics for the country, 1.2 billion people translates to a combination of patients needing disease diagnosis and treatment and an even larger group needing disease prevention and wellness, thus opening up a myriad opportunities. Healthcare entrepreneurship in the past in India was typically associated with doctors setting up their nursing homes, diagnostic centres and hospitals. This progressed to private enterprise, not necessarily physicians, setting up healthcare chains. With rising incidence of lifestyle diseases, more people living in the ripe old age generation need home health services. And with the spread of the Internet, this decade has begun to see a new type of healthcare entrepreneur. These are driven by technology—from electronic medical records (EMRs) to telemedicine to apps to monitor your health at home.

Introduction:

The problems are many, the solutions few, so it's a great time to be a healthcare entrepreneur in India. In our own entrepreneurial journey starting with teleradiology services and progressing to, among other things, teleradiology software product (RADSpa) development, the pros of setting this up in India were essentially manpower-related—great doctors and great engineers, in addition to the support of the government-run Software Technology Parks of India. However, while getting radiologists a decade ago was relatively easy, this has changed over the years. Training of specialist radiologists has not kept pace with the healthcare boom, leading to a shortage and rising cost of the existing doctors. The cost advantage India had is very quickly eroding. The opportunities in teleradiology are new, the rules archaic. For instance, to train a radiologist, the country's rules say that an organization needs a 100-bed hospital. This automatically limits the number of training centres. However, since teleradiology is an IT-enabled service, one does not really need a hospital to practice or train in. New opportunities, old rules. The other challenges in India have been mainly infrastructural—long commutes for staff due to traffic issues, and electricity and Internet outages needing heavy-duty backup. Additionally, India-specific problems such as general strikes have been difficult for us to handle. To deliver a 24/7 healthcare service delivery from India is not an easy task and bandhs and road blockages make it even more challenging. India has a huge potential to deliver healthcare services and solutions locally as well as globally. In order to support healthcare entrepreneurship, several things will need to be done. At a government level, a rapid increase in the number of training positions for specialist and general doctors; reliable and low-cost electricity, real estate and bandwidth, and a stable working environment. From a private angle, training of healthcare engineers and allied services; better salary structures for personnel such as nurses and medical technicians to prevent the going-abroad drain; bringing in professionalism, transparency and accountability into a relatively under-regulated field and more collaborations and partnerships to leverage the amazing silos that currently exist. Funding has dramatically increased with multi-million dollar investments in healthcare. While money is always welcome to grow an industry, entrepreneurs must not lose sight of the fact that for any healthcare venture to be successful, ultimately the patient must benefit. Unlike some industries,

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spending money on swanky infrastructure, high-cost administrators and glitzy marketing is not as necessary to grow a successful healthcare venture as well-trained and caring doctors, well-paid and motivated paramedical staff, operational efficiencies, streamlined processes, an obsession with quality and of course, an idea and a service or a solution that fills a need and touches lives.

Nature & Scope Of Hospital

Human beings make a society. Healthy human beings make a healthy society. However, every society has its share of unhealthy human beings. Illness, disease and invalidity may be a curse for society; but their victims certainly are not. They are as much a part of society as the healthiest of individuals. In the past, an individual afflicted by a wound or disease was condemned to suffer and fend for himself. In those primitive days, the healthy never assisted or looked after the afflicted. The practice was to consider such an afflicted person a pent-force and no longer useful to society. Thus, complete isolation from society was the tragic lot of one who fell ill. No attempt was made to ascertain the causes and suggest cures for ailments. The belief, then, was that illness was caused either by evil spirits or was a punishment for one`s misdeeds. Later, the `tribe` assumed the responsibility of looking after the sick who were considered victims of a magic spell, by appeasing or scaring away the evil spirits with a counter-curse.

Civilization advanced from the individual to the family, from family to the tribe, and finally to the organized community, society acknowledged a common responsibility towards the sick. It was only when civilization progressed that man sought to provide for the welfare of his fellow-beings. Illness creates dependency. The sick need medical treatment, nursing care and shelter. With the advent of the modern society, the institution developed to cater to the needs of the sick was the hospitals.

History Of Indian Health Care Centers

The history of Indian medicine and surgery dates back to the earliest of ages. But health care centres as institutions to which a sick person could be brought for treatment were of a much later origin in other countries. In India, hospitals have existed from ancient times. Even in the 6th century B.C., during the time of Buddha, there were a number of health care centres to look after the crippled and the poor. More such health care centres were started by Buddha`s devotees later on in different parts of India as well as outside the country. The outstanding health care centres in India at that time were those built by King Ashoka (273-232 B.C.). Charka and Sushrutha of ancient India were famous physicians. Medicine based on the Indian system was taught in the universities of Taxilla and Nalanda, which probably contributed to the advances in Arabic medicine. The Upakalpa-niyam Adhyayam of charake Suthrasthanam gives specification for building health care centers, labour rooms and children`s wards. The qualifications for hospital attendants and nurses as well as specifications for hospital equipment, utensils, instruments, and diets have also been given. There is evidence to show that there were many hospitals in South India in the olden days, as observed in the Chola and Malakapuram edicts.

According to historians, the study of the history of the medicine of ancient India was greatly handicapped for want of inscriptions, manuscripts or other records as are available for others. Ancient systems of medicine. The seals and tablets discovered at Harappa and Mohenjodaro are yet to be deciphered. But we do find from the books written by Arabian and European travellers (about A.D. 600) that the study of medicine in India was in its bloom. Every major city had a medical school. The decline of Indian medicine started with the invasion of foreigners in the 10th century A.D. which was a period of the Indian flora slackened for want of encouragement. The invaders brought with them their own physicians called hakims. Under imperial patronage, the hakims began to prosper at the expense of the vaidyas. The maintenance of hospitals in India declined during this period.

The use of allopathic system of medicine commenced in the 16th century was arrived of European missionaries in South India. It was during the British rule that there was once again progress in the building the British rule that there was once again progress in the building of hospitals. The first hospital in India was probably built in Goa, as mentioned in Fryer`s Travels. The first hospital in Madras was opened in 1664; the establishment of a hospital in Bombay was under discussion in 1670

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but apparently it was not actually taken up till 1676; the earliest hospital in Calcutta was built in 1707-1708, and in Delhi, in 1874.

The Portuguese organized health care centers of the European type at Calicut (Kerala), Goa and Santhome (Madaras) through missionary organizations. They set up treatment centers and trained local men and women as dressers, nurses, etc. In the early stages, missions were financed by foreign sources but later on when the people realized their value, local support and subsidies were available.

In the 17th century, the European doctors employed by the East India Company played an important role in the introduction of modern medicine in India. The East India Company in Madras established its first hospital in 1664 for its soldiers and another in 1688 for the civilian population. Moreover, in the 17th century, Sir Thomas Roe introduced modern medicine in the court of Jahangir, the Moghul emperor. When other princely states also evinced interest, European doctors started becoming popular. Many doctors, after discharge from the services of the East India Company, settled down in India as private practitioners. Quite a few also got employment in the courts of princely states. When European doctors felt the need for assistants, they trained some local inhabitants as compounders and dressers. After some training and experience they were termed `native doctors. During the 17th and 18th centuries, there was a slow but steady progress in the growth of the modern system of medical practice in India and the indigenous system was pushed to the background. In the 19th century, modern medicine took firm root. Medical care based on this system spread all over India, mainly through the efforts of the missionaries.

Organized medical training was started in the 19th century. The first medical school was started in Calcutta, followed by one in Madras. In the beginning, both the modern system and the ayurvedic system were taught. A hospital assistant's course of two years duration was started by the army. The medical school in Calcutta was converted into a college in 1835. Later on, when the universities were started, some of the medical schools were taken over and converted into medical colleges.

The following list shows the year of establishment of the medical school/college in various cities during the period 1835 to 1916:

Calcutta	1835
Madras	1835
Bombay	1845
Hyderabad	1846
Travancore	1846
Agra	1853
Lahore	1860
Nagpur	1867
Patna	1874
Dacca	1875
Cuttack	1876
Indore	1878
Ludhiana	1895
Dibrugarh	1900
Rangoon	1907
Lucknow	1912
Delhi	1916

During This period, the British tightened their political control over the country. Many health care centers and dispensaries, originally started to treat army personnel, were handed over to the civil authorities for treating the civilian population. Local governments were encouraged to start dispensaries at the talukka and district levels and gradually many were taken over by the states or provincial governments and run as talukka and district hospitals. Many of these district health care centers were run by the members of the Indian Medical Service. Some health care centers at the provincial headquarters were converted into teaching hospitals and attached to medical colleges.

Changes In Health Care Centers

As far as voluntary health care centres are concerned, many religious groups ran family-style, mission-oriented service centres for the sick. As these grew into larger and larger modern institutions, the outward and inward pressures to adapt to the changes in society became evident.

In spite of various reports submitted by the different committees, modern health care centres in India have, for the most part, been organized along British lines with strict hierarchical structure. Government health care centres have to face increasing bureaucratic difficulties at different levels before goods and services are received.

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Traditionally, the Medical Director or Medical Superintendent is the head of the organization with the matron handling the nursing staff, maintenance, house-keeping, linen and other non-medical departments. There are delays, frustrations and inefficiencies as revealed by the discussions held with the heads of various government and semi-government health care centres and in hospital seminars. The unhealthy growth of trade unions in hospitals has only added to the difficulties.

During the past three decades, the organization of health care centres in India has come in for severe criticism, as is reflected by increasing labour protests of all kinds, and rising public sentiment voiced against existing medical conditions. Health care centre today are straining under the yoke of a type of organization more suited to a previous century. The changing times and needs of today should be the basis for a suitable system of organization. Organizational change is a requisite for organizational improvement and only a planned change is likely to be effective. Increasing specialization must give way to inter functional integration to maintain organic harmony.

With the increasing complexity of medical care and acceptance of the health care centre as a service, adjunct services to supplement the usual medical and nursing care are to be developed. These involve medical social work, linen and laundry management, nutrition, housekeeping, medical record technology, medical laboratory technology, hospital accounting, physiotherapy, and more complex record and business procedures. As modern hospitals have to perform more complex functions, employ highly skilled personnel and provide better facilities, their organizations have grown increasingly complex and their operations more costly.

These consequences, interacting with or affected by developments outside the hospital have, in turn, led to new phenomena and situations, namely, the appearance of hospital administration and pre-payment plans for health care centre expenses, an increased awareness of and greater attention to the quality of health care centre service and medical care, and a more prominent role of government, at all levels, in the hospital field, especially in the construction and financing of hospitals. While similar pressure for social change has resulted in several industrial concerns in India attempting to change from the hierarchical organization to the functional model, there has been little or no realization in the hospital organizations of this need to change.

Status Of Healthcare In India

Today, most Indians seek healthcare in private facilities. Owing to many years of neglect, lower-level public healthcare facilities often suffer from a variety of problems, including worker absenteeism and dual public-private practice, low demand for their use, and shortages of supplies and staff. In contrast, private healthcare varies greatly in quality of care, being unregulated and financed largely through out-of-pocket payments. In the private sector, there are a large number of health workers who have only a high-school education or do not have a medical degree. There are at least two major healthcare programs in India. The first is the National Rural Health Mission (NRHM), which is the central government's attempt to improve delivery of services in public facilities as well as public-health and preventive interventions, led by the Ministry of Health and Family Welfare. The second is the Rashtriya Swasthya Bima Yojana (RSBY), which is a health insurance program led by the Ministry of Labour and Employment. In most states RSBY covers people "below the poverty line" for a selected set of tertiary care services. While NRHM, launched in 2006, has had some success in improving access to certain services, such as maternal healthcare (under the Janani Suraksha Yojana program), it is not clear what effects NRHM has had on most other services. In contrast, there is early evidence that RSBY has been somewhat effective in reducing out-of-pocket payments for tertiary care, although it is not clear whether this program improves population health.

Indian Health Care

The healthcare industry in India is currently valued at more than US$ 70 billion and is projected to grow further to reach US$ 280 billion by 20201. With a healthy CAGR of 21% (for the period 2010-20), healthcare as an industry in India has emerged to become one of the most promising and progressive sectors in recent times. The growth of the healthcare industry has been fuelled largely by the growing and ageing population, rising economy, increasing income levels and changing

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disease burden, especially towards lifestyle diseases. Besides having an overall high disease burden (21% of the world's disease burden2), the share of non-communicable diseases and injuries in India is expected to rise to 76% of the overall disease burden by 20302. This will be a major factor driving up healthcare spending in the country. However, despite its impressive growth, the Indian healthcare scenario remains a paradox. On one hand, world class hospitals, state-of-the-art technologies, highly qualified doctors and health care professionals are attracting patients from all over the world while on the other hand the average Indian patient faces high prices, inadequate access, and inconsistent quality. India, with 0.6 physicians and 0.9 beds per 1000 people3, is among the lowest ranked countries in the world when it comes to health infrastructure Only 25%4 of the population is covered by private or public insurance and 71%5 of all health care expenses continue to be out of pocket, one of the highest in the country. Given the low per capita incomes, many Indians in both rural and urban India leave their healthcare needs unattended6. The private sector accounts for more than 77% healthcare spending and 74%7 of the country's hospital beds. It clearly dominates Indian healthcare delivery, especially in tertiary care. However the growth of private hospitals has also been inequitable, with more than a third of all hospitals present in the metros and Tier I cities8. A large part of the population relies entirely on the public sector for their healthcare needs which remains inadequate for the rapidly increasing needs. It is ironic that although Indian healthcare has made rapid strides basic issues of affordability, availability, and quality continue to persist and affect a large section of the population. Driven by the pressures of increasing costs and reducing margins, healthcare providers are also grappling with challenges around improving productivity and efficiency of healthcare services.

Developing And Innovation In Concept Of Health Care

Innovation is often defined as the introduction and application of ideas, products, services, processes or technologies, which are either new or are improvements of the current system, that benefit individuals, a group or the society as a whole. The National Knowledge Commission defines Innovation as "a process to achieve measurable value enhancement in any commercial activity through introduction of new or improved goods, services, operational and organizational processes". It is a key factor in facilitating competitiveness, improvement in market share and quality. Innovation differs from invention in that innovation refers to the use of a better and, as a result, novel idea or method, whereas invention refers more directly to the creation of the idea or method itself. Traditionally innovations have cantered around new products and technology – however increasingly the focus is on new processes, business systems and management methods – all of which have an important impact on productivity and hence growth.

Importance Of Innovation In Healthcare

Adopting innovations is increasingly becoming the norm across sectors including healthcare. The scope and avenues available for innovations in healthcare are plenty depending on the implementing stakeholder and the intended benefit. e.g. while hospitals may view products which help reduce costs and improve health as an innovation, patients and consumers of health care may view products that provide financial protection as innovations. Driven by the compelling needs of increasing number of people seeking healthcare services and ever increasing cost of providing healthcare services, a number of developing countries including India have emerged as nerve centres for frugal healthcare innovations so much so that countries like the Unfired States are looking forward to pick cues from these success stories. The drivers of innovations are many in the emerging markets. The unique and sensitive developmental challenges, which have required these markets to develop indigenous solutions and perspectives has been a big driver for innovations, Creating awareness of risk factors, disease symptoms and benefits of healthy living to adopt of preventive regular health check-ups. Along with innovations to increase the reach and availability of healthcare services at all levels – primary, secondary and tertiary care, focus on effective disease management support, monitoring and health maintenance as well as financial protection to afford the healthcare are emerging.

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Future Of Health Care Centers In India

Historically the Indian commitment to health development has been guided by two principles- with three consequences. The first principle was State responsibility for health care and the second (after independence) was free medical care for all. (and not merely to those unable to pay), The first set of consequences was inadequate priority to public health, poor investment in safe water and samtati on and to the neglect of the key role of personal hygiene in good health, culminating in the persistence of diseases like Cholera. The second set of consequences pertains to substantially unrealized goals of NHP 1983 due to funding difficulties from compression of public expenditures and from organizational inadequacies. The ambitious and far reaching NPP - 2000 goals and strategies have however been formulated on that edifice in the hope that the gaps and the inadequate would be removed by purposeful action. Without being too defensive or critical about its past failures, the rural health structure should be strengthened and funded and managed efficiently in all States by 2005. This can trigger many dramatically changes over the next twenty years in neglected aspects or rural health and of vulnerable segments. The third set of consequences appears to be the inability to develop and integrate plural systems of medicine and the failure to assign practical roles to the private sector and to assign public duties for private professionals. To set right these gaps demanded patient redefinition of the state's role keeping the focus on equity. But during the last decade there has been an abrupt switch to market based governance styles and much influential advocacy to reduce the state role in health in order to enforce overall compression of public expenditure an reduce fiscal deficits. People have therefore been forced to switch between weak and efficient public services and expensive private provision or at the limit forego care entirely except in life threatening situations, in such cases sliding into indebtedness.

Health status of any population is not only the record of mortality and its morbidity profile but also a record of its resilience based on mutual solidarity and indigenous traditions of self-care - assets normally invisible to the planner and the professional. Such resilience can be enriched with the State retaining a strategic directional role for the good health of all its citizens in accordance with the constitutional mandate. Within such a framework alone can the private sector be engaged as an additional instrument or a partner for achieving shared public health outcomes.

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Role of ICT to Facilitate Career Selection and Development of Rural Students

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Abstract:

Today's generation is living in the E-World. Irrespective of the social and economic background of the people, communication technology has reached every nook and corner of the globe. Even the ones who are illiterate, are able to handle the electronic devices. Communication being the life blood of any activity however big or small, is bridging all the gaps that were existing since time immemorial. This paper focusses on the immense potential Information and Communications Technology (ICT) has to offer, and if explored appropriately by students who belong to rural and suburban areas,whether it can play a significant role in shaping their careers and enable them to lead a happy and prosperous life similar to that of the urban students. It is observed by the researcher that the grades of the rural students is similar and also better in some cases to that of urban students while enrolling for a program. Unfortunately, as the course progresses, it is observed that most of the rural students do not perform that well compared to their earlier grades and obtain lesser grades than the students of urban areas. The paper analyses the reasons for such drastic performance by the rural students. The researcher explores the possibility of using ICT vide Educational Apps, Web Portals, communication tools etc. to guide the rural students in their overall development and to chalk out the right career path of success, no different than that of the students of urban areas.

keywords: *ICT, E-World, Communication Technology, Career Selection, Educational Apps.*

Introduction:

To succeed in life today, one need not have an affluent family background. Thanks to the technological development, as it gives equal opportunity to one and all, irrespective of his or her social, economic or cultural background. What it takes to succeed today is to choose your career and embrace it with all the talents you have acquired. The results however indicate that those professionals i.e. students of yesteryears from urban background who are techno savvy climb the career ladder at a very fast pace. While on the other hand the less fortunate budding professionals i.e. professionals or students from rural areas either do not excel or fade away midway. The professional career of an individual in India begins after his secondary education. Many avenues of higher education are open for him/her to explore,however, the decision making pattern of the rural and urban masses differ.

In ICT,'Information' is organized data in meaningful format. Different tools are used to transmit information such as telephone, television, radio, mobile etc. 'Communication' is the process where information is exchanged between individuals using symbols, signs or verbal interactions. Two different types of tools are used for communication i.e. Synchronous and Asynchronous. Skype, Google Talk, MSN, Yahoo Messenger, Video Messaging are synchronous tools, and E-Mail, Blogs, Wikis, Newsgroups, Podcasts, RSS Feeds, You Tube, eHow, Howcast, Twitter, Facebook, Audio graphics, Online forums etc. are asynchronous tools. 'Technology' is the use of scientific knowledge, experiences and resources to create processes products which fulfill human needs e.g. audio, video, text, computer, internet, mobile etc., It plays an important role in communication, computer projection, CDs. (Irwin, 2006).

Significance and Background of the Study:

The students from urban background seem to be more mature as they have the opportunity and exposure to various facilities like educated parents, economic stability, proximity of educational institutes, know-how of local environment etc. available to them both for their personal grooming as well as for career development. On the other hand the students from rural area are unaware about the latest technology and its benefits. This is because they seldom visit the cities and have very little know-how of the city life. The rural students tend to take a back seat due to reasons like their dressing sense, language being raw in nature, the body language, awareness about current affairs, accent, lack of proficiency in English language etc. This leads to difficulties in facing new situations, unable to cope up with the peers, haphazard presentations, problems in public speaking, low performance in studies etc. all these result in considerably low self-confidence and self-esteem. The best way to fight out any situation is doing something on your own, using available technology, if people around you are either not aware or not in a position to extend their help. Here is where ICT comes into picture and has the potential to turn the things around for the rural students to not only come out of the adverse situation but excel in choosing the right career and enrich their lives. ICT are the hardware and software that enable society to create, collect, consolidate and communicate information in multimedia formats and for various purposes.

Information and Communications Technology (ICT) stresses the role of unified communications, and integration of telecommunication, computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information. ("Information and communications technology - Wikipedia, the free encyclopedia," n.d.).

ICT in the area of education for rural development plays important role in socio economic development of rural areas to improve communication, deepen decentralization, and attract Micro and Small Enterprises (MSEs), ICT also contributed in automation of rural banks, networking, information sharing, source of entertainment and the provision of ICT enhanced distance learning in the rural areas. While implementing ICT some issues such as unavailability of electricity, lack of ICTs equipment, high level of illiteracy, user acceptance and local content to be addressed before the full potential of rural development can be achieved. ICT is useful for getting information about educational sector for rural development.

ICTs have the potential to support and enhance rural development initiatives in the key areas such as Managing, storing, and sharing information, access to more information, especially public information, Creating linkages for partnerships in information sharing, (Chapman, Slaymaker, & Paper, 2002) The literature suggests that rural students may have a more difficult time than urban and suburban students adjusting to the increased size of the campus and surrounding community; becoming comfortable with racial/ethnic diversity; becoming accustomed to expanded social, academic, and career options; adapting to broad cultural differences between urban and rural cultures; and accessing student support services. These challenges are likely to have contributed to the high rates of mental health problems experienced by rural college students, low college persistence rates at large institutions, and high rates of transfer. (Guiffrida, 2008) While some students from the rural community excelled at large institutions, anecdotal evidence suggested that a sizable number of these students did not have successful experiences. In fact, many of these students dropped out of the large universities early in their first semesters, eventually enrolling in the local four-year college. Conversations with these students often revealed that they felt lost and out of place at large colleges. (Guiffrida, 2008)

Career selection is one of many important choices students will make in determining future plans. This decision will impact them throughout their lives. The essence of who the student is will revolve around what the student wants to do with their life-long work. (Borchert, 200) Careers are a large part of life, and are often how we define ourselves. A career is a lifelong process, not just which occupation we currently hold. Therefore, career development can be defined as "the lifelong psychological and behavioural processes as well as contextual influences shaping one's career over the life span" (Ball, 2009)

Rural students come to urban areas due to lack of educational and infrastructural facilities in their villages. They have the urge to study further to shape their careers.

Objectives:

* To identify problems faced by rural students.
* To studyif the behavior of rural students influence their career selection.
* To study how ICT as a tool can help rural students in choosing their career path.

Methodology Adopted:

The researcher being a teacher continuously is in contact with the students both rural as well as urban. Having consistently interacted with the students from various batches the researcher has observed certain typical and key characteristics in the behavior of rural and urban students. The inflow and outflow of students is a continuous process, but it seems the way the rural students think and behave does not seem to differ much. Therefore, the researcher conducted situational interview and informally interacted with students in general and rural students in particular.

Sources of Data Collection

Primary:

* The primary data was collected by interacting with the rural students from time to time.
* The rural students were asked random questions and their response was noted.
* The students were contacted individually and in groups.

Secondary:

Journal Articles, Research Articles, Reports, Thesis, Web references.

Observations:

* It is observed that there is no dearth of talent in rural students.
* The rural students have limited exposure to city life.
* The body language and dressing sense of urban students is better than that of rural students.
* The language and expression of urban students is better than that of their counterparts.
* The rural students perceive that knowing English language and speaking fluently makes a person far superior.
* It is observed that most of the rural students possess a smart phone.
* The rural students complete their 10th and 12th Standard from vernacular medium.
* The rural students who pursue further studies have to first understand English language and then understand what is taught in the class.
* The rural students feel alienated when the medium of instruction in the class is English.
* The students feel not knowing English is a big mistake they have committed and do not ask for clarification in the class due to fear of others making fun of them.
* It is observed that the teacher, though aware of the problem faced by the students can do little unless the students express themselves.
* Over a period of time the students lose their interest in the subjects and slowly opt not to attend the lectures.
* The rural students do not have the facility to attend private tuitions in their villages due to lack of private teachers.
* The urban students get an opportunity to join private classes. Therefore even if they do not attend all lectures the urban students are not at loss.
* The rural students also develop a habit to enjoy city life.
* It was also observed that many rural students who came from economically weaker sections found it very difficult to get adjusted with the rich students from both urban and rural areas.
* It was observed that very few students knew about the various apps that were available freely to be downloaded and used.
* Most of the rural students used smartphones only to make calls, listen to music, take photographs and watch videos.
* It was also observed that most of the rural students even did not realize the importance and potential of the education they were getting.

Results and Discussions:

* Benefits of use of ICT:

Interactive, individual-based education, better understanding and usage of wide range of presentation facilities, time sparing, individual sense of achievement, easier concentration on the subject, integrative but individual-based education offered to rural students and students with special educational needs. Easy tracking of educational progress, easier completion of statistical and

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quality measurement surveys and quality and performance control.

Free Educational Apps:("Free Apps for Students.," 2014)

* **iProf**
  English app, English speaking, learn English in 30 days, Math tricks, Current affairs, Aptitude,
* **inClass:**
  This app keeps track of your courses, plus all your homework and project deadlines, sending out nifty little reminders so you don't forget. You can even take notes on it and share those notes/other files with your classmates.
* **Google Drive:**
  Google Drive is an awesome cloud service, as it updates in real time and gives everyone 15GB of space for free.
* **Duolingo:**
  For anyone taking a language course, this app is a must-have. It's the first ranked app in "Language Learning" and is fast, free, and completely addictive. You can learn and practice Spanish, French, German, Portuguese, Italian, and English through activities involving voice recognition and an almost video-game-like achievement format.
* **The Homework App:**
  This app is an awesome way to keep track of your homework in a convenient, visually appealing way. You can color code subjects, add subtasks, and even get help with your homework!
* **iBooks:**
  This app has a great range of free eBooksmany of which you'll need to read for school. The layout is simple and easy-to-use. Availableonly on apple devices.
* **Learnist:**
  It is "a crowd-sourced collection of the world's knowledge, with curated web, text and video content on Learnboards covering tens-of-thousands of topics." This app is really a treasure trove of information, and it's great for research projects.
* **iFormulas:**
  All those formulae that you learn throughout high school can get overwhelming, iFormulas has a bunch of them in one easily accessible place. Perfect for last-minute cramming.
* **Kno Textbooks:**
  This app has tons of e-textbooks which you can highlight and annotate. Very convenient if you don't want to lug/ carry around your school textbooks all dayand even more convenient because you can synchronize content throughout multiple devices, share notes with classmates, and add media.
* **Mind8:**
  Simple mind-mapping, which would really useful to help students prepare revision or for assignments
* **Sentence builder lite:**
  A fun way to learn how to make sentences!Sentence Builder is designed for the beginning reader. A four word sentence is displayed, but the words are jumbled. Drag the words into the white boxes and create a correct sentence. Great for home or classroom use!
* **My Study Life:**
  My Study Life is a planner for students, teachers and lecturers. It is a combination of the Windows 8 app and the My Study Life website. It's designed to make life easier by storing classes, tasks (assignments, homework, revision) and exams in the cloud, making study connected activities available online and offline.
* **CareerPath**
  CareerPath has been designed specifically for students or education users. What it does is allows you to explore career paths, based on a database of 30,748,234 datapoints about careers progr-ession.Students can search on a particular career choice, and position, and see how people have historically got into that role, and where they have gone on afterwards.
* **Book Reader**:
  This is a reader for ePub files (one of the number of different ebook formats) that will read books that are not DRM protected. What that means is that you can't use it to read digitally protected books, such as the ones you can buy from iTunes and Kindle. However, what this will allow you to do is to download free ePub format books from places like Project Gutenberg (which offers 40,000 free ebooks) and epubBooks.com.

Suggestions:

* It is suggested that the students read the books on how people from adverse conditions made their way to glory by their determination and dedication.
* The rural students must understand that knowing a language or proficiency in it is just a 'tool' and not

the 'object' of the education they have enrolled for.

* They have to learn to build their vocabulary in English. This may be done by various games like Wordplay, word building, using various apps etc.
* The students should learn to know how to get the required information using communication technology like Internet, E-Mail, Blogs, Wikis, Newsgroups, You Tube, eHow, Howcast, Twitter, Facebook, Audio graphics, Online forums,Android Applications etc.
* The teachers should help the rural students by counseling them to overcome the fear of English language by personal attention, using collaborative apps.
* The students listen to music whenever they get an opportunity i.e. in their leisure, while travelling, late night etc. If they use the above mentioned interactive apps during these times instead of listening to music or when they are with their friends, it will really add value in developing their overall personality.
* Like we have EduSat we can have a dedicated FM Channel for skill development of the rural masses, which should include programmes like English Speaking, Body Language, Personality Development, Success Stories, Various Apps available etc. along with music and general entertainment. Some competitions such as quiz, debates, group discussions could be organized and prizes offered to the winners and participants.

Conclusion:

It can be concluded that there is little or no difference in the level of potential between urban and rural students. The rural students compare themselves with the urban students. Due to lack of exposure to city life,blunt and natural behavior against sophisticated behavior of urban students, inferior complexion creeps in the rural students. This takes a heavy toll in the development of their personality and makes them indecisive to choose the right career path. Though not much can be done about the uncontrollable factors such as economic condition, proximity of educational institutes, village environment etc. the rural students have to help themselves to come out of the shell by using the various ICT tools like educational and personality development Apps available to overcome the deficiencies in them. The rural students have to clearly understand the underlying fact that, communication skills, public speaking skills, professional presentations etc. are mere 'means' and not the 'object' to choose one's career path. Further, the challenges in the career ahead is same for both the rural as well as urban students.

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Rural Women Entrepreneurship in India: Problems and Opportunities

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Abstract

The entrepreneur is an economic man, who tries tomaximize his profits by innovation. Innovation involves problemsolving and entrepreneur gets satisfaction from using capabilities inattacking problems.There are around seven lakh villages in India and also that morethan 70% of our population live in villages of half are women. Ruralwomen represent a sizeable percentage of labor force in our countryyet; they have not been brought under the main stream ofdevelopment. The rural women may be mobilized and may lead tothe nation towards the path of progress and prosperity. The ruralwomen by all means can be very effective agents of change for betterhomes, better society and ultimately for robust economy in thepresent global scenario.

Keywords: *entrepreneurs, economic development, women entrepreneurship*

1. Introduction

An entrepreneur is a person who operates a new venture and also inherits some risks and is able to look at the environment, The great ones are ready to be laughed at and criticized in the beginning because they can see their path ahead and are too busy working towards their dream, True entrepreneurs are resourceful, highly motivated and driven to succeed and Improve their entrepreneurial skill. The term "entrepreneurship" comes from the French verb entreprendre" and the German word "unternehmen",both means to "undertake". Grave and Hofer in 1891

defined the entrepreneurial process as involving all the functions, activities, and actions associated with perceiving of opportunities and creation of organizations to pursue them. Women Entrepreneur, in a larger sense, therefore is a woman who accepts challenging role to meet her personal needs and become economically self-sufficient. A woman faces numerous problems to reach her familial needs. At last, a women entrepreneur becomes economically selfsufficient after facing challenges. By identifying herself a successful entrepreneur, she shines in the two faces of her life i.e. society and family. Entrepreneurship of Women development is an essential part of human resource. Development of women entrepreneurship compared to other countries is very low in India, especially in the rural areas. The progress is more visible among upper class families in urban cities. Rural woman constitutes the family, which leads to society and Nation. Social and economic development of women is necessary for overall economic development of any society or a country.

Concept of Rural Women Entrepreneurs

Rural woman constitutes the family that leads to society and Nation. Overall development of women is necessary for the development of society and nation. The emergence of women entrepreneurs and their contribution to the national economy is quite visible in India. Women entrepreneurship has been recognized during the last decade as an important untapped source of economic growth. According to of statistics women in India 2010, proportion of female main workers to total population in percentage is 16.65 in rural areas and 9.42 in urban areas this shows overall less contribution of women in work but more percentage of women workers in rural areas. Women in entrepreneurshiphas been largely neglected both in society in general and in the social

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sciences. Not only have women lower participation rates in entrepreneurship than men but theyalso generally choose to start and manage firms in different industries than men tend to do. Entrepreneurshipdevelopment among rural women helps to enhance their personal capabilities and increase decision making status in the family and society as a whole. (Sharma, et.al., 2012)

The Problems Of Rural Women Entrepreneurs :-

Breaking centuries of tradition; the Indian woman today has not only embraced a life in the corporate world but has also begun to make her moves beyond a corporate career and into Entrepreneurship. While a corporate career gives her the financial independence and growth to substantiate her abilities, being an Entrepreneur takes her beyond that and into a world where not only does she get an opportunity to carve a notch for herself but also make a difference. Over the years the number of women taking on entrepreneurial responsibilities has picked up indicating a healthy trend however despite the number slowly growing it still has a long way to go before more and more Indian women can be convinced about the potential that can exploited in having their own start up. The reason for this being that many women nip their interests in the bud or give up midway not because it is hard to become an Entrepreneur but because they find their journey too uphill to become one.

What stops them from taking on that journey? Why is it that despite the change in numbers we do not see as many women on the Entrepreneurial map? And whether we like it or not, why do most perceive potential failures for women who do take the plunge? Many reasons contribute to this but when you give it a though you realize that most of the reasons that stand out usually stem from two important factors – The society and Security/safety

Problem 1: Traditional Mindsets

When a friend once announced that she would like to quit her job and set up her own Art and Design business, instead of a pat on the back or a hearty congratulations, she got a raised brow and a question that broke her confidence "You are a girl, what will you be able to do?" While a lot many women are breaking the shackles and moving out of their homes to work, setting up businesses is still perceived to be a Man's domain.

Problem 2: Aggression and Assertiveness

Most Indian women are known to be extremely adaptive but the aggression and assertiveness that is required to get their need across has not been a known characteristic in them. However this is once aspect that is changing with more and more women from urban areas who are educated and have an exposure to society taking the initiative to start their own business.

Problem 3: Networking

An important aspect of running your own business is the ability to socialize within the Entrepreneurial network to build contacts and win customers but very few Indian women step out of their comfort zones to do so. If they do socialize, it is limited to the work they need to get done and not to build relationships. The implication of this is directly on the extent of visibility they have in the market and on the perception they build.

Problem 4: Prioritization expectations

Societal expectations that whatever a woman does, she should always prioritize her family over everything else can prove to be a big deterrent for those running their own show. Most women bow down to the pressure instead of working out a win-win situation.

A successful woman entrepreneur once pointed out an easy solution to this dilemma; she worked out a solution where she and her husband shouldered their domestic responsibilities equally thus giving her enough time to focus on her work. Understanding that men are also quite capable of handling family responsibilities and making that a reality can go a long way in resolving this obstacle.

Problem 5: Business mindedness

Unfortunately most women lack the shrewdness that is required while dealing with their stakeholders. Part of this also stems from the fact that most women do not hold a long term view of their business and do not have a clear picture of how they want their start up to grow. What also contributes to this absence of behaviour is the lack of the ability to say no. Traditionally Indian women have learned to adjust and adapt instead of putting their foot down when necessary and saying No. This nature works against them when it comes to the business world.

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Problem 6: Sustainability

Probably the most important aspect of turning an Entrepreneur is being able to sustain your business. Most women are unable to carry through their ideas because of the short term goals they set without thinking through the sustainability of their venture and also partly due to the priorities they are forced to change when it comes to family. This alone with the general perception makes VCs hesitate to fund their business. That most VCs are led by men add to the already existing problem.

Problem 7: Safety and Security

In today's times, probably this is the biggest obstacle for women in India. The security blanket is at its thinnest thus making women hesitate to take on roles that demand long hours and interactions with a world of strangers. The rise of social crime and the need for safety pushes everything down the priority list when there is a demand to spend late hours at getting work going.

While urban women are taking the plunge after much thought, the silver lining is when women from rural areas turn Entrepreneurs in their own small ways with things such as opening a small grocery store or something as simple as rearing cows to sell dairy products. A small step in the rural world can be a huge motivation in the urban one. Despite these bottlenecks that most urban women face in India, there are many who have risen above them and built successful businesses. Communicating with the family and thinking the business idea out with a long term sustainable plan can act as a key to succeed. Most important of all, developing an attitude to persevere despite all odds goes a long way in being successful.

Kiran Mazumdar Shaw, counted among the most successful women entrepreneurs in India, did not build Biocon overnight. It took her time, perseverance and a 'never say die' attitude to get to where she is today. You need exactly the same ingredients to get past these obstacles and rub shoulders with her someday.

OPPORTUNITIES FOR RURAL WOMEN ENTREPRENEURS

1. Training of Rural Youth For Self Employment (TRYSEM) TRYSEM gives training to the youth / young unemployed men & women for Self employment. The trainees get a stipend of Rs. 150 per month during training period. In this programme 40 % of total seats are reserved for women. About 20 lakh women have been trained form its inception till now. It is supporting scheme for women entrepreneurship.

2. **Development of Women & Children In Rural Areas (DWCRA)**

DWCRA is the Rural Development Department's scheme to support women's income generation activities through a group of 15 to 20 women each. The Government of India has launched this women & children development programme in 1982. The main objective of this programme is to strengthen the economy of rural women by giving them loan and economic assistance to develop their skills, efficiency and abilities to meet their liabilities effectively.

3. **NORAD Programme**

NORAD (Norwegian Agency for International Development) was established in 1982-83 to help the educated & uneducated women financially in non-traditional areas of business like electronics, computer programming, manufacturing of watches, printing, readymade garments. Near about one lakh women were benefited by NORAD Programme. In 2006 – 07 (up to 31st Dec. 2006), it has an expenditure of Rs. 672.80 lakhs and the beneficiary women are 14615.

4. **STEP: Support to Training and Employment Programme**

STEP was started in 1987 with the objective to provide training to rural women for increasing their production capacity and income generation. In this programme, they give training in the areas of traditional business like: agriculture, milk, fisheries, handlooms, khadi development.

5. **Rashtriya Mahila Kosh (RMK)**

RMK established to meet the needs of poor women by giving them the loans. RMK is also organizing training, apprenticeship and orientation programmes for trainers under the Indian Mahila Block Societies (IMPS). The objectives of RMK are that credit becomes a widely known and used facility for enhancement of the daily income of poor women. The experience of RMK is that the women would have been able to double or triple

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their daily income with the credit support of Rs. 2500 to Rs. 5000.

6. Indira Mahila Yojna (IMY)

IMY was launched in August, 1995. Its main objective is to give a forward thrust to education, awareness, income generation capacity and empowerment to women. The platform for the forward thrust is to be done through self – help groups at the grassroots level.

7. SEWA – Self Employed Women's Association

SEWA based in Ahmadabad is a brain child of Ela Bhatt. SEWA guides women in rural areas in the use of their own resources to the maximum both physical and financial. Has helped many women from the rural areas of Gujarat and Rajasthan in marketing their land embroidered Tie & Dye materials both in India and abroad. A commendable job of SEWA is where the rural women entrepreneurs are sent to countries like Australia, Europe and United States for promoting their products.

8. Self – Help Groups (SHG)

SHG's plays a vital role in rural development for rural women. Each member of the group contributes money & keptof members. The SHGs are linked with the banks for the external credit inflow. Self Help Group associate with micro credit is the element for the development of any country in bank in the name of the Group. Group can obtain loan from the bank. The rules & regulation are developed by the group

CONCLUSION:-

Rural women are not so aware and literate as to handle all the legal and other formalities involving in loan taking and establishing an Industrial Unit. They also lack confidence in their ability to run the entrepreneurship.They need capacity building and training in functional areas such as finance, literacy skills, marketing, production and managerial skills. The only urgent need is to create a favourable atmosphere to increase self employment for women and over all developments of the country. Thus, there are bright prospects for rural women entrepreneurship in India.

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"A study to assess the knowledge and attitude regarding health services provided by primary health center (PHC), Yelavi among the head of the family at Yelavi, District Sangli." in view to promote health services

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Abstract:

NEED OF THE STUDY: People of the rural area are illiterate and they working in their field. They use health services when they have serious problem.The primary goal of the project is to improve population access to quality primary health care services on one hand and improving public health awareness, health seeking behavior and competent demand for PHC services on the other.Objectives:1. To assess the knowledge and attitude regarding the existing services provided by primary health center (PHC) Yelavi s among head of the family residing at Yelavi in District Sangli. in view to promote health services. 2. To find association between Knowledge and attitude regarding the health services provided by primary health center (PHC) Yelavi as well as knowledge and selected demographic variables of head of the family residing at Yelavi in District Sangli.

Methodology:

A non-experimental, quantitive, descriptive survey research approach was used for the study.60 Head of Families were selected as research sample by using simple random sampling technique from Yelavi,District Sangli.Structured interview schedule was developed and validated by expert. It had three sections. In Section I there were 8 questions of Demographic information .22 YES / NO questions which were knowledge centered in Section II & 20 questions of 5 point rating scale which were attitude centered in Section III.

Major Findings Of The Study:

Mean Knowledge scorerelated to primary health services was 12.45. The mean strongly agree attitude score towards primary health services was 18.There was no association between Knowledge and attitude regarding the health services provided by primary health center (PHC) Yelavi as well as knowledge and selected demographic variables of head of the family residing at Yelavi in District Sangli.Action project: Distributed information pamphlets regarding the health services provided by primary health center (PHC) Yelavi to the visited families. Conclusion: There is needed to make awareness regarding the health services provided by primary health center (PHC) and good administration to utilize it maximum and regularly by the people.

Keywords: *Primary Health Centre (PHC), Knowledge, Attitude and Health services*

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