

Perceptual Study of Behavioral Implications of Usage of ICT for Sustainable e-Governance in Rural India

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Abstract- The e-Governance is growing very speedily in entire world and in our country also. Simply we can say that in near future it will become a part of human life. In the field of 'e-Governance', it includes government, nonprofit, and private-sector entities without distinct boundaries. The model for e-governance is a one-stop portal, where citizens have access to a variety of information and services. The major goal of e-Governance is strengthening good governance and broadening public participation, improving the productivity and efficiency of government agencies, improving the quality of life for disadvantaged communities, creating a better business environment, transparency and openness in accountability. As far as rural sectors of India are concerned, e-Governance has not yet laid its actual needed effect to develop them. Integrated empowerment of rural areas is one of the abiding tasks before the Government of India. India is a country of villages and about 50% of the villages have very poor socio-economic conditions. E-Governance implementation in rural India has "Too many goals but very little reality".

This research paper discusses the behavioral implications of usage of ICT for sustainable e-Governance system in Rural sectors of India so that, the system can influence empowerment of rural sectors and also sway value added citizen-centric approach as citizens' satisfaction, citizens' involvement, citizens' awareness, improved interaction with businesses and industries, increased transparency and reduced corruption with e-Governance services.

Index Terms- e-Governance, information to transformation, Rural India, Sustainability

I. INTRODUCTION

No doubt, India has introduced the global trend of usage of ICT in 1990, but no sincere exercise has been undertaken in the corresponding years to examine the effects of these reformative measures, especially the role of the information technology, in the governance process (Monga, A., 2008).

Mapping with this global trend of usage of Information and Communication Technology and Internet, India has undertaken considerable initiatives to introduce e-Governance at the national, state and local levels. In terms of the total number of government websites, although the advanced industrial countries are in the top of the list, India is ranked seventh in the global list (Norris, 2001). Similar to the previously mentioned common rationales, the top policy-makers in India tend to justify the

adoption and expansion of e-Governance on the grounds that it costs less, reduces waste, promotes transparency, eliminates corruption, generates possibilities to resolve rural poverty and inequality, and guarantees a better future for citizens (Dev, 1999; Schware, 2000; Wadia, 2000; Siliconindia, 200m1).

In short, the government of India tends to expose e-Governance as the solution for all ranges of problems facing up with India. But there are opponents who, in general, suggest that the whole endeavor of ICT may have created a new class of 'untouchables' living in 'information poverty', compromised equal access to government services and grind down accountability and individual privacy (Ghere and Young, 1998; Hariharan, 1999; Upadhyaya, 2000). Unlike developed nations, India is one of the poorest countries in the world with severe problems of poverty, inequality, illiteracy and external dependence, which represent major hindrance to the efficacy of e-Governance in ensuring equal public access to state institutions, empowering ordinary citizens to exercise their basic rights and considerate political and administrative officials to be responsive and accountable. However, before studying the impacts of usage of ICT for sustainable e-Governance in Rural sectors of India, the next section is devoted to an analysis of the major policies, initiatives and computer literacy of the people for sustainability of e-Governance in this country.

A Shared Vision of leveraging the use of Information and Communication Technologies for delivering Good Governance in Rural sectors of India will be evolved through the weighted analysis of computer literacy of the people, help provided by the government to the illiterate people for usage of Information and Communication Technologies for effective e-Governance implementation. Critical gaps in the existing policy framework and priorities set by the Government would be identified. For fulfilling this shared vision a Strategic Policy Framework of Generic nature would be proposed by Indian government. An e-Governance road map for good governance including stepping up social and economic development of rural people, would be grown through a reviewing discussion process with critically evaluating the important parameters like educational status of the people, computer literacy, language barrier, acceptance of new technologies, and awareness of the people for the advantages of involving ICT for good governance, financial viability, training for new technology.

The present research paper would attempt to identify and establish linkages between the factors responsible for creating a favorable environment for effective and sustainable implementation of e-Governance by considering the factors

relating to good governance, demography of narrated issues and challenges, precedence for improving the governmental services through computerization/ use of IT for sustainable e-Governance, economy, geography, culture and other aspects especially in the context of rural India. The study proposes to use both primary and secondary sources of information. The notified reports and published research work would be used in the study as a derivative source of information.

Many of Studies have been conducted in developed countries to review the parameters for good governance.

Richard Heeks (2001) studied the effect of new information and communication technologies and how it can make a significant contribution to the achievement of good governance goals. The paper suggests that there exists wide gaps between the current reality in developing countries and the future of e-Governance systems. However, most e-governance initiatives fail.

Roumeen, Islam (2003) looked at the link between information flows and governance with the objective to scrutinize how the availability of information may affect governance. Specifically, it focused at how the availability of basic economic data affects governance and how the legal framework governing access to information might affect the quality of governance.

Mohammad Shakil Akther (2007) in his study on an e-government project in Bangladesh highlighted that most e-Government projects within developing countries employ high-technology involvement whereas citizens are not ready for this. A few studies have been carried out with respect to Indian Perspective. Koneru, Indira (2007) her study is of the view that e-Governance as a technology-enabled Public Information Services system aids not only in reengineering the structures but also in reorganizing the procedures and processes for speedy delivery of services.

II. OBJECTIVE OF THE STUDY

Thus, it can be inferred from the above, that a good beginning has made e-Governance, a reality in India, but still a lot needs to be done for sustainable e-Governance in Rural sectors of India.

1. To study the key parameters of usage of ICT for sustainable e-Governance in Rural sectors of India.
2. To discuss key issues for sustainable e-Governance in Rural sectors of India.

III. BACKGROUND AND SCOPE OF E-GOVERNANCE

e-Governance covers a wide range of services, we can categorize it in three distinct areas. These areas are (1) government-to-government (G to G), (2) government-to-citizens (G to C), and (3) government to business (G to B). Each of this area has a different combination of stirring services. Though, some common objectives include advancing the efficiency, reliability, and quality of services for the respective parts. In many respects, the government to government (G to G) sector represents the strength of e-Government. It is needed that governments at the lower level like union, state and local level must improve and update their own internal systems and

procedures before electronic transactions with citizens and business are introduced. G to G e-Government involves sharing data and conducting electronic exchanges between various governmental agencies. There are number of advantages with government-to-government initiatives. One benefit of this, is improvement in the management of public resources.

Government to citizen (G to C) provides the facility to the citizens for interacting with government, which fulfills the primary goal of e-Governance. This efforts to make transactions, such as renewing licenses and applying for certain benefits, payment of taxes with less time consuming and easier process to be performed. Government to citizen e-Governance also tries to increase access to public information through the use of websites and kiosks. Further, one of the main goals of implementing this plan is to create a "single window" where citizens can carry out variety of tasks, especially those that involve multiple government departments, without the need of contacting with each government department individually. Thus, G to C type is driven by a support to provide "better government" through improved efficiency and more reliable outcomes.

Government to Business (G to B) sector includes both the getting hold of goods and services by the government as well as the sale of surplus government goods to the public on line. There are some inspiring things behind G to B, the business community prefers to carry out its activities such as sales, procurement, and hiring through electronic means. There are large numbers of software companies, which are producing number of products focusing on performing routine business activities on line. Thus, many companies like to extend the cost savings in the business with union, state and local level governments. In emerging countries, there is great need to minimize costs due to shortage of funds G to B is being encouraged by the governmental agencies.

IV. KEY PARAMETERS AND ISSUES

Adoption of ICT Enabled Information Systems for Rural Development and Rural Viability is a strategic concern worldwide. The following are the features describing sustainable implementation of e-Governance.

Key Parameters of ICT to implement sustainable e-Governance

e-Governance refers to the use of Information Technologies such as Wide Area Networks, Internet and Mobile Computing by government agencies, that have the ability to transform relations with citizens, businesses and other arms of government (Subhajit,2004). e-Governance has the aim to improve access and delivery of governmental services to benefit citizens. More appreciably, it aspires to help strengthening coerce of government toward effective governance and increased transparency to better manage a country's social and economic resources for development. After studying and reviewing so much of literature, Researcher has ascertained following parameters of ICT which should be taken in account for sustainable e-Governance in Rural India.

1. **Connectivity** : Continuous Internet connectivity is needed to access e-Governance web sites.

2. **Accessibility** : e-Governance services must be easily accessible at the citizens' doorsteps.
3. **Kiosk**: In rural India, people don't have handy computer facility to access e-Governance services. They must access it by the use of Kiosk connected to ISPs to enable private entrepreneurs operate the services profitably and build new services for sustainability.
4. **Way in assistance**: People of rural India need help to perform the e-Governance activities on behalf of them due to illiteracy or lack of knowledge.
5. **Integrated**: All e-Government applications should be integrated with each other, so citizens can have access to the data of various types. It improves the productivity of work and can save time and money.
6. **Single Window System**: To the greatest extent, citizens should be able to do everything they have to do or want to do with their government through one e-Government portal.
7. **Pervasiveness**: Access to an e-Government portal and its connected sites, services and applications should be available to users/citizens from any Internet-capable connection.
8. **Secure**: e-Government systems need to protect the confidentiality of data provided by citizens, the records created and stored by government, and the content and existence of citizen-government transactions performed over the Internet.
9. **Easy to operate** : The design and operation of e-government systems should take into account the special needs of the disabled, and make it possible for them to use these systems as easily as the non-disabled. It should be easy to operate so most novice of computer users can readily find the information they need to have.
10. **Interoperable**: An excellent e-Government site is one that provides appropriate and up-to-date links to other e-Government sites, at its own and other levels in the government hierarchy. All e-Government sites need to work together seamlessly.

Critical issues to get success

ICT can be a considerable and cost-effective way of responding to the needs of disadvantaged people of the Rural Indian population. Unfortunately, such hopes are built almost entirely on an empirical vacuum. Almost nothing is known about factors that make for effectiveness or ineffectiveness of ICT in developing nations. No state in the Indian union is without a plan for bringing ICT to the masses; every major NGO has its IT

projects. But unfortunately, the hopes so widely expressed are built almost entirely on an empirical vacuum (Kenneth Keniston, 2002).

After studying and reviewing so much of literature, Researcher has ascertained some key issues that would play a critical role and can be considered as yet unsolved problems of development that overwhelms large sections of the population of Rural India for effective usage of ICT for sustainable e-Governance.

1. **Educational level of the people and computer literacy**: There is wide inequality in literacy rate between the rural and urban areas – urban literacy rate is 80.06 % compared to rural rate of 59.21%. (Planning Commission, 2002). R. Chandrashekhar, Secretary, Department of Information Technology, The Government of India has stated during an interaction with media on the sidelines of Apex Committee on National e-Governance Program (NeGP), that an investment between Rs. 30,000 to Rs. 40,000 crores over period of 4 years for e-Governance services by 2014. This investment will cover the cost of all kinds of hardware and software that will be required for capacity building. (CyberMedia News). The Government of India is investing heavily in e-Governance with each passing year registering an increase of almost 23% in e-Governance spending (Figure 1).

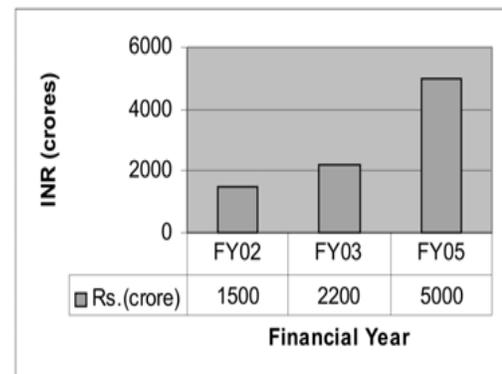


Figure 1: e-Governance spending by Govt. of India (2002-2005)

But with 70% of Indians living in 6 lakhs villages and 95 percent not speaking English, e-Governance models which do not support the rural delivery system will not contribute much to good governance.

2. **Language barrier**: There is non-availability of software in regional tongue languages for rural folks. The rural community can take the best advantage of the information content only if it is presented in the local language.
3. **Acceptance of new technology**: Another challenge in India seems to be change management. There is confrontation from government employees due to the perceived negative impact of technology

on their jobs and career and adapting to a new technical environment (Gartner, 2005).

4. **Awareness of the people for the advantages of involving ICT for good governance :** Generally, as far as people of rural areas are concern, they cannot change their traditional beliefs and working styles easily. Initially, e-Governance may seem like another option but in the face of rising demands ensuing from demographic, economic, social, and global trends, e-Governance no longer appears to be a matter of choice but will become a compulsion for any country, wishing to sustain in the 21st century as a competitive nation in the world arena. So people of rural sectors should be updated about the advantages of ICT for good governance, then only they can be switched over towards the acceptance of new technology and trend of ICT.
5. **Financial viability of the people:** With the rapid growth in population and consequent growth in the population of poor people, lives of the rural people are tough. Even after more than 50 years of independence India still has the world's largest number of poor people in a single country. Of its nearly 1 billion inhabitants, an estimated 260.3 million are below the poverty line, of which 193.2 million are in the rural areas and 67.1 million are in urban areas. More than 75% of poor people reside in villages (Azad India Foundation). To give more benefits to the people below poverty line (BPL), Indian government has to take more facilitating actions and plan accordingly to provide benefits of ICT by considering financial viability of poor people.
6. **Training for new technology:** It is essential for the e-Governance projects to sustain themselves. The Information kiosks, especially those run by NGOs and the private sector need to employ villagers to run the kiosks after providing pertinent training. The income generated by collection of user charges can be used to pay the kiosk operators in a self-sustaining model. These would not only be the income source for the men but also to women who are traditionally confined to their homes. MSSRF's Embalam Knowledge center is a case in point where the kiosk operators are women. More girls and women visit kiosks manned by women and almost no women visit kiosks run by men due to the cultural barriers in rural India. (Toyama, 2005)
7. **Quick and reliable access to internet :** Presently, less than 10, 000 Indian villages out of a total of 6 lakhs have seen the presence of internet (One World South Asia , 2004). To give broadband connectivity to 48% of the rural population, an estimated 100,000 broadband and kiosks still needs

to be set up. (CII National Broadband Economy Committee: Vision 2010).

8. **Government policy and efforts to promote e-Governance in particular sector :** Local Government policy and efforts to promote e-Governance are very important factors for successful and sustainable e-Governance in that particular sector.
9. **Properly audited technical standards :** Government of India and a majority of State Governments have created Departments of IT, however, there is a need for clear distinction of the duties and responsibilities between the respective DIT and the other Ministries/Organizations. There is no standardized technique even among the departments of the central government in implementing e-Governance projects. Such standardization would help shunning repetition of the same mistakes committed in a previous project. There is a need to address such divergences so that successes are replicated across States and failures are eliminated. This calls for formulation of norms for standardization and inter-operability at the national level.
10. **Continuous power supply:** There is practically no village with 24 hours power supply.

V. CONCLUSION

Governance in India and other developing and under-developed countries continues in its classical style with its ever increasing inability to deliver and to come up to the expectations of the masses. From the above discussion, it is evident that there are various key parameters for testing behavioral implications of ICT for sustainable e-Governance system in rural sectors of India. There are some key issues like people continue to deal with state and central functionaries in traditional manner and waste efforts and time as well as resources in getting the routine e-Governance jobs done. There are some sporadic efforts at modernization and automation of processes but a complete transformation does not appear to be contemplated.

At the centre of all e-Governance activities is the citizen. Therefore, on account of the diversity in languages across the country, e-Governance initiatives have to be built on a platform which supports interface in local languages in order to reach out to those living in Rural areas.

Some other strategies/action plans for a successful implementation of an e-Governance system for one billion people of India are suggested as creating literacy/awareness and commitment to e-Governance at high level, conducting usability surveys for assessment of existing e-Governance projects and act upon the results of such assessments with clearly defined objectives and interoperability policies to achieve such objectives.

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