

STRATEGIC ANALYSIS OF THE INFORMATION TECHNOLOGY IMPACT ON THE EFFICIENCY AND EFFECTIVENESS OF HUMAN RESOURCES IN THE TAX ADMINISTRATION IN MARKAZI PROVIDENCE

Ali Ezzati¹ and *Mehran Khalaj²

¹Department of Management, Science and Research Branch, Islamic Azad University, Saveh, Iran
Aliezati1390@yahoo.com

²Department of Industrial Engineering, Robat Karim Branch, Islamic Azad University, Tehran, Iran
Mkhalaj@rkiau.ac.ir

*Corresponding author: Mehran Khalaj

ABSTRACT: Aim of study was to investigate the relationship between the application of information technology and productivity of human resource of tax central office in Markazi Province. Research hypothesis consists of one main hypothesis and two secondary hypotheses. The statistical population includes all employees, supervisors and managers of tax central office in Markazi providence that are somehow associated with information technology that are 379 employees and in order to survey, 77 of them had been considered as a sample. In order to consider the reliability of survey Cronbach's alpha was used. Data were analyzed by using the Spearman correlation test; the obtained results indicate that there is a strong correlation between the use of IT and productivity, at the 99 percent confidence level, in central office of Tax Administration in Markazi province.

Keywords: information technology, human resources- productivity- efficiency- effectiveness

1. INTRODUCTION

Today, one of the most important factors that impact on organizations and human resource is information technology and development changes. Being precipitous of the investment speed and innovation in information technology cause to create a completely different perspectives in economic activities compare to past. Nowadays, in the major dissections of country, including the design and layout of administrative reform plan, government bureaucratic agencies seriously working to transfer the administrative, scientific and educational systems of country from the traditional space to environment of information based society and management information system and also as regards the use of information technology and information systems to enhance productivity in any organization is one of the most challenging tasks of today's managers [1].

Base on this, the tax administration in Mrkazi providence, in order to increase productivity and also to create necessary groundwork for the implementation of e-government, began to use IT in department. According to that this department compare to other organization in this providence, fund on IT desirably. Accordingly, researcher selected this organization to determine the impact of the information technology Utilization on productivity and effectiveness of the human resource.

Theoretical Principles of the research

In situations where productivity has been represented as an important component of the organizations, doubtlessly, attempt to increase amount of the productivity, effectiveness and efficiency of staff, in each organization, accounted as one of the managers' goals. In this regard, several factors affecting the productivity of human resource such that it can be noted information technology in which tax administrative office in Markani providence and its managers placed on the agenda the use of modern informative approach an information technology in order to increase staff productivity and provide better services in recent years. The concept of information throughout the organization's history has been crucial. History is full of cases where existence of accurate and timely information has changed a series of events in uncertain environment surprisingly. Nowadays, the

importance of information consider as an important tactical and strategically source and known as a major source of added value. Information has always been a competitive advantage in the business environment. Information technology with features like storage, processing, retrieval and transfer of information can improve the performance of their organizations [2].

Information technology developed, by adjusting business processes, in order to improve productivity and quality of service and also to maintain a comprehensive database of customer, supplier, employee and process / project. The difference between past studies and what has been done recently show the potential ability of information technology to support "customer satisfaction" and "quality results"

The most important factors to implement the information technology (IT) in any organization should be considered are:

- 1) Making culture: making the cultural context in each organization is necessary to implement the information technology successfully.
- 2) Believe and faith of senior managers of organization: how senior managers of organization consider the information technology as an inseparable parts of their organization, the success of its implementation will be quicker and more. IT like surgical blade in the throat of manager is more dominant. In this way) believe and faith of manager to future is the most effectiveness factor in the achievement of information technology utilization.
- 3) Pest recognition: problems and barriers and implement of the IT evaluation and planning carefully and scientifically in the organization.
- 4) Leads to the processing construction: the structure of organizations related to IT should take out from responsibilities structure and lead to the processing construction.
- 5) Involving all staff of the organizations in IT: All members of organization from senior management to employees of operational level should be considered as IT experts.
- 6) Productivity indicators improvement: indicators of productivity measurement should be to grow to improvement in organization and used the information to transform into knowledge.

7) Downsizing: take out non-core activities from the environment organization that called downsizing is considered as organizational requirements.

Hence, the importance of the impact of information technology investigation on productivity of organizations, especially in tax central office in Markazi province, is following:

- Because of competitive reasons, many organizations see themselves forced to invest in IT.
- In organizations, have been invested heavily on the information systems and IT
- Equipping different parts of this central office of the information technology network, office automation and different plans of mechanized operations.
- Particular importance of human resources productivity for management of the office.
- New concepts of information technology in this office.

So, do various research, in context of analyzing the information technology application effects on the performance of the organizations, in order to mitigate the possible adverse effects, related to the blindly use of the new technology in organizations is necessary that the recent research conduct to put into action such a necessary.

Review of the literature

Local review of the literature

Alame [3] investigated the influence of organizational culture on human resource productivity by using the questionnaire and field method as a tool to collect data, in research Institute of Animal Husbandry of the country and conclude that the single constituent elements of organizational culture in current state and the desired state are significantly different. Therefore, it can be generally concluded that the overall dominated culture of organization with the organization's desired culture and their employees if there is such a culture (desired culture) will be increased their productivity, have significantly different to each other. He suggests reduce the ambiguity of career, establishing a reward system based on performance of employee; design an appropriate and accurate system for recruitment of human resource, performed proper supervision system in the institution and implementation of training programs to enhance management capabilities in order to achieve the desired situation.

Masomi [4] studied the factors affecting motivation and its impact on employee's productivity of post office in Semnan providence and come to the conclusion that wages and benefits, job security, clerical career and professional knowledge has a positive and significant relationship with their motivation and productivity. And he suggested the reform the system of pay and benefits, pay attention to the welfare and protection and holding training courses and explained the duties of staff in order to increase staff productivity.

Jah bin [5] studied the performance of Tehran's taxi service and effectiveness of management information systems on the effectiveness of its management and productivity that the study hypothesis is as follows:

- A. Establishment of management information systems cause to improve the planning and decision-making in the taxi services.
- B. Establishment of management information systems led to improve the monitoring and control of the taxi services.

C. Establishment of management information systems led to improve the coordination of the taxi services.

According to statistical data derived from questionnaires, all hypotheses have been tested and approved.

Sepeheri [6] by the study and classification of factors affecting the productivity of human resources from the executive staff point of view in West Azerbaijan province, by using field method and questionnaires to collect data, concluded that the material factors (providing life requirements) participation of personnel for the fate their organization and great responsibility of the serving staff and involve subordinates in decision making are the affecting factors of employee's point of view in increased productivity. At the end of study, he suggested the pay and benefits reform, assignment of job responsibilities to employees, delegating and fair and appropriate punishment and reward system to achieve greater productivity.

Foreign review of the literature

Louckis g Michalopoulos [7] analyzed and investigated the IT pressure on organizational structure of public administration in Greece. The data used were provided by the central government and the study was focused on IT hardware technologies that were employed. This study led to presents the following guidelines, i.e. the public administration guidelines in Greece on the use of information technology:

- More coherent and greater use of information technology in the public administration can be significantly helpful in achieving the objectives of administrative modernization and improvement of productivity.

- Although IT partially covers the administration and support sub-systems, more favorable and more widely used in the field of doing things manually greatly reduces and releases human resources more than before.

- In order to the use of information technology to improve strategic functions, where the current use of information technology is the minimum, maximum effort should be made. studied the impact of information technology on organizational characteristics and argued his results as the organizational consequences resulting from the use of information technology. At first, they outlines two main functions are lead to useful information that included: information performance and information increases, they believe that information technology with these two characteristics impact on the characteristics of organization and led to five organizational consequences that these outcomes are: human resource empowerment, knowledge-based encryption, increasing the scope of organization, increase efficiency and enhance creativity and innovation... in a subset of organizational characteristics, aspects that have been studied include: structure, size, learning, culture and organizational relationships. However, the structure was studied the four subset like specialization, formalization, centralization and decentralization and vertical separation.

Research hypotheses

Main research hypothesis: the use of information technology (IT) in the tax Central Office in Markazi province has increased the productivity of human resources.

Secondary research hypotheses

- Use of information technology (IT) in this department increased the efficiency.

- Use of information technology (IT) in this administration lead to increase the effectiveness

RESEARCH METHODOLOGY

Recent study in the purpose view is functional and is a kind of correlational research. Theoretical foundations have been used by library studies, including books, articles, journals and internet, and others. The required data collected through the questionnaire of the impact of technology on productivity and human resources.

The statistical population and sample

The statistical population consisted of all employees, supervisors and managers in tax administration of Markazi Province in summer and fall in 2013 which are somehow related to information technology and in order to survey 77 employee was considered as a sample.

Research variables

Independent variable: "Information Technology" is the independent variable in this study includes office automation, management information systems and various communication networks in the tax administration of Markazi Province.

Dependent variable: the dependent variable is "productivity". According to the definition, productivity was divided into two dimensions: efficiency and effectiveness. Efficiency is the ratio of outputs to produce goods or services, or in other words the ratio of the final resources was used.

Technology: Technology is systematic knowledge for the manufacture of a product, process and service utilization. Technology is a kind of intangible asset that can be create and transmitted, acquired and discard [7]

Information: information is the currents that changes the total knowledge, this change occurs when either the issue added to knowledge or renewal the existing knowledge structures Information technology: include the all forms of

the technology is used in order to processing, storage and transmission of information in an electronic format. Physical equipment that is used for this purpose include: computers, networks, communications equipment, fax and electronic software.

Office automation: Office automation includes all formal and informal electronic systems that related to informational communication between individuals inside and outside of the organization and vice versa.

Information management system or management reports systems: The second generation of information systems that provide a necessary report from transaction processing systems (operation) in a mixed form and put in the hands of managers. Also, for this reason, it's called management reporting system.

Communication networks: Communication networks have been created to support the communication and transfer of information and messages. Many of these networks at the national and transnational networks to be interconnected, have provided the possibility of communication between individuals and the transfer of communication.

Productivity: productivity is doing things right as well as doing the right things

(1-1)

$$\text{productivity} = \text{efficiency} + \text{effectiveness}$$

Efficiency: Efficiency is the ratio of output to produce goods or services, or in other words the ratio of the resources used in the final.

Effectiveness: The effectiveness of the organization is a degree or extent in which the organization will achieve to its desired goals [8]

According to the research variables, conceptual model is ready as follow.

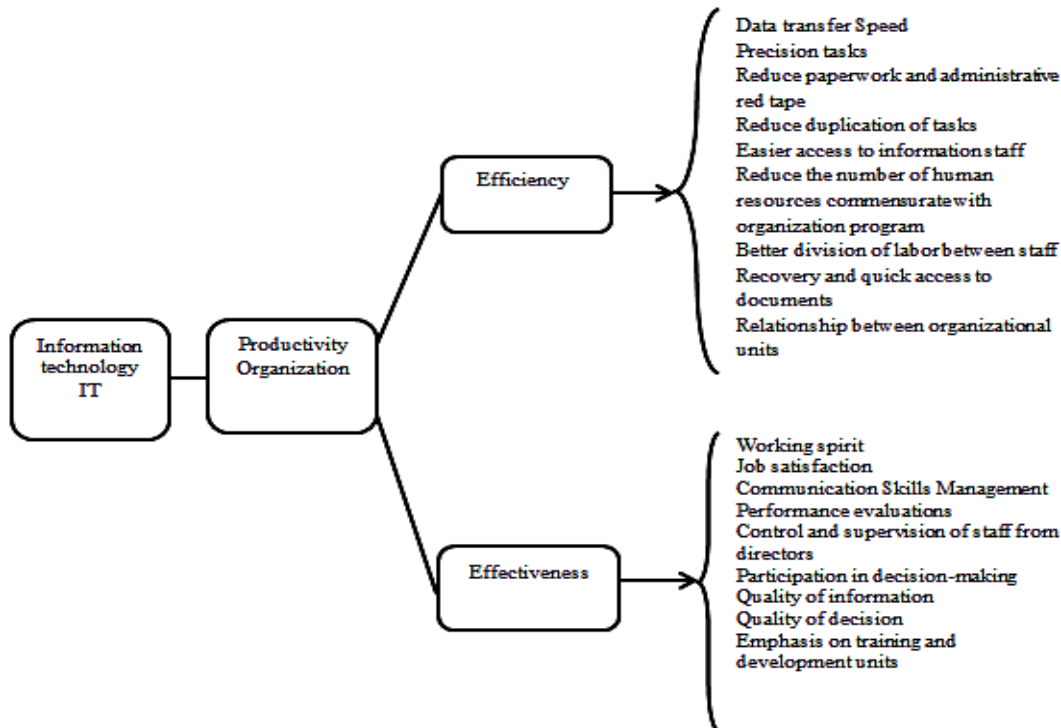


Diagram 1) research conceptual model

Table 1) Questions of Cronbach's alpha questionnaire

	Cronbach's alpha like to remove question		Cronbach's alpha like to remove question
Question1	0.913	Question14	0.913
Question2	0.913	Question15	0.908
Question3	0.912	Question16	0.911
Question4	0.914	Question17	0.911
Question5	0.911	Question18	0.913
Question6	0.913	Question19	0.911
Question7	0.917	Question20	0.916
Question8	0.915	Question21	0.920
Question9	0.912	Question22	0.916
Question10	0.916	Question23	0.913
Question11	0.916	Question24	0.918
Question12	0.912	Question25	0.914
Question13	0.911	Question26	0.918

Table 2) the correlation coefficient between information technology and efficiency

			Efficiency	IT utilization
Spirman	Efficiency	correlation coefficient	1.00	(**)0.854
		significance level	0	0.000
		Number of observation	77	7
	IT utilization	correlation coefficient	(**)0.854	1.00
		significance level	0.00	0
		Number of observation	77	77

Table 3) the correlation coefficient between IT and effectiveness

			Efficiency	IT utilization
Spirman	Efficiency	correlation coefficient	1.00	0.720(**)
		significance level	0	0.000
		Number of observation	77	77
	IT utilization	correlation coefficient	0.720(**)	1.00
		significance level	0.000	0
		Number of observation	77	77

The structure of the research questionnaire

The main tool used to collect data in this study is the researcher made questionnaire and designed by the Likert type questions (range of very low, low, medium, high, and very high). The questionnaire consisted of 26 questions and designed based on the hypothesis that the first eleven questions to assess the efficiency and fifteen next questions is used to assess the effectiveness of staff.

Reliability and validity of the questionnaire are as follows:

Research Validity

To increase the validity of the questionnaire, have been used some methods such as study and investigate the questionnaires and questions of similar research, study numerous books and articles related to information technology and productivity and study the relevant model and also consultation with experts.

Research reliability

Reliability was evaluated by Cronbach's alpha measuring:

Results of the research hypotheses analyzing

The first sub-hypothesis: the it utilization in tax administration in markazi province has increased the efficiency

The correlation coefficient between the two variables is equal to 0.854 and the performance and utilization of information

technology and its significance level is equal to 0.00. This correlation coefficient indicates a strong correlation between these two variables. Because, the significance level of the first type of error is less than 0.01, so the first hypothesis with 99% confidence be approved. So these two variables have a significant correlation and because the correlation coefficient between the two variables is positive, suggest that the increased in the information technology utilization in tax administration of Markazi province cause to increase employees' efficiency. The coefficient of determination (r^2) is 0.729 for the first sub-hypothesis.

The second sub-hypothesis: the information technology utilization in tax administration of Markazi providence enhances the effectiveness.

The correlation coefficient between the two variables and the efficiency and utilization of information technology is equal to 0.72 and its significance level is equal to 0.00. This is the high correlation coefficient between these two variables. Because the significance level of the first type of error is less than 0.01, so the first hypothesis is approved with 99% confidence. The coefficient of determination (r^2) is 0.518 for the second sub-hypothesis.

CONCLUSION

In order to analyze provided hypotheses, because the responses has been provided have Likert range, by the Spearman correlation coefficient was used. The results of the statistical analysis suggests that the research hypotheses are approved, therefore, a significant level of one percent with 99 percent of confidence can be claimed that the use of information technology, in tax administration in Markazi providence, increase the efficiency of human resources. Hence, the main hypothesis is confirmed.

Also, there is a strong correlation between IT and productivity of human resources of the tax administration. The results are aligned with the research results of Masomi [4] and Alame [3].

According to the results the applicable suggestions for organization is organized as follows:

1. As long as, there is no the infrastructure and organizational framework in order to applied information technology and require culture of the organization, related to the necessity of information technology application, cannot expect that staff be very interested and willing to use the technology.
2. Other specialized training courses related to information technology and its application to employees according to their fields of work.
3. Formulate IT long-term planning along with goals and programs and organization vision and delivered these programs to all dependant cities of this administration to move in a single direction and avoid from duplication and the waste of resources.
4. Organization need to store written documents in the computer and discard those documents. Since the advent of information technology is to reduce duplication and omitted parallel activities, existence of other traditional filing systems seem unnecessary. With this advanced tools such as CD, DVD and etc. which is always available and the space is not too cumbersome, does not need to store information in writing form.
5. Update sites and introduced all the activities, facilities and the provision of tax law related to the type of activities as well as through e-services can be done the legal papers to the payers by email.
6. Nowadays, received information as a basis of decision-making is important . So, the creation of the database is required. So that all payers are an individual magnetic card that card was associated with a bank card so that we achieved needed information on payers in all over the country, at any time.
- 7 . The regular meetings with users and all those who are associated with the IT organization , in order to precise information on the consent and their demands and attempt to resolve the problems and obstacles posed by them.

Also, considering the results and confirm the role of information technology in the management of human resources improvement (in terms of effectiveness, efficiency and productivity) the following suggestions are offered to managers, especially human resource managers.

It should be noted that in order to strategic enterprise-level information technology was used, careful planning is required. This planning includes in-depth study of the culture of the organization, the organization's ability to perform the change, the external environment of the organization, management support, the information needs of the organization and ways to meet them. Also, it should be checked their skills in the field of information technology to ensure that adequate manpower for maintenance systems exist both in hardware and software. Lack of managers' knowledge in the field of information technology prevents the adoption of this technology in organizations. So before IT can serve effectively in the organization, managers should be trained in the various fields of technology. But unfortunately, managers involve to other aspects of the technical and dense work so that will focus on other aspects of the organization does not exist.

Adoption and implementation of information technology (IT)in organization is not a general prescription and cannot be a comprehensive program of information technology for all organizations and companies to implement and run IT structure.

To realize the benefits of information technology, organizations should be embedding IT within the structure, culture and of their organizational strategy and the position of information technology defines clearly in organization. Since that information about all activities affecting organization document generally advanced tasks in organizations information technology (IT) in all organization units and management oversight result in extended by supreme management position. However, some local companies and organizations because are unaware about IT issues, use it as a spread within the organization, create serious resistance and problems that make it difficult to achieve the goal of technology in company. The IT structure independently but penetrating to coordinate and implement the information technology (IT) and develop within the organization or company that defines its structure.

In addition to the above, the following recommendations for the management of human resources in order to improve its human resource functions are provided:

- Providing the necessary conditions of employment for all managers developments
- Correct behavior and actions of leaders and managers: People should be given greater responsibility for the management and leadership while have a certain personality traits, leadership and management practices to operate and are pattern morally.
- Provide the necessary conditions for career advancement for all people
- In-service training and staff training: in-service training and staff training should be seen as a vital and continuous. Because it is only way to efforts of staff training to existing facilities and new scientific developments.
- All tasks, guidelines and rules should be clear for staff and for which there is no ambiguity.

- Provide sufficient authority to staff, so they feel more responsible for their own work.
- At the time of hiring, attempt to efficient and professional people to be attracted and in order to select them execution of written and oral tests are necessary.
- Try to employee participation in decision making and the formulation of objectives and programs. The result of this operation will cause the employee to perform their responsibilities and actions to achieve organizational goals and exhibit greater effort.

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