

## **e-GOVERNANCE AND e-GOVERNMENT: A STUDY OF SOME INITIATIVES**

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### **Abstract**

*Government of India (GoI) recognizes that e-Governance, in the context of developing countries, provides an excellent opportunity for improving governance. These changes could not only go a long way in improving the quality of life of these sections of society, but could actually provide them more equitable access to economic opportunities than ever before. Hence the Government of India views e-Governance as a vehicle to initiate and sustain reforms. The present work focuses on various e-government initiatives in India and China. This study aims at finding users perception on level of Satisfaction from e-filing Project in Indian companies. Questionnaire is administered on Company Secretaries, Chartered Accountants of various manufacturing and Service Sector companies of India. Descriptive as well as inferential statistics were used for analyzing data. Data analysis suggested e-filing system need to be strengthened on various parameters like Connectivity with server, Forms format, Ease in communicating information to outsiders, and data Accuracy in India. Implications of the study, limitations and future research directions have also been discussed in this paper.*

**Key Words:** E-Government, E-Governance

**JEL Classification:** H11 - Structure, Scope, and Performance of Government

### **1. INTRODUCTION**

With the advancement of ICT (Information, Communication Technology), the words like E-government and E-governance have come into prominence. In fact both these terms are used synonymously although they are quite different and have differing audiences to cater to and different objectives to achieve.

#### **1.1 Definition of e-Government and e- Governance**

The concept of e-government, according to the *UN Global E-Government Readiness Report*, mainly involves government websites, the goal of which is to build "...a people-centred and inclusive information society, putting the potential of information and communication technologies at the service of development and addressing new challenges of the information society" ([www.unpan1.un.org](http://www.unpan1.un.org)).

The primary delivery models are: Government-to-citizen/customer (G2C), Government-to-Business (G2B), Government-to-Government (G2G), and Government-to-Employees (G2E).

e-governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective.

The scope of e-Governance covers: Electronic Service Delivery (G2C), Delivering information and services electronically to citizens and businesses, Government to Business Transactions (G2B), Delivering information and transacting electronically with businesses, Government procurement and infrastructure projects, Internal Government Administration (G2G, G2E), Improving efficiency, effectiveness, and transparency of intradepartmental and inter-department interactions within government, and with government employees, and Foreign Trade (G2X).

### **1.2 Difference between e-Governance and e-Government**

There is no major difference between (munshi, 2008) e-governance and e-government. These two terms e-governance and e-government are used interchangeably, still could be defined and differentiated appropriately. To summarise the corresponding characteristics of e-government to e-governance:

#### GOVERNMENT - GOVERNANCE

superstructure - functionality  
decisions - processes  
rules - goals  
roles - performance  
implementation - coordination  
outputs - outcomes

#### E-GOVERNMENT - E-GOVERNANCE

electronic service delivery - electronic consultation  
electronic workflow - electronic controllership  
electronic voting - electronic engagement  
electronic productivity - networked societal guidance

### **1.3 Components of e-Government**

It refers to the use by government agencies of information (www.electronicgov.net) technologies (such as wide area networks, internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government, as per World Bank definition. E-Government is expected to allow for less corruption, provides increased transparency, affords greater convenience, improves revenue and reduces costs. Preconditions for e-government are (a) Government in good working order, (b) Functioning governance processes, (c) Availability of resources, (d) Consensus on drivers for e-Government and (e) Political support & leadership. Government Stakeholders include citizens, businesses, government employees, government ministries, department and

agencies, union leaders, community leaders, politicians and foreign investors. Governments are the societal superstructure for politics, policies, and programs. The components of e-government are as follows:

**i) Electronic Service Delivery** (Dawes and Prefontaine, 2003)

Governments can query, inform, and transact with the public over electronic networks. The expectations were,

- Access by a person to all the personal data on that person that is held in government data banks. So far this is limited by security, privacy, and confidentiality concerns.
- Access to all government documentation of all kinds by anyone. At present the storage and retrieval costs are prohibitive, and there are also security, privacy, and confidentiality concerns here as well.
- Information architecture that permits one-stop-shopping for all information from all governments in a simple thematic directory. There are also cost constraints, and no known technology to integrate, index and search all of this information.

**ii) Electronic Workflow** (Golubchik et al, 2003)

There are some user-friendly templates currently designed and deployed throughout government intranets. There has to be the same standardized set for every type of transaction located in every government department and agency. Like "business rules", there is the potential to develop "administrative rules" that would routinize substantially information processing and decision-making. The larger issues in this area are security, privacy, and confidentiality.

**iii) Electronic Voting** (PUMA, 2002)

The system is working well in India. In developed countries, the concerns over security, privacy and confidentiality could be more challenging than with most other electronic interactions. If the suspicion arises that candidates can access the record of electronic voting, voters are unlikely to trust the process enough to agree to use it. The challenge for any proposal to increase electronic voting is to build sufficient public trust in the security of the record of results.

**iv) Electronic Productivity** (OECD, 2003)

The rationale for e-government is *better operations at lower cost*, i.e., productivity. The social need to ensure public health and safety, national security and crime control, economic prosperity and environmental sustainability, will all guarantee the presence of governments and their active involvement in our lives, whether visibly or "behind the scenes". Efficiency of the expenditures has to be the target.

**1.4 Components of e-Governance**

E-Governance involves making and implementing decisions, proper Leadership, putting in place Organizational arrangements, ensuring Resources and funding, establishing Accountability and measuring success. The infrastructure requirements include,

Telecommunications network, internal agency systems, Cross- Government systems, Service delivery network – access points, Internet access and skilled staff. The expected outcomes are Better delivery of government services to citizens, improved interactions with business and industry, Citizen Empowerment through access to information and more efficient government management. The accruable benefits are increased transparency, Greater convenience, reduced corruption, Revenue growth and reduced cost of running government. Governance is the societal synthesis of politics, policies, and programs. The components are as follows:

**i) Electronic Engagement** (OECD, 2003)

The possibilities for the public to engage in the policy process via electronic networks range all the way from sending elected officials e-mail to creating a distinct conferencing facility (e-mail box, document repository, chat room, etc.) for each major policy initiative (whether a new policy, or changes in an existing policy).

**ii) Electronic Consultation** (Fountain, 2003)

This refers to interaction between public servants and the citizen and interest groups, contact between the public service and interest groups. But two recent developments have come together to produce something quite extraordinary: (1) ordinary citizens now have the potential to participate in rule making (crafting regulations); and (2) electronic rule making has gained a foothold in the U.S. national government.

**iii) Electronic Controllorship** (Pearlson, 2001)

There are two aspects to successful controllorship, both of which much be optimized and integrated to achieve full benefits, namely hardware configuration, and software customization. To effect controllorship, all informatics and telematics hardware must be interconnectable into a single system. Capacity should also be standardized. Employee e-mailboxes should have similar storage space; all Internet connections should have the same band rate, and attached documents should all have the same byte-limit on their size. Electronic technologies are playing a large role in shaping the mind-set of citizens, and they will want that mind-set reflected in social governance. Governance software should also be standardized. The other aspect of software design that needs standardization to accomplish controllorship is the use of extensible markup language (XML) for file formats and document layouts. It is used on the Internet, and can be incorporated into each and every software application.

**iv) Networked Societal Guidance** (Cullen and Cushman, 2000)

Who watches the watchers, who govern the governors, has been a central question of political analysis. The concept of distribution of powers, between branches within a government, and between jurisdictions within a country, has gone part way to answering this question. Those who are competing for power will watch each other, either to keep everyone honest or to expose the illicit practices of competitors. The rise of the mass media served to inform public opinion of such infractions much more quickly and thoroughly than when all news traveled by word of mouth. Recently the Internet has become an even speedier vehicle for such disclosures.

### Some e-Governance Initiatives in India

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-stop-shop 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, Computerisation 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	SETU, Online Complaint Management System—Mumbai
Rajasthan	Jan Mitra, RajSWIFT, Lokmitra, RajNIDHI
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North-Eastern States	
Arunachal Pradesh,	Community Information Center. 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.

#### 1.5 India slips on UN e-Governance List

In spite of the growing Internet ([www.hindustantimes.com](http://www.hindustantimes.com)) connectivity, increasing awareness of the Right to Information Act and a spurt in funding for e-governance programmes, the digital divide between the government and its citizens seems to be widening in India. The country's has fallen from a rank of 87 in 2005 to 113 in 2008 on e-government readiness.

According to the UN E-government Survey 2008, India has slipped 26 places in the last three years and been overtaken by countries like Maldives (ranked 95), Sri Lanka (101) and even Iran (108). However, they too, have themselves slipped from their 2005 rankings.

Sweden has surpassed the United States as the leader in the overall E-readiness index, with Denmark, Norway coming in second and third respectively. The US slipped to fourth place. Pakistan and Bangladesh have both improved, climbing to 131(from 136) and 142 (from 162) respectively.

The fourth edition of the UN survey measures the progress made by various member states in drawing and implementing e-government policies to improve public services. It uses e-participation and web assessment as two broad categories to rank countries on the basis of e-information, e-services and e-tools provided by their governments to meet the demands of transparency and accountability voiced by citizens. India did fairly well on both these fronts.

In the e-participation index, India was ranked 49 globally, whereas in the web measurement assessment, which measures the online presence of national websites, with those of the ministries of health, education, welfare, labour and finance of each country, it was ranked 54.

The survey makes a mention of the government's user-friendly site <http://india.gov.in/>, which promotes e-governance as an important national policy and strategy, including a link to the National e-Governance Plan (NEGP).

## **2. CASES OF E-GOVERNANCE INITIATIVES IN INDIA**

### **i) e-Choupal, Ujjain, Madhya Pradesh**

ITC Limited initiated e-Choupals project to deliver relevant technology in the hands of the farmers, which can improve the economic condition of the entire village, reduce the number of middlemen involved between agriculture commodity producers and final consumers, create networks in rural areas, which can function as virtual agricultural commodity market places.

### **ii) Bhoomi, Bangalore, Karnataka**

The crucial document which records various parameters and information pertaining to land-holding is the Record of Right Tenancy and Cultivation (RTC), which earlier were maintained by 9,000 Village Accountants (VAs or village revenue officials). The RTC is required for land transactions, to obtain crop loans, other loans and concessions linked to the size of the land holding. The drawbacks of the manual system of maintaining RTCs were: exploitative and bribes were often extracted, there was considerable scope for manipulation, harassing citizens, tampering with the records and other corrupt practices. When the Bhoomi project was launched, the generation time of the RTC has been reduced from one to 30 days to five to 15 minutes. Similarly, the mutation process cycle time has decreased from 90-180 days to 30-45 days. Crop record updating has increased to 80-100 percent from 50-70 percent. Around 12 million users have used Bhoomi since its inception, which has resulted in the collection of Rs 180 million as user charges. Presently, 0.7 million people are using Bhoomi centres every month and monthly user charges collected amount to around Rs. 10 million.

### **iii) TARAhaat, Jhansi, Uttar Pradesh**

TARahaat (meaning star market place in Hindi) is a gateway that connects the village user to information, social services, entertainment, and also to various markets, through a network of franchised cyber centres, customized in the language of their choice, covering all three components for rural connectivity: content, access and fulfilment. TARahaat has been conceived with the view that it has to be mastered and used by people with wide variations in literacy, language, financial liquidity and levels of understanding.

**iv) CARD Origin, Andhra Pradesh**

The goal of the system was to introduce transparency and efficiency in the land registration process. The main beneficiaries are the land-holding citizens of Andhra Pradesh, for whom payment of land taxes and registration duties on property was made easier. The tasks included digitization of records, implementation of hardware and software infrastructure and training of personnel.

**v) Gyandoot Origin, Madhya Pradesh**

The project aimed to bridge the digital divide in 38 villages by providing computing services to rural citizens and also to generate employment for youth who were to man the kiosks as entrepreneurs. Each Gyandoot kiosk offered services such as: prices of agricultural produce at various auction centers in the state; copies of the record of rights to land at a nominal price; online application for revenue, caste or domicile certificates etc.

**vi) eSeva Origin, Andhra Pradesh**

Located in the urban twin cities of Hyderabad-Secunderabad, e-seva was an attempt to have a central facility (distributed across the two cities via 48 centres) for payment of taxes, delivery of certificates, bill payments, document clearance, granting of licences and permits, asset licensing, forms submission etc (a total of 66 services). The goal was to eliminate the multiple offices and timings that citizens had to suffer to pay their bills and obtain other government services.

**vii) Akshaya Origin, Kerala**

The project was initiated in 2002 by requests from the panchayats (or village councils) to provide computer training to its constituents, to bridge the digital divide by providing computer literacy and e-government services, and also to provide employment to rural youth.

**viii) Lokvani Origin, Uttar Pradesh**

This project was initiated in 2004 to use existing computer kiosks to provide additional e-government facilities by entering an agreement with the district government. The project aimed to provide citizens of the district with access to information on government programmes, on land records, and with a facility to file online grievances. The grievance mechanism was such as to move the grievance to the district magistrate's office from where it was forwarded to the relevant department.

**ix) SARI Origin, Tamilnadu**

The Sari (Sustainable Access in Rural India) project in the Madurai district of the state of Tamilnadu was started in the year 2000 to link up village kiosks using a wireless

technology. The stated objectives were to improve the quality of life among the rural poor by creating employment opportunities with the help of ICTs. The kiosks would provide e-gov services along with information about health care, education, and economic conditions.

**(x) MCA21 E-Governance Project**

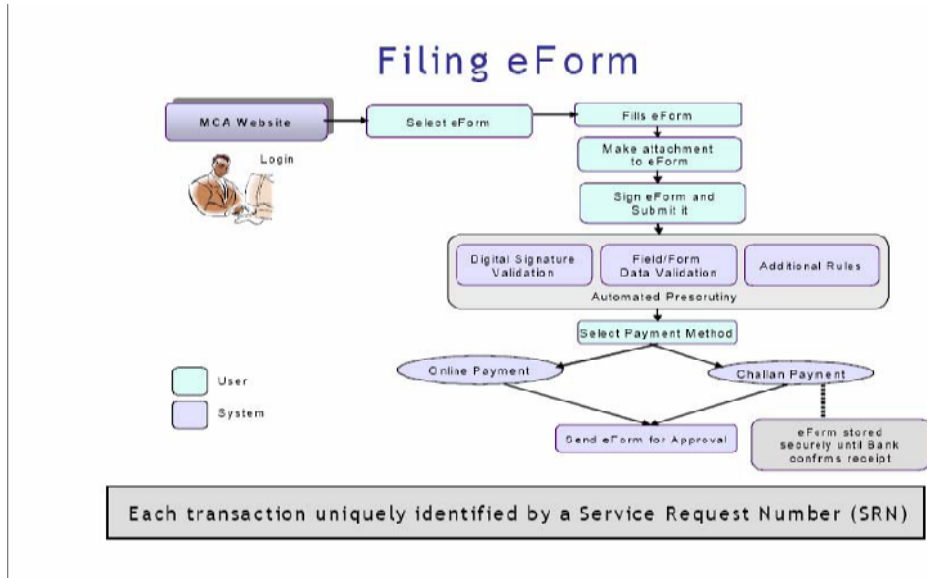
The Ministry of Corporate Affairs has implemented MCA21 e-Governance Project. It is one of the Mission Mode Projects of the Government of India under the National e-Governance Plan. The project envisages easy and secure online access to all registry related services provided by the MCA, including registration and filling of documents throughout the country for all the corporates and other stakeholders at any time and in a manner that best suits them. MCA21 seeks to fulfill the requirements of the various stakeholders including the corporate, professionals, public, financial institutions, and banks, Government and the MCA employees.

The key benefits of MCA21 project are as follows:

- (a) On line incorporation of companies
- (b) Simplified and easy mode of filing of Forms>Returns
- (c) Registration as well as verification of charges anytime and from anywhere
- (d) Inspection of public documents of companies anytime from anywhere
- (e) Corporate centric approach
- (f) Building up a centralized database repository of corporate operating in India
- (g) Enhanced service level fulfillment and customer relationship building
- (h) Total transparency through eGovernance
- (i) Timely redressal of investor grievances
- (j) Availability of more time for MCA employees for qualitative analysis of corporate information

**Efiling:** MCA21 project facilitates eFiling of various forms and applications under the Companies Act, 1956 and the Rules and Regulations there under.





**Fig1. Flowchart of eFiling**

### 3. E-GOVERNANCE INITIATIVES AROUND THE GLOBE

#### 3.1 e-Governance in China

In recent years, both central and local Chinese governments have paid increased attention to e-governance. The infrastructure includes “Three Networks and One Database,” comprising internal networks, special networks, and external networks, and a database system. The three stages in building this comprehensive network include “Office Automation,” the “Twelve Golden Projects,” and “Government Online.”

According to data from CCID ([www.apdip.net](http://www.apdip.net)), in 2004 the Chinese government invested US\$ 5 billion in e-government projects, which accounted for 10 percent of all IT spending. Analysts projected that total spending in 2005 in the IT industry has increased to US\$ billion and by 2009 this amount would reach US\$ 10 billion. This translates into a 15.9 percent compound annual growth.

The first phase of e-government in China focuses on twelve networks, widely known as the “Twelve Golden Projects,” including (a) core systems designed to strengthen supervision and enhance efficiency (i.e., the Administrative Resources System and the Golden Macro Project), (b) projects designed to safeguard government revenue and rationalize government spending (i.e., the Golden Tax Project, the Golden Customs Project, the Golden Audit Project, the Golden Finance Project, and the Golden Card Project), and (c) systems designed to ensure basic order in the national economy and social development (i.e. Golden Shield, Golden Quality, Golden Agriculture, Golden Water Conservancy, and Golden Social Security). While some of these projects include front-office applications on the external network, most operate on the -government internal network with direct links to the main databases. The twelve golden projects are as follows:

**i) Administrative Resources System** (*bangong yewu ziyuan xitong*) is a comprehensive system that underlies e-governance operations in all divisions of government work, including five components: (1) a desktop video-conferencing system; (2) an electronic meeting announcement and registration system; (3) a State Council supervision management system; (4) an electronic document transmission system; and (5) a government crisis management system.

**ii) The Golden Macro Project** (*jinzhong*), also known as the Macro Economic Management Information System, aims at increasing connectivity and information sharing among government bodies in charge of macroeconomic management so that national economic policymaking will be more efficient, accurate, and transparent.

**iii) The Golden Tax Project** (*jinshui*) is designed to prevent tax evasion using counterfeit receipts and invoices. As one of the most successful golden projects in promoting efficiency and accountability, the Golden Tax Project since 2002 has covered approximately 600,000 units, i.e., about 45 percent of taxpayers nationwide.

**iv) The Golden Customs Project** (*jinguan*), also known as the Golden Gate Project, was formally launched in 2001. The Project's current emphasis is on four application systems for (1) the management of quotas and licenses, (2) import/export statistics, (3) tax returns for exporting companies, and (4) international trade currency transactions. The long-term objective is to facilitate the modernization of China's international trade and economic transaction system by using computer network technologies.

**v) The Golden Finance Project** (*jincai*) began in 1999. As the main effort to modernize financial management within the Chinese government, the Golden Finance Project has two main objectives: first, to integrate the eleven existing sub-systems at the national level from income and budgeting management to procurement and debt control, and; second, to establish vertical networks that include provincial and municipal bureaus of finance.

**vi) The Golden Card Project** (*jinka*) is a project that promotes electronic currency in Chinese society. The central government calculates that the spread of electronic currency will not only enhance e-commerce, but also will allow government to improve the regulation of financial markets based on a unified payment clearance system.

**vii) The Golden Audit Project** (*jinshen*) aims to establish a centrally organized electronic auditing system for government entities in China.

**viii) The Golden Shield Project** (*jindun*) aims at "the adoption of advanced ICTs to strengthen central police control, responsiveness, and crime combating capacity, so as to improve the efficiency and effectiveness of public security work."

**ix) The Golden Social Security Project** (*jinbao*) aims to set up a unified national information system for labor protection and social security, monitoring changes in the labor market and providing policy recommendations to government offices at the national, provincial, and city levels.

**x) The Golden Quality Project** (*jinzhi*) aims at transforming quality supervision authorities into public service providers, enhancing transparency in administration, and establishing a standardized national network.

**xi) The Golden Agriculture Project (*jinnong*)** is a project that promotes the utilization of ICT in agriculture. The Project has three major applications: (1) a monitoring and alert system that provides warnings regarding agricultural production and animal diseases; (2) an information system supervising the market for production materials, and; (3) a service system that provides science and technology information for agricultural production.

**xii) The Golden Water Conservancy Project (*jinshui*)** was designed to build basic infrastructures, increasing the supply of information, and enhancing the capacity of data-sharing for water conservancy, including a National Flood-Control and Draught-Relief Command System, as well as a National Supervision Network for Water and Soil Conservation.

There are some other “golden projects” that were launched thereafter, such as the Golden Bridge Project (*jinqiao*) run by China Jitong Telecom Inc., the Golden Hygiene Project, the Golden Travel Project, the Golden Wisdom Project, and the Golden Trade Project, etc. But the entire infrastructure is still known as the “Twelve Golden Projects.”

#### **4. OBJECTIVES**

The study involves understanding the e-government initiatives taken in India and abroad.

The main objectives of this study are:

1. To study the components of e-governance and e-government.
2. To study the level of satisfaction from e-filling Project of Government of India.
3. To make recommendations for improvement.

#### **5. HYPOTHESES**

This study begins with a hypothesis and research questions and involves precise procedure and data source specifications.

- H0a: There is no difference of opinion amongst manufacturing and service sector professionals on the level of satisfaction from e-filling project of government of India.
- H1a: There is a significant difference of opinion amongst manufacturing and service sector professionals on the level of satisfaction from e-filling project of government of India.

#### **6. RESEARCH METHODOLOGY**

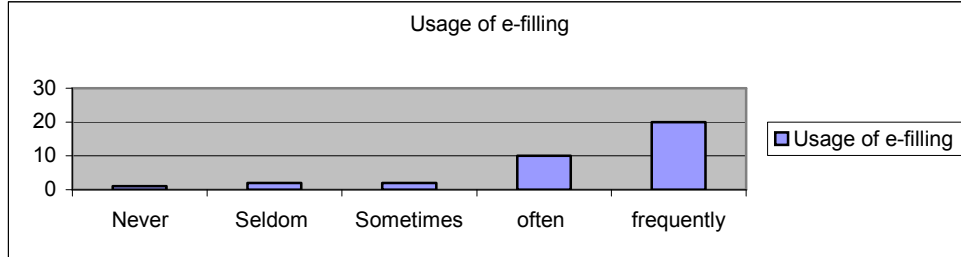
To develop the quality instrument to assess level of satisfaction from e-filling project of government of India, a two-stage research was designed. The first stage was the qualitative research consisting of in-depth interviews, the second stage comprised of questionnaire survey.

## 7. ANALYSIS AND INTERPRETATION

### 7.1 Primary Survey on level of Satisfaction from e-filing Project under MCA21 E-Governance Project

Questionnaire is administered on 150 Company Secretaries, Chartered Accountants of various Manufacturing and Service Sector companies of India.

**Fig 2. Usage of e-filing**



**Table 1. Satisfaction level from various features of e-filing process**

Features of e-filing	Highly Satisfied (%)	Satisfied (%)	Neutral (%)	Dissatisfied (%)	Highly Dissatisfied (%)
Comfortability from e-filing	46.7	33.2	13.4	3.7	2.8
Ease of e-filing	37.1	14.4	31.2	8.5	10.6
Speed	40	22.8	18.2	10.2	8.5
Security Checks	28.5	34.2	14.2	9.4	13.4
Connectivity with server	11.4	16.2	18	20	34.2
Forms Format	34.2	14.2	5.7	25.7	17.1
User friendly	45.7	31.4	2.8	5.7	11.4
e-checking	35.1	27.7	12.4	16.1	8.5
ease in communicating information to others	42.8	14.2	5.7	25.7	11.4
Form accuracy	34.2	28.5	10.5	6.5	20
Form completeness	30.5	34.2	8.5	14.2	12.2

In analyzing the survey results, the questions deal with the satisfaction level from e-filing project. The survey responses indicate that respondents are highly satisfied from features like Comfortability, Ease, Speedy, User friendly, Security checks, e-checking forms, Completeness while dissatisfied from Connectivity with server, Forms format, Ease in communicating information to outsiders, and data Accuracy.

**Table 2. Comparison of level of satisfaction from e-filing process amongst Manufacturing and Service sector professionals**

	Manufacturing (N=70)		Service (N= 80)		'Z' Value
	Mean	S.D.	Mean	S.D.	
<b>Overall Satisfaction from e-filing process</b>	3.8	1.96	4.6	1.32	<b>3.07</b>

In order to test for the difference in satisfaction of Manufacturing and Service sector professionals, standard deviation and 'z' values were computed. At 5% level of significance the critical value of 'z' is 1.96 and table 2 reveals that the calculated value of 'z' is higher. Therefore, Manufacturing and Service sector professionals differ on the level of satisfaction from e-filing process.

### 7.2 Discussion of the results from the survey

As the calculated value of 'z' is higher than the critical value, it is found that Manufacturing and Service sector professionals differ on the level of satisfaction from e-filing process. Service sector professionals (4.6) were highly satisfied than Manufacturing sector (3.8). In manufacturing sector, professionals have to attach more documents with the forms and when server connectivity is low, it takes too much time.

### 8. CONCLUSIONS

Based on the survey results and analysis, it was found that e-filing system is successful and used by most of the companies in India, which need to be strengthened.

### 9. RECOMMENDATIONS

As respondents are found to be dissatisfied from Connectivity with server, Forms format, Ease in communicating information to outsiders, and data Accuracy. Even in computerization of workflows, there will be a need to update the data periodically. In the event of each individual completing the work assigned to him, even in the present system delays would not have occurred. It will be extremely naive to assume that the updating of data would be regularly and periodically done just because the system is computerized, In fact, in the workflow computerization model there is a very real danger of substantive investments being made in hardware, application software and even in training and still the issue of prompt and regular updating of data not being effectively addressed. In the above context, it is clear that substantive administrative reforms would have to precede attempts at e-Governance. In other words, the emphasis will have to be on simplifying procedures, rationalizing processes, restructuring Government and then use IT to institutionalize such changes.

During the last few years there has been major initiatives among different Governments towards ushering in Information Technology and its tools in the functioning of Government. The emphasis has been on providing better services to citizens and in improving internal productivity. It has been widely accepted that IT implementation in Government is a most difficult process and hence requires careful planning and formulation of strategies for effective implementation.

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