

## E-Government Development Process in Iran

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### ABSTRACT

Electronic government is one of the important phenomena obtained from deployment of information technology and communications that its implementation has very profound change in lifestyle, administration and leadership and it is combination of information technology and information network website that its aims providing direct services to citizens, government employees, business sectors and other sectors of government. Hence, more than one decade has started creation of e-government projects in different countries. The Iranian government in its strategic orientation Takfa Project has begun for architectural government. In this paper, first, we have been identify and evaluate model of implementation of e-government and amount of realization of e-government in Iran have been evaluated according to the website administration features. For evaluate of administration websites characteristics was imposed process model of the United Nations e-government. Obtained results of this paper is show that total of ministries and government institutions are in the early stages of the realization of e-government, but the realization of e-government does not follow a linear pattern.

**KEYWORDS:** IT, Web Sites, E-Government, Takfa Project.

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### 1- INTRODUCTION

Today, vision of good governance is requires review with oriented a comprehensive governance model. Information technology can be considered a tool for universal access to public services. Socially inclusive governance have provided model general framework for review of the role of information and communication technologies in the field of citizen access to government services. It's clear that mutual effort of governments and people is the critical element for the progression of companies and actual promotion of their activity levels (Rezvani, Gilaninia & et al, 2011). Information technology combination with the need for good governance of, electronic government, government focus will be to promote all universality. Islamic Republic of Iran is committed to prepare the plan Takfa to taking steps electronic government have a reasonable position in the global arena but the main question is what degree of e-government has achieved in the country. The United Nations assessment of the readiness rank countries to e-government readiness show that Iran, with index 0 / 38 among 179 countries in 2005 is located 98 ranking. E-government Status in Iran can be measured with this approach. In the field of achieving the ideal E-government planning in order to achieve faster and better seems to be necessary government ministries and institutions evaluation our country and how in terms of amount of electronic information and services provided by them, in order to identify the current situation. This paper has attempts based on web sites features of executive organization evaluate degree of executive organizations readiness in providing electronic services in Iran. Selected indicators in the assessment are based on a five-stage model that United Nations is used in assessing the realization of e-government in the world (Rahavard & Mohammadi, 2007).

### 2- LITERATURE REVIEW

Developing countries have taken steps towards the development of e-government but in order to successfully establishing e-government should be considered cultural and institutional considerations in order to take advantage of e-government have been done actions in Iran. An expectation of consumers increased every day and with this trend is growing along (Gilaninia & et al, 2011). In terms of chronology, the first step in developing effective e-government in Iran in recent years can be mentioned approved the 2002 by Office Supreme Council to automate all business and public administration of office system (Elahi Abdi, Danaei Fard, 2010). In the public management, principles of good governance as a new paradigm refers to emphasizing the role of public managers in providing high quality services that citizens and groups have benefited from it (Gilaninia & et al, 2011).

The first comprehensive and coordinated activities in the public sector to develop information technology and deploy e-government prepare and compile program development and application of information and communication technology to Iran (Takfa plan) by Management and Planning Organisation (Secretariat of The Supreme Council of Information) was in June 2002. This project aims to coordinate that administrative activity and in development and application of communications and information technology formulated, in the ninth of July 2002 was approved by the Cabinet and for implementation was referred to the relevant organisation such as information Supreme Council (Yamini, 2010).

Based on strategic presented plan by the Management and Planning Organisation (Supreme Council of Information) were located work areas seven in strategic planning of information and communications technology at the head of the electronic government on the agenda (Bateni, Yazdanshenas, 2006).

Recent research, business and social circle of United Nations (2008) shows ranking countries in terms of state electronic government, Iran acquisition of 4067 points is located in 108 ranking placed down to 10 compared to the previous report in 2005, even lower than countries such as Fiji, Armenia, Kyrgyzstan, Montenegro, Guatemala (Elahi & et al, 2010).

Among other reasons for the weak electronic government in Iran would be named the following:

- 1 - Lack of awareness and attitudes of senior managers.
- 2 - Lack of national comprehensive plan for future IT.
- 3 - Lack of an organization responsible for planning and implementing electronic government
- 4- Lack of regulations and procedures.
- 5 - Lack of proper infrastructure.
- 6 - Lack of power required for the absorption of advanced technologies.
- 7 - Lack of flexibility of digital government projects implementation.

### ***2-1-Concept of electronic government***

As an application of the Internet, e-commerce depends on information infrastructures and telecommunications for its development (Gilaninia & et al, 2011). The term electronic government that has been discussed seriously in the 1990s according to experts will develop a new model of government. Electronic government-wide information from the internet to provide citizens and the private sector but the electronic government's role is not merely to provide information and services, it can also communicate with the citizens and the private sector create strategic relationships between organizations and the public sector. Such interactive improve cooperation between government organizations and facilitate implementing policies and strategies of government. Several definitions of electronic government is presented, below we mention a few

- Electronic government is a way for governments to use new technologies that facilities necessary for convenient access to government information and services, provides a higher quality and more opportunities are created for public participation in democratic processes (Bateni, Yazdanshenas, 2006).

According to the definition of "Organization of Economic Cooperation and Development" electronic government include: using information and communication technologies especially the internet as a tool to achieve more efficient government (Bateni, Yazdanshenas, 2006).

- Electronic government include provide of government information and services via the internet or other electronic media that in the case of systems of provide services and internet-based information unlike traditional structures are hierarchical, linear and one-way, e-government is Two-way and non-hierarchical mode and a twenty four hour, seven day a week to pay for provide services on line.

Electronic government can be defined as application of information and communication technologies in providing effective and efficient information and services to citizens and customers (Howard, 2001; World Bank, 2003; United Nations, 2005).

Thus, the idea of e-government to increase the effectiveness and efficiency in public services has been proposed to customers. Of course should consider that nature of needs of customers proportional to its relations different with government and it is necessary be provided appropriate services to them.

### ***2-2- Stages of electronic government***

Different models about evolution and deploying e-government in investigation has been proposed. Models with briefly details are expressed in table 1.

Table 1: Comparison for models of electronic government evolution stages

Source	steps	Description
Gartner group (2001)	1) emergence 2) interactive 3) Transactions 4) transformation	-Static Web site to provide information - Ability to search in Web site and available forms -Electronic receive services such as certification - unit Web site to access the service
Balutis(2001)	1) Information 2) provide forms	- Providing information Providing forms
Layne and Lee (2001)	1)Catalog 2) Transactions 3) horizontal Seamless 4) horizontal integration	-Provide static information - Search, complete forms, and receive Notice - Add links to local government, state and national - Integration between different tasks or services.
DPADM (2005)	1) emergence 2)upgrade 3) interactive 4) the transaction 5) integrated (networking)	- emergence of formal Web site with static data - Professional and dynamic data - Formal interactions between citizens and service providers - Trading and electronic services - Integration of services in different levels
Belanger and Hiller (2006)	1) Information 2)both sides communication 3) Transactions 4) Seamless 5) Political participation	-Provide static information -Request and receive information interactive, searchable form - Transactions and electronic payments - Web site integration at different levels - Political opinion and association electronic

### 2-3- The five-stage model of United Nations

This model realization process of e-government in the five stages described as follows:

#### 1) Emerging stage

At this stage some of executive organizations of public sector proceed to design and establishing of their web sites and is provided static information in their.

#### 2) Enhanced stage

At this stage sites is increased and more information are inquired.

#### 3) Interactive stage

At this stage, users can save the forms and send e-mail message to officials and is interact with them through their website.

#### 4) Transactional stage

At this stage user can cost of received services and other their transactions paid and receive the form of timely.

#### 5) Seamless stage:

At this stage seamless electronic service is provided across administrative boundaries.

### 3- Research questions

By selecting model of the United Nations due to its comprehensiveness in defining formation of stages e-government, questions of this study is raised as follows:

1- What extent features of E-government five stages (Emerging, Enhanced, Interactive, Transactional, and Seamless) has been achieved in websites of ministries and government institutions?

2- Are there difference between Government ministries and institutions of consider degree of realization of e-government?

### 4- RESEARCH METHOD

This study is survey – descriptive. Statistical Society is website of the field staff of all ministries and presidential (22 cases) and governmental institutions (152 cases), that their list was prepared by the office of Management and Planning Organization. Due to the limited number of first group have been studied websites of all ministries but in relation to second group (governmental institutions) and by using Morgan table was obtained sample size n = 110. According to the common features such as institutions, were selected randomly from a list. In this study for collect data about website features of administrative organizations is used Observational method.

### 5- Data Analysis

According to the fact that Iran's government is following in the form of e-government Takfa projects arrangements necessary for the gradual establishment in Iran this question may be introduced that with considering models of Enhanced stage of e-government what extent has been achieved. To answer this question,

features of the web sites of ministries and government agencies is described according to different stages of e-government in table's number two to six.

Table 2) realization degree of emerging stage features in ministries and government institutions of Iran

Row	trait	Ministry		Government institutions	
		Yes	No	Yes	No
1	Web site presence	18	4	85	25
2	information For contact phone and (address)	11	11	39	71
3	Guidance use of site	8	8	54	56
4	Information related to the mission and goals	14	8	74	36
5	Information related laws and regulations	14	8	55	55
6	Information related to organizational units	14	8	51	59
7	Personal information	8	14	32	78
8	<b>Information in foreign languages</b>	<b>9</b>	<b>13</b>	<b>58</b>	<b>52</b>

Table 2 shows that over 50 percent of emergence stage features has found in web sites of governmental ministries and institutions. In other words, provided static information about goals and missions, relevant laws and regulations, organizational units, and for contact and as it is almost institutionalized.

Table 3) realization degree of Enhanced stage features in ministries and government institutions of Iran

Row	Trait	Ministry		Government institutions	
		Yes	No	Yes	no
1	Possibility of search for information	12	10	58	52
2	E-mail Address	16	6	78	32
3	Ability to communicate with (Link) with other devices	12	10	48	62
4	Availability of publications	1	21	4	106
5	Availability Newsletters	6	16	13	97
6	Provide dynamic information	2	20	5	105
7	<b>Possibility of Membership for receive information</b>	<b>2</b>	<b>20</b>	<b>12</b>	<b>98</b>

Table 3 shows features of Enhanced stage, it is introducing of specialized information and dynamic of executive organizations. In addition for ministries and governmental institutions is achieved respectively 33% and 28% of the features of this stage. In other words, executive organizations have entered to Enhanced stage and they want give dynamic information in available citizens.

Table 4) realization degree of Interactive stage features in ministries and government institutions of Iran

Row	Trait	Ministry		Government institutions	
		Yes	No	Yes	No
1	Ability to Search for database	12	10	58	52
2	Possibility of implement and store	17	5	84	26
3	Ability to complete forms and its submit	9	13	23	87
4	updating of information Regular	2	20	1	109
5	Ability to receive complaints	6	16	32	78
6	Possibility of Repeated question in each section	0	22	2	108
7	<b>simultaneous response and without waiting to customers</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>109</b>

Table 4 indicates to interactive features, it is expected that in this stages Two-way communication between citizens and service providers is established. As can be seen in Table has been achieved only 30 percent of the features of this stage for ministry and 26 percent for governmental institutions.

Table 5) realization degree of Transactional stage features in ministries and government institutions of Iran

Row	Trait	Ministry		Government institutions	
		Yes	No	Yes	No
1	Provide Services such as driver's license or passport	2	20	0	110
2	Online payments such as fines or taxes	0	22	0	110
3	Electronic signature for contract	0	22	0	110
4	<b>Predicted Password</b>	<b>3</b>	<b>19</b>	<b>14</b>	<b>96</b>

Table 5 indicates to Transactional stage features, stages that electronic transactions and services finds in extensive form. This table show that has been achieved only 3 percent of the features of this stage for ministry and 2 percent for governmental institutions. In other words, e-government readiness in terms of providing electronic comprehensive services and transactions is very low.

Table 6) realization degree of Seamless stage features in ministries and government institutions of Iran

Row	Trait	Ministry		Government institutions	
		Yes	No	Yes	No
1	Port unit for provide services	0	22	0	110
2	Clustering services accordance with the needs	15	7	82	27
3	<b>linked to all sites each other</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>110</b>

Table 6 indicates to seamless or networking stage features, in this stage is formed a single portal for electronic services and can be achieved Seamless governmental services at different levels. Table data suggests that this preparation for ministries and governmental institutions is respectively, 10 and 11 percent.

**The first hypothesis Test**

For answer to this question what extent features of E-government five stages (Emerging, Enhanced, Interactive, Transactional, and Seamless) has been achieved in websites of ministries and government institutions, below statistical hypotheses proposed and single-sample t test was used for data analysis that result is reflected in table 7.

$$\left\{ \begin{array}{l} H_0: \mu \leq 0.050 \\ H_a: \mu \geq 0.050 \end{array} \right.$$

Table 7: test realization degree of e-government stages features

Ratio of achieved Features	Executive organization	Value test=0/05			Mean
		t	df	Sig	
Emerging stage	Ministries	2/74	17	0/014	0/6558
	institutions	7/009	84	0/000	0/6574
Enhanced stage	Ministries	-2/352	17	0/031	0/4056
	institutions	-8/333	84	0/000	0/3597
Interactive stage	Ministries	-3/632	17	0/002	0/3667
	institutions	-9/911	84	0/000	0/3378
Transactional stage	Ministries	-17/631	17	0/000	0/0556
	institutions	-45/349	84	0/000	0/0412
Seamless stage	Ministries	-5/571	17	0/000	0/2939
	<b>institutions</b>	<b>-43/500</b>	<b>84</b>	<b>0/000</b>	<b>0/3294</b>

Due to the level of significant in table 7 can be said with 95 percent confidence that Emerging stage features have realized more than average level in the ministries and government institutions. Of course observed mean for each group indicates that realization rate of emerging stages features is approximately 65%. Looking at the significant level for Enhanced stage and negative t value indicates that can be claimed with 95% confidence Enhanced stage features is lower than 50%. Compared to other features of stages is not in acceptable level (above 50%). Of course realization of Interactive stage features is more than Transactional and Seamless stages.

**The second hypothesis Test**

For answer to this question that are there difference between Government ministries and institutions of consider degree of realization of e-government, below statistical hypotheses proposed test for equality of mean that result is reflected in table 8.

$$\left\{ \begin{array}{l} H_0: \mu_1 = \mu_2 \\ H_a: \mu_1 \neq \mu_2 \end{array} \right.$$

Table 8: Comparison of ministries and government organizations of implementation stages of e-government

Ratio of achieved Features		Test for Equality of Variances		Test for Equality of mean				Mean		
		f	sig	t	df	sig	mean difference	Standard error	Ministry	Government institutions
Emerging stage	Equality of variance	0/557	0/457	-0/027	101	0/978	0/0015	0/055	0/6558	0/6574
	Inequality			-0/025	22/639	0/980	0/0015	0/060		
Enhanced stage	Equality of variance	0/029	0/865	1/120	101	0/265	0/0459	0/040	0/4056	0/3597
	Inequality			1/054	23/359	0/303	0/0459	0/043		
Interactive stage	Equality of variance	0/095	0/758	0/733	101	0/465	0/0289	0/039	0/3667	0/3378
	Inequality			0/718	23/234	0/480	0/0289	0/040		
Transactional stage	Equality of variance	1/200	0/276	0/579	101	0/564	0/0144	0/024	0/0556	0/0412
	Inequality			0/529	22/794	0/602	0/0144	0/027		
Seamless stage	Equality of variance	34/807	0/000	-1/892	101	0/061	0/0355	0/018	0/2929	0/3294
	Inequality			-0/955	17/384	0/352	0/0355	0/037		

According to significant level at 95% confidence distance can not rejected  $H_0$ . In other words, we can say that there aren't significant difference between Government ministries and institutions of consider degree of e-government realization.

## 6- Concolusion

United Nations to assess progress of countries in terms of stages realization e-government in 2005 shows that Iran, with 38% making use of electronic services among 179 countries is in the ranking 98, while the findings of this study is represent 35% of e-government readiness in Iran. It explained that percent of this difference is from time difference of findings and evaluation index of researcher made. obtained result for five stage (Emerging, Enhanced, Interactive, Transactional, Seamless) statistics published in organization is sign that Iran hasn't Seamless website and there is limited static information in the National site. Reviews of web site feature ministries and governmental institutions in Iran show that overall readiness for the realization e-government in executive organization is at low levels of stages. Therefore, it is necessary for the transition from the current situation and achieve high levels of e-government are formulated and implemented appropriate transition plans. Transition strategies to e-government should be designed so that perceived value of electronic services by citizens is more than its cost. The findings indicate that the executive organization passes from the first stage (emerging) and simultaneously are trying to realization of next stages features.

In addition, the results of this study indicate that there isn't significant difference between performance of ministries and government institutions regarding stages of electronic government implementation.

We should be considered that Transition programs from traditional government to electronic government are not end of work. As countries progress in achieving high levels of e-government, today scholars by design concept of "E-Inclusion " think beyond e-government (DPADM , 2005). E-Inclusion means that applying information and communication technologies for the issue clarify share of access and providing equal opportunities for economic and social empowerment of all citizens. Today governments need to think beyond the public sector management and is appeared in role of justice and equality of social and economic and this is not achieved except by providing equal opportunities for all citizens.

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