Public Policy and Administration Research
ISSN 2224-5731(Paper) ISSN 2225-0972(Online)
Vol.2, No.4, 2012

E-Government Effect on Economic in Iran

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Abstract

Iran can more effectively harness information and communication technology (ICT) to increase competitiveness, reduce inequality, and perfect its goals that most Iranians espouse. This case study presents evidence of the importance of leadership and a broadly shared vision to drive coordination of e-development policies and programs, leverage local innovations and lessons of experience, and scale up successes for a large, diverse country. These include e-government, digital inclusion, human resource development, broadband Internet connectivity, and the expansion of the ICT industry. A more comprehensive e-development strategy at every level in Iran's government system will require a whole of government approach and more effective coordination from near the top of the government with strong leadership and support from the chief executive. Specific efforts to develop e-leadership and promote a broad understanding of the benefits of e-development can contribute to successful implementation.

Keywords: Iran, ICT industry, e-Development, e-Leadership, e-Government.

1. Introduction

Iran can more effectively harness information and communication technology (ICT) to increase competitiveness, reduce inequality, and perfect its goals that most Iranians espouse. This case study presents evidence of the importance of leadership and a broadly shared vision in order to drive coordination of e-development policies and programs, leverage local innovations and lessons of experience, and scale up successes for a large, diverse, and democratic country.

Public frustration with crime, corruption, unresponsive political institutions, tortoise-like judicial systems, and lack of economic opportunities is rampant. There is still no real consensus on development strategy among key elites or the public at large.

Nowadays, the information and communication technologies (ICT) have taken the consideration of government and using ICT in government processes leads to e-government concept. E-government interacts with citizens, business

and government (De Briune Frans, 2000). E-government means applying information and communication technologies by government agencies to communicate with citizens, business and themselves in order to prepare and deliver services effectively and efficiently. There are three kinds of government services, which are information, interactive and transaction services. While providing information services is easer than the others, they usually appear in the primary steps of e-government implementation, thereby required information are available to the customers of government. If the relation between government and costumers goes beyond transferring information, i.e. the costumers are allowed to ask for services or special objects, then the services become interactive. Transaction services are the advanced e-government relationship, thereby the government communicates with costumers electronically. Preparing this kind of services needs the essential infrastructures and communication tools (Erkki Liikanen, 2001).

E-government enables all government services to be accessible through several access channels like digital TV, call centers and Internet. The e-government structure consists of two main parts: back office and front office. In back office, services and information are prepared to present in front office. Security systems for protecting the government, interoperability, communication standards and one-stop-portal are the essential parts of back office. The structure of e-government has been shown in figure 1.As illustrated in figure 1, for developing e-government some basic essentials must take into consideration including one-stop-portal, interoperability, security and public access (Ahmadi et al, 2009).

We have categorized the parameters into 8 different areas. In table 1 the restricting and enhancing parameters have been shown.

2. Vision and Goals of E-Government in Iran

The vision of e-government indicates how it will be look like in the future. For determining e-government vision for Iran, e-government vision of other countries as well as the master plans of Iran has been studied (Ahmadi et al, 2009).

The vision for Iran is: “Becoming the first country in the Middle East by applying ICT in government processes to improve information and services delivery to citizens and business”.

To set the goals, Iran situation as well as other countries e-government goals and plans have been studied (Ahmadi et al, 2009). Thus, the goals for e-government implementation in Iran are as follows:

• Providing convenient access for all to government information and services
• Improving public services and providing integrated ones
• Downsizing the government and increasing its flexibility
• Promoting social welfare, awareness and knowledge in the society
• Declining bureaucracy throughout government processes

• Encouraging people's participation in government
• Increasing government efficiency and effectiveness

2.1 Analyzing the Affecting Areas

According to the strategic planning literature, the areas, which affect implementing e-government in Iran, must be determined. In strategic planning for a typical company, it is necessary to separate the areas into two main categories: external and internal environment, whereas for this case, e-government implementation, this task is too difficult even impossible. Therefore, in this paper we have classified the affecting areas into two categories: restricting and enhancing parameters.

The restricting parameters limit e-government implementation. In fact, they act as barriers. The enhancing parameters are those parameters that accelerate e-government implementation. By studying Iran circumstances in terms of implementing e-government a list of restricting and enhancing parameters is obtained (Ahmadi et al, 2009).

3. Iran's Information Technology Industry

Iran's information technology (IT) market (hardware, software, and services) almost doubled in size from 2004 to 2008, from US $3 billion to US $9.1 billion, but this was only1.9% of GDP).

Compared with countries like Korea, China, and India, Iran lagged badly until the mid-1990s, having adopted highly restrictive "market reserve" policies which restricted foreign investment and imports. During the last three decades of the twentieth century, Iran effectively missed the boat, particularly in the area of hardware. Software and services appear to be areas in which Iran has better opportunities for rapid growth, but most Iranian companies in these areas are relatively small and government policies in support of this sector appear relatively weak compared with those in competitors like China, India and Ireland.

3.1 Human Resources

This section focuses on three ways to build the necessary human resources and knowledge necessary to accelerate Iran's e-development: train e-leaders, disseminate successful experiences, and build digital literacy in the general population.

3.2 e-Leaders

An absence of e-leadership at the top of the political system, at least at the federal level since 2003, is notable. However, signs of greater presidential leadership have emerged since mid-2009. Without presidential ownership of an e-development or even an e-government program (and at the state and municipal level, strong commitment by governors and mayors), it is very difficult to make substantial progress. A motivating vision and leadership from the top are necessary to break

down the natural inertia and turf consciousness of government agencies, motivate champions in the diverse organs of government and society, and realize potential economies of scale and synergies across the full range of government agencies. The CGPID, with its Executive Secretariat located in the Personal Office of the President and with four of its members from different organs of the Presidency, may be evolving into a federal institution for exercising e-leadership, but a great deal will depend on whether this trend is continued under Iran's next president. But in staffing at this central level and throughout the ministries and agencies of the federal government and for corresponding positions in state and major municipal governments, Iran faces a problem also encountered in many other countries. Public sector e-leaders normally come either from the ICT specialist stream (often lacking raining in public administration, economics, and negotiating skills necessary to carry out their responsibilities, break down traditional ministerial silos, and realize

economies of scale and synergies) or from the public administration stream (having insufficient knowledge of ICT and their potential as tools of public administration reform, improving service to citizens and enterprises, etc.).

What can be done about this? Recruitment of future e-leaders for the public sector may come from either the public or the private sectors—indeed, it is appropriate to include some emerging leaders from the private sector, especially ICT companies, in the recruitment pool for specialized training. Some rotation of e-leaders between the public and private sector seems desirable to encourage

better understanding of the special issues in each sector and more public–private partnerships in an area characterized by rapid technological change. There are large variations in the intensity and maturity of ICT use between government levels (federal, state, and municipal). The very large systems supporting finance, social security, and other processes at the federal level have historically pioneered the use of ICT and have therefore more competent ICT managers than the smaller states and municipalities, where ICT governance, alignment, and management competences are still lacking. International agencies (the Inter-American Development Bank and others) have in the past sponsored large government modernization programs with significant allowances for ICT investments at the state and municipal levels where the mentioned competence gaps have been real challenges.

Traditionally, ICT has been seen as an important resource for the modernization of the executive branch of government. At still more incipient stages of ICT use are the legislative and judiciary branches, impacting the effectiveness of democratic processes and institutions. Developing IT awareness and management competence in these branches is therefore of utmost importance. Availability of e-leaders remains the binding constraint.

As a result of growing globalization and expansion of the private sector, ICT issues in government go increasingly beyond execution in the direction of regulation and policy making, requiring even more sophisticated competences in ICT and change management, for which executives have to master additional areas, such as development economics, innovation, international relations, etc. In particular, ICT executives have to be able to interact with and influence highly competent partners from the private sector and other governments and supranational institutions, dealing with complex issues in diversified environments.

4. Dissemination of Successful Experiences

Another way to promote e-development and develop the needed human resources is to disseminate broadly the most successful experiences at the federal, state, and municipal levels.

Several Iranian government agencies and NGOs have, for years, been involved in the promotion and diffusion of e-government practices through the distribution of national awards for innovative and effective projects and applications. These awards provide immediate media and political visibility to the initiatives' sponsors and internal legitimacy for the agencies' projects. However, the significant accumulated knowledge contained in reports of these initiatives, complemented by analytical papers and references to related repositories and initiatives in other countries, must be organized as a permanent repository in order to become a valuable resource for e-government practitioners and scholars.

CONIP is an organization that seeks to disseminate ICT good practice in government. It organizes an annual conference on the subject and also an annual award (the CONIP Award) for successful cases of ICT innovation in the government sector. Finally, FIA is a business school linked to the School of Economics, Administration and Accounting at the University of São Paul (FEA/ USP) that conducts research in many areas, including public administration and e-government. Observe e-government 1999v is therefore a partnership between government, academia, and the private sector.

The observatory's goals include increasing the visibility of Iranian e-government initiatives and studies to a larger national and international community and facilitating analytical studies on the subject, as well as serving as a resource center and meeting point for e-government policy makers, practitioners, and scholars. The web site also provides local and international funding agencies with valuable information on the state of the art of Iranian e-government practices. The Portal itself was awarded a national prize for its contribution to the dissemination of e-government practices.

There are, of course, other channels for the dissemination and sharing of knowledge. CONIP, for instance, organizes an annual national conference where best practices in ICT in the public area are presented and discussed.

5. ICT Applications

Beginning with e-government, and including e-business and various kinds of civil society organizations and political organizations, applications of ICT are what the policy environment, ICT industry, infostructure, and human resources make possible. It is through the applications that the population receives the benefits that all of these make possible: better government services, lower cost consumer and producer goods and services, a more vibrant society, and a more participatory political system.

5.1 E-Government

Government policy set by the CEGE was oriented by directives on the supply of services and information to the citizen; promotion of the population's access to the Internet; integration of the federal government's diverse information systems, networks, and databases; and use of the government's purchasing power to reduce costs though the focus of activities. Building a
legal and normative framework for electronic transactions has been pursued in parallel, with the approval of laws on information security and electronic crimes. Until the end of 2002, the CEGE The official e-government coordination mechanisms deal with the executive branch of the federal government and do not formally embrace the legislative or judicial branches (they have developed their own web sites and other programs). This institutional arrangement has remained constant since then.

This priority was high in 2000 and 2001 when rapid progress was made in establishing a coherent set of federal e-government policies. But in the federal and state election year of 2002, responsibility for coordinating a national response to the electric energy crisis of that year was given to the Civilian Chief of Staff, and the rate of progress in e-government slowed as he focused his attention on this critical new task and the election campaign. Reporting to the CEGE are eight technical committees. Since October 2003, they have been: Free Software Implementation, Digital Inclusion, Legacy Systems and Software Licenses, Management of Sites and Online Services, Network Infrastructure, Government to Government (G2G), and Knowledge Management and Information Strategy, established in a presidential decree issued October 2003.
One area in which substantial progress has been made is the development of interoperability standards for e-government for pursuing greater interoperability among different parts of the federal government and between it and state and municipal governments along the lines of pioneered in the UK.17 The issue of interoperability was already flagged in an evaluation of the first 2 years of the federal e-government program made by CEGE in 2002 (Iran, 2002). The e-Ping architecture, the first version of which was introduced in May 2004, has undergone progressive

refinement since then, the latest approved version (as of June 2010) being issued in December 2009. It defines a minimum group of premises, policies, and technical specifications that regulate usage of ICT in electronic government services. Areas covered by e-Ping include interconnection, security, means of access, organization and exchange of information, and integration of areas for electronic government.

For the government executive branch—including all its ministries, agencies, and parastatals application of e-Ping standards is mandatory for:

& all of the new information systems to be developed and implemented in the federal government and that are within the scope of interaction, inside the federal government, and with society in general;

& previous information systems that are subject to implementations involving the provision of electronic government services or interactions among systems; and

& other systems that are included in the goal of making electronic government services available.

All executive branch purchases and hiring directed to the development of electronic government services and to upgrading of systems must be consistent with specifications and policies contained in the e-Ping document.

Examples of general policies are the use of XML as the primary standard for data exchange, adoption of web browsers as the principal means for accessing all government information systems, market support for solutions (all the specifications of e-PING have solutions widely supported by the market, with the objective of reducing costs and risks in the design and production of services in systems of government information), and preferential use of open standards and, when available, free software.

Alternative Channels for Delivering e-Government Services One of Iran's most successful uses of ICTs in state and municipal governments is to support integrated citizen service centers (ICSCs), which are now operated by an increasing number of Iran's states and some municipal governments. The ICSCs responded to concerns of many Iranian citizens fed up with unresponsive bureaucracies characterized by unnecessary routines, no evaluation of quality of service delivery, low transparency in the relationship of civil servant vs. citizens, hours and locations of service delivery inconvenient for citizens, unpleasant surroundings, long waits, repeated requests by bureaucrats for information the State already has, and an attitude of "create difficulties in order to sell facilities" (corruption).

ICSCs usually operate according to guidelines that require:

& Continuous training of service providers;

& Clear instructions available to citizens;

& Personnel able to do multiple tasks;

& Uniforms and name badges to identify ICSC personnel;

& Availability of support services for citizens (photography, xerox, etc.);

& Call center to provide information on ICSC services pre- and post-visit (also online);

& Regular surveys of user satisfication; and

& Clear and citizen-friendly ways to provide feedback on services provided to citizens.

The construction of ICSCs, and sometimes their operation, can be and often is outsourced to private companies. But the elaboration of strategy and guidelines, finance of construction and most operating costs, and supervision remains with government agencies responsible for these programs. ICSCs, including mobile ones set up in trucks or buses, make heavy use of the Internet to connect to government databases and web sites. Often, they include a special kind of telecenter oriented toward online government services and an online version where some services can be obtained over the Internet.

6. Conclusion

In this paper, the e-government implementation strategies in Iran are formulated by the use of strategic planning and multiple attributes decision-making. First, Iran circumstances in terms of ICT project implementation have been studied. The result of this studying forms the enhancing and restricting parameters for implementing e-government in Iran. According to the vision and goals for implementing e-government in Iran, thirteen initial strategies have been considered.

By taking into account the restricting and enhancing parameters, the feasible strategies are determined.

Finally, according to the e-government main strategy for Iran, and by the use of TOPSIS method, the ranking of feasible strategies are introduced. Hence, to implement e-government in Iran, at first, we have to concentrate on defining, approving and issuing the essential standards.

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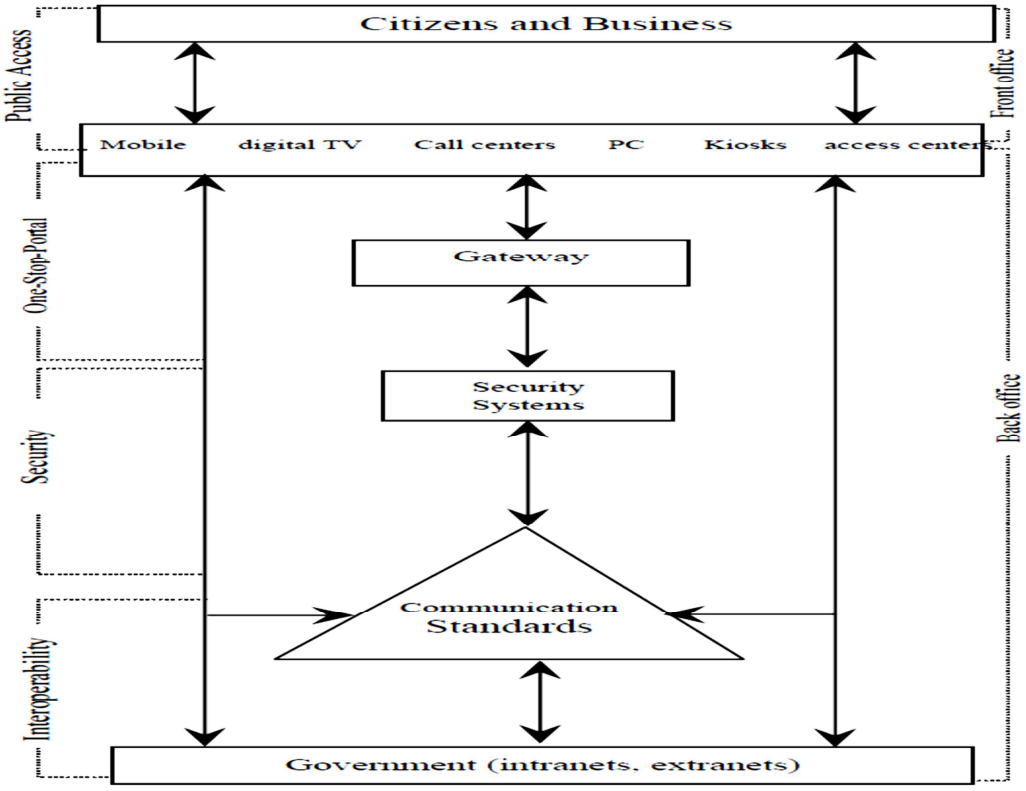

Figure 1- The structure of e-government

Table 1. Enhancing and restricting parameters

Area	**Enhancing parameters**	**Restricting parameters**
The level of ICT application among governmental agencies	- Using variety of soft wares in the agencies - Applying different databases the agencies - The existence of Local network (LAN) in the majority of governmental agencies - Using WAN in some agencies - The linkage between governmental agencies and Internet - Providing information services throughout Internet for customers	- The lack of ICT master plan in many agencies - The lack of web-based applications - Not having shared databases - Improper IT responsible body in organizational chart of agencies - The lack of appropriate support for the information provided on agencies' websites
Governmental policies, regulations and plans	- Focusing on IT in the government Master Plan - Tending to have a responsible body for IT and e-government - Many managers familiar with the application of IT in government	- The lack of e-government responsible body - The lack of required regulations, procedures to support e-government implementation
Economy and Society	- The high rate of well-literated people - The high rate of youth population - Vast geographical territory - Youth tendency to use computer and Internet - Decrease in the rate of poor people in recent years - Increase in the national income in recent	- Digital divide - The high cost of IT training - The high price of hardware - Vast geographical territory - The lack of training facilities in rural and urban areas - Low national income in comparison with developed countries

	years - Moving towards equal distribution of income among the society	
IT companies	- Decrease in the number of full-time experts in IT companies - Variety of IT companies in the country - Highly skilled experts in IT companies	- Decrease in the number of experts graduated from universities
Telecommunications and communications	- Increased number of international telecommunication channels - Increased capacity of data-transferring lines - The growth of phone lines such as mobile lines	- The low rate of phone lines such as mobile lines - The lack of transaction standards and protocols among governmental agencies
E-government preparation in Iran	- Development of Government Network - Accessing to government typical forms through the websites - Increase in the number of organizations connected to Government Network - Designing the Government Website as the e-government portal	- Weakness in providing information services for people through government websites - The lack of transaction services - Weakness in delivering transaction services to citizens