

## **ICT Infrastructure & Services for Rural India – A Study**

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### **ABSTRACT**

Improving broadband penetration is a key focus area for the Government and this is being addressed actively by the Department of Telecommunication (DoT) and the Department of IT (DIT). The National Telecom Policy 2012 lists the use of mobiles as an instrument of socio-economic empowerment for citizens as a mission statement. It sets targets of 79% and 100% rural teledensity 2017 and 2020 respectively.

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### **I. INTRODUCTION**

It laid special emphasis on providing reliable and affordable broadband access to rural areas. It also targets provision of high speed and high quality broadband accesses to all village panchayats through a combination of technologies by the year 2014 and progressively to all villages and habitations by 2020. DoT's universal service Obligation Fund (USOF) already launched a Wire line Broadband scheme in 2009. Under this scheme, 360,000 connections had been provided till April 2012. With the auction of 3G spectrum, it is expected that the rollout of broadband facilities in rural india would follow over the next five years as prescribed under winning operators agreements with DoT. For uncovered areas USOF would put in place a rural Wireless Broadband scheme. USOF is also to fund the National Optic Fibre Network (NOFN) now christened Bharat Broadband Network Ltd (BBNL) which shall soon connect 2,50,000 village

panchayats and co-located Bharat Nirman Kendras) with Optic Fibre thereby providing high speed broadband facilities. Bandwidth from NOFN will be available to eligible service providers to provide broadband and broadband enabled services in rural areas. Even as connectivity improves steadily, what rural india needs urgently is electronically delivered information, knowledge and urban quality services. This translates into a huge market opportunity for providers of ICT enabled access to information, education, health, financial services, commerce and employment opportunities etc.,

### **Mobile Value Added Services**

A good example of mobile services is the USOF pilot project scheme for mobile value added service (m-VAS) for rural women's Self Help Groups (SHGs). This is a part of USOF's Sancher Shakti programme. In this scheme, SHG's information needs are identified based upon their main entrepreneurial/income generation activities and relevant information is then delivered in local language through mobile phones. It could be through SMS (if the women are literate) or otherwise through outbound Dialers (OBDs) and Integrated Voice Response Systems (IVRS). The focus is on skill building and income enhancing information (training, market opportunities, input and output prices, weather, crop/livestock care etc), but information is also provided on health, education, women's empowerment and local government schemes. Even in its early days this scheme has demonstrated that rural women are extremely responsive to information. They were able to vocally and precisely demand pertinent information /data. In Uttaranchal, SHGs wanted to know how to obtain a license to sell forest produce (which they gather and process) rather than depend on intermediaries. They are very keen on information about market prices and women's health. In Rajasthan's Ajmer district rural mothers wanted to information on educational and job opportunities for their daughters. SHG members from kanyakumari, (Tamil Nadu) villages were very keen on improving profit margins from the sale of their cottage industry products and wanted appropriate SMS inputs. Many women who have earlier studies till class five or six were reviving their long forgotten reading skills thanks to their eagerness to read the VAS content. Across the board, women farmers were extremely receptive to and interested in crop related information (sowing techniques and timings, disease prevention etc).

It is perhaps not widely known but 80% of economically active women in India are involved in agriculture. Information on government schemes was valued highly and acted upon promptly. MNREGA related information too was in high demand. As of now rural women

hardly constitute a target segment for rural VAS and this project was designed not only to cater to the needs of rural women but to demonstrate the demand for such women –specific content to mobile services and content providers. It must be mentioned that there are other such examples of mVAS initiatives such as those of self Employed Women’s Association (SEWA) and Barefoot College in Ajmer. Ministries such as Women and Child Development and agencies like UN Women are actively considering m-VAS for target groups like Anganwadi workers and women sarpanches respectively. The fact that even this unexpected market segment responds so positively to information, demonstrates the tremendous potential of relevant, knowledge based content and hence the market potential for sale of relevant rural mVAS in local language. While many government agencies and private agencies such as Reuters Market Light and IFFCO are already providing mVAS to farmers, it is felt that a much broader spectrum of information/service needs of rural population can be successfully met through creative use of. Cases in point are operation Asha’s Compliance programme of biometric based e –tracking of tuberculosis treatment and mobile text based follow up and Andhra Pradesh’s m Foods programme to track food delivery and nutrient related activities for service of anganwadis (day care centers) and child Development Project Offices (CDPOs). Examples abound and need only to be replicated and scaled up.

The lack of higher education facilities in the vicinity of their homes makes rural India the ideal market for distance education services. The sancher shakti scheme in Rajasthan demonstrates that in spite of the family’s desire to educate its daughters, a rural girl can only study beyond the secondary school level if higher education facilities or distance education opportunities are available in the village itself. In the present context of rural educational infrastructure, this translates into the need for public access to broadband facilities in every Indian Village. Apart from education and medical facilities, employment opportunities and government services etc. can be made accessible too. For example Naukri SMS brings together prospective employers, blue collar employees and skill trainers. The utility of ICT- enabled services to provide a feedback mechanism to rural Indians is often overlooked. MeraSwasthya-MeriAwaz is one such m-governance programme where women in Azamgarh and Mirzapur can now complain if they are wrongly charged for government mandated free services by Public Health Centres. Such feedback is critical for successful governance and would be a great pull factor leading to demand for ICTs. Mobile banking is another area where ITYs can overcome deficient infrastructure. Only 31% of bank branches are located in rural India. The success of

mobile banking for the poor has been already been demonstrated by Kenya's M-Pesa of Kenya and Philipines G-Cash initiatives.

### **Rural India and Broadband Enabled National Growth**

Contrary to the commonly held notion there is a fair demand for broadband in rural areas. Already there are more internet users in small towns than the top eight metros put together. Interestingly more than 20% users are school children and 10% users belong to lowest socio-economic strata. While only a minority of rural Indians may be able to afford computing devices and power, this does not imply a lack of demand for broadband enabled services. In interactions during the verification of USOF's wire line broadband scheme, it has clearly emerged that better off rural families across the country do buy computers for the same reasons as urban families do, i.e, children's education, knowledge and entertainment or as an aid to their incomes/businesses.

### **Rural India Attracts E-Commerce**

Goind by the current success of e-tailing and anticipating the tripling of Indian internet users to 230 million odd by 2015, india is slated to be a very attractive e-commerce market. Rural india already accounts for about 50% of sale of FMCGs, consumer durables and services and it may be assumed that broadband enabled e-commerce would be a bigger hit in villages where media exposure is at par but shopping options are limited. It is a fact that rural India accounts for 40-60% of the sales of online retailing portals such as eBay.in, Snapdeal.com and Naptol.com. The latent potential of rural BPOs has been adequately demonstrated by successful examples such as rural shores, Desi Crew, Next wealth, Exchanging etc. Given the rising salaries and high attrition rates of urban BPOs and in the context of improving rural connectivity, rural business and knowledge process outsourcing has huge potential as a business opportunity and as an employment opportunity for our youthful rural population including rural women (for whom migration to urban areas is not an option).

## **II. CONCLUSION**

While the Government is rightly concentrating on encouraging rural ICT infrastructure, ultimately it is the services that ride on this network that rural India needs. These compensates for the lack of other infrastructure and services such as health, education, employment opportunities. Bothe Government and Private sector need to tap into ICT's tremendous potential as a mode of delivery for rural services. ICT based development for rural India is not

just a national obligation but poses a huge and attractive business opportunity and a source of national economic growth. The healthy growth of both rural ICT infrastructure and services would complement each other to revolutionize and mainstream rural India.

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