IJNRD.ORG **ISSN : 2456-4184**

INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG

An International Open Access, Peer-reviewed, Refereed Journal

Title: Effectiveness of E-Governance Mix in India

Authors:
1.   Dr. Sunil Kumari, Assistant Professor, Govt. College Meham, Rohtak
2.   Mrs. Jyoti, Assistant Professor, Pt. NRS Govt. College, Rohtak

Abstract
As it is being witnessed that in present global scenario product economies are turning to information and knowledge economies, so governance of such economies needs also to be electronically consequently concept of E-Governance is emerging of which effectiveness depends upon IT infrastructure, service quality of web portals of E-Governance and its delivery to citizens at affordable cost with accuracy and proper security. Present study aims at finding the level of effectiveness of E-Governance in India. Study reveals that efficacy of E-governance depends upon the service quality of web portals provided by the Govt. to citizens.
Key Words: Web Portals, E-Governance Mix, Service, Quality

1.   Introduction

In present era of information and communication technology where economies are undergoing to transform to E-governance as a broader government modernization programs, so how India can isolate itself at this counterpart. At the same time, not all Indian state governments are at the same level on the e-governance curve. While some states have been proactive and faster adopt e-governance concept, others are still in the process of transforming the domain of citizen-centric governance. Some developed countries at global level, however, have already achieved the goals of Governance 1.0, and are now moving on to Government 2.0, described as the next phase, or next step of good governance and India is also trying to pick the same track of E-governance.

E-governance is nothing but an application of electronic media in Govt services. To make the E-governance more effective E-governance mix is framed that signifies the mixture of 4As i.e. Awareness, Accessibility, Adaptability and Affordability in optimal manner. Goodness of E-governance depends upon service quality of web portals provided by the Govt. regarding these 4As. The central and state governments have taken several initiatives to harness the power of ICT to improve G2G, G2C and G2B interactions Government's concern seems in adoption of   National e-governance Plan (NeGP), which aims to make all government services accessible to common citizens in their localities through common service delivery outlets and ensure efficiency, transparency and reliability of such services at bearable costs. Now question arises whether Govt web portals are meeting the needs of citizens so that more steps can be taken by Govt to improve the efficacy of E-Governance which initiates the researcher to make the study on this topic.

2.   Literature Review

M. Shamsul Haque (2002) revealed in his study that E-governance must show more than this dismal scenario of human conditions in India. After all, the poor citizens need the basic material preconditions of living — including food, health, education and employment — before they become interested in non-material concerns like information and knowledge provided by e-governance. There is no doubt that e-governance has been useful for certain services enjoyed by citizens, especially the affluent high-income families and foreign investors. But it is yet to be seen whether e-governance can eradicate poverty, reduce inequality and satisfy basic human needs in a poor country like India**.**

A. Monga (2008) concluded that with the introduction of e-government applications, the service delivery mechanisms in India have made clear departure from the past - cramped spaces, shabby ambience, long queues, delaying tendencies of officials procedural complexities, direct and indirect demands for bribe, and inefficiency in work. The introduction of Information Technology in the governance process has brought about a revolution in the quality of service delivered to its citizens.

Xenia Papadomichelaki and Gregoris Mentzas (2009) conceptualized an e-government service quality model (e-GovQual) to develop, refine, validate, confirm and test a multiple-item scale for measuring e-government service quality for public administration sites where citizens seek either in-formation or services. Within E-GovQual four factors are used: reliability, efficiency, citizen support and trust. Each of the four factors had a

significant impact on overall service quality. Through understanding the service quality dimensions for governmental sites, an organization will stand a much better chance of gaining and serving much more citizens.

Dr. Sanjay Kumar Dwivedi & Ajay Kumar Bharti (2010) stated in their study that 81% citizens report reduction in corruption, 95% find cost of e-governance affordable and 78% favors fast of delivery of services. Therefore we can say that e-Governance is the key to the "Good Governance" for the developing countries like India to minimize corruption, provides efficient and effective or quality services to their citizens.

Debjani Bhattacharya, Umesh Gulla, M.P. Gupta, (2012) took seven constructs – i.e. citizen centricity, transaction transparency, technical adequacy, usability, complete information, privacy and security and usefulness of information – were identified from the analyses, which can be used to assess the demand side service quality of government portals. **Jaya Iyer & R.K.Srivastav (2012)** measured the website quality, proposing nine dimensions which are identified based on a review of the literature and on the analysis of data of a pilot survey.

Sushil Kumar Singla & Himanshu Aggarwal (2013) focused in the study at discovering e-Governance inventiveness initiated by the Punjab Government. The study found why e-Governance is not appropriately applied in rural areas of the Punjab. It emphasized on determinants of e-Governance to control the corruption. It has also been explained the awareness of citizens about internet required for effective implementation of e-Governance. This study is useful to know the impact of e-Governance projects implemented and find out the scope of e-Governance in the State of Punjab.

Parul Jain & Pradeep Suri (2017) explored that an e-governance project where citizen is taking as a central point witnessed extraordinary value of theoretical S-A-P variables is anticipated to be well thought-out by high public value. The study has made in depth to determine the relationship between S-A-P variables and civic value of e-governance plans.

P. Adjei-Bamfo & T.M. Nyamekye et al (2019) reveals that dynamisms in building a healthy ICT infrastructure, web portals, and human capability to adopt Information communication technology is a proposal to developing countries inter alia an informative stage to share and communicate SPP necessities. E-governance also assists a broader model for market keenness valuation and a cohesive e- procurement structure towards impactful SPP observing and assessment.

Atta Addo & PK Senyo (2021) examined the role of digital identity in socio-development and inclusion and determines a relationship model between both. Study contributes in advancement of E-Governance by establishing the relationship between socio-economic development and inclusion.

Furthermore, many more researches have also been done to determine the quality of the e-Government websites in different countries. To move on the same line in Indian context, present study aims to provide an instrument for measuring the quality dimensions of Government web portals to make the E-governance mix more effective in India.

3. **Objectives of the study**
- To assess the service quality of Govt Web Portals in India.
- To explore the determinants to optimize the E-Governance mix.

4. **Research Methodology**

Research is exploratory in nature for which both types of data primary as well as secondary, has been collected. Primary data has been collected through circulation of questionnaire to 100 citizens of India rating at 5 point Likert's scale and secondary from Newspapers, magazines, internet etc. proper weights were given to scores gathered as per their significance. Principal Component Analysis has been used to testify the adequacy of various factors affecting E-Governance mix and grouping thereof. Further X^2-test has been applied to know the validity of the results of the study.

5. **Hypothesis:**
- **H_0:** E-Governance Mix is independent of the stated five factors (F_1 F_2, F_3, F_4 and F_5)/Variables.
- **H_1:** E-Governance Mix is not independent of the stated five factors (F_1 F_2, F_3, F_4 and F_5)/Variables.

6. **Parameters of the Study:**

Following factors have been taken as parameters of study which will assess the quality of the Government web portals in India.

6.1 Table: Parameters of the Study

Website Design (F$_1$)	Reliability (F$_2$)	Familiarity (F$_3$)	Personalization (F$_4$)	Security/Privacy (F$_5$)
Easy in Use	Promise to respond	Familiar with Website	Offers a Choice	Assurance of Privacy
Visual Appeal	Services' righteous	Conducting Online Transaction	Links to Other Websites	Non sharing of my information
Well organized Outlook	Reasonability of charges	Interactions with Govt. Agencies	Delivering the Services	Protects information
Availability to Citizens			Variety in Service Options	
Doesn't Crash				
Loads its pages Faster				

7.   E-governance Framework

Taking the various views of different scholars it has been explored that optimal framework of following 4 As, which can be named as E-Governance Mix, can make the E-governance most effective.

7.1   Awareness: This metric of the 4A framework requires all citizens are aware of all web portals of e-governance available made by the Government.

7.2   Accessibility: All reports, information, notifications etc provided by the Govt electronically must be accessible to all citizens. Moreover, it needs adequate infrastructure.

7.3   Adaptability: The metric ensures the E-governance system ability to adapt to the changing needs of society and fight the regional disparity as well as local issues and contexts. This must be flexible and respond to the needs of its citizens, meet their best interests and adapt to different contexts.

7.4   Affordability: Govt. should also ensure that all web portal of e-governance are either free of cost or affordable to the all citizens.

8.   Results and Discussions

Question wise analysis was made with the help of Excel and SPSS version 12.0. The questionnaire was based 5 different variables that were considered to be significant while using the ICT based Web Portals of E-Governance and it was measured against a 5-point Likert scale, depending on the level of importance attached to each variable. The facts obtaining from the questionnaire were analyzed by using Factor Analysis. Variables that have factor loading of more than 0.5 were grouped under one factor. Only the factors having Eigen values greater than one were considered and the remaining factors have not been considered as part the analysis. Further statistical tests were performed on the data collected.

Table 8.1: Rotated Component Matrix

S. No	Constituents	F_1	F_2	F_3	F_4	F_5
1.	Offers a Choice					0.811
2.	Easy in Use	0.766				
3	Non sharing of my information			0.733		
4.	Familiar with Website	0.812				
5.	Well organized in outlook			0.711		
6	Assurance of Security				0.556	
7	Conducting Online Transaction	0.749				
8	Doesn't Crash		0.829			
9	Services' righteous		0.538			
10	Reasonability of Charges		0.614			
11	Promises to respond				0.849	
12.	Loads its pages faster	0.543				
Eigen Values		2.414	2.404	1.792	1.455	1.366
Commutative Percentage		20.032	34.968	47.089	58.470	67.534

Note: F_1, F_2, F_3, F_4 and F_5 are the five derived factors.

Source: Survey

From the Table 8.1, we can infer that the 12 variables have coded against the 5 point Likert scale. Table 1 shows the Rotated Component Matrix (RCM) for the 12 variable giving the proper weight as per their importance to each variable. This has been used by using SPSS version 16.0. The Principal Component Analysis is a commonly used method to group the variables under few unconnected factors. This method is closely related to Factor Analysis. A factor is a co-relation between the concerned variable with a specified factor. Thus, it is very important to analyze the nature of a particular factor, and then group them under one factor. Factor Analysis using Varimax rotations has derived 5 factors, with each having Eigen values greater than I have been shown in the Table 8.1. From the table, it can be seen that Factor$_1$ has the Eigen value of 2.404 and explains 20.032% of the variance. The Eigen values and percentage of variance for other factors are also shown respectively in the table. The total Variance accounted by 5 factors is 65.534%, which is acceptable thus establishers the validity of the study.

9.   Testing of Hypothesis

Table 9.1: Cross Tabulation of Factors & E-governance Mix

		Factors				
		F_1	F_2	F_3	F_4	F_5
E-governance Mix	A_1	18	3	5	6	0
	A_2	5	0	7	6	1
	A_3	2	1	5	9	5
	A_4	8	2	10	6	2

Source: Survey Analysis

Table 9.2: Pearson's Chi-square Tests

		Factors/Determinants
E-governance Mix	Chi-square	25.945
	Df.	12
	Sig.	.010*
The chi-square statistics is significant at the 0.05 level		

Source: Survey Analysis

From the table 9.2 and 9.3, it was found that the chi value i.e. $0.01 \square 0.05$ at (95% confidence level). Hence, the researcher reject the null hypothesis that the various elements of E-governance Mix is not affected by various stated factors i.e. Website Design (F_1), Reliability(F_2), Familiarity (F_3), Personalization (F_4) and Security/ Privacy (F_5).

From the analysis, it is clear that effectiveness of E-governance is influenced by mainly awareness and affordability. Other factors have also significant impact on the E-Governance mix. Thus the researcher accepts the alternative hypothesis that E-governance Mix is affected by stated variables i.e. Website Design (F_1), Reliability (F_2), Familiarity (F_3), Personalization (F_4) and Security/ Privacy (F_5).

10. Conclusion:

Present study finds that E-governance is an emergent counteractive mechanism to govern the information system or knowledge economy to give the assurance of accountability, truthfulness and limpidity. If E-Governance portals are constructed on the basis of stated 5 pillars, it would make the web site quality better in E-governance. It would assist as well stimulate the citizens to use the web portals. Hence the Govt. should design the websites in such a manner that to provide the better governance. So web portals have significant impact on the E-Governance effectiveness, its quality matters a lot in this regard and all stated variables i.e. Website Design, Reliability, Familiarity, Personalization and Security/ Privacy can optimize the E-Governance mix. Furthermore, Govt. should design its E-governance mix consisting of 4 As i.e. Awareness, Accessibility, Adaptability, and Affordability in such a manner so that service quality of web portals provided to citizens can be improved. So study proves the alternate hypothesis true which means there is a strong relationship between service quality of govt. web portals and effectiveness of E-governance mix.

References

- Haque Shamsul M. (2002); International Review of Administrative Sciences[0020–8523(200206)68:2] IIAS. SAGE Publications (London, Thousand Oaks, CA and New Delhi), Vol. 68, 231–250; 024079

- Halaris, C., Magoutas, B., Papadomichelaki, X., Mentzas, G (2007); Classification and Synthesis of Quality Approaches in E-government Services. Internet Research: Electronic Networking Applications and Policy 17(4), 378–401

- Monga, A. (2008). E-government in India: Opportunities and challenges, JOAAG, Vol. 3. No. 2

- Mentzas Gregoris & Papadomichelaki Xenia(2009): M.A. Wimmer et al. (Eds.): EGOV 2009, LNCS 5693, pp. 163–175.

- Dwivedin Kumar Sanjay Dr. & Bharti Kumar Ajay (2010), Journal of Theoretical and Applied Information Technology viewed at http://www.jatit.org/

- Bhattacharya Debjani, Gulla Umesh & Gupta M.P. (2012), Journal of Enterprise Information Management, Vol. 25, Issue: 3, pp.246 – 271

- Iyer Jaya & R.K. Srivastav (2012). The IUP Journal of Information Technology. Vol VIII, No 3, Sept 2012, pp 39-52

- Singla Kumar Sushil & Aggarwal Himanshu (2013). International Journal of Computer Applications. Volume 44. Number 14

- Parul Jain Gupta, Pradeep Suri (2017), "Measuring public value of e-governance projects in India: citizens' perspective" Transforming Government: People, Process and Policy, Publisher: Emerald Publishing Limited, ISSN: 1750-6166, Issue: 2, 15 May, 2017

- Basel Institute on Governance (July 2017), "New perspectives in e-government and the Prevention of corruption" Working Paper Series 23, pages 60 at https://baselgovernance.org/sites/default/files/2019-06/WP_23_web.pdf

- P.T. Bamfo & T.M. Nyamekye et al (2019), "The role of e-government in sustainable public procurement in developing countries: A systematic literature review", Resources, Conservation and Recycling, Volume 142, March 2019, Pages 189-203

- Atta Addo & PK Senyo (2021), "Advancing E-governance for development: Digital identification and its link to socioeconomic inclusion", Government Information Quarterly, Volume 38, Issue 2, April 2021, 101568

- India's e-governance framework viewed at http://www.microsoft.com/india/msindia/perspective/e_governance.aspx

- E-Governance at http://en.wikipedia.org/wiki/E-Governance

- Integrated MMPs at http://india.gov.in/e-governance/mission-mode-projects

- e-Governance in India: The Society for Promotion of e-Governance at http://www.egovindia.org/

- About IT & e-Governance | STQC at http://www.stqc.gov.in/content/about-it-e-governancehttps://issuu.com/itls/docs/journal/55

- https://www.researchgate.net/publication/306916391_Effective_Implementation_of_E-Governance_in_Technical_Institutions_in_India_using_ICT_to_Make_them_World_Class

- https://issuu.com/itls/docs/journal