OVERVIEW

In general, the term e-government applies to concepts of electronic management, electronic commerce, and electronic operation of government functions. But, in a strict sense, e-government refers to government’s use of information and communication technologies (ICTs) to exchange information and services with citizens, businesses, employees, civil societies, and other arms of government\(^1\) (Nia & Hob, 2004; Thompson, Rust & Rhoda, 2005; Sadok & Djemaieil, 2007). E-government may be applied by the elected representatives, judiciary, or government administration, in order to improve not only the internal efficiency, but also the delivery of public services or processes of democratic governance. The primary delivery models may comprise of Government-to-Citizen or Government-to-Customer (G2C), Government-to-Business (G2B), Government-to-Government (G2G), and Government-to-Employees (G2E). However, the most important anticipated benefits of e-government may include improved efficiency, reduced cost, added convenience, and better accessibility of public services\(^2\).

On the other hand, readiness in terms of e-government is the degree in which a community or country is prepared to participate in the networked world. At the national level, e-readiness refers to a country’s ability to take advantage of the Internet as an effective engine of economic growth and human resource development\(^3\). By far e-readiness could be referred to several defined components, such as information infrastructure (telecommunications), human resources (skilled personnel), and legal and policy framework (liberal policies). Usually, it is estimated by assessing its relative advancement in the areas that are most critical for ICT adoption and favorable for important applications of ICTs (UNDP, 2001; Bidgoli, 2004; Pattinson & Low, 2006; Rahman, 2007; Wagner & Klaus, 2008).

When considered collectively, e-government readiness relates to the maturity of the information system of a government in terms of physical and logical infrastructures (relates to the available information infrastructure of a country), preparedness of their information dynamics to be compatible with available global indices ranking the country (relates to the governmental efforts to improve the information system), better understanding in the context of strategic planning, ability to take intelligent decision by taking dynamic strategies for ICT development (relates to the eagerness of the policy makers and their knowledge in this aspect), and foremost, empowerment of communities for engaging themselves in societal developments through ICTs (relates to practical applications in the outreach).

A good sign in recent years is that with the specter of the increasing digital divide looming at large, world leaders in government, business, and civil society organizations have started harnessing the power of ICT for development. They seek to improve their countries’ and communities’ e-readiness (i.e., the ability of a region to benefit most out of ICT). But, at the national level, especially in South Asian and Sub-Saharan African regions, the majority of countries are not able to cope up with the advancement of technologies, their transformations, and reap the actual benefit of information technology innovations.
These failures relate to many parameters and constraints that are inherited by their socioeconomic culture, created through ambient surroundings, improper decision making by national policy initiators, lack of awareness and proper attention within the communities, lack of interest by the entrepreneurs in investing in some kind of non-profit ventures, and many visible and invisible parameters. One may see that many national governments have enthusiastically taken numerous steps to improve the situation, but again they failed due to lack of change management, proper justification, balanced fund flow, adequate knowledge on governance issues, proper monitoring and evaluation, and inadequate documentation.

To provide some necessary information and knowledge in these aspects, a handbook of research compiling initiations, progress, failures, and success cases around the globe for the last decade of ICT innovation was being thought of and has been put forward here with a few research findings, methodologies, and case studies. It is expected that it will be able to cater to the information need of the stakeholders in this dimension and at the same time would be extremely valuable to the governments, researchers, academics, development partners, and individuals as a guidebook.

**OBJECTIVES AND MISSION**

Nowadays, e-government is not only meant to utilize ICT to enable more efficient, cost-effective, and participatory government, but also to facilitate more convenient government services by allowing greater public access to information, promoting information as rights, and making the government more accountable to citizens (Govt. of Italy, 2004). As Syjuco (2007) stated, these practices, in the longer run, will reinforce other reforms that are helping countries to better compete in the regional and global economy through strengthening of markets and individual choice to promote sustained economic growth and poverty reduction.

Furthermore, along the perspectives of e-government readiness, e-readiness is seen as an enabler of globalization. Moreover, one can observe that a country’s digital competitiveness cannot be developed in isolation. Though national e-readiness may allow local industries to foster longer term economic success, the ideal e-readiness condition should be to attain solid ICT infrastructure and comprehensible regulatory structure. Therefore, e-readiness in the longer run should accommodate processes on local specific, country specific, regional specific, and global specific (The Economist, 2005).

Hence, e-government readiness has became a function of not only a country’s state of readiness, but also its technological and telecommunication infrastructure and the level of its human resource development, among other factors, and at a minimum should be based on the level of all four mentioned above. Foremost, e-government initiatives, if they remain sophisticated, expensive, and over ambitious, are unlikely to contribute significantly to the national development if they reach only the privileged few (UN, 2005).

Keeping all these in the research scenario, the primary objective of the research handbook will be to assist its readers in acquiring knowledge on the significance of e-government for developing efficient and effective government systems in recommending formulation of ICT strategies for their countries’ and at the same time, acknowledge the importance of e-governance for building institutions to achieve transparency and accountability, and democratic governance. The secondary objective of the handbook will be to assist its readers in implementing collaborative policy initiatives among the private, public, and non-profit sectors for eliminating the global digital divide, and this handbook explores the relationship among different variables related to technical, planning, and managerial issues related to the implementation of digital initiatives for effective e-government readiness utilizing progressive information communication technologies.
The handbook has tried to provide an insight into the context of e-government at local, national, regional, and global levels, and tried to find solutions to deal with various challenges in the implementation processes of e-government, such as adopting and enforcing appropriate laws, regulations, including management and organizational changes of financing infrastructure (in addition to information infrastructure), systems, technical support, and skills development, while ensuring equitable access and affordability.

TARGET AUDIENCE

In the era of innovative applications utilizing ICTs, electronic governance goes hand-in-hand in many countries. However, due to various factors, many countries are lagging behind the global ranking. This makes this handbook on e-government readiness a valuable asset not only to individual researchers and practitioners acting in the field of electronic governance and electronic government, but also to the practitioners actively involved with the national governments, especially in LDCs; Non-Governmental Organizations and civil society organizations; donor agencies and development partners; national and international financial institutions; research organizations and academic institutes; and private sector entrepreneurs and philanthropic organizations operating in ICT4D arena.

ORGANIZATION OF THE HANDBOOK

This handbook has been divided into four sections: research and learning; tools and techniques; applications and services; and case studies. Research and learning contains six chapters, tools and techniques has five chapters, applications and services has five chapters, and case studies contains eight chapters as eight cases.

Section 1: Research and Learning

Chapter 1 aims to explore the capabilities of governments in terms of e-government. The chapter presents a seven core e-government capabilities framework and attempts to develop an intellectual framework for practitioners and researchers to follow within the area of organizational abilities or personnel management in the e-government era. In this aspect, this research contributes to the readers’ formulation of ICT strategies for their countries, which is the first objective of this book.

Chapter 2 presents the results of the search carried out in the Library and Information Science Abstracts (LISA) database, with the aim of shedding light on the status of the connection between digital inclusion and electronic government. The search took place at two different times: in August 2006 and in October 2008. Two aspects were the focus of the analysis of the retrieved items: the process of information retrieval and the objective and questions of research. This study shows that “digital inclusion” and “electronic government” is a “kaleidoscopic” topic because it reveals many other facets, according to the evolution of the use and non-use of ICTs, particularly access to and use of information on the Internet. However, one idea seems central and permeates all considerations of this relationship: that the implementation of electronic government and its success go far beyond technology deployment. Therefore, the effectiveness of electronic government depends on many more issues involving the participation of citizens. This participation depends on issues related to the provision of information and care with the architecture of information for government Web sites, in addition to human resource development.
Chapter 3 investigates a set of governance concerns related to the electronic transformation of public administration for performance improvement under the context of reinventing government in the knowledge age. Particularly, this research is looking into the transformative impact of an information system effort on the design of a citizen-centric model of public service in the digital operation of e-government. The framework of analysis in this research accommodates the configuration of a government unit’s value profile in public sector as exemplified in many of today’s citizen-centric societies. This framework highlights a public sector reform approach to nurture information systems support for improving public sector management.

E-government is not only an innovative idea but, more and more in a growing number of countries, it is becoming a practical activity of high priority. It reflects the emergence and development of information societies. Moreover, it has been observed that sociocultural context is an important framework of e-government strategies and practices. Chapter 4 incorporates a research in this aspect to determine the effects of such efforts. This chapter tries to identify and briefly analyze the challenges for e-government strategies and practices from the point of view of sociocultural context. It is argued that this context should be treated dynamically, as changing and as creating potential for change leading to further advancement of information societies.

Diffusion of information and communication technologies is nowadays becoming a global phenomenon. However, in spite of rapid globalization, there are considerable differences between nations in terms of the adoption and usage of new technologies. In recent years, several studies exploring causal factors, including national cultures of information and communication technology adoption have been carried out. The focus of Chapter 5 is slightly different from other studies in this area. Rather than concentrating on the individual information technology, an overall e-government readiness is the focus of this chapter. This research conducted an analysis of the impact national culture has on e-government readiness and its components for 62 countries. The research model and hypotheses were formed and tested using correlation and regression analysis. The findings indicate that worldwide e-government readiness and its components are related to culture.

Analysis of financial issues in the ICT sector is an essential element to study the progress of the sector, and especially the analysis should relate to the regulatory perspective of the country, if it would judge the overall e-government scenario of that country. Along this context, Chapter 6 attempts to quantify the technical efficiency of the ICT sector in 45 countries during 2002-03, and in 52 countries during 2006-07 by using data envelopment analysis (DEA) method; and finds that the productivity growth in the ICT sector in developing and newly industrialized countries is slightly higher than the growth in developed and transition countries, suggesting the catching-up of developing and newly industrialized countries.

Section 2: Tools and Techniques

Information is a valuable commodity for an information based society, but only if it is shared. Through diversified technologies, the dissemination of information has been made possible for a number of government organizations around the world, but for some, developing efficient and effective e-government systems poses a variety of unique challenges. Key demographic and economic variables, such as income, education, language, human resources, and lack of appropriate products and robust regulatory frameworks for ICTs drive the policy questions surrounding electronic commerce in government operations. Chapter 7 describes and discusses the advantages and limitations of streaming media technology, a form of new ICT tool, and the comparative benefits it has in both developing and developed countries for effective e-governance.
Chapter 8 intends to reveal the benefit of predated notifications of personal actions for human resource planning and discusses the interrelated demands on entrepreneurship resources planning systems. Human resource planning (HR-planning) is a component of strategic enterprise planning within the governance system. It is fully integrated into the enterprisewide planning process, because HR-planning is not only determined by other planning areas, but it also determines them vice versa. This chapter emphasizes the importance of efficient HR-planning for governments in order to improve their business processes. It can be seen as one of the goals of e-government readiness.

In recent years, many governmental institutions have started to provide their customers with access to governmental documents by electronic means. This changes the way of interaction between authorities and citizens considerably. Hence, it is worthwhile to look at both the chances and the risks that this process of change implies for disabled citizens. Due to different laws or legal directives, governmental authorities have a particular responsibility to consider also the needs of handicapped persons. Therefore, they need to apply appropriate techniques for these groups to avoid an “Accessibility Divide”. Chapter 9 is built on the observation that governmental processes are mostly based on the exchange of forms between authorities and citizens. For each scenario, there exist different tools to improve accessibility for people with certain disabilities. This chapter focuses on approaches that provide easier access to governmental processes for people with visual impairments, elderly people, illiterates, or immigrants.

In the context of e-government, one believes that patterns are about finding solutions to recurring problems, so that they can be solved based on the local experience and then benchmarked with international solutions. It has been found that one of the common and recurring problems in the context of e-government is the design of e-government programs. Throughout Chapter 10, the design process is analyzed in order to find possible patterns. If patterns exist for one context, then nations resolving the same problem have the opportunity to use the encapsulated knowledge and employ the others’ best practices. By doing this, nations can avoid remarkable cost and act proactively.

Learning is considered as one of the potential tools to empower a community in terms of governance. Over the past decades, technology mediated learning has been recognized as an alternate channel replacing/supporting/strengthening the traditional forms of education in various forms, especially with the advent of interactive and collaborative learning. However, the organizational learning at the peripheries and capacity development at the grass roots remain almost unattended, despite recognized national and global efforts under many bottom-up empowerment sequences. Social components at large within the transitional and developing economies remain outside the enclosure of universal access to information and thus, access to knowledge has always been constricted to equitably compete with the global knowledge economy. Despite challenges in designing and implementing collaborative learning techniques and technologies, Chapter 11 emphasizes introducing collaborative learning at a community level and improving the knowledge capacity at the grass roots for their empowerment. This chapter, further, investigates the relationship of collaborative learning towards improved e-governance.

Section 3: Applications and Services

The Web is revolutionizing the way citizens and businesses interact with government agencies and related organizations. Nowadays, a wide spectrum of governmental services is available online in order to facilitate end-users and provide them with effective Web-based experiences. In Chapter 12, authors argue that the usage of knowledge management (KM) would greatly assist e-government applications and services. The basic aim is to point out the necessity of designing and implementing efficient KM e-government applications in order to improve public sector quality. The chapter provides a review of literature and all these foundations upon which it is envisioned and then demonstrates the close rela-
tionship between issues of design and implementation. The chapter continues with the presentation of a characteristic KM conceptual model for e-government services. It examines the most interesting applications in the area, and finally demonstrates the barriers, the key challenges, and the arising opportunities regarding e-government and KM.

Citizen participation in government decision making through online and other electronic technologies has been termed as e-participation, and has the potential to facilitate better decisions, better citizens, and better government. Chapter 13 examines the extent to which progressive e-participation practice interacts with local government decision making and contributes to the espoused benefits of citizen participation. The chapter argues that e-participation can positively contribute to community capabilities, political relevance, better problem identification, and assist in finding more relevant solutions.

Chapter 14 presents a review and analysis of e-democracy conceptual models, terminology, methodologies, case studies, outcomes, future issues, and research opportunities. A critical assessment of credible research studies is provided to support a determination as to why and how ICT can be utilized to expand the role of citizens in providing responsive input to government representatives. The approach envisions involved deliberation by citizens on issues of concern with subsequent dialogue between citizens, the government, and especially the elected officials. Furthermore, the chapter addresses e-democracy in the context of governments seeking to utilize ICT to support a means of communication with citizens.

It has been observed that, despite the popularity, potency and perfection of electronic government, it is yet somehow remain in uncharted territory for many countries in terms of implementing e-governance at the local government level. However, technology possess the potential for improving the way government works, and utilizing the newly evolved technology many countries have been engaged themselves for improving the way their citizens work. Moreover, local and national governments are trying to realize this potential by finding ways to implement novel technology in spearheading its utilization to achieve the best services for their citizens. Chapter 15 has tried to draw a line of reference by putting forward the importance of local e-government organizational structure and their supremacies in terms of utilization of ICT. Along this context, the chapter has attempted to synthesize a few prospective local e-government scenarios, focus on their adaptation of ICT, and put forward recommendations to improve local e-government for better utilization of information services.

Chapter 16 is focused on some of the current research being conducted in the field of social network theory. The importance of studying the social network concepts is attached to a better understanding of individuals and how and why people interact with each other, as well as how technology and the Internet can affect this interaction, which in turn affects the governance system of a country. The social network theory field has grown significantly in the last years, and the use of the Internet and advanced computing technology has contributed to new research in this growing area. This chapter covers some aspects of the social network theory and some applications for social networks. It also discusses virtual communities, as well as the control over communications tools through social networks. Finally, the technology side of social networks is presented, as mobile social networks, internet social networking systems, and e-business correlation, social network software, and future trends of social networks.

Section 4: Case Studies

Chapter 17 explores how to formulate an ICT-enabled e-governance action plan, including the necessary components of a knowledge management strategy, and the adoption of a culture of learning organization behavior. This strategy is based on lessons learned from a model designed and tested on data from 140 Slovenian public agencies. Slovenia, a small transition economy newly admitted to the European Union (EU), faces both its own demands and the demands of the EU for good governance. Moreover, Slovenia
offers lessons relevant for both developed and developing countries. This chapter argues that there are three progressively complex stages when integrating ICT into the operations of government. The chapter concludes with the argument that successful e-governance works hand-in-hand with e-democracy, whereas failed e-governance will position e-democracy as a force in opposition to the behavior of government.

Chapter 18 contains a case study that was conducted to explore the attitude towards adopting m-commerce in Lebanon. The objective of this research is to understand customers’ behavior and motives in choosing to adopt m-commerce in Lebanon. This research investigates internal and external motives underlying individual behavioral intention to use m-commerce in Lebanon. It examines both the consumer risk perceptions and the motives as they are the key elements that will affect customers’ adoption of new technology. The results of the study suggest that the relationship between different variables need to be investigated further through elaborated studies using a larger sample. However, qualitative findings suggest that the majority of the participants desire to be involved in m-commerce, and there is a lack of awareness, including some financial restrictions.

After reluctance in the 1990s, Germany actively began to pursue the modernization of its administration through online government in the early 2000s. The federal initiative “Bund online 2005” with an investment volume of 800 million Euro was one of the largest government online projects worldwide focusing on services for citizens, especially at the federal level. Chapter 19 first gives a short overview of e-government initiatives in Germany. Afterwards, the e-government initiative of Bavaria, “BayernOnline,” is presented. Then, the problems of e-government in Germany are discussed, followed by a discussion of e-government as one instrument to contribute to a solution of economic problems in Germany. Finally, a view ex-post looks at the results of the “Bund online 2005” initiative and how it helped to overcome bureaucratic inertia in Germany.

Work reported in Chapter 20 relates with work carried out in the context of the European Information Society Technology (IST) Project SemanticGov. The project aims at implementing a set of advanced Semantic Web technologies for adoption in the European public sector to advance the level and expand the volume of e-government solutions in the European Union (EU). The research elaborates on the need to (re)position the idea of providing an advanced solution for an ideally functioning e-gov island within a sea of non-interoperable e-gov process frameworks, to become parts of open-ended ventures to allow the creation of collaborative networks for electronic governance.

In a small firm, access to information is usually linked with strategic awareness, a growth orientated mindset, and improved performance. The advent of communication technologies has significantly changed the amount of information available, how it is being accessed, and the cost of collecting and using this information. However, to exploit this resource, individuals, firms, and governments must be e-ready. In Chapter 21, the authors examine the technological sophistication of a sample of mature small and medium sized enterprises in Scotland and analyzed whether there is a link between this, some other firm-specific factors, and an entrepreneur’s succession choice. The evidence suggests while firms located in urban and suburban areas have better access to ICT and may benefit from e-government services targeted at assisting them through the transfer process, older and more rural firms have limited access and will only benefit if government policy is directed towards providing ICT access and making them e-ready.

ICTs have a magnificent potential to improve the quality of people’s livelihood in general and especially in the developing countries. They can enhance business, support education and health systems, and also improve the governance that is a major and vital factor in the development process. In the context of Fez e-Government Project, that is being led in Morocco, in a close collaboration with the municipality of the Moroccan city of Fez, authors have developed a pilot e-government system that facilitates citizens’ access to governmental information and services. In Chapter 22, authors present the main phases of the methodology and lessons learned during the e-Fez Project. Authors state that this approach may benefit
similar projects, especially in developing countries that are willing to create and deploy e-government systems for the benefit of their citizens.

E-procurement incorporates electronic means for purchasing or buying goods. The government of Malaysia implements e-procurement systems in realizing the cost benefits therein. The government provided the charge to Commerce Dot Com Sdn Bhd to independently develop the best practice of e-procurement that can meet the satisfaction of the business and non-business citizens of the country. In the light of this, Chapter 23 examines some determinants of users’ satisfaction and their relationships with e-procurement services. In order to bridge the gap between theory and practice, the study employs a quantitative survey analysis as its methodological approach. The findings of the research show a significant relationship between service quality, ease of access, knowledge, transparency, and security in e-procurement services as the key factors that determine the satisfactions of the service users.

Chapter 24 investigates the current issues and development of the application of e-government processes in promoting local tourism industry for small and local cities and counties throughout the United States. The primary data for this study are collected through a comprehensive Web site evaluation. The prime objectives of this chapter are to examine the use of online tourism promotion implemented in local city and county websites across the United States, to identify major issues and challenges for local governments in promoting local tourism online, and to discuss the managerial implications for future research. The data collected from this study show that there is an emerging need for improvement in promoting local tourism through e-government application.

CONCLUSION

Though in recent years governments are intending to reorient development programs and strategies for the attainment of knowledge-based economies, many developing countries are still finding it difficult to divert scarce resources towards ICT-led-development when faced with pressing priorities of reducing poverty; as such providing basic health and education; and thus to maintain sustainable economic growth. Furthermore, lack of technical skills and policy building capacity are other key barriers for effective e-government, e-participation, and e-service delivery in many countries (UN, 2003; UN, 2009). It was realized that a handbook focusing on these critical factors and parameters is extremely essential at this time, for initiating realistic formulation of strategies, planning, design, and implementation. This handbook covers several in-depth studies along the e-government readiness perspectives, incorporating issues related to major deficiencies in cross-sectoral atmosphere, critical implications in the implementation processes, and preparing measurable criteria for successful e-government readiness.

If one can think of an ideal transparent public administrative process, an ontology-based organizational memory systems predominantly come into focus; with many existing sources of information, content, knowledge bank, laws, acts, comments on laws, specific regulations, recommendations, similar old cases, available case-specific documents, information, and so forth are prevalent in different places and in different forms and representations, at several degrees of formality, and are related through many links. Henceforth, in order to make informed, transparent, responsive, and accountable decisions consistent with the past that are compliant with the law and consistent with similar decisions in other part of the globe, all of this knowledge should be placed within an inclusive coherent framework (Abecker & Mentzas, 2001; Kovačić, 2006; Cegarra-Navarro, Jiménez & Martínez-Conesa, 2007). Taking these factors in mind, this handbook has tried to compile researches, applications and services, tools and techniques, efforts, cases, and initiatives towards establishing a common platform of transparent, effective, versatile, and futuristic e-government.
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**ENDNOTES**