

Identifying the Success Factors Affecting the Information Technology Application in Causing Entrepreneurial Governmental

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ABSTRACT

This article looks at the intersection of the two paradigm shifts of the information revolution and reinventing government (REGO) by examining the role of information technology (IT) in the REGO movement. International community need to Information Technology and reinventing government, two object in age information should be considered: First; a much greater role for information and information systems in the processes of change, and Second; a much greater role for information technology in the processes of change. This study is applied and surveying that research, information technology factors which can be effective in achieving the entrepreneurial government and present a model that identified factors affecting of the entrepreneurial government. A questionnaire was developed to measure the validity and the degree of role of these factors the five strategies the entrepreneur government. After collection of the questionnaires, they have been analyzed by software, and finally according to statistical analysis all of theories, considering the statistical have been proved.

KEY WORDS: Information; reinventing government; electronically government; entrepreneurial government.

INTRODUCTION

It seems that bureaucratic system cannot meet the demands of communities. Hughse says: ' in recent years, government affairs are changed more than any time. These changes are not created by themselves, and they are created in response to different requirements including 1) criticizing government affairs, 2) the change in economics theory, 3) The results of the change in private sector namely globalization is created as an economical force (Alvani et al, 2006).

Economic development and collaboration organization claims that: "Now, all the member countries recognized and accepted that the improvement of government sector management is an inseparable part and the basis of structural adjustments necessary for the better economy performance is in global completion. (1990).

Economic development and collaboration organization in another report says that (1990): The reformation of public sector structure considering the position of public sector activities in all the economy is considered as an important goal. On the other hand, in the late Roman second millennium, some historically important events changed social perspective of human being. A technological revolution focused on information technologies is reinventing the materialistic foundation of the society rapidly. Economies over the world are dependent on each other and in a system in which its structure is changing continuously, a new form of relationships are created between economy, government and society (Castells1, 1999). Thus, it can be said that information age and government and government change are the current requirements of the world community. But what is the relationship between these two paradigms. What is the meaning of information age for government reinvention? In a general expression we can say that government reinventing is the continuance of new terms in general management. What are the requirements of government reformation at information age? Here entrepreneurial government and its related strategies are defined, and then its relationship with electronic government and information technology is investigated by the previous researchers.

Since mid 1990, entrepreneurship application in public sector was raised different from trade sector that led into entrepreneurship frameworks in public sector (Sadler, 2002). Maurice believes that the potential role of entrepreneurship is very important in public sector. Entrepreneurship is influence as a manageable process with important aspects of innovation, risk taking and behavior. Entrepreneurial government is the

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crucial change of public systems and organizations to increase its efficiency, adaptability power and innovation capacity. This change is gained by the change in motivation goal, responsibility and its power and culture structure. Entrepreneurial government substitute Entrepreneurial systems with bureaucratic systems. Invention of organizations and public systems without required external pressures are improved surprisingly their quality (Osborne and Plastrik, 1997). In 80s and early 90s new terms were made in public sector. Interpreters referred to engineering reinventing of public sector or as Osborne and Gabler called it, it is called reinventing government and this is referred as Entrepreneurial government. In this research reinventing means the reformation of public sector by making it Entrepreneurial. The features of such sector are as the followings:

Entrepreneurial government is a new paradigm opposite to bureaucracy and it is consisting of organizations highly flexible and compatible. They make the citizens more capable not just giving service to them. They increase competition between service providers and by transferring monitoring from bureaucratic organization to society, make the citizens more capable. In Entrepreneurial government, performances are assessed but, input is not assessed and output is assessed more. Goals and missions proceed Entrepreneurial government, not rules and regulations. They consider their client as their customer. They provide them with different choices including selection among different schools, instructional programs and all possible choices. It is attempted in Entrepreneurial government to avoid problems not providing necessary services after the problem is raised. They do their best in producing incomes not just spending money. In Entrepreneurial government distribution power and partnership management are accepted. Market mechanisms are preferred to bureaucratic mechanisms. Entrepreneurial government doesn't give services but all the sectors including public, private and volunteer sectors are encouraged in solving the problems of society (Osborne and Gabler, 1992).

Entrepreneurial government has 5 strategies: The first strategy is core strategy. If an organization is unclear about its purpose or has been given multiple and conflicting purposes it can't achieve high performance. If you don't know where you're going, then any road will take you someplace else. We call the strategy that clarifies purpose the core strategy, because it deals with the core function of government: the steering function. While the other four strategies focus more on improving rowing, the core strategy is primarily about improving steering. In this strategy the functions that are not in the service of main public goals or run by private sector, are ignored. It uncouples steering and rowing functions. As each organization can focus on a goal and they do policy making and proceeding the affairs (Osborne and Plastrik, 1997).

The second strategy is consequence strategy to rewrite the genetic code to change these incentives, by creating consequences for performance. When appropriate, they put public organizations into the marketplace and make them dependent on their customers for their revenues. When that is not appropriate, they use contracting to create competition between public and private organizations (or public and public organizations). When neither is appropriate, they use the consequences strategy to shatter the status quo by measuring performance, rewarding improvement and excellence and refusing to tolerate persistent failure (Osborne and Plastrik, 1997).

The next strategy is customer strategy focuses primarily on accountability and responsibility:

Specifically, to whom are the organizations accountable? Although all five strategies touch on the issue of accountability, the core strategy defines what an organization is accountable for; the consequences strategy determines how it will be held accountable; the control strategy affects who will be accountable; and the culture strategy helps employees internalize their accountability.

But by making organizations accountable to their customers, the customer strategy deals most powerfully with the issue of accountability.

Creating accountability to the customer increases the pressure on public organizations to improve their results, not just to manage their financial resources. Also, it creates information about customer satisfaction with specific government services and results that is difficult for elected officials, public managers, and employees to ignore. And it gives public organizations the right target to shoot at: increased customer satisfaction. This does not mean that public organizations are no longer accountable to representatives; it means they often have dual accountability (Osborne and Plastrik, 1997).

The fourth strategy is the control strategy that determines where decision making power lies. In bureaucratic systems, most of the power remains near the top of the hierarchy.

Line managers find their options limited and their flexibility constrained by detailed budget instructions, personnel rules, procurement systems, auditing practices, and the like. Their employees have

almost no power to make decisions. As a result, government organizations respond to new orders rather than to changing situations or customers' needs.

The control strategy pushes significant decision making power down through the hierarchy and at times out to the community. This strategy changes the control form in detailed regulations and Hierarchy orders to common mission and systems causing accountability for performance. By reducing the control of central controlling institutions gives power to organizations (Osborne and Plastrik, 1997).

Finally the last strategy is the culture strategy that determines the culture of public organizations: the values, norms, attitudes, and expectations of employees. Culture is shaped powerfully by the rest of the strategies: by an organization's purpose, its incentives, its accountability system, and its power structure. Change these and the culture will change. But culture always doesn't change in the ways leaders intended. Sometimes due to resistance and anger it is encountering difficulty. Often for the satisfaction of the customers and policy making, its change is very slow (Osborne and Plastrik, 1997).

Government change and information age are world community requirements. The reformations in public sector and changing bureaucratic government to Entrepreneurial government are the main strategies of governments. It should have another meaning in information age. One should consider a major role for information and information systems and the other is that it's should give important role to IT in change process (Heeks, 2000).

Electronic government provide extensive facilities to make Entrepreneurial government aspirations as real and by applying new communicative and information technologies help the improvement of providing service in public sector, rapid service providing to citizens, making government officials more accountable, clear information, reducing the distance between people and authorities, more effective participation of citizens and civil community members in public decision process, development of social justice by equal opportunities to have access to information and etc. And if the governments want to move toward good governing, should be equipped with powerful tools such as electronic government (Farhadinejad, 2007).

In response to this question that why establishment of electronic government is welcomed by public management, it is dedicated to the analysis of efficiency factors of IT, electronic government and its role on the creation of information community, private sector experience in application of E-business, good governing and function of electronic government, expectation of citizens from the government and continuance of public sector reformations by electronic government model. These six factors can determine some of the reasons of public sector inclinations toward electronic government. (Yaghubi, 2008)

The investigation of IT influences on public management shows that totally, we can conclude that the most clear positive effect of information on public management is in efficiency and operation of government function (Yaghubi, 2008). Regarding the relationship of electronic government with the movement of public management, he says: ' we can separate electronic government and reformation movement but both movements improve each other reciprocally. Heeks as one of IT and electronic government experts emphasize that electronic government whether as a part of reformation movement starting from 1980, or as its developed form is a sample of the latest designs that are taken into the attention of public sector staffs to pass from traditional model to new model (Hughse, 2003). Regarding the researches carried out in the country, in some of them, IT is dedicated to some limited functions such as receive, processing, creation, storage, recycle and information transfer and in reinventing some features are referred and nothing is said about strategies and Entrepreneurial government tools, while it could expresses the relationship between these two items and their related influence. In these researches it was shown that applying IT in public organizations reinvent these organizations considerably (Moghimi and Namdari, 2006).

In this research at first a draft of effective factors on the application of IT is extracted from previous researches then, the draft was completed through elite interviews and the factors affecting IT application were determined from the viewpoint of elite. In the next stage a questionnaire was developed to measure the validity and the degree of role of these factors on the five strategies the entrepreneur government and it is distributed in the statistical population sample. After collecting the questionnaire, it was analyzed by software and finally research hypothesis was proved by statistical analysis.

HYPOTHESIS AND RESEARCH METHOD

Research questions

- What are the effective factors in the application of IT on core strategy of Entrepreneurial government?
- What are the effective factors in the application of IT on customer strategy of Entrepreneurial government?
- What are the effective factors in the application of IT on consequences strategy of Entrepreneurial government?
- What are the effective factors in the application of IT on control strategy of Entrepreneurial government?
- What are the effective factors in the application of IT on cultural strategy of Entrepreneurial government?

Research hypothesis

- IT is effective in core strategy of Entrepreneurial government
- IT is effective in customer strategy of Entrepreneurial government
- IT is effective in consequences strategy of Entrepreneurial government
- IT is effective in control strategy of Entrepreneurial government
- IT is effective in cultural strategy of Entrepreneurial government

Research method

This research from applied goal and field research method is of survey type. Data collection is done at library resources level and applied research levels of operation systems and public organizations.

Also arrangement of the effective factors on IT application is done by interview with elite and previous researches. Sampling is done according to simple random method by considering test error and the number of samples are determined and statistics population investigated in this research are including public managers of information systems located at applied scientific education centers in Tehran and lecturers of IT and entrepreneurship. The methods and data analysis instruments are including T test single sample that is the significance test to evaluate the effect of research variables and the variance analysis applied for the evaluation of significance difference between research variables.

To identify the effective factors on the application of IT, Qubit control model was used in which 4 general factors including making the planning and organization, development, support and providing service and monitoring of IT are used. These 4 factors are including 32 subsets and each of 32 subsets are including a process in which the amount of IT role on 5 entrepreneurial government strategies (core, customer, consequence, control and culture) was analyzed and finally 10 factors were identified as the factors with high influence. The factors are as:

Planning and organization of IT including:

- Strategic plan of IT
- Architecture of IT information
- Structure and process of IT

Development of IT including:

- Strategies and services of IT
- IT software
- Application of IT

Support and service of IT including:

- Management of service layers of IT
- Information management

Monitoring and evaluation of IT including:

- Conformity of monitoring goals on IT with monitoring goals on government performance
- Supervising the conformity of costs, benefits, strategy, policy and IT services

These 10 factors with 5 strategies of entrepreneurial government including core strategy, consequence strategy, customer strategy, control strategy and cultural strategy and also 3 strategies were recognized to achieve each of the strategies and they were designed as matrices in which respondents by completing each block of the matrices from 1 to 5 identified the effect of each of 10 factors of IT in entrepreneurial government strategies.

RESULTS

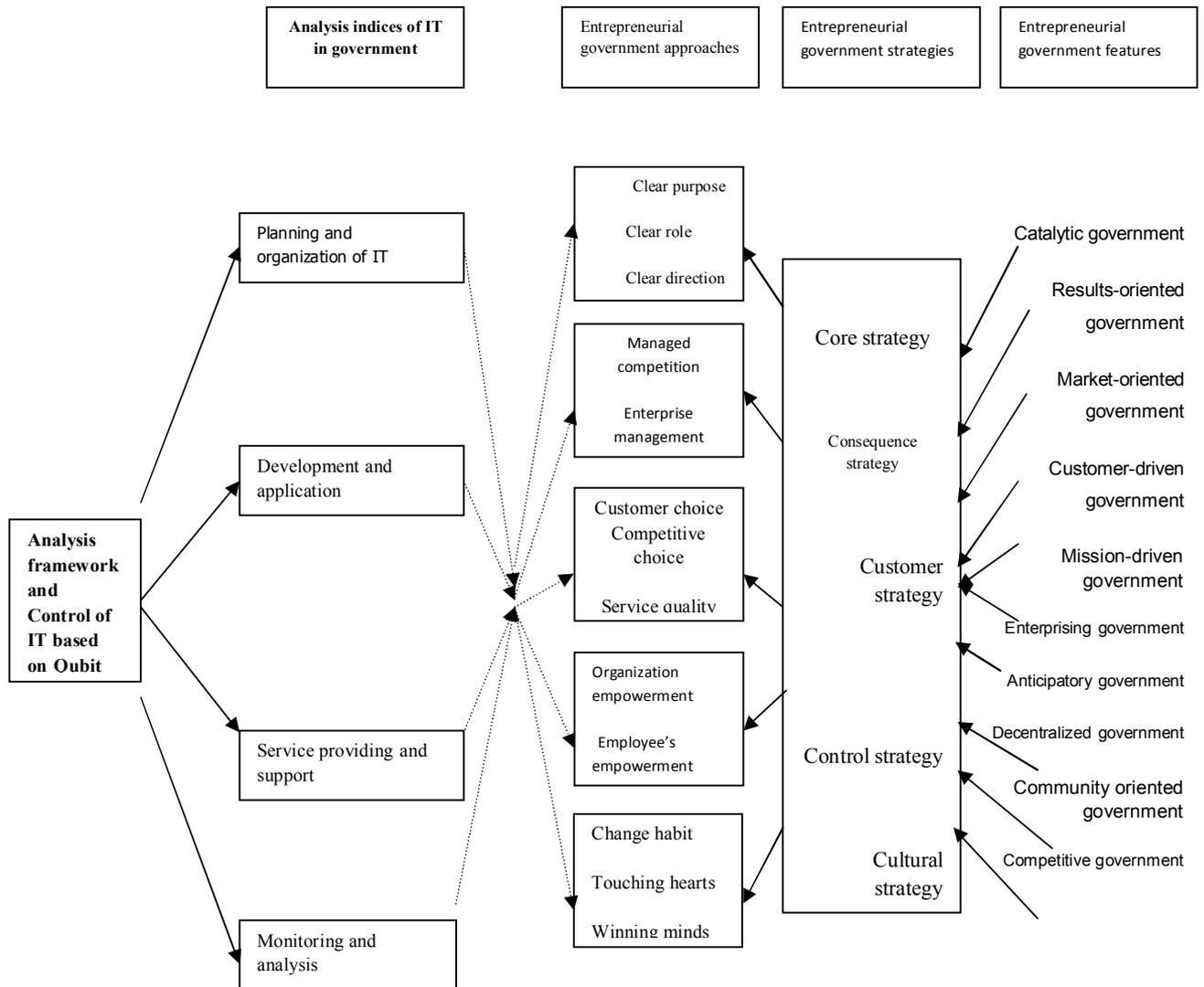


Chart 1: The main research-based model

Research results were investigated in two theoretical sections including: review of literature of theoretical principles, theories related to the effective factors on the application of IT in the improvement of efficiency and government influence, electronic government, entrepreneurial government and using real strategies of entrepreneurial government and also the relationship between two issues.

In this research having access to entrepreneurial government with ten above features in chapter 2 are assumed by five strategies of core, consequence, customer, and control and cultural.

Also based on Osborne and Plastrik theory, three strategies for each of entrepreneurial government strategies assumed as the followings:

Core strategy including reengineering of government, separation of steering functions and operational functions and the improvement of steering strategy

Consequence strategy including, Enterprise Management, competitive service management and Performance Management

Customer strategy including making the organizations accountable, customer choice and service quality assurance

Control strategy including Organizational Empowerment, Employee Empowerment and Community Empowerment

Cultural strategy including Changing Habits Touching Hearts Winning Minds

Considering the control model of Qubit IT in which IT analysis in the government is divided into 4 parts.

Here to prove the effect of IT on entrepreneurial government strategies the followings are proved.

1- Are developing the planning and organization of IT in entrepreneurial government strategies including core, consequence, customer, control and cultural strategies?

Table 1 shows the assumption test of planning and organization of IT on control strategy of entrepreneurial government. Considering the significance level in table (0.000), the test is significant, so zero hypotheses that means the lack of effect of planning and organization of IT variable on control strategy of entrepreneurial government is rejected at significance level of 0.05. As average amount in this variable is more than 3, the effect of this variable on control strategy of entrepreneurial government is very much.

It is proved by this method that this variable is effective on other core strategies.

Table 1: The assumption test of planning and organization of IT variable on control strategy of entrepreneurial government

Reliability interval 95%		Significance level	Freedom degree	T amount	Average	Variable
Upper bound	Lower bound					
.9815	.7119	.000	86	12.487	3.8467	plan4

2- Is development and application of IT effective on entrepreneurial government?

Table 2 shows that zero hypothesis is rejected at significance level of 0.05. As the average amount is more than 3 in this variable, the effect of this variable is very much on control strategy of entrepreneurial government.

It is proved by this method that this variable is effective on other core strategies

Table 2: The assumption test of development and application of IT variable on control strategy of entrepreneurial government

Reliability interval 95%		Significance level	Freedom degree	T amount	Average	Variable
Upper bound	Lower bound					
1.3651	1.0691	.000	86	16.346	4.2171	develop4

3- Is Support and service providing of IT effective on entrepreneurial government?

Table 3 shows the effect of Support and service providing of IT on control strategy of entrepreneurial government.

It is proved by this method that this variable is effective on other core strategies

Table 3: The assumption test of Support and service providing of IT variable on control strategy of entrepreneurial government

Reliability interval 95%		Significance level	Freedom degree	T amount	Average	Variable
Upper bound	Lower bound					
1.3450	1.0305	.000	86	15.014	4.1877	support4

4- Is monitoring and analysis of IT effective on entrepreneurial government?

Table 4 shows the effect of monitoring and analysis of IT on control strategy of entrepreneurial government.

It is proved by this method that this variable is effective on other core strategies

Table 4: The assumption test of monitoring and analysis of IT variable on control strategy of entrepreneurial government

Reliability interval 95%		Significance level	Freedom degree	T amount	Average	Variable
Upper bound	Lower bound					
.6190	.2699	.000	86	5.061	3.4444	monitoring3

Therefore, it was proved that four above items are effective on entrepreneurial government strategies and all the assumptions are proved. To investigate the significance difference between effective factors data in the application of IT in the level of entrepreneurial government strategies, in five group's one way variance analysis approach is used. For example, in planning and organization of IT in the result of variance analysis for this factors as it is shown in this table, Sig (p-value) is less than 0.05. So, the equal average assumption in these five groups is rejected, this means that these groups have significant difference and the reason of this difference should be defined. According to Scheffe Test rejection of equality of averages hypothesis and groups without any meaningful difference are identified. The result of new grouping based on Scheffe Test is shown in table 5.

Table 5 shows that group 5, 2 and one group 2 and 3 and group 3 and 4 are in separated groups that can be defined in this analysis regarding its average we can say that this factor has the highest effect on core, cultural and consequence strategy of entrepreneurial government.

Table 5: The classification of Scheffe Test for planning and strategies of IT variable

plan

Scheffe

Factor	N	Subset for alpha = 0.05		
		1	2	3
4	87	3.8467		
3	87	4.0511	4.0511	
2	87		4.2682	4.2682
5	87			4.3768
1	87			4.3857
Sig.		.246	.190	.772

Means for groups in homogeneous subsets are displayed.

IT in level of five strategies of entrepreneurial government with the highest effect is drawn in bold, field section including the obtained data and statistical data are collected in relation to dependent and independent variables and a model is presented based on the results. According to the results of scientific theories, the theoretical framework of the research was made and questionnaire was designed. : The effective factors on IT were defined in entrepreneurial government.

Suggestions

To achieve a defined and applied proposal that can be a frame work for continuing researches in this regard, the writer presets his proposal in the frame work of "comprehensive system of entrepreneurial government based on IT" and here Porter model is used (Radfar and Saeidikia, 2010). Michele Porter as business expert, proposed value chain model in 1985 (Porter, 2003). According to this model, the activities involved in these organizations are divided into two parts: main activities and support activities. So, comprehensive system of entrepreneurial government based on IT is including main components and they activities called value-added activities. Support components are activities done beside main activities and for the preparation of its execution conditions. In the followings the writer by the concept of value chain, present its proposal in the form of "comprehensive system of entrepreneurial government based on IT" as the followings:

It seems that all the main and support components should be drawn according to the defined principles of goal system and develop some plans to achieve the goals in order that the researchers can research about it, but the result of this thesis is as the followings:

First, today IT has practical and effective value in each of the chain rings. IT and especially information systems are playing as the main components in this system and create value in this government. Second, IT can play as a support component for other main components. Thus, some of the plans of comprehensive system of entrepreneurial government based on IT are proposed as the followings:

a. Planning and organization of IT field

1) Developing strategic plan of IT to support entrepreneurial government and monitoring requirements considering the benefits, cost and their risks as strategic plan of IT is a dynamic process and are considered in entrepreneurial government goals setting and if it has value added for entrepreneurial government by investment on IT, this long term plan will be based on reality and is updated to be in accordance with government changes and technology. In strategic plan, it should be considered how technology can supports entrepreneurial government strategies, especially core strategies of entrepreneurial government.

2) Developing the architecture of organization information is done for rapid accountability of IT to entrepreneurial government demands. This is done by giving valid information and integration of information systems with entrepreneurial government main strategies. As information architecture is integrated in all over the organization to make the value of information architecture for entrepreneurial government more tangible.

3) Developing IT processes that its function is being compatible with strategic decisions and process of entrepreneurial government and rapid accountability to their demands as the government can react actively to changes and its is including all the roles existing for the accountability of entrepreneurial government. The structure of entrepreneurial government IT is totally flexible and compatible with the services in accordance with entrepreneurial government process and strategies.

b. Development and application of IT

1) Identification of strategies and IT services to meet the demands of performance and control demands of entrepreneurial government. The methodology for the identification and evaluation of IT strategies should be improved regularly. The application method of the methodology is flexible and in accordance with the size of the project. The methodology is being supported by local and international database with reference IT strategies. Methodology is including structured documentation that provides improvement. New opportunities in this field are identified regularly and they are used to improve the organization efficiency.

2) Developing processes for the satisfaction of final users of IT services by the applied software integration and technology by the process of entrepreneurial government and updating the process of this field to make it compatible with new methods and tools of entrepreneurial government.

c. Support and service of IT

1) Providing process for giving services of IT in compatible with entrepreneurial government strategies by giving service continually to be ensure of the compatibility of IT goals with the goals of entrepreneurial government are evaluated and its evaluation and comparing with cost, benefit and etc are done. In this part service levels should be evaluated and managed continually and user's satisfaction should be evaluated also. The strategic galas meeting the demands of service levels in organization are compared with soft industry and, IT management of the organization are enjoying with adequate resources for the management of the required services of the organization.

2) Ensure of integration of infrastructures, resources and government technologies capacities and their optimized performance in meeting the demands of entrepreneurial government and being ensure of the validity and having access to information when necessary.

d) Monitoring and evaluation of IT

All the processes should be evaluated regularly for the quality and conformity with requirements of entrepreneurial government.

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