A STUDY OF RURAL POVERTY ALLEVIATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY

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ABSTRACT

India is one of the developing countries in Asia. Almost 70% (Census-2011) of its total population live in rural villages and UNDP India reported37.2% poverty rate. Since from the early 1990s with the economic liberalization of India, Information and Communication Technologies (ICT) are playing an important role on poverty eradication and economic development of the rural poor. The impact of ICT has been felt in almost all sectors particularly in human development and alleviation of rural poverty. It has great potential to bring in the desired social transformations by enhancing access to health, education and empowerment to the people. ICT applications can enhance poor people's opportunities by improving their access to markets, health, and education. The uses of ICT for development of rural area actively promote economic development, job creation, rural development and hence poverty alleviation. The aim of this study is to focusing on that rural poverty alleviation though the use of information and communication technology particularly for rural sector. This study explores, to alleviate poverty from rural India through the use of Information and Communication Technology as a useful tool.

KEY WORD: *Rural Poverty, Information and Communication Technology (ICT), Human Development, Economic Development, Poverty Alleviation*

1.INTRODUCTION

Being second highest populous country of world India it has been facing a number of problems due to its vast population. Among all those problems the first and most crucial is poverty. The UNDP reported in India there are 37.2% people lives below poverty line, they even do not have enough money to fulfil daily basic needs. Many small children are there who are not able to eat twice a Day. Poverty is one biggest challenge of India which has been facing till today since long. Poverty is historical in nature and appears to be as old as human history. A poor

man is one who does not have command over or access to the basic physical needs like adequate food, drinking water, clothing and shelter and social needs like education and health. During the last five and half decades India has made tremendous progress in various spheres of life. Its economy has expanded and diversified, society has become cohesive and polity has democratized. It has also been facing many problems, some of which have been successfully been solved; but many others still remain unsolved. Poverty alleviation has been one of the most important objectives of Planning in India since Independence. Most of the Indian people live in villages and rural areas.

2. POVERTY SCENARIO OF INDIA

The current official poverty rate of India based on Planning Commission report using Tendulkar methodology in 2011-12 is 25.7% for rural areas, 13.7% for urban areas and 21.9% people live below the Poverty Line as a whole in India. The poverty is measured not in terms of annual income, but in terms of consumption or spending capacity of per individual over a certain period for a basket of essential goods. Further, this methodology sets different poverty lines for rural and urban areas. Since 2007, India set its official poverty line at Rs. 26 a day ($0.43) in rural areas and about Rs.32 per day ($0.53) in urban areas. While these numbers are lower than the World Bank's $1.25 per day income-based estimation. According to The World Bank's international poverty line definition, it is based on purchasing power at $1.25 per day. The national level poverty ratio is based on Suresh Tendulkar Methodology, which uses the mixed reference period after National Sample Survey Office (NSSO) tabulated expenditure of about 1.2 lakh households across the country. The national poverty line has been fixed at Rs 816 per capita per month for rural areas and Rs 1,000 for urban areas, though the government of India has set up a committee under C. Rangarajan to review

the Tendulkar methodology that has been criticised in the past for fixing poverty lines that were too low at 22.42 per person in rural areas and 28.65 in urban areas. The rural poverty has shown a consistent decline. The rate of decline was faster in the 1980s. The decline in the poverty in the eighties could be attributed to stable agricultural growth and the impact of the Government Poverty Alleviation Programmes. It is seen that public action in the employment generation makes a greater impact on removing poverty. The non-farm employment also increased during the eighties and contributed to reducing rural poverty. It is remarkable to find that, at the national level, urban poverty ratio has always been lower than the ratio in rural areas. During the above period the proportion of poor declined in all states. However, Kerala, Jammu and Kashmir, Goa, Lakshadweep, Delhi, Andhra Pradesh, Gujarat, Tamil Nadu, Karnataka, West Bengal and Andaman and Nicobar Islands recorded significant reduction of poverty rate. While some states such as Punjab and Haryana have succeeded in reducing poverty by following the path of high agricultural growths, others focused on particular areas of development. Kerala has focused on human resource development, West Bengal on vigorous implementation of land reform measures and empowerment of Panchayats, and Andhra Pradesh on direct public intervention in the form of public distribution of food grains.

3. RURAL POVERTY ALLEVIATION THROUGH ICT

A large proportion of the Indian population is not in a position to meet basic needs as defined in terms of employment, consumption, health, nutrition, life expectancy, child mortality and literacy, opportunities for schooling, and access to public goods or property. As a long-term measure for the eradication of poverty and improving the quality of life, broad-based literacy and basic education for all is the

main foundation and an essential precondition. Thus, in the developing countries, raising literacy and education levels viewed as the principal instrument of poverty eradication. Alleviation of poverty can be implemented by many ways and among them some vibrant aspects are as follows.

a. Increasing Literacy Rate though ICT

Literacy is the factor key for socio-economic progress in India. The literacy rate of India has grown from 12% to 74.04% in 2014 since from Independence in 1947. But comparing to the other countries and world average literacy rate 84% India's literacy rate is below 10%. There are many factors lies behind this low literacy in India. One of the main factors contributing to this relatively low literacy rate is the lack of proper school facilities in the rural villages in India. There is a shortage of classrooms to accommodate all the students. Severe caste disparities also exist in the rural societies. Discrimination of lower castes has resulted in high dropout rates and low enrolment rates. According to the National Sample Survey Organization and the National Family Health Survey the percentage of children completing primary school are reported only 36.8% and 37.7% respectively. The high poverty rate is also responsible for low literacy rate in India. The large proportion of illiterate females is another reason for the low literacy rate in India. Inequality based on gender differences resulted in female literacy rates being lower at 65.46% than that of their male counterparts at 82.14%.Due to strong stereotyping of female and male roles, Sons are thought of to be more useful and hence are educated. Females are pulled to help out on agricultural farms at home as they are increasingly replacing the males on such activities which require no formal education. Fewer than 2% of girls who engaged in agriculture work attended school. But only ICT can enhance to increase this rate by providing information to the people which include radio,

television, computers, wireless technology and internet. These tools are available at all remote and rural villages. But in most of the developing countries including India the access to ICTs in dominated by a small number of educated persons. The Use of ICT requires literacy and often English literacy. It is estimated 50% of rural population of India are illiterate. That is why though there are numerous Tele-Centers for enhancing education these are not in used by the local rural population due to their illiteracy. ICT can literate village people providing information by electronic media, satellite broadcasting, interactive TV, CD/DVD, online learning program, audio video learning material, online monitoring, online chat etc. These can increase literacy rate in rural sector irrespective of caste, class and gender biasness.

b. Healthcare improvement through ICT

The development of rural poor must begin from a common ground which can be his or her disease and illnesses. In development practice, ICT for health is commonly called e-health. It is essentially the use of ICTs in medicine for knowledge management and service delivery, and combination of improved delivery of medical services and improves health outcomes. According to The World Health Organization (WHO, 2007) there are five essential components to e-health which are: 1. Structural enhancement of health services, 2. Availability of improved and appropriate technology with stakeholders, 3. Uses of the technological tools, 4.Standardized norms Creation and its practices and, 5. Evaluation and monitoring of the application and impact of ICTs to health. E-health is essentially a collaborative model that functions as a network of experts and resources that are able to be mobilized at a distance and beyond borders. Extending access to these resources can become The important element to the success of the use of ICTs always be combined to broader efforts at reform of health care delivery and strategies to increase

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outcomes in this dimension of human development. Information can save lives and ICTs are designed specifically to facilitate the sharing and retrieval of knowledge that in the case of health and medicine can mean life or death. Thus ICT can improve the health care services by Telemedicine services to the rural poor. It can reduce the cost and hardship of long distance travel for medical attendant and diagnose. Through telemedicine centres medical list can serve & deliver at minimum cost to the patient, furthermore, ICT simplify medical data collection, record management and paper filling.

c. Empowerment through ICT

In India, it is not uncommon for rural villagers to travel long distances to government district headquarters in order to submit applications, meet officials, obtain copies of public records, or seek information regarding prevailing prices in commodity markets. This involves the loss of a day's income as well as the cost of transportation. Once at the government office, the relevant official, record, or information could be unavailable, forcing repeated visits and additional expenses. In effect, government officials working with paper records enjoy a monopoly over information and records. Villagers may also face discomfort, harassment, and corruption on the part of public officials, or are often given incorrect information about government programs or market prices. Potential benefits include increased transparency, less corruption, better delivery of government services and greater government responsiveness. Information disclosure and the possibility of interacting with public officials also build pressure for government accountability. The poor become empowered because they feel they are getting a service rather than a favour. As empowerment is a process of change (Deepa Narayan). It is a process of enhancing an individual or group of people's capacity to make effective choices and translate these choices into desired actions and outcomes in real life.

Empowerment is an important dimension of human development. Thus access to ICTs in rural areas has a remarkable effect on people's ability to be an active participant in their societies at both social and political level. ICT empower the rural poor by increasing their capacity to work in organized networks both within and beyond borders. ICT have both positive and negative implications on the choices and freedoms available to users irrespective of individual, cultural, social and political barriers such as gender, ethnicity, age, income and liberty. Overcoming these barriers, ICTs can fully enhance civil society's ability to promote change by the creation of communication channels that brings about collaboration on common goals towards development practice. ICTs are most effective tool when they are used as means of engagement and enhancers of participation, which are indispensable for human development. The availability of useful content online gives the government opportunity to positively influence the adoption of ICTs by using it actively themselves. ICTs can help to improve empowerment and participation in policy debates by creating linkages to government processes which also maintain government transparency in citizens' development and also promote the use of ICT.

4. ICT IN RURAL INDIA

In India, even where telephone lines have reached rural areas through the introduction of Public Call Offices (PCOs), the poor have indeed very limited access to ICT. As revealed by a recent survey of The World Bank which conducted in five villages in Uttar Pradesh, West Bengal and Andhra Pradesh only radios are owned by a majority of poor households. Televisions, telephones and newspapers are available to the majority of households on a shared basis. Very few families have shared access to a computer or Internet connection, and some households have never viewed television, read a newspaper or used a telephone. Surveys also suggest that

the poor rely on information from informal networks of trusted family, friends and local leaders, but these networks do not adequately satisfy their information needs. This indicates that ICT could play a pivotal role in improving access to information by the poor. However, it remains very difficult for people with low levels of education to reap the full benefits of new technologies, including wide access to knowledge and information.

5. ICT based Agriculture in Rural Village

The input-output policies of government, improved marketing network, rural connectivity and development of infrastructure have played a significant role in increasing the productivity. One of the emerging challenges for sustainable & integrated agriculture is to recognize the power and uses of ICT and to effectively use it for improved farm production. There is a need to establish agriculture local content & knowledge base for ICT driven agriculture. Development of locally relevant content is the critical success factor. There is a strong need to present locally relevant information intelligibly in local language. The local contents need to be developed by consulting at the grassroots. These inputs will help in providing information that people really need. The agriculture development implies in its wider sense the integration of resources, integration of Technologies, and integration of economic and social factors. This integrated approach will, therefore lead to the development of a Farming System to enhance the house hold income by way of increasing the agricultural productivity and by involving the community in other off-farm activities with optimum utilization of natural, physical and human resources. Integrated Farming system can go a long way towards sustaining agriculture productivity. An integration of crop husbandry, animal husbandry and water resources in the same piece of land not only meet the varied needs of the farmer such as food, fodder, milk, and fuel but also helps

sustain agricultural productivity. The farmer must know about the soil, crop rotation, thousands of kinds of seeds available, fertilizers and pesticides, the weather, water table, animal husbandry and feed, package of practices, price and political situations, enabling to decide what crops to grow and which animal to raise.

6. Some Eminent Practices of ICT in Rural India

1. Bhoomi: Karnataka, 2001 -it provide a real time record of land holdings .The project partners were– NIC (National Information Centre), Bangalore Department of IT, Government of India, Department of revenue, Karnataka. It undertook computerized 20 million records of land ownership of 6.7 million farmers of the state & Franchisee model working with n-Logue project, which is fully online system to carry out mutation on land records data at each Taluk office for public interface.

2. Community Information Centre in North-Eastern Region, 2002 – The project partners are NIC, DIT (Department of Information Technology) Govt of North-Eastern states. This project introduced to Internet access and ICT enabled services to the community. It envisaged providing ICT infrastructure at block level in remote area of the country.

3. Electronic Seva: Andhra Pradesh 2001–It was a State Govt. initiative to enforce effective governance machinery by delivering e-governance services at the community level through info-kiosks.

4. Jan Mitra: Rajasthan 2001– The Project partners were, United Nations Development Programme, Department of IT. This project aimed to provide free access to the information with a view to empowering citizens, making administration more participatory, ensuring greater transparency.

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5. Akshaya Project: Kerala, 2002 – It was initiated by Kerala State IT Mission to develop over 6000 numbers of networked Multipurpose Community Information Centers to provide ICT access to entire population of state. Ensure a viable, sustainable service delivery mechanism for the citizens. It envisaged the enhanced ICT demand in Tele-medicine/e-Commerce/ e-Education.

6. Gyandoot: Madhya Pradesh, January 2000-The Project partners were NIC, Village Panchayat supply funds. It envisaged providing services to the rural masses and acting as a link between the administration and the people. Low cost, self-sustainable, & community –owned rural Intranet system called Soochnalaya & more than 24 public services, provided on user charge basis based on G2C (Govt to citizen) model.

7. Tarahaat: MP & UP 1999 – Project partners were MSSRF (MS Swaminathan Research Foundation & IDRC (International Development Research). It envisaged to create sustainable rural livelihoods and enrichments of the rural Indian & to create sustainable rural livelihoods and enrichments of the rural Indian economy through improved information flows, education and direct job creation.

8. Drishtee: Rajasthan 1999-Initiator of projects was Drishtee.com Ltd, Various local and state Govt.& Boston Consulting Group was the project partner. It targeted the benefits to the rural poor built into its vision and strategy and be the window to the world for Indian villagers. The services include information related to land records, Virtual Bidding Market Place, Market Information System.

9. Jagriti-e-Sewa: Punjab 2003-Initiated by Jagriti- a social enterprise which focuses on Agriculture-Centric Services: Diversification, backward and forward linkages, contact farming, marketing etc. It lays emphasis on involvement of local educated youth or ex-

servicemen for better services and generation of rural employment.

10. Milk Collection Centers: Gujrat 1991: Project partners were AMUL, NDDB (National Dairy Development Board), REIL (Rajasthan Electronics and Investment Ltd.) in collaboration with M/s AISN Foss Electric, Denmark & ATE Enterprise Ltd. Project plan included computerized mill collection centers with integrated electronic weights, electronic fat testing machines and plastic card readers are ensuring fair prices for farmers who sell milk to dairy cooperatives. Appreciative part is that women take the milk to a weighbridge.

11. e-Chaupal: Central India, 2000: It envisaged delivering values to its customers around the world on the sustainable basis. It is a unique web-based initiative of ITC International Business Division in Central India. Covers 31,000 villages through 5200 Kiosks across six states (Madhya Pradesh, Karnatka, Andhra Pradesh, Uttar Pradesh, Rajasthan, and Maharashtra).

12. Agmarknet (Agricultural Marketing Information System Network): Andhra Pradesh, in 1999 it envisages establishing a nation-wide information network for speedy collection and dissemination of market information and data for its efficient and timely utilization, nationwide market information for wholesale produce. This project is highly scalable, planned through bottom-up process, and implemented through active involvement and collaboration of Agricultural Produce Market Committees (APMCs) in India. Now proceeding further Kisan Call Centers (KCC), Village Knowledge Centre (VKC) are discussed in detail.

13. Kisan Call Centers (1800-180-1551): They have been established with a view to leverage the extensive telecommunication infrastructure in the country to deliver extension services to the farming community. The purpose of these Call Centres has been mainly to

respond to issues raised by farmers instantly in the local language, on continuous basis. Accordingly, it was proposed to target the entire country in all the major languages by a network of Call Centres to enable the farmers to get expert advice through a toll free number. The services would be available round the clock. While during the working hours there would be immediate response whereas beyond working hours and in holidays, the call would be recorded and the queries are answered by post. The trend of questions and the quality of answers are continuously monitored to upgrade the facilities and it is expected that the entire system will evolve into a unique and revolutionary way of communicating with the farmers in the process of technology transfer to the farmers and solution of the location specific problems instantly.

7. CONCLUSION

More than 70% of total Indian population live in the villages representing 25.7% of rural poverty. The development of India depends on its development of the rural villages as the backbone of Indian economy is the agriculture. It has been rightly said by father of nation Gandhiji, "If the villages perish, India will perish too". The Information and Communication Technology can promote the economic development and alleviate rural poverty by improving access to market, health, education and people participation in various government activities. Hence ICT is successfully used as a tool to alleviate poverty from grass root level by enhancing literacy to the illiterate, health services to those who are unable to reach from the remote villages in a low cost and also empowering the poor people economically, socially and politically irrespective of class, caste and gender biasness in society.

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