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## **THE ROLE OF UCT ON EMPOWERING THE STAFFS OF SOCIAL SECURITY ORGANIZATION OF KERMAN PROVINCE**

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### **ABSTRACT**

The most important and most vital asset of any organization is its human's resources. The quality and empowering of human resources is the most important factor on the survival and vitality of the organization. ICT is a kind of technology that has a large effect on organization's human resources. The present study was done to investigate the role of ICT in enabling SSO staff in Kerman province. The statistical population of this study is social security organizations and among them, 180 employees were selected by using random sampling. And by using RST model, we have investigated the role of ICT components of staff empowering. ICT components include use of computer, internet and the amount of using economic software. The results of this study show that using computer and internet in SSO organization causes that the staff feeling and belief increase to work in an organization. So, according to the results of better studies, organization manager can working better in relation with promotion of technology and innovation in an organization and increase the quality level among staffs.

**Keywords:** *ICT and RST Model*

### **INTRODUCTION**

According to the OECD definition, the ICT includes a set of manufacturing and service industries to store, transport and data display and information are used in electronic form. Technological revolution is known with the indices of rapid improvement of equipment quality and greatly prices reduction. ICT has a dual role in economic and inputs are considered for users and output is considered for ICT industry manufacturers. By observing relative price, profit-maximizing firms reacts through the replacement of ICT equipment, software and services to other goods and services. So ICT is obtained by the three-part interaction of computer, information and communication (Mahmoudzadeh, 2005). ICT plays a dual role in the economy. On the one hand, input is considered for user and on the other hand, output is considered for ICT industry manufactures. Technological revolution is known with rapid improvement indicators in equipment quality and software by a sharp reduction of prices (Pahiola, 2002). Thus, firms whose goal is to maximize the profit, can react to these changes with replacement of equipment, software and services that can provide a context to enhance their interests by using rapid advancement of technology. One of the main conditions of development of information technology is the presence of efficient specialists; lack of these forces is the main cause in the lack of technology development. The world is currently in transition and transformation of the present situation to the desired situation. Therefore, we can expect that a number of jobs are created in the IT field. Countries need for IT professionals to develop their job. And these components will not be done by conducting training courses for educated people to have sufficient skills and abilities in digital age (Naserzadeh, 2001). ICT can create job and job debugger. Evidence suggests that ICT can act as a catalyst for economic growth and job creation. When the daily life is mechanized and productivity increased and production and delivery cost decrease. In other words, the cost of goods decreases for the buyer and consequently, the demand for buying increases. And also, information technology causes that efficient and accurate information are always available for seekers and they can be able for decision-making and better and timely decision-making. This can in turn reduce the costs, and increase profits and it can facilitate the economic growth. It is a fact that as a result of motorization of activates, some demands for industrydecrease for labor force. On the other hand, new jobs are entering to the job market. Some of these jobs include web page design, maintenance and

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management experts of web based database, experts of multimedia systems, satellite transmission technician, technicians of global positioning systems and professionals of e-commerce, these jobs require knowledge, skills and abilities that some of them are not exist in previous or current job description (Kurzwei, 1999). So the basic problem that should be answer in this study can be presents as follows. Is the ICT can playing a role in social security employees?

### **Research Literature**

The mean of technology is a knowledge that is required for design or manufacture of a product or a set of services (Fakour, 2010). Scaramuzzi (2002) introduces ICT technologies as a set of manufacture technology, storage, exchange and using information in various forms of business information, voice conservation, images and animations, multimedia presentations and other forms that have not yet introduced. ICT means production management networks, processing, distribution, and optimal consumption of information systems in order to increase the efficiency of information systems (Hejberkiyani, 2007). Lucas defines the information and communication technology as follows, ICT technologies refers to all storage and processing technology types, electricity. For this purpose, some equipment such as computer, communications equipment and networks, fax machines any manageable electronic package (Hejberkiyani, 2007).based on the theory of economic growth, increase of production factors can lead to increase production and employment and then, in the absence of technology will diminish the return production. Hence, the increase of production factors (capital) alone can not increase the production. But technology development and return role is not reducer and by transmitting production functions, they can cause to employment and production growth and reducing unemployment (Agshari, 2006).

### **Research Literature**

There are several studies in different countries of world and Iran to investigate ICT that are considered in following cases.

Merikull (2008) in a study, investigate the effect of innovation of employment of the Estonia country in the industry and firm level. The results of his study showed that ICT in the industry and firm level has a positive effect on employment and ICT in the manufacturing level has a more positive effect on employment level. Lachenmaier studied the effects of technology on employment that his result of this study was that technology on the firm level has a positive effect of employment. Also, the technology effects in process are more than their effects on manufacturing, innovation in manufacturing causes to create new produces in market that creates new demand. This increased demand increase employment in force powers but innovations in process means to promoting the level of manufacturing process. Harrison *et al.*, (2006) investigate the effect of ICT on employment at the firm level (France, Germany, Spain and England). The results showed that ICT creates changes in employment of labors but the compensating effect with price decrease caused overall positive effect of ICT on employment. Hagen and Zeed (2005), by using data from 2752 firms that has more than 10 employees in the industry and services of Sudan and by using Cobb-Douglas production function, investigated the effect of the ratio of people with computer, dummy variable for access to broadband as an approximation of ICT. Used control variables in this study include firm size based on the number of employees, skill composition and ownership skill. Obtained results imply that in industrial sector, the 10% increase in equipping workforce to computer causes 3.1percent increase labor productivity and increasing bandwidth causes 3.6% increase of labor productivity. Kashalsh (2004) investigated the growth of employment and electronic work that they concluded that entering new technologies will not cause to job lost. By arrival of ICT, employment has a significant growth in all investigated companies that the main growth of employment relates to skilled workers. Adelman (2000) in a study to evaluate the virtual information world concluded that today the term information technology includes a broad spectrum of computing and technologies. IT performs many functions in the modern world that have started from installation of information systems to design complex computer and information networks (Mahmoud and Asadi, 2009). The effects of Information and communication technology were studied on the growth of labor productivity in Iran's economy. The results showed that total productivity, non-Fava capital and fava and human capital have a positive effect

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on labor productivity in Iran economic. Hosseini (2007) in his master’s thesis entitled “investigating the empowerment levels of woman labors and identifying hindered barriers in empowerment in the offices of the Iranian Telecom, research Institute of planning and management concluded that there is not a significant relation between the mean of female staff empowerment in the telecommunication Company of Iran.

Mashiri and Jahangard (2006) studied the effects of information and communication on economic growth and productivity of Iran and this study consists of two parts that in the first part we investigate and test the relation between ICT and economic growth. The results of this study implies a positive but insignificant and weak relation between economic and technology and communication. In addition, in the studies there are done about the effect of ICT on the firms performance, due to the lack of data and due to the lack of data and statistics, the successor or poor approximation are used to measure the use of ICT. Horabadi (2004) in his master’s thesis entitled to investigate the relation between organizational structure and employee empowerment (Tehran Persian Bank) of Tehran University, concluded that there is a significant relation between empowerment cognitive factors and recognition. Also, there is a significant relation between empowerment cognitive factors and focus. In addition, there is a significant relation between empowerment cognitive factors and complexity.

**MATERIALS AND METHODS**

Due to purpose, application, methodology, this research is a survey research. In following, research variables, data collection tools and methods, validity and reliability, the statistical population and sampling and data analysis are discussed. To data collection, researchers use many different tools. Due to the question and studied questions, in this research, two methods of library and filed studies are used. In library method, for data collection and research background, many books and specialized articles have been used. In field method, in this study, a questionnaire has been used. The questionnaire relates to information technology and communication. It should be noted that dependent variable is employment empowerment and independent variable: 1-internet access, 2-using computer software and 3-using computer. Each component measurement can be done by some questions and to answer the questions, the Likert scale is used. Statistical population in this study consisted of all employees of social security insurance of Kerman province. In this study, the sampling method was a simple random and the number of samples is equal to 180 people. In the section of inferential statistic, the RST method was used to examine the relation between variables. Rough Set Theory (RST) in the beginning of 1980s, was expanded by Zdzislaw. This view is used to express and checking issues that there is uncertainty and ambiguity. And it provides a powerful tool for methods such as eliminate and reduce data and redundancy and irrelevance information from database include approximation perform from bottom to up for a set of objects based on the properties of the objects. For using this theory, we define an information system as a flat table. Rows in this table are about objects and elements but the columns of tables consist of condition characteristics or decision characteristic or decision making. So,  $IS = \langle U, AUD \rangle$  is an information system/decision making in which  $A \subseteq U$  and  $D$  is a single element set and  $A = \{a_1, a_2, \dots, a_k\}$  is nonempty. And the elements of set  $A$  are called conditional features. And for each non-empty set  $B \subseteq A$ , we can define Equivalence  $IB$  on  $U$  as  $IB \subseteq U^2 = U \times U$  and it can be defined as follows:

$$(x,y) \in IB \iff \forall a \in B(a(x) = a(y)) \tag{1}$$

In which  $a(x)$  is the amount of feature  $a$  in an object or element  $x$  from  $U$ . we can show easily that this relation induces an equivalence on  $U$ . in fact, this means that two object  $x$  and  $y$  are equivalent relative to features in  $B$ . whenever for these features, the values of two object be same, more precisely, we have:

$$x/IB = [x]_{IB} = \{y \in U \mid \forall a \in B(a(x) = a(y))\} \tag{2}$$

And all of the equivalence classes of elements  $x$  in  $U$  are as follows:

$$U/IB = \{ x/IB \mid x \in U \} \tag{3}$$

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It is obvious this set gives a partition. An addition, to partitioning P from U, we can define a partition E(P) includes (x,y) pairs on U<sup>2</sup> so that two elements of x and y are in one object in P partition. In other word, if P={p1, p2, ..., pk} is a partition from U. so:

$$(P_j \times P_j) \tag{4}$$

$$R = \bigcup_{j=1}^k P_j$$

An induced partition is a partition P from U.

Portioning classes x/IB for X ∈ U is known as initial sets and partition classes x>ID for X ∈ U are called concept sets. The overall processes are sets as follows:

$$X_1 = \{x \in U \mid d(x) = d_1\}$$

$$X_2 = \{x \in U \mid d(x) = d_2\}$$

$$X_3 = \{x \in U \mid d(x) = d_3\}, \dots$$

$$X_r = \{x \in U \mid d(x) = d_r\} \tag{5}$$

Where V<sub>d</sub>={d<sub>1</sub>, ..., d<sub>r</sub>, d<sub>2</sub>} are the decision values for all U objects. Discernibility matrix and reduction set of RED is defined according to the usual approach in Rough theories. Suppose: B=Red is from RED sets, we calculate following sets:

$$IB(X_1), IB(X_1)$$

$$IB(X_2), IB(X_2), \dots IB(X_r), IB(X_r) \tag{6}$$

So, some of the decision making rules are strong and other rules are obtained by using ROSE2 software and necessary conclusions are done (Biobef, 1998). Reliability is one of the technical characteristics of measuring. This concept deals with this issue that measurement tool in similar conditions produce results. To determine the reliability of questionnaire, the Cronbach’s alpha was used and validity or reliability of this questionnaire was calculated as 83/0. The validity of this questionnaire is confirmed and it has the necessary validity.

**Data Analysis**

According to investigating the collected data from 180 questionnaires,, information classification are done as follows:

**Table 1: Valuation variables**

Verbal values	rate	Classification rate	Number of questions	Variable name	row
Low	1	5-10		The amount of using computers	1
Average	2	11-15	4		
High	3	16-20			
Low	1	5-10		The amount of using computer software	2
Average	2	11-15	4		
High	3	16-20			
Low	1	5-12		Using internet	3
Average	2	13-20	5		
High	3	21-25			
Low	1	10-20		Staff empowerment	4
Average	2	21-30	8		
High	3	31-40			

In this model, decision variable in this model are employees empowering the staffs and conditional variables include: using internet, the amount of using computer software and the amount of using computer. Table (2) shows the obtained results from Rough model, the final table has been classified in accordance with these details.

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**Table 2: The obtained results from Rough set**

The amount of using computers (A <sub>1</sub> )	The amount of using computer (A <sub>2</sub> )	software using internet (A <sub>4</sub> )	Staff empowerment (B)	frequency (F)
1	1	1	1	2
1	1	1	1	2
1	1	1	1	2
1	1	1	2	2
2	1	1	2	4
2	1	2	1	5
2	1	2	1	6
2	1	2	2	22
2	1	1	2	8
2	2	1	2	36
2	2	1	1	6
2	2	1	1	6
2	2	1	1	4
2	3	1	1	5
2	3	2	2	8
3	3	2	2	17
3	3	2	1	5
3	3	3	2	5
3	3	3	2	8
3	3	3	3	17
3	3	3	3	12
Total				180

Rule 1 shows that if in this organization, the amount of using computer is too high and in Social Security Organization, the amount of using computer software is low and finally, employing empowering of staffs of SSO will be moderate. The second law states that if in the Social security computer, the amount of using computer software is low and the amount of using internet can be investigated moderate, thus the staffs employment empowering of SSO will be in average limit. Third law shows this point that of the amount of using computer and internet are investigated high in SSO, so the employment empowerment of staffs will be in high level. Fifth rule states that if the amount of using computer is in average level and using internet in SSO is low, then the employment empowerment of staffs of SSO is low or moderate. Fifth rule shows that if amount of using computer is high and using internet is also moderate, employees empowering of staffs of SSO will be in medium and high level. Sixth rule indicates that if using computer software in SSO is too high, employees empowering of staffs of SSO will be in moderate to high level.

**CONCLUSION**

**Conclusions and Recommendations**

In order to identify ICT, scholars conducted many research with statistical approach to help managers make better decisions. In this study, it was observed that if the amount of using computer and internet in SSO is high, employees empowering of staffs will be higher means sense and relief of people to organization and employee. Some occupations in social security organization are done by equipping to modern technologies (including information technology) and they can provide more accurate and easier use. For example, insurance operator equipped with mobile phones, portable computers and digital cameras, can perform their tasks, better). Promoting the use of ICT in the economy and organization increases the flow of available information in financial systems. In this way, it increases the competitive

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environment governing the organization's activities and the benefits of competitive environment can be achieved. In other word, using ICT reduced the search cost and more access to information. And this can increase the employ's sense and belief to jobs and organizations. Developing the computer and internet in each sector increase the productivity of other product factors especially the workforce, in other words in different organizational levels (public and private) improves mental and management systems and so by reducing costs and releasing powers and human and physical resources, it can increase economic efficiency. The effect of information technology in the demand sector influence on consumer utility and on the supply side, ICT can be seen as a general technology. And it creates continuous overflow effect in productivity of all product factors in organization. Since the development of ICT results a more intellectual, more instable and scientific staff, so continuous training and promoting knowledge level and knowledge about employment requirements seems necessary. If the amount of using computer and software and internet become high in organizations this issue causes to increase demands for force work and as a result, increases employment. It is supposed that for creating automation, we need experts, in this regard, demand for skilled labor increases. Using technology creates new services in an organization. Development of ICT creates new branches which in turn are associated with new jobs.

### Offers

1. The context for ICT development and ensuring and allocating necessary financial resources including funds for investing in networks infrastructures and ICT technology is necessary with the aim of providing the necessary vision capacities in country.
2. Also for developing ICT, we need experts that in this position, training labors and specialization is so necessary.

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