

Investigating the Effect of Using E-government on Occupational Empowering of the Employees

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ABSTRACT

The paper aims to investigate the effect E-government on occupational empowerment of government employees. The statistical population includes all employees at the Tax and Finance Organization of Eastern Azerbaijan province in 2010. A sample of 153 people was selected by random sampling. Using questionnaires designed by the researchers, the data was collected in two areas of demographic information (gender, age, level of education) and the personnel's occupational empowerment. Data analysis was conducted using SPSS software and descriptive statistical techniques (mean, standard deviation, frequency percentage) as well as independent and paired T-test. The results indicated that the use of information technology increases the occupational empowerment of personnel in the areas of self-efficiency, occupational meaningfulness, occupational autonomy, and occupational effectiveness. The results demonstrated that there is a significant difference between male and female personnel in regard to empowerment.

KEY WORDS: Occupational Empowerment, Information Technology, Self-efficiency, Occupation meaningful.

INTRODUCTION

Empowerment

Organizations have been currently focused on empowerment of employees. Researchers always applied employee empowerment at private and public sections. At recent years empowerment has been applied as a human resource strategy to create efficiency, productivity and satisfaction of working environment (Appelbaum& Karen, 1998; Huang, 2001).

Empowerment is one of the most effective tools in achieving productivity, employee and customer satisfaction, and competitive advantage. In the implementation of empowerment, not only the employee participation as a potential empowerment factor is needed, but also the organization should create special condition and tools for it.

Oxford dictionary defines empowerment as:

- a) to give (someone) the authority or power to do something;
- b) to make (someone) stronger and more confident, especially in controlling their life and claiming their rights.

Kanter defines Empowerment as giving power to people who are at a disadvantaged spot in the organization (Kanter, 1977). Others believe that Empowerment is having the freedom to act but also the responsibility for results (Blanchard, Carlos & Randolph, 1996); or, it is the process of enhancing an individual's or group's capacity to make purposive choices and to transform those choices into desired actions and outcomes (Alsop et al., 2005).

In other words, empowerment refers to the way that people possess more authority and accept more responsibilities. For example if you give your daughter some amount of money to buy jeans, you only gave her a mission, but if you give her money to buy some kind of clothes under her own authority you empowered her. So we define empowerment as giving authority and responsibility to employees in their tasks, participating in decision making, and providing training and participation opportunities for the best use of their capabilities and personal skills to increase their loyalty against the organization.

By reviewing the literature of empowerment concept we found that, before 1990s scholars mentioned empowerment concept in articles with different topics such as participative management, total quality control, individual development, quality circles, and strategic planning (Sullivan, 1994).

Empowerment in organizations deals with different issues such as: creating a shared vision; providing clear top-management support; using team and temporary group models of organization; responding to external circumstances and developing a strategy for continually scanning the environment; redesigning work to reflect collaborative norms; implementing job-enrichment; creative use of sponsorships, role models, peer alliances,

coaching, and mentoring; the development of reward systems that build “win-win” rather than “win-lose” attitudes; and identification and clarification of common goals (Vogt and Murrell, 1990). In an empowered organization, power has largely been decentralized to employees of lower levels, so they may have authority in making their own decisions (Randolph, 2000).

Empowering employees by means of giving workers some control over how they do their jobs is a key factor in capturing worker creativity, developing their skills and ability, creating learning experience and overcoming the problems caused by incessant work demands. Today’s empowered work environments result in the opportunity for and necessity of self-leadership. So, the empowerment leads to self-leadership (Carson and King, 2005).

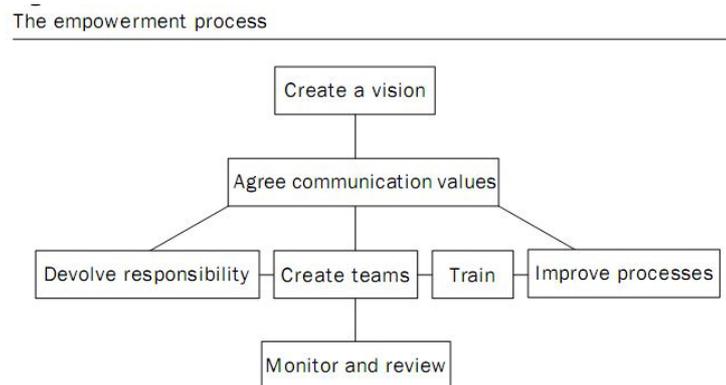
Empowerment focuses on delegation and passing power from higher organizational levels to lower ones. Empowerment gives employees the independence to make decisions and commitments instead of just suggesting them (Forrester, 2000).

By implementing empowerment concept in organizations we can see the following results: increased employees' self-confidence, increased employees' loyalty, employees think positively about their jobs, improvement in the performance and service quality that finally result in higher productivity. Employees will use their all competencies to improve their performance, obtain organizational objectives with little necessity for employees direct control, And so on.

We can categorize factors that influence empowerment in two groups:

- Individual factors: For example, personal empowerment demanded self-confidence and a strong work ethic;
- Organizational factors: Professional traits, training, mentoring, networking, environment, leadership style, job enrichment, team working, participation in goal setting (Martin, 1994).

Other elements associated with empowerment include: authority delegation, motivation, job enrichment, autonomy, self-leadership, high-involvement and participative management, (Jaw and Liu, 2003; Lee and Koh, 2001; Lopez *et al.*, 2006).



Source: Cook (1994)

Empowerment can be influenced by various organizational factors such as use or not-use of e-government and individual characteristics of employees.

E- Government

Nowadays information and communication technologies (ICT) have been increasingly used as a modern tool for providing effective and efficient governance. Technologies such as internet, facilitates the use of ICT in government, so e-government concept came to existence. Before we go around this research first we should define the meaning of e-government.

Some definitions for e-government are as follows:

the use by government agencies of information technologies (such as Wide Area Networks, the internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government.

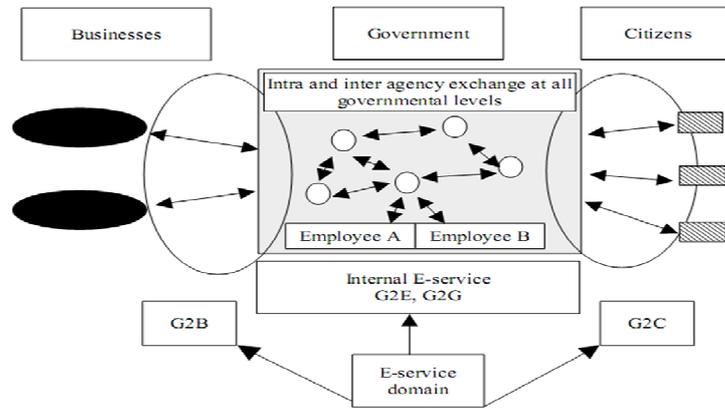
These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions (World Bank, 2004).

The use of any and all forms of information and communications technology (ICT) by governments and their agents to enhance operations, the delivery of public information and services, citizen engagement and public participation, and the very process of governance (Curtin *et al.* 2004).

E-government involves four key functions of the government: E-services, the electronic delivery of government information, programs, and services; E-democracy, the use of electronic communications to increase

citizen participation in the public decision-making process; E-commerce, the electronic exchange of money for goods; and E-management, the use of information technology to improve the management of the government. As we know, there are 5 types of relations that government faces in doing the functions told before. These relations are the same in e-government as the classic forms of government. We can categorize these interactions into four groups:

1. government to government (G2G);
2. government to citizen (G2C);
3. government to business (G2B);
4. government to employee (G2E).



Source: Hassan and Shehab, 2011

In the evaluation of e-government services we can recognize a five-dimension service quality instrument involving: (1) usability; (2) usefulness of content; (3) adequacy of information; (4)accessibility; and (5) interaction.

Implementing and getting benefits from e-government policies is never as easy as it seems, especially in the developing countries (that our research is related to) the government may face many problems. Barriers to the implementation of e-government in the developing countries include: cultural barriers, technological barriers, administrative barriers and resistance(Tseng et al. , 2008; Velsen et al. , 2009; Helbig et al. , 2009; Hung et al., 2009).So we can imagine four vertical layers of infrastructure crucial to e-government:

- (1) Human activity systems infrastructure. This constitutes the organization of activity supporting the creation and distribution of value (see above);
- (2) Information infrastructure. This comprises the information necessary to support the human activity systems infrastructure;
- (3) Information systems infrastructure. This consists of the information systems needed to support organizational activity in the areas of information collection, storage, dissemination and use;
- (4) ICT infrastructure. This consists of the hardware, software, communication facilities and ICT knowledge and skills available to the organization(Beynon,2007);

Because of these influences, most organizations make use of e-government. However, no researches have been conducted to study the real impacts of using e-government on various aspects of organizations including employee empowerment.

This study aims at investigating the impact of using e-government on professional empowerment of the employees in East Azerbaijan Ministry of Economic Affairs and Finance. We will try to answer the question that if using e-government causes professional empowerment of the ministry employees (self-efficiency, autonomy, professional effectiveness and meaningfulness) in East Azerbaijan?

RESEARCH METHOD

This study has been conducted in descriptive way in a time period with retrospective approach. The statistical population of this research includes all male/female employees of East Azerbaijan Ministry of Economic Affairs and Finance who were working in the ministry in 2010. At the time, around 600 people are working in this ministry. Sampling was made as stratified random sampling from a list of employees and according to their gender. Sampling was determined according to Morgan’s table. Accordingly, at least 148 persons must be selected from the statistical population of 600 people. Eventually, a sample of 160 people was selected to increase the reliability of the research and to allow for possible decrease in the number of cases. After data collection and elimination of irrelevant data, a population of 153 persons (35 female, 118 male) were used in the statistical analysis.

Data collection tools

Field research method is applied as data collection method and the researchers made questionnaire has two parts. The first part includes general demographic information such as questions on gender, age and level of education. The second part includes researchers made questionnaire on professional empowerment of employees. The employees clarified their feeling of empowerment before and after using the information technology.

The questionnaire on employee empowerment includes 26 statements using a 5-point Likert scale (1= very little- 5= very much) in two modes before and after using information technology. The questionnaire also involves 4 subscales (autonomy, professional meaningfulness, self-efficiency, professional effectiveness) and is developed using the theory of Thomas Woltus. The study makes use of content validity and face validity to evaluate reliability and validity of questionnaire. We asked several scholars and experts to confirm the evaluation tool. To ensure and evaluate the reliability of questions, we asked 35 persons to fill in the questionnaires. As the reliability ratio was over 60% no question was eliminated and all the questions were used. Alpha ratio was taken into account in the next phase of the study. It was in this phase that we decided to use or eliminate certain questions. Thus we made use of final data resulting from this survey to examine the reliability of tests. According to Cronbach Alpha ratio if the questions have not positive correlation, similar results would not be attained. There was acceptable reliability in this phase, too. Following table shows the reliability of research tool in pretest/posttest settings.

Table1. Reliability and number of items related to evaluated indices.

No.	Indices	No. of items	Pretest	Posttest
1	Autonomy	9	60%	61%
2	Professional meaningfulness	6	72%	87%
3	Self-efficiency	5	61%	69%
4	Professional effectiveness	6	69%	80%
5	total	26	74%	85%

The study applies SPSS.15 to analyze research data. The study also makes use of descriptive statistics (mean, standard deviation, percent frequency) as well as inferential statistics of independent T-test and paired T-test.

RESULT OF INFORMATION ANALYSIS

Total number of subjects in the study was 153 including 118 males (=77.12%) and 35 females (=22.87%). The average age of subjects was 35.52 years with deviation of 6.92. The average working experience of subjects was 13.92 with deviation of 7.21. As reviews showed 12 persons (=7.84%) were undergraduate, 135 persons (=86.27%) were graduate and 9 persons (=5.88%) were postgraduate (see table 2). To ensure the normal questionnaire, it was examined using Kolmogrov-Smirnov test (K-S= 1.01, P=0.26).

Table2. Percent frequency of the level of education of Employees in East Azerbaijan Ministry of Economic Affairs and Finance.

Level of education	frequency	Percent	Total percent
Undergraduate	12	7.84	7.84
Graduate	135	86.27	94.11
Postgraduate	9	5.88	100
Total	153	100	

Table3. Employees' empowerment condition before & after using the Information Technology

variable		mean	deviation	frequency
Autonomy	Pretest	25.81	4.10	153
	posttest	32.18	6.83	153
Professional meaningfulness	Pretest	17.38	3.64	153
	posttest	21.83	4.78	153
Self-effectiveness	Pretest	15.85	2.67	153
	posttest	19.81	3.15	153
Professional effectiveness	Pretest	15.86	3.67	153
	posttest	24.15	4.44	153

This study makes use of paired T-test to examine the impact of every factor of empowerment. As you can see in Table 4, the difference between mean self-effectiveness of employees before & after using the technology is - 3.95 with a deviation of 3.99. The analysis resulted in a T-score of -12.24 (that shows a P<0.001 level of significance). In other words, using information technology has caused an increase in self-effectiveness of employees in Azarbaijan-e Sharqi (East Azarbaijan) Ministry of Economic Affairs and Finance. It is also revealed that the average difference of professional meaningfulness before & after using information technology was -4.44 with a deviation of 5.16. The analysis resulted in a T-score of 010.65 (that shows a P<0.001 level of significance). In other words, using information technology has caused an increase in professional meaningfulness of employees

in Azarbaijan-e Sharqi (East Azarbaijan) Ministry of Economic Affairs and Finance. It is also been discovered that the average difference of professional effectiveness before & after using information technology was -8.29 with a deviation of 6.28. The analysis resulted in a T-score of -16.33 (that shows a P<0.001 level of significance). In other words, using information technology has caused an increase in professional effectiveness of employees in Azarbaijan-e Sharqi (East Azarbaijan) Ministry of Economic Affairs and Finance.

Table4. Results of paired T-test in comparing employee empowerment before & after using the Information Technology

Variable	Paired difference		T- score	Degree of freedom	Probability
	mean	deviation			
Self-effectiveness	-3.95	3.99	-12.24	152	<0.001
Professional meaningfulness	-4.44	5.16	-10.65	152	<0.001
Autonomy	-6.36	7.28	-10.79	152	<0.001
Professional effectiveness	-8.29	6.28	-16.33	152	<0.001

This study makes use of independent T-test to compare the levels of empowerment between men and women. As you can see in table 5, the average empowerment level of men is 96.27 with a deviation of 15.29 whereas it is 103.76 for women with a deviation of 14.13. The analysis resulted in a T-score of -2.58 that is significant at P<0.05 level. In other words, there is a difference between the level of empowerment between men and women employees in East Azerbaijan Ministry of Economic Affairs and Finance. Women have greater levels of empowerment compared to men.

Table5. Difference between males and females level of empowerment (118 male, 35 female)

Variable	Mean		Deviation		Variance equality		T-score	Degree of freedom	Probability
	M	F	M	F	F	significance			
empowerment	96.21	103.76	15.29	14.13	1.14	0.28	-2.58	151	0.011

RESULTS AND DISCUSSION

Results of paired T-test show that there is a statistical difference between average empowerment on four dimensions (self-efficiency, professional meaningfulness, professional autonomy and professional effectiveness) before & after using e-government. It means all averages (self-efficiency, professional meaningfulness, professional autonomy and professional effectiveness) show an increase after using e-government. In other words, using e-government causes an increase in empowerment of employees (self-efficiency, professional meaningfulness, professional autonomy and professional effectiveness) in East Azerbaijan Ministry of Economic Affairs and Finance.

The findings of this study on impact of e-government on self-efficiency explain that using e-government reduces the individual's errors and makes employees feel that they perform their duties effectively. The findings of this study on impact of e-government on professional meaningfulness show that using e-government- because specific work procedures are made and detailed purposes are determined- makes employees feel that they perform their professional activity with a clear purpose. So the professional activity causes professional meaningfulness.

On the impact of e-government on professional autonomy we found out that using e-government helps to clearly determine all responsibilities and sphere of power of employees so the employee would have authority in his/her domain and the autonomy will increase.

It seems that using E-government creates a new network of connections by applying computer systems so that managers and employees can make use to become a group and get a group behavior. This technology helps managers to eliminate distances and create a feeling of being a group which comes into existence in organizational identity in a way that all members would trust in their professional effectiveness.

Another part of findings show that the level of empowerment in women is higher than that of men. In other words, there is a difference between men and women employee of East Azerbaijan Ministry of Economic Affairs and Finance regarding the level of empowerment. Women have greater levels of empowerment compared to men.

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