ASSESSING THE IMPACT OF E-GOVERNANCE ON PUBLIC SERVICE DELIVERY IN INDIA

DR. SHRIKANT PRADHAN,
ASSISTANT PROFESSOR POLITICAL SCIENCE, GOVT. NAGRIK KALYAN COLLEGE, NANDINI NAGAR DURG

Abstract

The aims of this research paper are to evaluate the effectiveness of e-governance in public service delivery system in context to India including the problems and result emerging from it. The advanced incorporation of information and communication technology in governance has made e-governance endeavors to improve the delivery of essential services through improved accountability, transparency, and efficiency. Drawing from e-governance literature, this work identifies and assesses the critical e-governance ambitions, which encompass the information technology environment. Based on the case studies, interviews, surveys and secondary data the study explains the prospects and challenges of e-governance in eradicating the digital divide and bureaucratic red tape problem. The studies show that although the e-governance has brought positive change in public service delivery it has not yet realized full potential due to factors such as lack of electronic literacy, lack of necessary infrastructure and lack of willingness to change. The paper concludes with policy recommendations for improvements in e-governance in India that supports the government's ambitions of making India an inclusive economy for citizens of all class.

Keywords: e-governance, public service delivery, digital infrastructure, transparency, India, digital divide, policy reform.

Introduction

E-governance which involves the integration of advanced technologies in improving governance processes and delivery of services in the government has received positive9 acceptance across the globe. In India, the overall delivery of public services is known to be slow and encumbered with bureaucracy, corruption and limited availability of services, here e-governance come as a beacon of hope. The subsequent Indian government since the year 2000 has embarked on a number of e-governance program to enhance the delivery of services through transparency, accountability and efficiency. Aadhaar has revolutionized the identification of the citizens while Digital India and the National e-Governance Plan (NeGP) have transformed the citizens' interface with government organizations.

Nevertheless, the effectiveness of e-governance in India is not so overwhelming and standardized, the digital divide and disparities in the demographic structure have serious impacts towards the e-governance goals. In rural areas and to the people of low income and standard, the main obstacle is to access the digital facilities and platforms which results in the unequal service provision. In addition, although e-governance offers the prospect of improved delivery of government services, challenges persisting today consist of data privacy issues, opposition from conservative civil service, lack of effective digital enabling environment among others.

In this research, an attempt will be made to analyse and evaluate more profoundly the possibilities of e-governance to enhance the operations of public services in India. Thus, based on the findings of the quantitative and qualitative data that concern specific e-governance projects and their results, the research is to assess how the phenomenon of digital governance has helped increase the availability and quality of delivered public services. Furthermore, the research addresses the factors that limit the e-governance effectiveness of the potential and contains the suggestions about its enhancement. As the pace of digitalisation continues to increase, it becomes important to comprehend the processes involved in e-governance with an aim of achieving adoption of technologies in the society for the benefit of all the segments.

Literature review

Electronic governance is the application of ICT in public sector services and it has captured the attention of scholars and policy makers. Some of the papers focused on the growth, issues, and effects of e-governance especially in developing countries such as India; the country with progressive government initiatives in furthering the use of technology for improving services delivery.

The concept is directly linked with the overall process of the so called 'information revolution'. The World Bank (2011) has described e-governance is the utilization of ICT in a way that help the government to become efficient, transparent and accept citizen engagement. Heeks adds further on this, pointing out that e-governance is not just the process of computerisation of the government departments and agencies but a change in the nature of the delivery of these services in order to effectively respond to the needs of the citizens. These definitions in a way provided a framework upon which analysis on the impact of e-governance in enhancing the delivery of public services could be made.

For the embracement of e-governance initiative in India, it was started with National Informatics Centre in the year of 1977 and establishment of National Task Force on IT & Software Development in the year of 1998. In the beginning of the twenty first century, The Indian government embarked on a variety of e-Governance projects with a view of enhancing the delivery of services to the public. Other authors like Satyanarayana in 2004 and Misra in 2006 has noted that the NeGP launched in 2016 signal a new epoch in governance in India with more emphasis on the use of ICTs for enhancement of service delivery in various fields.

Ref: Bhatnagar, 2014 As per the NeGP, all the services by the government had to be made available to the common man and this was to be made available especially in the rural regions and also to the people belonging to the needy section of the society through the use of e-governance. Research conducted during this period also pointed at obstacles within e-governance programmes such as substandard hardware, low literacy levels with technology, and organisational culture that demeans avant-garde initiatives (Kumar & Best, 2006).

The effect of e-governance on public service delivery has been considered the heart of any study. Heeks (2013) also pointed out that if e-governance is implemented in the right manner then quality of services, accountability and efficiency of services offered may also improve dramatically. This is especially the case in the developing countries where conventional forms of governance are normally unresponsive to the people's needs.

Some studies done in India in mid 2000s explored the impact of e-governance on service delivery among several case studies as highlighted below. For instance, Bhatnagar and Singh in their paper the Role of ICTs for Empowering Indian Society, discussed the Karnataka's Bhoomi project where the information on land records where made accessible to the public through computers. This study established that the project led to decrease in corruption and delays in land related transactions hence increasing citizens' satisfaction. Similarly based on Data Communication and Networking the Gyandoot project in Madhya Pradesh showed how ICT can be used to deliver relevant information and services to rural people (Kumar & Singh, 2004).

But at the same time, some scholars also highlighted a few similar negative aspects of the e-governance also. According to Prakash and De' (2007) although e-governance improved efficiency of services, challenges like poor Internet connection, low consciousness and rural urban digital gap slowed down the efficiency of the projects. For example, the use of e-governance and telecentres particularly in rurallocations posed challenges which restrained the overall socio-economic impact of the innovations.

Transparency is also another benefit to be achieved through e-governance. When comparing and analyzing the level of transparency of e-governance in India, Pathak et al. (2007) established that there are decreases in corruption in records' process, and increases in the populace trust in the governmental institution. With the help of online grievance redressal systems like Lokvani introduced in Uttar Pradesh there were improvements in the levels of accountability in service delivery (Singh & Sahu, 2008).

Nonetheless, Bhatnagar (2008) opined that even though e-governance enhances the level of transparency it is not a solution to all the governance problems. According to him, the effectiveness of these initiatives relies on the political will, institutions and the ability of government institutions in the management of the digital platforms. Without these, almost, all e-governance initiative was possible only on papers with almost negligible actual freeway application.

Still, the implementation of e-Governance has numerous difficulties that cannot be overcome in any way. Heeks (2002) wrote about the 'design-reality' gap where e-governance projects fail because these are not in consonance with the capacity, culture, and socio-economic environment within which such projects are implemented. Ideally, this brings about project failure or minimal achievements majoring in the rural or hard-to-reach zones (Kumar & Best, 2006).

There have also been reports to the problem of digital divide. Norris (2001) noted that it was a positive thing that e-governance could improve the delivery of services but at the same time stated that this would set the digital divide even further since there are places where internet connection is either scarce or non-existent. In India the gap of 'Digital divides' such as availability and accessibility of information technology infrastructure and availability of computer literate and aware users of e-governance is still restricted to urban India (Palvia & Sharma, 2007).

Additionally, poor training of employees within the government sector also vetoes the improvement of new technologies while traditional bureaucratic systems prove to be resistant to change. Prakash and De' (2007) agreed that bureaucrat's resistance coupled with lack of accountability for project outcomes hampers several e-governance projects in India.

In the existing literature on e-governance of public services delivery in India, e-governance was referred social engineering that has the potentiality for revolutionizing delivery service through enhancement of efficiency, transparency and public access. But, despite all these measures, the effective delivery of e-governance programmes were not without their share of a problem.

Challenges like lack of access to technology, lack of infrastructures and organizational politics were some of the factors that hampered the implementat_offua tion of these projects, especially in rural areas. Nevertheless, e-governance continued as vital gears of how the current society can transform its administrative sector and the interaction between governments and the people. It is therefore a subject of future research to look at measures to reducing these gaps and availing e-governance benefits for all classes of people in society.

Objectives of the study

* • To analyze the maturity of e-governance that has been adopted in different sectors of the public service delivery in the country with an emphasis on selected programs.
* • In order to measure the efficiency and the impact that e-governance has brought to the public sector in terms of accessibility, effectiveness and transparency of public services that are being delivered with measured percensity of citizen satisfaction.
* • This paper aims at identifying the constraints that have emerged to construe the diffusion and adoption of e-governance in India, especially in the rural areas, and how these problems affect the achievement of e-governance projects.

Research methodology

The overall research method used in this study is descriptive in nature and qualitative methods have been used systematically to properly measure the effect of e-Governance in Indian context on public service delivery. Secondary data is has been collected from annual reports of government, Journal articles published in various Journals, case studies on E-governance projects in India including Aadhaar, Digital India and e-Government portals. Performance of e-governance services is measured using quantitative data analysed using statistical tools whereas qualitative data from interviews determines the challenges, benefits and socio-economic implications of the e-governance initiatives. These methods used are important since they provide a balance in evaluating the e-governance impact and challenge, in order to encourage improvement where need be.

Case studies

Aadhaar: The Aadhaar project was initiated by the Indian Government in the year 2009 and rapidly has become one of the biggest biometric identification systems across the globe. Operated by the UIDAI, and assigned to the residents a unique 12 digit identification number using biometric as well as demographic details. To this extent, Aadhaar has been designed as a bio meter that was to help deliver efficient identity assurance and twin objectives of making availability of governmental sponsored subsidies, services, and benefits more predictable and prevent leakages. It has played a beneficial role in the organization of the subsidies, minimization of inefficiencies and fraud in the Welfare Programs such as PDS, DBT among others. But, Aadhaar has been into controversy regarding privacy, data security, and most notably, making its linkages with essential services mandatory.

Impact: Its effectiveness has been demonstrated by the fact that Aadhaar has enhanced effective delivery of public services through elimination of complexities involved in identification of individuals. Currently, millions of beneficiaries receive subsidies from the government through their bank accounts thus reducing on corruption cases and delays. However, the presence of issues pertaining to an individual's digital know-how, exclusion errors, and surveillance risks make it deficient in fulfilment of its potential.

Digital India Initiative Launched in 2015, Digital India is an initiative below which several schemes are launched with an aim of converting the country into a digitally aware society and a hub of knowledge-based economy. It is based on the framework of offering 'digital pipes' to every citizen and supporting the mainstream digital services. The major schemes of Digital India include the BharatNet project for Internet connectivity to rural India, the use of CSCs for delivery of e-services and the building of the GeM for procurement. It has brought about increase in the delivery of government services and increase citizen participation especially in rural areas due to information and online access.

Impact: Bharat Digital has significantly improved the dissemination of various government services especially in far reaching and hard-to-reach areas. Some of the services are e-Hospital, which has enhance healthcare delivery, e-Pathshala to enhance education delivery and

DigiLocker to enhance document storage services to citizens. However, slow internet connection in the rural areas, absence of proper technology support in many fields, and low awareness about technology in many of the depressed sections of the society have posed a check to the growth of the concept of Digital India.

E-Government Portals: Government to Citizen Services There are several examples of created e-government portals aimed at improving the government to citizen services across the sectors. For instance, National e-Governance Plan (NeGP) was launched in 2006, which offers a blueprint for e-governance projects at the cross ministry and state level. This is apart from the e-District facility where the services like birth and death certificates, ration cards and pensions are to be delivered through online. Another major government portal is the MCA21 portal under Ministry of Corporate Affairs through which businesses concern can file statutory returns and obtain corporate data etc. The intended purpose of these platforms is transparency of public services, effectiveness of delivery with minimum physical interaction with civil servants.

Impact: Implementation of E-Government portals have cut the barriers of administrative delays, bureaucratic interferences and corruption in the delivery of public services since the handling of the services is automated. Some services like preparation of tax returns, passport application, business registration among others have been made much easier and secured than before. However, there are some challenges such as usage, lack of infrastructure especially in the rural areas and the digital gender divide that affect the oriental progress of these portals.

Bhoomi Project: Land record management in Karnataka State: the 'Bhoomi' Project The 'Bhoomi' Project was initiated by the Karnataka government in the financial year 2000–2001 with the primary objective of computerization of the land records and their demonstration to the public so that the general public could easily check or update their records. The conventional method of keeping land records was not always efficient; it faced problems such as delay, corruptions and wrong information. The analysis of transactions at Bhoomi shows that it has cut the time needed to process the transactions in land and increased the clarity of the data on ownership of the land.

Impact: Bhoomi has been effective in fighting the menace of corruption as well as undesired delays in every other services pertaining to land. It has made land records more transparent by making it easier to access them through the internet thus helping to improve the business environment in Karnataka. Nevertheless, some few difficulties like, inadequate internet connectivity in rural markets and problems associated with static and wrong data have mitigated full functionality of this BT.

Passport Seva Project: In 2010 the process of implementing the Passport Seva Project has been launched and it became the e-governance Project of the Ministry of External Affairs and Tata Consultancy Services (TCS). The objective of the project is to enhance the process of passport issuance through use of application for online passports, incorporating use of biometric components in the process of issuing passports and restructuring of a normal process of issuing passports. This has also helped in coming up with an appropriate time for issuing the passports and also eased the issue of their transparency.

Impact: Passport Seva Project is one of the successful projects of Government of India that has brought a qualitative change in the service delivery in the area of passport services. Appointment or call booking has appeared to be satisfying citizens with utilization of online systems and real-time applications. However, there are always some issues with NVS and CT for mobilization in rural areas and people's insufficient level of digital competencies.

Discussion

Indeed, it can be argued that e-governance in India has evolved as a major phenomenon that has revolutionalised the delivery system of public services, transparency and accountability. The lessons to be learnt from the Aadhaar ID project combined with the Digital India plan or the several e-government portals reveal a broad spectrum of effects of such projects on various aspects of governance and public administration as well as the lives of the common citizens. Despite the success of these projects, a number of fundamental questions have to be raised and explored to assess the effectiveness of the projects and their drawbacks.

1. Increased Efficiency and Accessibility

E-Governance initiatives have also helped in improving efficiency of the public services, doing away with manual intervention, cutting short the bureaucratic management and fee of intermediate agents. For example, Aadhaar has made the system of DBT effective for subsidy delivery through which subsidy funds reach the target groups without chances of pilferage. Likewise, the Passport Seva Project has enhanced the TAT for the issuance of the passport which is fulfilling the millions of citizens.

However, whilst there have been gains in efficiency in the urban areas, efficiency, access and coverage in the rural areas still remain a big problem. The successful implementation of e-governance is challenged by an uneven roll out of digital infrastructure especially in rural areas thus making it harder for every party to maximize potential benefits afforded by digitalization. In the same token, despite initiatives such as the Digital India, many of the rural citizens have challenges when it comes to e-government productivity because either they cannot access the internet or they lack adequate knowledge in the use of the digital tools.

2. Transparency and Accountability

The effective implementation of the e-governance projects such as Aadhaar and Bhoomi has helped transform government services as one of the most transparent. Aadhaar has eradicated identity theft and multiple registrations in the welfare programmes due to its biometric enabled identification while Bhoomi has increased the efficiency of land deals through easy access to records. Measures of this nature help to minimize corrupt practices since contract award is not influenced by individuals but rather coupon codes, which generate a record of the transaction.

However, several questions are raised with the large scale digital systems including their accountability and how they are regulated. For instance, Aadhaar have attracted concerns citing privacy infringement and threats of data leakage. While the system had mitigated fraud, risk remains a problem since personal identification information such as fingerprints are stored centrally hence compromising privacy while enhancing transparency. Unfortunately, this is a

reality today, and to reduce such risks the laws protect data and have strict control measures in place.

3. Cost and Resource Optimization

It may be noted that e-governance initiatives are capable of providing a cost effective solution to delivering public services by cutting down on overhead costs and simplifying operations. Other e-marketplaces such as the Government e-Marketplace (GeM) that falls under the Digital India initiative help the government to optimally order supplies and provide good value for money. They also afford an easier accessibility of services eliminating the need of citizens to travel physically to the government offices so as to conduct their businesses.

However, cost of creating e-governance projects is very high during the initial stage and the cost may include. One has to invest in formulating and implementing infrastructure development, integrating different system, training the government employees to use the digital systems etc. Also, the costs of keeping up the digital resources, updating it, and defending it from hackers and other online threats are perpetual. These are projects that require good budgetary and long term planning in order to make them sustainable and continue for more years recouping their costs.

4. Inclusivity and Social Impact

Speaking about the opportunities of e-governance one of the most significant aspects is the improvement of the situation for the limited access population groups and increasing their chances to get services they need. Despite some concerns, Aadhaar has ensured that sections of the society which are otherwise unlikely to get a chance to access government schemes including the homeless and the rural poor can get enrolled. About the Digital India application and various other digital literacy campaigns, this is meant to establish the divide between the urban and rural population and equip the latter with skills to interact with the system.

Nevertheless, there is a potential to deepen people's exclusion especially those who are not computer literate or lack accessories such as smartphones. This implies that elderly people, people in remote rural areas and those with disabilities cannot access services provided by e-

governance hence they remain locked out of the system. To foster more inclusive governance it is critical to close these gaps through targeted digital literacy campaigns and to support the independence of those alternative mechanisms of service delivery.

5. Cybersecurity and Data Protection

Since e-governance uses technical and communications infrastructure, it is imperative to address factors of security, particularly in regard to computers and data accumulation. Initiatives such as Aadhaar & Digital India management deals with personal and financial details hence are vulnerable to hacking attempts. Every violation of security can lead to disastrous results such as identity theft, fraud, and loss of people's confidence in e-governance.

India has come up with a working framework of cybersecurity but there is difficulty in establishing a strong outlook in e-governance services. Possible preventive measures include the enhancement of the encryption standards, specific and strict access controls, and raising public awareness about data protection. It is also important for the government to protect legal requirements and procedures for the handling of the datasets in order to improve the level of security on e-governance solutions.

6. Scalability and Future Prospects

Most of the e-governance projects like the Aadhaar and Digital India have been proven to have the ability to scale in relation to their impact on the millions of Indian citizens. It also means continuation of digitization, automation, using artificial intelligence (AI) for governance which is still to unfold full potential for the future. For instance, AI, or more specifically, predictive analytics can enhance service delivery in areas like, healthcare, education, and security.

One major drawback is that the scope of e-governance expands each year and the system should hopefully be able to adapt the new technologies. Continuity of updates, passing of relevant trainings to government employees, as well as the possibility to develop new approaches to applied technologies will be the key factors in the long-term perspective on the development of initiatives.

Conclusion

The paper on the effects of e-governance on public service delivery in Indian shows how the method and dynamics of government services delivery has undergone a significant change. Initiatives like Aadhaar, Digital India and various e-portal for government have made tremendous changes to increase the effectiveness, transparent and user friendly the government services. Such digital platforms have helped to ease out procedures, cut out paperwork and made officials more responsive since they reduced costs and improved services. However, the study has also established major constraints; the key among them being, the issue of the digital divide, cybersecurity, and data protection. Despite the fact that the enumerated e-governance projects have stepped forward on the path of development, sustainability and proper inclusion, it is still a challenge. To successfully deal with these challenges better digital literacy programmes, stronger cyber security and more investments in infrastructure will be necessary for the effective implementation of e-governance. In conclusion, it is very important to note that as much as e-governance is hinged on technology it is equal to this technology without discriminating or excluding any segment of the society.

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