

CONTRIBUTIONS OF ICTs AND E- GOVERNANCE TO RURAL DEVELOPMENT IN INDIA

Priyanka Das

Department of Political Science, Gauhati University, Assam, India, Pin:781014

Email: dasprianca14@gmail.com

Abstract: Better access to information empowers the citizens. In recent times ICT is playing a role as a catalyst in rural development. The advancement in ICT can be utilized for providing relevant information and services which in turn can empower rural masses. Many rural e-governance projects, covering various types of services for rural citizens, have yielded significant positive gains demonstrating the potential of such drives in accelerating rural development. However, there are some challenges in providing e - delivery of services in the rural areas that need to be overcome. This paper highlights some of the significant rural e-governance drives in India and also discusses the issues in the implementation of such drives on the ground, and makes suggestions to improve their effectiveness.

Keywords: *Rural Development, Information and Communication Technologies, e-Governance, NeGP, India, Projects, Challenges*

1.INTRODUCTION

The Information and Communication Technologies (ICT) have made significant impacts on every aspect of human existence and have contributed immensely to the social and economic advancement of a country. Across the globe, governments have been using these technological advancements (ICT) to offer different types of services efficiently. E-Governance is considered as the utilization of Information and Communications Technology (ICT) at various levels by the government to offer better types of assistance to the residents, interactions with business substances , exchange of data between various branches of the government in a fast, helpful, proficient and straightforward way. E-Governance not only helps in good governance, yet in addition improves the participation of the common citizen in governing process & thereby strengthening the democracy. In the present day world, it appears to be difficult to upgrade the social and economic conditions of the rural masses without proper implementation of the e-Governance programmes. An enormous number of rural E-Government applications were aimed at offering easy access to citizen services and improved processing of government-to-citizen transactions. The ICTs have facilitated the design of solutions to deliver government services for social advancement at the doorstep of the rural poor. In order to bridge the rural- urban divide there is a need to provide better facilitates in rural areas. In India, in order to equip the rural masses with better opportunities, informations and easy access to various welfare and developmental schemes, government at different levels have taken enormous steps . Large numbers of these activities on the part of government have been fruitful in terms of addressing the problems of rural masses. Even more drives can be taken

and the one which are presently working can be improved further remembering the issues being faced by the people in getting to these ventures.

2. ELECTRONIC GOVERNANCE

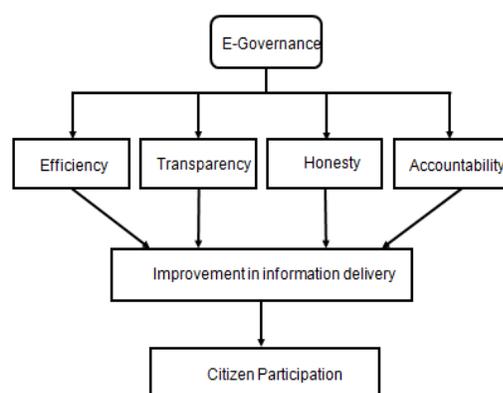
E-governance is using information communication technologies to improve the interactions within the government departments and between citizens and government ¹. Prabhu states that the motto behind E-Governance is to provide SMART (Simple, Moral, Accountable, Responsible, and Transparent) government ².

According to the World Bank: “E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.” ³ Thus, the stress here is on use of information technologies in improving citizen-government interactions, cost-cutting and generation of revenue and transparency⁴.

In the year 2005, UNDP defined, “e-Governance is The Information and Communication Technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective.”⁵

Dr. APJ Abdul Kalam, former President of India, has visualized e-Governance in the Indian context to mean: “A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the inter-departmental barrier and providing a fair and unbiased service to the citizen”⁶.

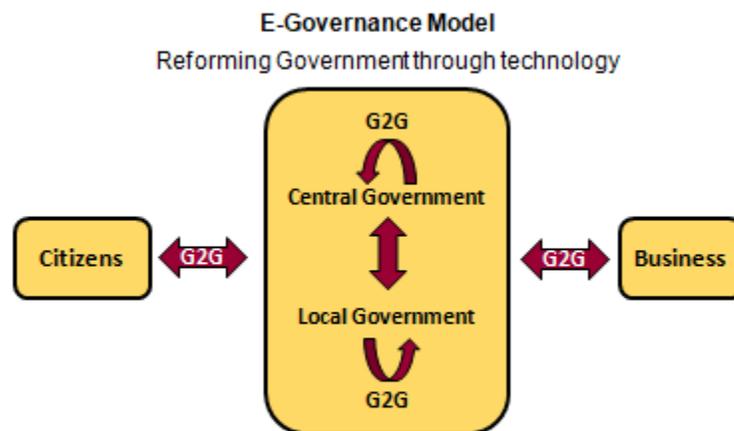
Figure 1. E –Governance & Attributes of Good Administration.



Many people use the terms 'E-governance' and 'E-government' interchangeably. E-government includes the processes and structures needed to deliver electronic services to the public (citizens and businesses), collaborate with business partners, and conduct electronic transactions within an organizational entity ⁷. In short, E-government

is the use of ICT particularly web-based internet, to provide citizens and businesses government information and services to improve the quality of services and to give increased opportunities to participate in the democratic institutions and processes. One of the important dimensions of E-governance is to improve the government-citizen interface and bring them closer to the government. E-government operates in different platforms such as Government to citizen (G2C), Citizen to Government (C2G), Government to Business (G2B), and Government to Government (G2G), and Government to Employee (G2E) ⁸.

Figure 2. Types of Interaction in E- governance.



On the other hand, E-governance has an entirely different scope from that of E-government which is a technologically driven initiative. E-governance under its purview includes a broader vision of the use of ICT to fulfill good governance and encourages citizen participation in the democratic processes. Various concepts are included in the term E-governance like e-administration, e-citizen and it takes a holistic view aimed at achieving good governance. E-government aims to realize the public needs by providing user-friendly online services. Technology dominates the arena of government ⁹.

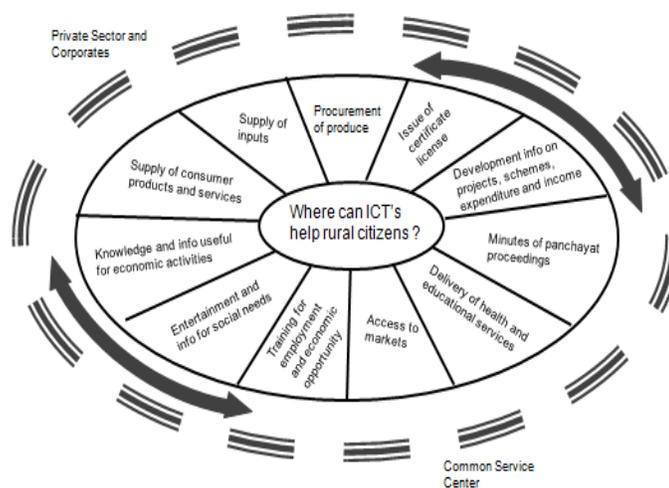
The objective of E-governance is to support and simplify governance for government, citizens, and businesses, the use of information, communication, and technologies can connect all three parties and support processes and activities ¹⁰. The latest developments in communication technology enable a shift in the relationship between governments and citizens in a new way, thereby contributing to the ideal of good governance. E-governance focuses on processes whereas E-government is mainly concerned with improving end-user service delivery for all the stakeholders ¹¹.

3. ICT AND RURAL DEVELOPMENT:

In recent times, ICT is playing a role of catalyst in rural development. It is used in every aspect of information, management and governance of development. ICT means application of innovative way to facilitate information and communication technologies in the rural domain. The advancement in ICT can be utilized for providing relevant informations and services to the farmers, thereby facilitating an environment for more rewarding agriculture. Farmers of rural areas can be educated with modern means of cultivation through ICT¹².

In today's era Information and Communication Technologies (ICT) has brought remarkable changes in the lives of people in every respect also enabling government to deliver better services even at remotest corners of the country. Various ICT applications have been designed specifically for the people residing in rural areas of the country. Ministry of Rural Development (India) has taken various initiatives at different levels by way of strengthening the ICT infrastructure to provide opportunities, information and easy access of the rural development Schemes to all citizens in rural India. Through ICT, several e-governance initiatives have been adopted which have ultimately proved to be a major contributor in rural development¹³.

Figure 3 : Where Can ICTs Help Rural Citizens? ¹⁴



Communicating with the remote population has been a very big challenge for the government of India as India has a vast geography, immense population, with vast linguistic and cultural diversity. Basically the proper way of communicating with the rural people is through connectivity at a digital platform¹⁵.

The rural ICT applications attempt to offer the services of central agencies (like district administration, cooperative union, and state and central government departments) to the citizens at their village door steps. A large number of rural E-Government applications were aimed at offering easy access to citizen services and improved processing of government-to-citizen transactions. The Information and Communication Technologies have facilitated the design of solutions to deliver government services for social development at the door step of rural poor¹⁶.

4. NATIONAL E- GOVERNANCE PLAN AND RURAL DEVELOPMENT

The Government of India approved the National e-Governance Plan (NeGP), on May 18, 2006 with an objective to bring public services closer home to citizens, as articulated in the Vision Statement of NeGP.

"Make all Government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realise the basic needs of the common man"

NeGP comprises 31 mission mode projects (MMPs), which are further classified as state, central or integrated projects. A mission mode project (MMP) is an individual project within the National e-Governance Plan (NeGP) that focuses on one aspect of electronic governance¹⁷.

National e-Government Plan (NeGP) aims to accelerate rural development through¹⁸:

- Implement mission mode projects in key departments (that focus on development or serve rural populations) with large public interface,
- Ensure that ICT can benefit even the remotest areas.
- Enhance capacity building along with providing generic programme component .

Four of the 31 mission mode projects under the NeGP have a direct focus on serving the rural populations. First, Common Service Centers (CSC) scheme is an initiative of the Ministry of Electronics and Information Technology (Meity), Government of India. CSCs act as the access points for delivery of various digital services to villages in India. Also, the scheme promotes rural entrepreneurship and building of sustainable rural livelihoods. The other two projects on e-district and e-panchayat will support computerization of the back-end in local governments at the district and panchayat level to offer services to rural populations. The fourth project is on creating a unique identity for every citizen (UID). It proposes to initially create a central database of residents above the age of 18 years, and generate a Unique Identification number (UID) for all such residents. This UID would at the first instance serve as the basis for efficient and effective delivery of various social and welfare services to persons below the poverty line (BPL).

5. VARIOUS E- GOVERNANCE PROJECTS FOR RURAL DEVELOPMENT IN INDIA

- **e-KrishiSamvad**
an internet-based interface, launched in March 2017, is a unique platform that provides direct and effective solutions to the problems faced by farmers and stakeholders in the agriculture sector. Farmers can upload photographs related to diseases of the crops, animals or fishes for diagnostics and remedial measures and seek instant advice from specialists by directly connecting to the ICAR website <http://icar.org.in> or through SMS¹⁹.
- **e-Panchayat**
project of the Ministry of Panchayati Raj aims at improving the quality of governance of the PRIs including 250,000 Gram Panchayats, 6094 Block Panchayats and 633 Zilla Panchayats. A computerized system is created to improve transparency in the functioning of panchayat bodies with panchayat data made available on the Internet. Moreover, certain services such as pension, property-tax, birth and death certificates, etc.,

are issued in hassle-free manner. Also, e-panchayat system provides facility of Business Process Reengineering of the services so that the process of receiving any demanded service is greatly simplified. With this, local governance by panchayats is expected to be transformed ²⁰.

- **Bhoomi (Computerization of land records).** The Department of Revenue in Karnataka, India has computerized 20 million records of land ownership of 6.7 million farmers in the state. Previously, farmers had to seek out the village accountant to get a copy of the Record of Rights, Tenancy and Crops (RTC), a document needed for many tasks such as obtaining bank loans. There were delays and harassment; bribes had to be paid. But with the implementation of the various Bhoomi centres (land record kiosks) a farmer can obtain a copy of an RTC online by paying a Rs 15 fee ²¹.

- **Gyandoot (community owned rural internet kiosks)**

The Gyandoot project was launched on 1 January 2000, in Madhya Pradesh. Gyandoot was awarded the Stockholm Challenge award for 2000 in the Public Service and Democracy category, and a Computer Society of India/Tata Consultancy Services National IT award for best IT usage in 2000. The goal of the project was to establish community-owned, technologically innovative and sustainable information kiosks in a poverty-stricken, tribal-dominated rural area of Madhya Pradesh. Rural citizens have the opportunity to access knowledge and a number of government services on payment of a small service fee. Thirty-nine privately owned kiosks connect with a district administration server through an intranet. The project has faltered after initial success ²².

- **e-Choupal:**

This project was initiated by ITC pvt.limited with the goal of establishing 6000 rural internet kiosks to provide information to farmers about the latest farming techniques, weather forecasts, crop insurance, etc. and to sell their produce to ITC. This project has empowered 4 million farmers and has helped to remove the intermediaries so that the farmers can directly negotiate with ITC to sell their produce ²³.

- **Drishtee :**

Drishtee is a rural model of distribution and promotional network for consumer goods and basic services. Information is provided to the users in the form of services via internet through village kiosks that are run and managed by local entrepreneurs. Drishtee made a presence in Dhar, Seoni and Shahdol districts in Madhya Pradesh, Sirsa district in Haryana and Jalandhar district in Punjab. Drishtee has impacted the lives of over 1.5 Million people in rural India. One of Drishtee's primary objectives is to empower rural communities by supporting local entrepreneurship and thus helping to stem the distress migration of people from rural to urban parts of the country ²⁴.

- **Rural Access to Services through Internet (RASI):**

Sustainable Access in Rural India (SARI), now renamed as RASI, was initially a Pilot Project implemented in Melur Taluk, Madurai District. The objectives of the project were :

- i. to bridge the gap of the digital divide between rural and urban areas.
- ii. to establish Rural Connectivity (networking) .

- iii. to facilitate dissemination of informations in all fronts of social development to the rural public at a nearest location to them and at a substantially low cost.

AGMARKNET: An E-Governance Portal

The Agricultural Marketing Information Network (AGMARKNET) was launched in March 2000 , is a NIC based e governance portal that facilitates generation and transmission of prices, commodity arrival information from agricultural produce markets, and Web-based dissemination to producers, consumers, traders, and policy makers transparently and quickly. It aims to link all important agricultural produce markets spread across the subcontinent with the State Agricultural Marketing Boards and Directorates for effective information exchange ²⁵ .

- **Akshaya Project**

Akshaya Project aims to set up a network of 6000 information centers that would be able to impart basic IT literacy to at least one member in each of the 6.5 million families in Kerala; provide services like data-entry, desk top publishing, computer training and internet telephony; generate and distribute locally relevant content; improve public delivery of services for government departments like payment collection, e-commerce, e-courier; and create employment opportunities. The Akshaya project is being implemented through Panchayati Raj Institutions, and involves private enterprise in the development of training institutes and content generation. Networking and computerising the 1214 local self-governing bodies to expedite transactions like issue of certificates, licenses, tax collection etc. Setting up internet kiosks, accessible to the public in every Panchayat ward. The government is setting up broadband Internet facility to connect all the Akshaya centers ²⁶ .

6. CHALLENGES

Even if it is accepted that ICT and e- governance has brought many changes in the life of rural masses, it has not been able to derive the expected results. In this section we shall explore few challenges faces by ICT and e governance programmes for rural development in India.

- *Digital divide and low level of literacy:*

Along with low level of literacy the issue of Digital divide is very prominent amongst rural masses in India. There is no doubt that ICT and E - governance interventions have been able to bridge the rural –urban divide to some extent but the issue of digital divide is one of the main challenges. There may be multiple aspects of ‘Digital divide’ like lack of digital literacy, uneven distribution of network coverage due to geographical location ,insufficient infrastructure like mobile phones, computers, internet connectivity etc., and also due to poverty . The computer education in rural areas are not quite adequate.

- *Lack of content in local language:*

The user interface of most of the e- governance applications are not in local language. The incompetence of the major portion of rural masses in English language and lack of IT skills hinders the successful implementation of e governance projects.

- *Attitudinal Constrains:*

Failure of e- governance projects in rural areas may also be attributed to many factors like lack of trust and confidentiality on the system, privacy and security issues and hesitation on the part of folks to adopt a new

computerized based governance system. As e-governance means a change of the system from manual to computerize based, it is generally disapproved by the employees and the general public ²⁷.

- *Poor Infrastructure and High Cost of Access in Remote Areas:*

Most of the rural areas lack the necessary infrastructure to build computerized system and provide access to such systems via the Internet. Even the basic infrastructure of a stable electricity supply does not exist in rural/remote areas of most of the villages. Basic communication infrastructure such in the absence of telecommunications infrastructure, providing internet access in rural areas becomes expensive.

- *Capacity Building:* Service delivery will be effective if there is a trained manpower. Though computer training is being imparted to all the basic public functionaries, except in few cases, an effective use of ICT is yet to be seen.

7. SUGGESTIONS AND CONCLUSIONS

To conclude it can be said that e governance initiatives for rural people, if properly used and implemented will definitely bring the desired results. The rural e- governance applications should be made citizen – centric, more participatory in nature so that people can easily access the information and get benefitted from it. In order to have proper access points (Kiosks) stress should be given in building proper infrastructures. A more intense approach is necessary to train those villagers who are completely disconnected with the city and township in order to bridge the digital divide. Moreover, efforts should be made to spread awareness among rural masses about various developmental schemes. Knowledge about computer and other technologies needs to be mediated through proper pedagogy, which connects the illiterate rural masses living in the interiors of rural India. Regarding cyber laws, the government needs to enact appropriate laws, especially those, which are necessary to enable transactions over the Internet, which requires addressing the safety concerns regarding use of credit cards or other modes of online payments. Security has to be ensured for generating confidence in the system. ICT revolution is believed to have partially bridged the rural urban divide but it can tender more benefits if the existing challenges are addressed and new opportunities are created concerning the rural masses.

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