

Challenges and Prospects of e-Governance in India

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In recent decades, governance has evolved into a more intricate and diverse undertaking. Significantly, citizens now hold significantly heightened expectations from their government. Information and Communication Technology (ICT) is playing a pivotal role in this transformation. It enables the efficient storage and retrieval of data, rapid information transmission, and expeditious data processing, surpassing the capacities of earlier manual systems. This accelerates government processes, facilitates quicker and more informed decision-making, bolsters transparency, and enforces accountability. Furthermore, it extends the government's reach, both in geographical and demographic terms.

The fundamental objective of governance is the welfare of citizens. While one facet of governance involves safeguarding the legal rights of all citizens, an equally crucial aspect is ensuring fair and equal access to public services and the benefits of economic growth for all. E-Governance is anticipated to empower the government to fulfill its functions more effectively.

Evolving paradigm of governance reflects the changing role of the state in both developed and developing countries, encouraging the idea of good governance. From a narrower perspective, good governance primarily revolves around resource efficiency for enhanced economic development (World Bank, 1994). In a broader sense, it extends beyond economic growth, encompassing principles like fostering participation, democracy, and human rights.

Good governance embodies principles of participation, transparency, and accountability. It upholds the rule of law and strives for effectiveness, efficiency, and the promotion of democratic governance. Achieving this objective necessitates moving beyond public sector

reforms and delving into institutional transformations. Utilising applied social science and local field research findings is essential to effectuate tangible improvements in the quality of life within diverse communities (Ostrom, 1990).

E-governance goes beyond mere access to official websites; it represents a multifaceted concept. But what precisely does it entail, and what benefits does it offer? How can governments ensure their successful implementation?

Governmental changes, such as the introduction of decentralisation, must be addressed when considering development-oriented transformations. The overarching aim of e-governance introduction is evident: cost reduction, increased effectiveness, and efficiency. Additionally, there is a growing public demand for online information and services that enhance democratic participation, accountability, transparency, service quality, and efficiency. The adoption and utilisation of ICT solutions hold the potential to enhance governance. In the coming years, the global proliferation of e-governance is anticipated.

E-Governance and E-Government: A Paradigm Shift

E-Governance, as defined by the Council of Europe, revolves around the use of electronic technologies across three vital domains of public action. These domains encompass interactions between public authorities and civil society, the role of public authorities within the democratic process (commonly referred to as electronic democracy), and the provision of public services (commonly known as electronic public service).

The World Bank, in its interpretation, defines 'E-Government' as the adoption of information technologies by government agencies, such as Wide Area Networks, the Internet, and Mobile Computing.

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These technologies have the transformative potential to revolutionise interactions with citizens, businesses, and other government entities. They can serve diverse purposes, including enhancing the delivery of government services, facilitating interactions with businesses and industries, empowering citizens through information access, and optimising government management. The positive outcomes of this transformation can encompass a reduction in corruption, an increase in transparency, improved convenience, revenue growth, and cost savings.

The US E-Government Act of 2002, specifically outlined in Section 3601, defines electronic government as the government's utilisation of web-based internet applications and other information technologies. The goal is to make government information accessible to the public, other government agencies, and various entities, with the intent to effect changes that enhance effectiveness, efficiency, service quality, and the transformation of government operations.

E-governance is driven to advancing the welfare of citizens, protecting the legal rights of all individuals, ensuring equitable access to public services, fostering economic development for all, streamlining service delivery, enhancing accountability and transparency, empowering individuals through data access, optimising government operations, facilitating smooth industrial and business interactions, expediting processes, reducing time and costs, ensuring efficiency in the delivery of public services, strengthening internal oversight, increasing revenue, reforming administrative systems, and providing top-tier facilities.

Within this comprehensive understanding, several key components represent the fundamental functions of government, including:

e-Services: The distribution of government data, programs, and services through electronic means.

e-Commerce: The electronic exchange of products and services involving electronic transactions, such as online tax payments and utility bill renewals.

e-Management: The application of Information and Communication Technologies (ICTs) to enhance the management of governmental activities, from streamlining processes to improving the flow of information within government offices.

e-Democracy: Encompasses electronic engagement (e-engagement), enabling public participation in the policy-making process through electronic networks, fostering interaction between public servants, citizens, and interest groups.

e-Controllershship: Encompasses the management of expenses, performance, and service capabilities using electronic systems.

An essential aspect of e-governance is the role of ICT. Establishing an environment that encourages innovation and growth in the ICT sector has become pivotal. This involves considerations of fiscal policies, legal and regulatory frameworks, and resource allocation for ICT tools as essential components in achieving good governance.

Through the utilisation of ICT, individuals, groups, organisations, and governments can communicate more swiftly, cost-effectively, accurately, and efficiently. They gain access to high-quality services, streamlined work processes, enhanced data sharing, and optimised information utilisation, all contributing to improved control and heightened efficiency. ICT benefits everyone and necessitates a transformation of government practices, attitudes, laws, regulations, and their interactions with the public. E-governance is not merely an option; it has evolved into an indispensable necessity.

E-governance in other countries

'e-Europe' is one of the success stories of e-government. The e-Europe project have been politically charged and goal-oriented. The European Union (EU) stands distinct from other global, regional, and sub-regional entities because of the careful consideration and implementation of e-Europe and the political commitment of the EU leaders to build and really enforce a knowledge-based economy and society 'for the benefit of all.' The first thing emerging nations may well learn from e-Europe is the good results of political intent and enforcement through efficient implementation benchmarking.

Among other parts of the world, Kenya started its e-Governance initiatives in 2004 through its digital service delivery. More than 70% of the Kenyan population are using mobile phones and it simplified the government to reach the public through m-Governance. Egypt is quite behind and the government has started some legal initiatives. All business transactions are through e-receipts, pensions are through e-payments, and government-citizen expenditures are also through e-payment.

Armenia started its e activities in 2004. More than 20 services were included in their first phase. They have a wide application of e-signature and e-visa. Through the e-Azerbaijan program, Azerbaijan entered into e-initiatives in 2003. They are concentrating on free-flow information and ensuring transparency in the citizen-official relationship. Singapore's e-Citizen Portal is an organized single access point to government information and services. South Korea's Home Tax Service (HTS) provides citizens with 24/7 online services such as tax

declaration. Taiwan has top-ranking G2C technology including an online motor vehicle services system, which provides 21 applications and payment services to citizens. Estonia is the first country in the world with e-residency which enables anyone in the globe outside Estonia to access Estonian online services.

E-governance: Indian scenario

India, the largest democracy in the world, stands to benefit much from e-governance. One of the important characteristics of e-governance in India is citizen participation in governance. There have been numerous global e-readiness assessments that demonstrate India's current level of e-readiness. The three basic kinds of services made available by e-Government in India are: (1) delivering information, (2) increasing processing effectiveness, and (3) facilitating transactions. The simplest of these is delivering information, and as we move from transactions to information, the complexity level rises. However, the second and third categories of services offer the most convenience to the populace. The difficulty is paying for such services.

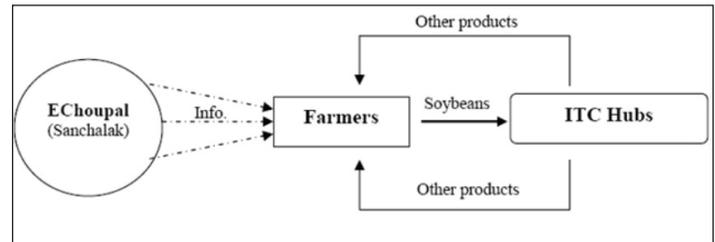
The Union government has established a number of initiatives to support e-governance, including e-Seva, Smart Government, Digital India, and e-Kranti. However, some issues in the application of e-governance pose obstacles to e-progress. The Indian government started initiatives to promote democratic governance. When it comes to e-governance, the initial project was National Informatics Centre (NIC) in 1977. Later, there were other initiatives such as NICNET in 1987 and e-Gov, which was launched by the IT ministry in 1999. e-Kranti and the plan for a Digital India are from the 2006 plan and in a later phase, the Indian government launched a number of programs to promote e-governance in India.

The influence of ICTs is evident through various initiatives and projects implemented across the nation. Approximately 10,000 grassroots ICT initiatives aim to break down longstanding barriers in rural areas and elevate living standards (Atanu and Shadrach, 2006). Initiatives such as ITC's e-Choupal, n-Logue models, and Village Knowledge Centers, alongside e-governance models like Gyandoot, Rural e-Seva, and Drishti, as well as the integration of ICT into popular communication media like radio, TV, and mobile platforms, contribute to disseminating information and knowledge in the remote regions of the Indian subcontinent.

e-Choupal

e-Choupal is an initiative of ITC Limited, a conglomerate in India, to link directly with rural farmers via the Internet

for procurement of agricultural and aquaculture products like soybeans, wheat, coffee, and prawns.



Source: UNTAR (2005: 5)

e-Choupal facilitates the flow of information and knowledge and supports market transactions online. It transmits Information (weather, prices, news), helps transfer Knowledge (farm management, risk management), facilitates sales of Farm inputs (screened for quality), offers the choice of an alternative Output-marketing channel (convenience, lower transaction costs) to the farmer right at his doorstep and also provides an interlocking network of partnerships (ITC + Met Dept + Universities + Input COs + *Sanyojaks* (the erstwhile Commission Agents) bringing the "best-in-class" in information, knowledge and inputs.

e-choupal is, thus, a distributed transaction platform that brings together sellers and buyers along with information and service providers. e-choupal is a model with a number of non-conventional characteristics namely: Customer-centric; Capable of being used for many commodities and multiple transactions; Easily scalable once it is verified; Uses local talent and local people and develops local leaders; Extended to local as well as global procurers; Stimulates local entrepreneurs to extend their innovativeness; Uses all the existing institutions and legal frameworks etc..

The increased participation in e-Choupal has been due to the creation of win-win situation in which both the firm and the farmer benefits equally. The farmer gets attracted towards e-choupal due to increased profits, added services that he could get, saving in time, and the ability to use the e-choupal for many transactions. E-Choupal operation has been successful. It has reduced the cost of procurement and the cost of transit and the material handling cost.

N-Logue Village Internet Kiosks

N-Logue, a company affiliated with the TeNeT group of IIT-Madras, has been established to extend telecommunications and internet connectivity exclusively to rural regions. The objective is to establish kiosks in every village to provide these much-needed services. Given that 85 percent of *taluks* (sub-districts) have fiber-

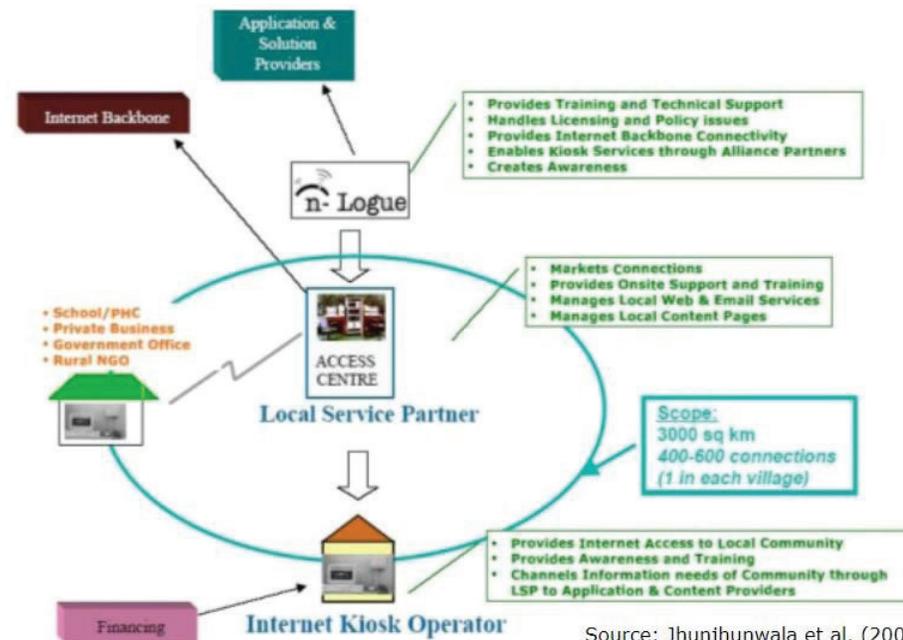
optic connections, n-Logue utilizes this infrastructure as a backbone to set up access centers in taluk headquarters. These centers serve areas within a 25-kilometer radius. The model revolves around a network of an access center connected to multiple kiosks in villages within the designated area. Consequently, a single access center can serve approximately 30-40 villages. The business model for these kiosks is akin to the erstwhile successful STD/PCO booths, complemented by an all-India Internet Service Provider (ISP) license and a partnership with BSNL to offer telecom services.

its portfolio to include health information, agricultural consultations, booking bus and train tickets, as well as offline services like computer education. Villagers pay for the kiosk services they use, typically at rates lower than those in urban areas. This center was recently connected to the Madurai Agricultural College and Research Centre, a part of the Tamil Nadu Agricultural University. Villagers can now email their agricultural queries to the College and receive electronic responses. For instance, Ulagapichanpatti village sent a query about issues with their ladies' finger (bhendi) crop, which had

been severely affected by disease in 2001. In response to emails and photographs sent by the kiosk on behalf of the farmers, the college assigned two horticulture assistant professors to address the queries. A live web meeting was organized between Ulagapichanpatti and the experts at the college, allowing the immediate identification of the disease through webcams and its subsequent resolution.

Gyandoot: E-Governance in Rural India

In the heart of Madhya Pradesh, specifically in the Dhar district, a groundbreaking and economically sustainable e-governance initiative known as Gyandoot, which translates to "Messenger of Knowledge,"



Village kiosks are established by Local Service Providers (LSPs), who invest in equipment and provide services to the local community. A typical kiosk offers both telephone and Internet services to the villagers, equipped with a PC, power supply, Internet/Voice connection, localized software packages, and a telephone.

N-Logue actively supports these initiatives in various ways. Firstly, it assists in identifying collaborating institutions and organizations, primarily local ones, capable of delivering these services. Secondly, n-Logue offers training, marketing support, and entrepreneurial opportunities to franchisees and kiosk owners, who are often young individuals. It also helps these entrepreneurs secure the necessary startup loans, often leveraging existing government self-employment opportunities. Additionally, n-Logue facilitates the posting of classified ads created by kiosk owners on local websites.

To provide a concrete example, the kiosk in Melur, located in the Madurai District of Tamil Nadu, initially offered e-government services and has since expanded

was launched on January 1, 2000. This innovative project began with the establishment of 21 telecentres strategically placed in various village councils within five blocks of the district. Over time, Gyandoot expanded its reach, eventually encompassing more than 600 villages and serving nine out of the 13 development blocks in the Dhar district.

Gyandoot represented an unprecedented and imaginative approach to e-governance, particularly in the context of delivering citizen services through computer technology, an approach not previously explored in India. Prior to Gyandoot, villagers had to undertake arduous journeys to access government services, and even then, there was no guarantee that someone would be available to assist them. Moreover, they often encountered discomfort and instances of corruption from public officials. Therefore, Gyandoot was conceived as a means of digitizing the front-end of government services, offering a transformative solution to these issues throughout the region.

Akshaya: Pioneering E-Literacy and Government Services in Kerala

In 2002, Kerala took the lead as the first state in India to embark on a significant initiative aimed at a widespread ICT transformation. This endeavour, known as 'Akshaya,' was driven by the vision of 'Empowering Kerala.' It paved the way for Kerala to become the country's first e-literate state. Akshaya Centers emerged as an extensive network of highly efficient Common Service Centers (CSC), designed to provide a diverse range of services to the public under a single roof, spanning Government to Citizen (G2C), Government to Business (G2B), and Business to Citizen (B2C) services.

As of now, there are approximately 2,650 Akshaya e-centers scattered across Kerala, with at least two centers in each panchayat. By extending ICT access to all sections of the population, Akshaya serves as a catalyst for enhancing the quality of life, ensuring information accessibility, fostering transparency in governance, and driving overall socio-economic growth.

Furthermore, over 1,000 Akshaya centers are equipped with banking kiosks and micro-ATMs to provide a comprehensive range of banking and insurance services to citizens at their doorsteps. This is especially crucial for residents in areas with limited banking access. Kiosk banks are designed to be mutually beneficial for banks, Akshaya entrepreneurs, and the public. Akshaya centers hold approximately 650 IRDA licenses, enabling them to offer insurance policies to rural communities.

Project Akshaya marks a significant stride in making government services more accessible to citizens. It empowers individuals by providing them with a responsive avenue for accessing information and services and engaging with the government. By enhancing the government-citizen relationship, emphasizing transparency with security, Akshaya e-centers have established themselves as a highly effective front-end delivery network for government services.

Prospects and Challenges of E-Governance in India

The effective implementation of e-governance promises a more dynamic, responsive, and accountable institutional landscape. It introduces the potential for decentralisation, enhancing overall efficiency, effectiveness, cost-effectiveness, and ethical standards in governance while fostering transparency. Moreover, e-governance facilitates routine and impartial assessments of the quality of governance processes.

However, numerous significant hurdles hinder the adoption of e-governance. These challenges include concerns related to security, unequal access to computer

technology among citizens, the high initial costs associated with establishing e-government solutions, and resistance to change. The challenges that have been identified encompass issues of trust, resistance to change, the digital divide, cost considerations, privacy concerns, and security matters.

In the realm of e-government, two levels of trust are crucial. First, users must have confidence in the tools or technologies they will interact with, feeling at ease and trusting their reliability. The second dimension revolves around trust in the government itself. Government entities must ensure the integrity of transactions, data security, and financial stability. According to the innovation diffusion theory, the adoption of innovation occurs gradually within a population, with varying rates of acceptance among early and late adopters. The transition from a paper-based to a web-based system is accompanied by a natural resistance to change.

The digital divide presents a significant challenge, with disparities in access to information technology existing between individuals, communities, and businesses. Economic inequalities, including high levels of poverty, are closely linked to limited access to information technology resources. Cost considerations represent another crucial inhibiting factor, particularly in the context of developing countries like India, where a significant portion of the population lives below the poverty line.

The effectiveness of e-governance lies in its potential to enhance the responsiveness of public service delivery systems and encourage citizen participation in governance processes, ultimately maximising citizen satisfaction. An essential step in this direction is involving local communities in policy implementation, which can bridge the communication gap between the government and its people. While e-governance should permeate all levels of government, a primary focus should be on local governments, which serve as the most immediate interface between citizens and the government. Ensuring robust digital infrastructure, particularly in rural areas, along with improved internet connectivity is crucial. Moreover, incorporating regional languages in e-governance initiatives is commendable, particularly in a linguistically diverse nation like India.

Recognizing the varying levels of e-readiness among different states in India is essential when implementing e-governance reforms across the country. While several successful projects are currently in operation, only some have achieved a nationwide scale. It is imperative to replicate and expand successful models evenly throughout the nation. A comprehensive and integrated approach is necessary, involving government ministries in the identification, evaluation, formulation,

implementation, and redressal of data-driven policies to address the diverse needs of the population promptly.

Conclusion

We've witnessed the evolution of e-governance and m-governance, which have become essential tools for promoting government transparency and accountability. These technologies also serve as means to help citizens by providing them with timely and accurate information, thereby encouraging their active involvement in shaping policies.

Over the past decade, the increased access to the internet and telecommunications services in India has kindled hope among its citizens in their ongoing struggle against persistent challenges such as poverty, corruption, regional disparities, and unemployment. Nevertheless, the slow pace of project implementation, bureaucratic red tape, and resistance from government employees and the public have hindered achieving desired results. It's clear from this paper that while significant progress has been made, there's still much ground to cover.

Despite these challenges, it's undeniable that digital technologies have played an unparalleled role in bringing people together, especially in the face of the recent pandemic, notably in sectors like healthcare, education, and public support systems.

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