

## **EXPLORING CONSUMER EVALUATION OF E-GOVERNANCE SERVICES OFFERED BY GOVERNMENT OF INDIA**

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E-Governance is nothing but use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses, and other arms of government. Today, citizens are willing to get the required services at their doorstep fast, Efficient & corruption free. The commercial importance of e-services, accessed via Internet or mobile phone, grows steadily. There is a clear need to develop a better understanding of how consumers evaluate these services and develop e-loyalty. This paper examines the consumer evaluation (satisfaction) of e-government services. Current study is an exploratory in nature and the data were collected by using questionnaire method. This paper provides a review of current knowledge on consumer evaluations of e-governance services. Finally suggestions for successful implementation of electronic services offered by e-government, towards improving citizen's satisfaction, are elaborated.

**Key words: E-governance, Services, Consumer, Internet, Satisfaction, Evaluation.**

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**Literature review:**

**Bhatnagar (2002)** defines “e- Governance is a process of reform in the way Governments work, share information, engage citizens and deliver services to external and internal clients for the benefit of both government and the clients that they serve”

**Gronlund (2005)** In the process of defining e- Government / e- Governance, stresses that government has an obligation to ensure data accessibility to a broad segment of the public. He explains by saying that in every society, there are socio- economic distinctions, so that the data posted on government web pages must be simplified, i.e. Written in a popular style. Adding to this, Scott says that it is very important to satisfy public needs and recommends that every government be citizen oriented.

**Saxena (2005)** suggested a fundamental difference between e- Government and e- Governance. He defined the government as an institution which proposes, adopts, and implements concepts of governance on state or local community levels. On the other hand, the support from the government alone is not required for governance because it can be promoted by nongovernment organizations, companies, etc.

**V. B. Singh; Nikita Yadav (2012)** In this paper, researcher has given a framework and application of e-Governance along with a list of e-Governance projects run by state and central governments. Researcher has also proposed future technology for e-Governance with pictorial representation of working of e-Governance with new technology. Researcher has also proposed benefits of clouds with a graph showing how clouds reduce labour cost. Also stated that there are four pillars of E-Governance:- education,panchayats,health,education etc.

**Mrinalini Shah (2007)** in her paper E-Governance in India: Dream or reality?‘ while discussing the concerns for e-Governance in India listed issues of concern for rural 109 area as lack of infrastructure, less literacy and e-literacy, lack of awareness of the function , fear of bureaucracy, social and economic disparity. The issues she raised for urban area are concern for security and privacy and lack of time.

**Jamal A Farooquie (2001)** in his paper A Review of E-Government Readiness in India and the UAE‘argues that, reaping benefits from e-government implementation depends on the adequacy and quality of education, economy, and ICT infrastructure. E-government at the national level makes a governmental system interactive, cost-effective, quicker, and provides quality service. It is basically a system that deals with information and knowledge sharing among the stakeholders through information and communication technologies.

**Ulrica Löfstedt (2008)** in his Doctoral Dissertation e-Services for and by Citizens – Towards e-Participation and Social Systems Design for Development of Local Public e-Services‘ states that, the e-Government field emerged in the late 1990s as a context within which different practitioners shared experiences and since then governments at all levels have launched e-Government projects in order to, among other things, provide electronic information and services to citizens, businesses, and other stakeholders. Today e-Government is an emergent research field and currently research is being conducted all over the world. From the beginning research focused on national government and governmental issues, but recently, the local government level and the citizen perspective have acquired more and more attention. Currently citizen inclusion and involvement is strongly accentuated in the development of e-Government, and e-Participation is a rather new research domain within e-Government and is seen as one key to success.

**Dr. Sita Vanka, K. Sriram and Dr. Ashok Agarwal, (2007)** in their summary of panel discussion Critical issues in e-Governance ‘states that, the Government of India’s e-Governance projects should be based on Enterprise Architecture, which defines a set of business processes and Technology standards to be followed throughout the Government enterprise, providing services which are Citizen Centric, Open, Standards Based, Interoperable, Transparent, Flexible, Secure, Result Oriented and Dynamic. Enterprise Architecture addresses most of the architectural issues and leads to following benefits- improves business flexibility, and at the same time, business process and system optimization, it helps reduce process, system, and infrastructure costs and complexity, it helps ensure enterprise security and compliance, and it drives standardization, consistency, and scalability.

**Kedar Kadam, (2008)** in article Usability: High value proposition for successful e-Governance in India', opined that, the challenges of implementing an e-Governance project in India are abundant. The user size is huge and diverse. A democracy is a government of the people by the people and for the people, so the expectations of citizens from the government are very high. In such a scenario when any e-Governance system is introduced and is found not usable by the citizens or by government officials, it's not just a failure but also a waste of citizens hard earned money. Usability if used to the best of its potential is a virtual guarantee for successful e-Governance Project in India.

### **Introduction:**

The 21<sup>st</sup> century is the world of Information Technology. It brings the revolution changes in the working of whole world. The latest impact of technology has been observed on government sectors where government offices and services are governed through information technology. The adoption of new technology in government sector emerges new phenomenon called e-governance. The e-governance is referred to services provided by government to the citizens, business and local government through information technology. The rise and popularity of e-governance has proved it. E-Governance makes working of government more efficient, responsive and transparent. Many developed countries like UK, USA, and Brazil etc. have adopted the e-governance and India is one of them. E-Governance is a web based service for local, state and national governments. Government uses these web based services by internet to serve their citizens online. Government give many online services like payment of bills, taxes etc. and citizens use the services according to their need, comfort and time. Indian government also recognised the importance of technology and established the Department of Electronics in 1970. India took [1] first step towards the e-governance with the establishment of the National Informatics centre (NIC) in 1977. India launched NICNET (National Satellite – Based Computer Network) in 1987 with the aim of computerize all the district offices of the country. E-Governance provides many services to the citizens and government also.

The following are the factors which influence the acceptance of e-governance:

**Quality services and information for citizens-** Governance provides reliable and useful information in time. In the earlier stage, information was available in the aspects of forms, rules, procedures etc. but in e -governance, information is available on internet which saves time, effort and money.

**Accountability of the government:** Accountability of government increases with the popularity of e-governance. Citizens are more aware about their rights, facilities and expenditures of government on schemes. Government becomes answerable to the citizens for their performances and future plans which increases productivity and efficiency of working of government.

**Expanded approach and reach of governance:** E-Governance makes strong bonding and connection between government and citizens. It minimises the gap, increases interaction and trustability among citizens and government. With the advancement of telephone network and expansion of internet facilitates the delivery of large number of services to the citizens.

**E-Governance:** The governance is a framework which is developed with combination of man and machine. The implementation of any e- governance services requires advance technology infrastructure like for web based application require dedicated server and user friendly web interface. The following are generalized pillars considered for any e-governance application.

#### **Pillars of E-Governance:**

<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
<b>Connectivity</b>	<b>Knowledge</b>	<b>Data Content</b>	<b>Expenses</b>
Connectivity is very important and mandatory for the success of e-governance. It makes connection between people and services	Government should appoint the engineers who have the sufficient knowledge of IT. If any fault occurs in the working of	Government should maintain proper database for the e-governance. The data contents in database should be related to services	The expenses related to money which is used by the government to provide the services and benefits to the common people.

provided by the government. There should be strong connectivity between people and services of the government.	e-governance, skill full engineers can handle it and solve it so that e-governance can work smoothly.	provided by the government. Government share this adequate and relevant data over the internet for the success of e-government.	Money comes from both public and private partnerships. Expenses should be minimum and benefits should be maximum for the effective e-governance.
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The Government of India approved the National e-Governance Plan (NeGP), comprising of 27 Mission Mode Projects (MMPs) and 8 components in 2006. In the year 2011, 4 projects – Health, Education, PDS and Posts were introduced to make the list of 27 MMPs to 31. Currently, there are 44 MMPs being implemented by the government under e-Kranti.

### **Different services through E-governance:**

E-Governance is designed to provide the services to different sectors or areas and its role is multi-dimensional. The e-governance may provide services in different dimensions which are analysed and discussed below.

#### **1. E-governance services from government to citizens (G2C):**

This model relates to the services provided by the government to the citizens. This model makes the strong interaction between government and citizens. Citizens use the desired services provided by the government.

Citizens can interact with the government any time (24 hours a day, 7 days a week), any place (service centre, home/workplace) and with suitable medium (internet, fax, telephone, email etc.). The main objective is to enable the citizens to take benefits from efficient delivery of a large range of public services and to make government, citizens friendly. The following are the services provided by the G2C model:

**E-Citizen:** E-Citizen creates many service centres to offer the various customer services like issue of Ration Cards, Certificates, Passports, Online filling of FIR and Payment of online bills such as electricity, taxes, water, telephone bills etc. These centres are like government shops for providing governmental services.

**E-Medicine:** It involves online availability of various hospitals and better medical services in different parts of country.

**E-Education:** With the help of E-Education, government take many initiatives to educate the citizens and upgrade their knowledge with various information technologies.

**E-Transport:** E-Transport provides many facilities like online registration of vehicles, online issue of driving licenses, online payment of challans and taxes, control of pollution.

**E-Registration:** E-Registration reduces the paper work for registration and transfer of properties and stamp duty. It reduces the duplication of entries and increases the transparency in work.

The main aim of the G2C model is to deliver all the services of government to its citizens. The G2C model will successful if all the citizens have knowledge of all the government activities. Many groups like journalists, civil servants, oppositions will keep their eyes on the expenditure of government. Government should take feedback from public to improve the understanding between government and citizens.

## **2. E-governance services from government to government (G2G):**

It is also known as E-Administration. In this model, services are being shared between many governments. Information is shared among various government agencies, organizations and departments. The following are the services discussed in the G2G model:

**E-Secretariat:** E-Secretariat provides huge, valuable and functional information of the state. In E-Secretariat, multiple departments are linked together on internet and exchange the information of various components. It also links all the governmental departments with their headquarters and state capitals.

**E-Police:** E-Police helps everyone to feel safe and secure. For this purpose, E-Police maintains two databases. First database is of police personnel which provide records (current and

previous posting etc.) Of persons working in police. This database helps people to find the specialization of policemen according to geographical regions and skills. Second database is of criminal records. This database provides full detail of any criminal by just typing the name of criminal. This database also provide the past activities and area of operation of any criminal.

**E-Court:** E-Court will bring a revolution in the Indian pending court cases. In India, there are number of pending cases which produce frustration in people and will bring the system to a halt. Both consumers and the system need the change. If the system w3ill work in the same manner in future, than one day it will collapse. In E-Court, IT transforms the system into databases of cases having zero level dependency. In such systems, Judges can consider the appeals from intranet, give their decisions online by considering recorded facts of case and reduce the backlog of cases.

The success of G2G model is based on some important aspects like expenditure, establishment of network, planning, monitoring and controlling the performance of process resources like human and financial.

### **3. E-governance services from government to employees (G2E):**

Government to employee model increases a transparent connection between government and its employee. Employee can monitor the functioning of the government and government can also check the working and efficiency of its employees. With the help of this model, employees can aware of their benefits responsibilities. This model enhances the strengths and accessibility of the employees in the governmental organization. This model share the important information like attendance record, employee record, complaints, employee salary, working record and all kind of rule – regulations etc.

### **4. E-governance services from government to business (G2B):**

Government to business model makes connection between private sector and government sector. Government and business organizations exchange important information like collection of



taxes, payment of bills and penalty, sharing of rules and data. The following is the service provided by the G2B model:

**E-Taxation:** In the G2B model, business organizations achieve many services from government like getting licenses, payment of bills and taxes, complaints/dissatisfaction, rejection and approval of patent etc. The standards for electronic transactions and secure payment mechanism to enable payments over the electronic medium are required in the success of G2B model.

**Some E-governance Initiatives taken by various State Governments:**

**State/Union Territory:** Initiatives covering departmental automation, user charge collection, delivery of policy/programme information and delivery of entitlements

**Andhra Pradesh:** E-Seva, CARD, VOICE, MPHS, FAST, e-Cops, AP online—One-stopshop on the Internet, Saukaryam, Online Transaction processing

**Bihar:** Sales Tax Administration Management Information

**Chhattisgarh:** Chhattisgarh InfoTech Promotion Society, Treasury office, e-linking project

**Delhi:** Automatic Vehicle Tracking System, Computerization of website of RCS office, Electronic Clearance System, Management Information System for Education etc

**Goa:** Dharani Project

**Gujarat:** Mahiti Shakti, request for Government documents online, Form book online, G R book online, census online, tender notice.

**Haryana:** Nai Disha

**Himachal Pradesh:** Lok Mitra

**Karnataka:** Bhoomi, Khajane, Kaveri

**Kerala:** e-Srinkhala, RDNet, Fast, Reliable, Instant, Efficient Network for the Disbursement of Services (FRIENDS)

**Madhya Pradesh:** Gyandoot, Gram Sampark, Smart Card in Transport Department, Computerization MP State Agricultural Marketing Board (Mandi Board) etc

**Maharashtra:** Maha E-Seva, SETU, Online Complaint Management System—Mumbai

**Rajasthan:** Jan Mitra, RajSWIFT, Lokmitra, RajNIDHI

**Tamil Nadu:** Rasi Maiyams–Kanchipuram; Application forms related to public utility, tender notices and display

**North-Eastern States:**

**Arunachal Pradesh:** Community Information Centre. Forms available on **Manipur, Meghalaya:** the Meghalaya website under schemes related to

**Mizoram & Nagaland:** social welfare, food civil supplies and consumer affairs, housing transport etc.

**Research Methodology:**

**Primary Data:** In this present study, I have collected primary data by filling questionnaire from the user of e-services directly communicating with them through questionnaire.

**Secondary Data:** The major sources of secondary data for present study are – E-Governance Reports, E-Readiness Reports, Govt. reports and circulars, Newspapers, Magazines and periodicals, Journals, Conference proceedings, Internet, Websites, e-literature and Books.

Therefore, a field survey was undertaken with help of a questionnaire to study the extent of satisfaction among the various e-governance services offered by government of India. The convenience sampling method was used in this study because the researcher has no population list of Mumbai citizens' to be studied. The questionnaire was administered to around 100 randomly selected respondents in the city of Mumbai. On the basis of these questionnaires factual information was obtained.

**Data analysis & interpretation:**

Feedback obtained by user of e-governance services through the physical survey method to know their opinion about e-governance services provided by government of India. For the analysis part researcher has selected few important questions.

During the survey 39% of the respondents belong to the age group 18-25, 31% of them were belongs to age group 26-35 , 21% belong to the age group 36-50, only 9% of the respondents

were above 50. It is inferred that, (39%) Majority of the respondents belong to the age group 18 - 25.

During the survey 62% of the respondents were Male and 38% of the respondents were Female. During the survey 39% of the respondents were under graduates, 34% of the respondents were post graduates & others, 20% of the respondents were secondary level and 7% of the respondents were studied up to school level (primary Level). It inferred that majority (39%) of the respondents were under graduates. During the survey all the respondents have the ability to access the internet.

During the survey 48% respondents conducting the transaction with the government sector through online and 34% of respondents Face to face. According to them 13% of respondents conducting transaction with the govt sectors through using an agent and 5% respondents conducted by Phone. Most of the respondents conducting the transaction with the government sectors through online as well as Face to face. According to survey all the respondents access the government websites as per their need.

According to survey 48% respondents says that when there is need to do transaction with the government department instead of going by personally they prefer to use E-government services every time seating at home and 26% respondents use minimum 1-3 times. According to 15% respondents use E-government services 20-30 times and 11% respondents use e-government services more than 50% despite of going by him. It inferred that Majority of the respondents (48%) use E-government services every times instead of going by himself.

During the survey 38% of the respondents have accessed transportation related services however 34% of them accessed fees payment services yet. According to 14% respondents accessed Visa arrangement services and 9% of respondent's accessed municipality services. Only 3% of the respondents accessed education services & 2% of respondent's accessed health's related services. Majority of respondents accessed both transportation and fees payment related E-government services provided by government of India.

During the survey 20% of the respondents strongly agree that they preferred to use government services online. 46% of the respondents agree to this. While 10% of them Neutral this, 15% of the respondents disagree this and remaining 9% strongly disagree this. 66% of consumers are agreeing the fact that they preferred to use government services online.

During the survey 19% of the respondents strongly agrees that the all the government services that they want to use that are available online. 41% of the respondents agree to this. While 24% disagree this and remaining 16% of them strongly disagree this. Majority of the respondents (60%) agrees that the all the government services that they want to use that are available online.

During the survey 15% of the respondents have strongly Agree that the all the E- government services which is available online that easy to find and use. 39% of them agree to this. 26% of the respondents disagrees to this and 10% of the strongly disagrees this. Remaining 10% of the respondents neutral to this. Most of the consumers felt that all the E-government Services which is available online that are easy to find and use.

During the survey 15% of the respondents strongly agree that they are satisfied with the E-government services. 51% of the respondents agree to this. While 20% disagree this, 8% strongly disagree and remaining 6% neutral to this. Majority of consumers (66%) are satisfied with the E-government services provided by government of India.

During the survey 19% of the respondents strongly agree that the E-government websites is user friendly. 35% of the respondents agree to this. While 27% disagree this, 8% strongly disagree and remaining 11% neutral this. Majority of consumers are agreeing that the E-government websites is user friendly.

### **Statistical Study:**

The statistical test, in which the test statistics follow a chi-square distribution, is called the chi-square test. Therefore chi-square test is a statistical test, which tests the significance of difference between observed frequencies and the corresponding theoretical frequencies of a distribution, without any assumption about the distribution

of the population. Chi-square test is one of the simplest and most widely used non-parametric test in statistical work. This test was developed by Prof. Karl Pearson in 1900.

### **Testing of Hypothesis:**

#### **Hypothesis 1:**

**H<sub>0</sub>:** There is no satisfaction of citizens towards E-governance services provided by government of India.

**H<sub>1</sub>:** There is satisfaction of citizens towards E-governance services provided by government of India.

$$X^2 = \sum \frac{(O-E)^2}{E} = 66.3$$

Degree of freedom  $n-1 = 5-1 = 4$

Significance level = 0.05

Table value = 9.49

#### **Interpretation:**

Table value is less than calculated value so we reject null hypothesis and accept alternate hypothesis.

**Therefore there is satisfaction of citizens towards E-governance services provided by government of India.**

#### **Hypothesis 2:**

**H<sub>0</sub>:** There is no relationship between e-government websites and citizen's satisfaction towards e-governance services provided by government of India.

**H<sub>1</sub>:** There is relationship between e-government websites and citizen's satisfaction towards e-governance services provided by government of India.

$$X^2 = \sum \frac{(O-E)^2}{E} = 25$$

Degree of freedom  $n-1 = 5-1 = 4$

Significance level = 0.05

Table value = 9.49

**Interpretation:**

Table value is less than calculated value so we reject null hypothesis and accept alternate hypothesis.

**Therefore there is relationship between e-government websites and citizen's satisfaction towards e-governance services provided by government of India.**

**Findings:**

- Majority of respondents are aware about the various types of E-government services provided by government of India.
- Most of the consumers are agreed the fact that they preferred to use government services online. Even though there are few respondents disagree with this.
- Majority of respondents accessed both transportation and fees payment related E-government services provided by government of India.
- Most of the respondents conducting the transaction with the government sectors through online as well as Face to face.
- Majority of the respondents use E-government services every time instead of going by himself. All the respondents have the ability to access the internet and access the government websites as per their need.
- Majority of the respondents agrees that the all the government services that they want to use that are available online and agreed that the E-government websites is user friendly. However there are few respondents are not satisfied with the e-government services and websites.
- Most of the consumers felt that all the E-government Services which is available online that are easy to find and use.
- Majority of consumers are satisfied with the E-government services provided by government of India.

**Suggestion:**

- There should be trained and cooperative manpower for effective implementation of e-Governance Training camp for citizens & users should be arranged in every district and village.
- The software should prefer to use the local language for increasing the interest of user in new technology.
- There should be no Service tax or GST for online payments through e-government websites.
- Conduct different cultural programmes to promote the E-governance services initiative.
- The proper training should be arranged for new employees. E-Governance projects mostly developed in English language, majority of citizens do not understand English, so implementation of these projects in local languages is suggested. The Government of Maharashtra should create or start State Training Institute in District place or a region.
- There should be adequate number of technical person for giving proper technical support.
- For the implementation of the project, Government should provide adequate infrastructure & site for the services.
- The government should maintain & execute their portals & websites themselves.
- There should be proper interactive, user friendly software with familiar language support.
- The charges of internet usage are very high, start the kiosk in every village to provide internet facility as well as government related information.
- The charges of internet usage are very high, start the kiosk in every village to provide internet facility as well as government related information.
- The CSC should provide the services on holidays and after Office hours. The CSC should start the help desk to provide the information about the government services
- Government should start the awareness programs for the citizens so that they can trust on the government services.
- There should be up gradation of Government website once in a week & Government should take feedback regularly.
- Government should provide the high speed internet connectivity.
- There should be an establishment having incentive structure for supporting and encouraging e-Governance.

**Conclusion:**

E-Governance in India has reached in transitional state where almost every sector of Government is empowered through E-Governance. The people of India are enlarging extent availing these services. E-Governance enhances the relationships between G2G, G2C, G2B, C2G and B2G using ICT. A citizen found that implementation of e-governance system is perceived as more significant than the manual system. Consequently transparency would be maintained between citizens and government and this would help in growth of the nation. Implementation of e-governance services help citizens to avail civic services ‘Anywhere, Anytime’ according to their convenience. The most popular services like e-transport, e-education, e-tax, e-police, e-court and etc. Thus, E-Governance not only provides information about various activities of a Government but also involves citizens to participate in government’s decision making process. During the last few years, many initiatives have been taken by different state governments in India for using IT as a tool in the functioning of Government so as to provide better services to citizens. The availability of internet services is very limited in our country due to which services are not properly delivered to the citizens. Privacy is another important issue. Citizens have to give so much personal information while using online transactions which results in privacy issues.

Due to implementation of e-governance, citizens don’t feel the need to depend on any intermediaries or agents to avail e-government services. Hence, implementation of e-governance services helps them to reduce travel cost, time and effort and hence the total cost of the service. In spite of poor infrastructure, poverty, illiteracy, language dominance and all the other reasons India has number of award winning E-governance projects. Effective promotion schemes by the Indian government will also be a boosting factor to provide quality services to their citizens which means there is huge potential for the development of e-governance in various sectors. Citizens have strongly agreed that e-governance delivers better services to them. Hence it is clear that there is a high impact of e-governance services on citizens.



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