Chapter 1

Introduction

This chapter introduces the main concepts and background of the research area. This will be followed by purpose of the study, problem area discussion that will help provide an insight into the research area. At the end of the first chapter, the scope of the study, the expected contributions, and the outline of the study is presented.

1.1 Understanding e-government

Information and communication technology (ICT) has become the major driving force to boost up economic growth globally. With advanced networking system and pervasive use of information technology, new standards have been set for generation, storage, and transfer of digital data. Business world has taken the opportunity of integrating knowledge and policies with ICT to usher in a new era of information economy. Government organizations across economies also have taken initiatives to adopt advanced ICTs in public administration at all jurisdictional levels and grouped them together under “e-government” (OECD, 2003). Over the last decade, e-government or electronic government has emerged as a popular concept in public administration which ensures efficient and effective (Heeks, 2001) service delivery to the citizens and stakeholders.

Fountain (2001) used the term ‘digital government’ or ‘virtual state’ instead of e-government as there is an extensive use of internet in the system. UN & ASPA (2002) explained this new approach of government as “utilizing the Internet and the World-Wide-Web for delivering government information and services to citizens”. According to The Economist (2000), e-government not only can transform the
way most public services are delivered but it also can transform fundamental relationships between government and citizens. Teicher, Hughes, and Dow (2002) referred to e-government as second revolution in public management after New Public Management (NPM).

Researchers (Gupta, Kumar & Bhattacharya, 2004) inferred that government is community living and a sovereign state or nation in a larger context. Government is a superstructure that deals with decisions, rules, implementation and outputs of its policies; whereas 'governance' refers to functioning based on processes, goals, performance, coordination and outcomes. E-government is a commitment and initiative of the government to improve its relationship with citizens and the business sector through enhanced, cost-effective, and efficient delivery of services, information, and knowledge using ICT (Rahardjo, Mirehandani & Joshi, 2007). A review of existing literature on public administration offers various conceptual definitions of both the terms. Sheridan and Riley (2006) observed that e-governance and e-government are often used interchangeably and try to clarify that e-governance is based on four processes; namely electronic consultation, electronic controllership, electronic engagement and networked societal guidance; whereas, e-government refers to the structure that is responsible for electronic service delivery, electronic workflow, electronic voting and electronic productivity. Saxena (2005) stated that e-governance refers to the ‘outcomes’ as a result of ‘effects produced’ by public administration, but, e-government refers to the ‘outputs’ as a result of ‘efforts expended’ by the public administration; and mentions that e-government is perceived to be a sub-set of e-governance. Some researchers (Chen, Chen, Huang & Ching, 2006; ) were of opinion that e-government helps breaking down agency and jurisdictional barriers to allow more integrated government services across the three tiers of government (federal, state, and local). E-Government in this context encompasses a wide range of branches and sub-areas, for example the dissemination of information, services to individual citizens and businesses and participatory democracy. According to Wimmer (2006), e-Government is multidisciplinary and consists of several domains of research and implementations like e-Democracy, e-Participation, e-Administration, e-Health, and e-Justice. Yildiz (2007) mentioned that e-government refers
to the use of ICTs by public administration to create a networked structure for interconnectivity, service delivery, efficiency, effectiveness, transparency, and accountability.

The typical cause behind initiating e-government is certainly the need for improved productivity in public sectors. E-government can be considered as a subset of e-governance, and its focus is largely on improving administrative efficiency and reducing administrative corruption (Bhatnagar, 2004). In fact, federal, state and local governments worldwide are under pressure to deliver services more efficiently at lower cost and are recognizing e-government as an attractive option, both commercially and politically (Sharma and Soliman, 2003). Though some governments might be moving faster and are becoming more innovative compared to others, yet in totality governments have become ‘cyber active’. With the proliferation of Information and Communication Technology, electronic -government or e-government has evolved significantly in developing countries like India, UAE, Bangladesh, Bhutan, Nepal, China, Bulgaria, Romania, Brazil, Ethiopia, and Algeria.

E-government provides benefits such as fast, inexpensive, trustworthy, and reliable services to citizens and business and has the potential to reshape the public sector and remake the relationships between citizens, businesses, and the government by allowing open communication, participation, and public dialogs in formulating national regulations (West, 2000; Hin & Subramaniam, 2005; Ke & Wei, 2004). It offers platform to transform structure of governments by eliminating hierarchies in agencies and thus providing transparency. Barrutia, Charterina and Gilsanz (2009) observed that efficient and effective e-Government can gain economies of scale, reduce costs, and provide technology-enabled user services.

E-government is not only delivering services through ICT but is the transformation of public sector internal and external relationships through net-enabled operations, information technology and communications, to optimize government service delivery, constituency participation and governance. E-government provides a platform for multi-channel interaction to change relationships among governments, citizens, businesses, public sector employees, and other governments from hierarchical
command-and-control to an interactive collaboration and multi-service delivery options (Esteves & Joseph, 2008).

Researchers have named this new generation of e-government initiatives as ‘Transformational Government’ (Baum, Di Maio & Caldwell 2000; Scholl 2005; Dunleavy, Margetts, Bastow & Tinkler 2006; Irani, Elliman, & Jackson 2007; Dhillon, Weerakkody & Dwivedi 2008). Transformation of public agencies is expected to follow ‘user centric’ service quality which necessarily means anticipating the actual service and resource needs of citizens who can be residents, businessmen, government employees, and other stakeholders. To get a better insight into users’ needs, U.N. survey suggests that every country needs to have clear guidelines to implement their e-government projects more effectively and that regional e-government performance measurement should be broadened from ex-ante (pre implementation) to include ex-post (post implementation) measurements so that citizen participation can be encouraged in decision making.

Three distinct areas of e-government activities can be identified as government-to-government (G to G), government-to-citizens (G to C) and government to business (G to B). Each one of these areas is a combination of different motivating factors with common goals of improving the efficiency, reliability and quality of services for the respective groups (Monga, 2008).

1.2 Importance of portal in government

One-stop entry point

An Internet portal is defined as ‘a structured web site’ that provides a point of entry into an array of structured web contents. The individual contents are grouped together by the portal operator and made available to parties. Portals are typically multi-functional and make a multiplicity of various information
and services available at a single location (Schubert & Hausler, 2001). Other researchers (Teicher, Huges & Dow, 2002; Ebrahim & Irani, 2005; Kaaya, 2004) posited that portals in public sectors integrate government information and services from distinct departments and organizations, so that users may find a wide range of information and transact with government agencies through a single contact point without groping in the maze of different government departments. Smith (2004) reflected that portals provide secure, customizable, personalizable, integrated access to dynamic content in a variety of source formats. Government internet portals are turning out to be an increasingly important element of public administration reform programs across the world because they provide an ‘one stop’ online access to many government services, and can serve as a catalyst for the development of new electronic services. They prove to be a potential and powerful tool for administrative reform and anti-corruption, which enables transparent, accountable, effective and efficient way of empowering government.

Citizen-centric digital service

Citizen-centric services have become the key priority in public reforms and might be delivered through a variety of channels, like web portals, assisted citizen service centres, call centres, automated self-service kiosks, digital television, mobile portals etc. Gupta, Kumar & Bhattacharya (2004) stated that government portals is a simple gateway which offers an opportunity to reorient services for the needs of citizens while consolidating back office responsibilities. Web portals are multi-functional information systems which provide a single point of access to relevant information and services. Gouscos, Kalikakis, Legal and Papadopoulou (2007), while developing a general model of performance and quality for government portals observed that ‘one-stop’ e-Government services have emerged worldwide as a trend to offer administrative service electronically to meet needs of citizens' daily affair and business transactions. It is a complete paradigm shift with assurance of enhanced service accessibility, abated service delivery delays and minimum costs. In another study on citizen centric approaches of e-government, Yong (2004) mentioned that one of the salient features of citizen-centric government is to make information available
to citizens easily. Portals meet the criteria by offering ‘single window’ entry to multiple public agencies and provide citizens with the platform to interact ‘easily and seamlessly’ with different departments of the government administration.

Main objectives of government web portals are:

- Providing state and national level government services digitally;
- Integrating remote regions nationwide with primary operational areas.
- Providing service to one and all indiscriminate of caste, creed, and community.

Services of different types

Government portals can be information portals; can involve transaction or can simply be provincial, local and municipal government portals which provide services to the citizens. A vast range of services are offered to the stakeholders through various websites and portals as categorized below:

- National Entry Points: Gateways or Portals
- Citizen-Centric or Business-Centric Portals
- Ministry-level Websites
- Parliamentary Websites
- Judicial Branch Websites
- Portals for Provincial, Local and Municipal Governments
- Personal Websites for Elected Officials

Each portal has its own significance as it caters to information extending across different government department, organizational boundaries and heterogeneous infrastructures. Studies posited that government web portals are one of the key priorities for public sector organizations because they constitute the ultimate stage of e-government development (Ebrahim et al., 2005; Kaaya, 2004).
E-Government portal implementation passes through several stages. It starts from a user-friendly cataloguing of all information services offered by various agencies to citizens and businesses, followed by provision of one-stop access to the most important interactive and transactional e-services. Finally it leads to integrated delivery of government services to citizens, businesses, state employees and government employees involved in the back-office integration of information systems and business processes through the shared e-government infrastructure.

Eggers (2007) in his book on e-government 2.0 explained the inevitable transformation of government portals to industry like customizable web portals as “MyGov”, in the twenty-first-century. This is possible only through transparent, collaborative and participatory open government. Lot of background work needs to be done before the portals can become fully functional, including comprehensive process re-engineering and inter-agency integration.

1.3 Issues of Government portal in India

Electronic government being a relatively newer concept for common people in a traditional democracy like India, general acceptance and frequency of use is considerably low. With the existing diversity, implementation of country level projects to achieve citizen centric government proves to be a herculean task. Dwivedi and Sahu (2009) observed that low literacy level of majority of the population, low per capita income and limited financial resources pose challenges for successful implementation of e-government. Several other factors like vastness of the subcontinent, menacing population growth, cultural diversity, political interference, digital divide, knowledge divide, and lack of infrastructure need to be addressed for implementation of successful e-government programs countrywide. Though there have been few success stories; they are mostly based on individual effort at organizational level or state level.
E-readiness of a country is another factor which plays an important role to understand capability of ICT usage. E-readiness is defined as a measure of quality of a country’s ICT infrastructure and the ability of its consumers, private and public agencies to utilize ICT to their benefit. The index ranking of e-readiness thus helps the government of a state to assess the success of technology initiatives taken up compared to those of other countries. According to EIU’s e-Readiness study (2009), e-government readiness index of India is 113, which is not very appreciative. According to EIU report (2010), digital economy rank of India is 58 out of first 70 countries. There is no growth in digital economy since 2009 as the rank remains the same.

The focus of the early stages of e-government in India, like most countries, has been to e-enable existing front office processes in their existing state without proper integration of inter organizational processes. Consequently, they lacked significant improvement in efficiency and effectiveness. Simple web presence cannot promote usage. Interaction and transaction phases followed by transformation help proper exercise of portal utility. E-Government services not only are limited by difficulties in searching for and locating the desired information; infrastructural problem like lack of computers and internet connectivity affect many segments of the general population (Singh & Sahu, 2008). Regular monitoring of user-demands and facilitation is needed to increase citizens’ response to e-government endeavours. Gupta (2010) agreed in his review of evolution of e-government in India and emphasized that assessment of infrastructural efforts and evaluations of conceptualized services need to be done for an effective e-government in India.

Assessment of effectiveness depend on several aspects: (1) quality of services provided to users from the server side (2) how are they provided to the users (3) who the services are meant for and (4) to what extent users can utilize the services that have been developed for their convenience. Maheshwari, Kumar, Kumar and Sharan (2007) in their study attributed the above aspects into front end and back end functionalities. Front end design and development attributes are those which are visible to the demand-side of a system while backend development encompasses the server side initiatives. Users of online
services can be lay citizens, businessmen, government employees or other stakeholders, so a plethora of services catering to all segments are expected from public agencies. According to the study client side attributes were categorized into service delivery, customer orientation, usability and trustworthiness. Backend or server side attributes involve content management, IT architecture, keenness of government and implementation approach.

Sarkar (2008) in his study of Indian government portals elucidated that resistance to changes and lack of interests in incorporating new systems and typical mindset of users are some of the unavoidable constraints in the execution of e-government programs. There are other demographic, political and social constraints which thwart the deliverability and acceptance of e-government in India. Some of the distinct issues are:

- Unequal distribution of wealth
- Illiteracy
- Knowledge divide
- Cultural hindrances
- Digital divide and
- Political interference
- Insufficient infrastructure

Another issue which significantly impede to poor usage of government digital services is the lack of understanding of users’ needs by the government agencies. A gap between the users’ perceived usefulness of these applications and government perceived user usefulness of the projects create issues for proper implementation of the programs. The gap between government administration perceptions of user expectations of ‘Service Quality’ and user actual perception of ‘Service Quality’ can be reduced through citizen centricity (Cai & Jun, 2003; Jaeger & Thompson, 2003; Sung, Liu, Liao & Liu, 2009). Gupta
(2010) accorded with previous studies and concluded that meeting the demand of users and making the services citizen centric are foremost priority of practitioners. Government is answerable to users of public services as the investment that goes for the development of online systems are partially borne by the users as taxes.

Welch and Pandey (2007) had indicated that service quality is one of the major factors which affect e-government in its web service. Poor response of portal use is also ascribed to inadequate citizen centric service quality. Today the focus is on transformational government where citizen participation takes a major role. Since service quality has always been a challenge with changing technology and citizen mind set; society, various government and non-government agencies, stakeholders and the electronic media need to work in harmony to improve it thus making government a citizen centric enterprise.

To conclude, issues related to government portal can be (1) strategic (2) infrastructural (3) political (4) cultural (5) social and (6) behavioural or attitudinal.

1.4 Motivation for Study

Services offered by e-government portal and their quality are motivating factors for stakeholders to adopt and subsequently use the portal (Maheshwari et. al., 2007). Adoption of a portal by citizen/customers is directly related to (a) the functionality, and (b) availability and (c) accessibility of various services offered (Bertot, Snead, Jaeger & McClure, 2006).

Government portals should embody the changes brought by web2.0 and redefine ‘agency centric’ e-government services to ‘citizen centric’ and develop ‘service-conscious’ service delivery models (Yong, 2004). With gradual transformation of system –based system to user -based, a new concept of e-gov 2.0 has evolved which provide integrated delivery of public and private services on the same portal platform. United Nations e-Government Survey (2008) emphasizes the need to transcend from providing online
services (e-Government) to more participative, citizen-centric and inclusive ‘i-Government’ or ‘connected government’.

Since users are being given priority worldwide, knowing the users have become imperative. Users of e-government has been classified into a number of groups—citizens employing government information and services; residents and immigrants seeking information about their new country; government employees using e-government in their job functions; people in other countries wishing to know more about a nation (Bertot, Jaeger, & McClure, 2008).

Government of India in its Tenth five year plan (2002-2007), had significant reference to “Convergence of core technologies and E-Governance”. According to the report “Electronic governance also involves transformation from being a passive information and service provider to active citizen involvement”. It also considers the importance of portal and states: “Alignment of IT and business requirements of Government Departments and focus of citizen as a customer to deliver one-stop integrated services will be essential”. The National task force identified ‘Citizen-IT Interface’, as one of the important areas to serve the information requirements of citizens.

A report specifying guidelines on Indian government website was prepared by National informatics Centre (NIC), Department of Information Technology and adopted by Department of Administrative Reforms and Public Grievances, Ministry of Personnel, Public Grievances & Pension to enhance citizen response on increasing number of websites. It was observed that the citizens’ experience with various government websites is not uniform due to usage of different technology standards, navigation policy, usability, functionality and many such lacunae. Since NePG has the vision for universal accessibility, special mention has been there for citizen orientation (chap 5, Sec 5.1).

India though has laid down policies to make public services citizen centric, yet a long way remains to roll out such projects. In India, portals are designed and implemented solely by the IT department without any clear focus of business objectives or design or resource commitment, making the management of portals
poor. These portals often face challenges of presenting plurality of services with variety of features in a single complex structure. Today India has more than 20,000 web sites and portals to facilitate citizens carry out their regular activities with government, but quite often they lack in

- easy-to-use services
- accessibility and availability round the clock
- cost-effectiveness
- unification across agencies
- Multilingual coverage
- consistent appearance
- interoperability to incorporate various functionality
- interactivity with government offices

Researchers in their study of e-services through government portals observed that the process of implementing citizen-centered e-Governance is iterative and like any other information system needs continuous evaluation to ensure improvement and effective ROI (Wolf & Krcmar 2005; Wang, Bretschneider & Gant, 2005; Bertot et. al, 2008). With leveraging of new technologies, standards and refined practices, concept of e-service is continuously changing in India as it is happening in most countries. This study is conducted to understand the effect of this transformation in government environment and its impact on e-service quality as perceived by the citizens. This study also reflects the gap between government policy guidelines and actual implementation in online applications. The terms ‘web sites’ and ‘web portals’ have been used interchangeably in the study as most of the government web sites have been converted to portals with increasing popularity.
1.5 Outline of Study

User perceived service quality in the context of e-government, can be defined as the effectiveness of the web portals of government organizations. Usefulness and usability features of government portals can help citizens to participate in various public activities making the public administration effective, efficient, and transparent. Sound research can thus provide useful inputs to governments in early stages of services deployment.

The report has been outlined with focus on certain objectives:

To have the answer to the above discussed issues, following objectives are set for this research:

- To study and identify the performance indicators of service rendered by government websites/web portals in India.
- Classify the indicators and build a model based on them.
- Derive useful recommendations through validation of the model.

In this study we have tried to devise a scale of e-service quality based on citizen’s experience with popular portals involving transactions. An empirical study has been conducted resulting in identification of contributing factors: citizen convenience, citizen relationship, transaction transparency, communication, comprehensive information, reliability, technical adequacy and security & privacy. These constructs were then validated through confirmatory factor analysis and a scale was proposed.

1.6 Organization of thesis

Chapter 1 consists of the introduction to the study of e-government portals in India. The need for the research has been explained along with existing issues. The outline of the study has been framed based on
the objectives which are derived from issues observed. This chapter also deals with the report layout and conclusion on the report.

**Chapter 2** gives a literature survey on different concept of e-government and a detailed literature study on service quality of web portals and sites. The literature survey has been done based on the world scenario as well as on India.

**Chapter 3** explains the research methodology, research design and conclusion on the research process.

**Chapter 4** presents the various e-government parameters present in the web portal of Indian Railway Catering and Tourism Corporation Limited. A mapping of the parameters related to service quality of the portal is done using the data collected from external and internal users. Exploratory method of Principal factor analysis was used to determine the factors of a model proposed. A confirmatory factor analysis using SEM was then done to validate the model. Hypothesis testing was based on the research model devised.

**Chapter 5** presents the various e-government parameters present in the e-filing web portal of Income tax Department of India. A mapping of the parameters related to service quality of the portal is done to validate the proposed research model. Complete analyses of the data collected from external and internal users and statistical findings are presented as in chapter 4. Hypothesis testing is depicted based on the research model.

**Chapter 6** Synthesis of the result obtained in the previous chapters are done in the chapter. Recommendations are suggested based on the synthesis of study

**Chapter 7** Presents the conclusion giving implication of research and practice.
1.7 Concluding remarks

Considering all impediments, India has seen an expansive growth of internet which has created an increasing demand for direct access to government information, from both inside and outside government in recent years. As a result, DeITY has set up a vision of making all Government services accessible to the common man in his locality, through common service delivery outlets assuring efficiency, transparency & reliability of such services at affordable costs. This study is an attempt to understand the demand side service quality so that vision of DeITY can be achieved.