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Studying the Factors Affecting the Adoption of Electronic Customs by Staff of General Administration of Customs in Tehran

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Abstract: This study aimed to investigate the factors influencing the adoption of electronic customs by staff of general administration of customs in Tehran. The method according to the purpose, the method of collecting data including descriptive research and research-based cross correlation. The population consisted of 370 employees of Tehran's general administration of customs of which 189 of them using simple random sampling were selected as sample.

Key words: Acceptance of technology, knowledge, education, confidence, satisfaction, customs administration of Tehran

INTRODUCTION

In recen years, the growth of information and communication technology has important effect on human life and the performance of organizations and institutions have been in different countries. According to experts as the invention of the steam engine and the industrial revolution brought a great change in people's professional and personal life, the communications revolution has brought with it changes. With the help of modern information and communication media, the world has become a village where information and media is connected to the system and its components. A wide range of technologies of information and communication technologies such as the internet, satellite, mobile, cable television and so on through the transmission and reception of verbal messages, audio, video and production, dissemination, storage and retrieval of information for communication between people used. Since, the advent of information and communication technologies, researchers from different perspectives have tried to assess the consequences of the use of these technologies. With increasing investment in new technologies, the adoption of these technologies is very important. Adoption of multi-dimensional phenomenon and a wide range of key variables such as perceptions, beliefs, attitudes and characteristics of people and their involvement with information technology to be included (Chang and Cheung, 2001). Achieving optimal system to facilitate customs provisions in the trade. Thereby facilitating the use of e-Government services business is one of the strategies that can be applied globally. What could be a contributing factor to facilitating the adoption process of change and acceptance of new phenomena such as the technology is according to audience interpretation of the phenomena mentioned. Perception, perception or thought process by which people interpret their sense seems to give meaning to their environment, there are factors affecting the interpretation or person in authority such as past experiences or on the subject and the purposes attention is or is not in a position (Robbins, 2006). Therefore, considering the relationship between customs and the IT staff in terms of quality, the quality, the attitude and the relationship is important. If employees as the main elements involved in the organization can establish a relationship with the technology necessary to reduce efficiency and cause problems in individual areas for staff, problems also occur in the scope of the problems such as reduced productivity, disruption of services, unnecessary costs to the organization, etc., therefore, the necessity of understanding the relationship between new technologies and the acceptance of the importance of staff repeated. Therefore, considering the relationship between customs and the IT staff in terms of quality, the quality, the attitude and the relationship is important in relation to e-Government personal characteristics, factors related to electronic customs services including security, availability, quality, risk and uncertainty, speed, usefulness, perceived value, privacy and trust can have an impact on user perception towards electronic customs and its acceptance by them. Thus, according to the above description of all personal electronic customs employees may be due to their attitudes toward the adoption of new methods versus traditional methods, these attitudes are often due to lack of understanding of the new issues arise

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because often the idea is to induce that person to do an additional job in addition to previous work or even thinking may occur due to lack of understanding of its capabilities and new technology, it can learn and possible position in the organization is threatened, these are the challenges customs organization, constantly changing customs management system has been in different countries of the world customs organization managers are facing huge challenges. Towards globalization, increasing technology changes, customer-oriented, reduce the life of the product, the nature of the goods, regionalism, etc. and variety competition requires a new form of leadership. Therefore, managers have to make the switch in the dynamic and changing environment, organizations also need to change to improve things for their actions. Therefore, managers and pundits have identified factors in the lack of acceptance of new technologies by users so that they can properly resolve it. In Tehran's general administration of customs with the arrival of new technology to control the problems of the employees in faced with the need to create new technologies that addressed the effect of technologies in the office as a result, researchers are looking for answers to the question whether norms and attitudes of staff general administration of customs on the acceptance or rejection of an electronic customs is effective or not?

Change management in the field of electronic customs how members of the public sector means that traditional approaches to change management and information and communication technology as a new tool for the management of the environment. Aside from working conditions and the requirements listed, e-Commerce features in turn, leads to the creation of a virtual network without border trade and worldwide market that the market instruments for fundamental change and provide businesses forward.

The objectives of the study:

- Factors affecting the adoption of electronic customs by the general administration of customs staff in Tehran
- Determining the optimum level of each of the factors affecting the adoption of electronic customs by customs staff in Tehran
- Prioritize each aspect affecting the adoption of electronic customs by customs staff in Tehran

Theoretical foundations and literature: The definition of various concepts in an important place in the explanation and understanding of the research process, so under the definition of the variables the study explains:

Acceptance: Psychological acceptance in a variety of titles such as to permit, tolerate, accept and experience is described. Adoption also means communicating with a source of motivation (internal or external) and especially the experiences of the private (internal) is used to avoid this behavior, avoid or aggressive calls (Julian, 2014). However, adoption of technologies by introducing indices such as the agreement with the organization, the usefulness of IT for the organization, technologies and personnel evaluation of technologies to the benefit of employees and by definition is operational and tested.

Confidence: A definition that is considered in this study is Rogers's definition, the trust to ensure that other activities are consistent with their speech has defined. He says the definition of confidence means that people with whom you work toward happiness and materials you are interested in without you have the ability to do something for them. The index of confidence with the introduction of technologies such as the threat of human resources, consistent with organizational objectives and technologies, visibility of the organization and imposed technologies of IT managers by definition is operational and tested.

Customs: Customs cooperation council, customs has defined "public organization in charge of law enforcement, customs and collection of customs duties and export and import, transit and export of goods". The term of each of the parts of the customs organization or its subsidiary offices or refers for example in the case of customs agents, import and export duties and import or export controls or any other matter that is also used in some customs operations such as customs agents, customs duties, customs office and customs declarations.

e-Customs: According to the definition provided by the customs, the customs e-Mail is part of the government which means the use of ICT in customs including the use of technology in facilitating business, service to the customer, etc.

Security: Active state relative security from the threat or attack or be prepared to deal with any threat or attack.

Cyber security: With the advent of space (world) cyber users or the need to feel safe in cyberspace, cyber citizens to get things done, the first safety by increasing awareness and knowledge of users and then with the help of cyber security firms and the legal authorities and provided police (ibid: 39). The increased security by

introducing criteria such as reputation, trust in new technologies to ensure the safety of technology and strengthen the sense of security, by definition is operational and tested.

Knowledge: Everyone is very conscious daily experience. For example, knowledge of a red flower in the garden courtyard or the sound of an aircraft in flight in the sky or the taste of chocolate is that the tongue and prime examples of the conscious experience of visual, auditory second and the third was taste. Each of these conscious experiences "phenomenal character" to mean that there is a certain quality of experience. In this study, knowledge and technologies and the introduction of indicators such as the proportion of the organization's objectives, impact of technology on communication within and outside the organization, awareness of the disadvantages of technologies and stress and anxiety as a result of technology, defining, operating and measuring in the world.

Facilitating: Today in the world with an emphasis on information technology to improve procedures and reduce static, things easy. The use of e-Commerce related benefits such as reduced costs, increased efficiency and productivity, use of large-scale production, competitive markets, easy access to information necessary for the transactions, reduction and elimination of market barriers, increasing the number of suppliers of goods, up consumers have choice and since that enhance well-being and provides optimum use of resources. However, this awareness by introducing criteria such as increased productivity, reduced costs and save resources, facilitate the organization and performance improvement technologies, therefore, by definition is operational and tested.

Extensive research in the field of technology adoption in different organizations within and outside the country who went on to some of them.

In 2003, a study on factors that affect the adoption of mobile banking in South Africa was conducted by Erwin Brown. The study population included all 13 million mobile phone owners who were also bank customers, among which were referred to major shopping centers and stores samples were selected. The results showed that the comparative advantage of the ability to use experimental and needs of banking customers had a positive effect on the acceptance of mobile banking while perceived risk, prevent the adoption of mobile banking.

According to a study by Lu *et al*. (2009) and within the framework of the theory presented in the Technology Acceptance Model Davis, they feel confident that the new variable name indicates concerns related to security and privacy of users with regard to the decision Internet banking will have to accept the initial model. This study investigates the intention of self-reliance on computer users through the application of variable feeling, a feeling of ease of use and confidence shown. Variable feel the greatest impact in terms of ease of use, users have had in shaping consumer behavior intention. Then variable and variable feeling a sense of confidence in the applicability of the next rank in last place (ibid: 9).

Study entitled not to Reksha and colleagues investigated the effects of communication and acceptance of electronic banking in 2004, Singapore. The point of the article dealt with the relationship between banking relationship with the customer in the form of relationship marketing programs and their impact on the customer's decision on adoption and use of electronic banking as a new banking product. The results of this study showed that customer satisfaction with the banks on their willingness to use corporate e-Banking have no direct effect. However, the fact that customer satisfaction has a significant impact on the trust and commitment of the other two components and these two variables directly affect the willingness of customers to use electronic banking so, we can indirectly conclude that customer satisfaction is the willingness of customers directly affect the use of electronic banking. Therefore, it can be concluded that customer satisfaction indirectly affect the willingness of customers to use electronic banking (ibid: 10).

In 2006, another study using technology adoption and to identify the factors that determine the use of mobile banking among bank customers are affected, using a questionnaire was conducted in Malaysia by Hanadyn Amin. The variables used in this study are: perceived reputation, perceived ease of use, self-esteem and perceived social pressure. The sample used in this study includes customers in Malaysia who have a mobile phone but still did not use mobile banking. The results showed that social pressure have very little impact on the decision to use while ease of use was a significant effect on the decision. The direct correlation between self-efficacy and intention to use mobile banking and mobile banking on making a positive impact of credit by using mobile banking was observed. The researchers said that due to high costs for the banking system is done via mobile phone, it is important that their acceptance by customers as a new way of banking, make sure (ibid: 11).

In 2007, another study on mobile payment acceptance by the customers was conducted by Nina Malate. The independent variables used in his research include:

- Comparative advantage: the possibility of payment at any time and any place and no need to stand in line for banking
- Complexity: the degree to which an innovation is felt to be complicated
- Cost: the cost of using an innovation that can bring to users
- Perceived risk: unauthorized use of a mobile phone. This means that if a mobile device is lost, stolen or hacked through which others can make payments
- Terms of use: the mobile payment benefits depends on the conditions of use as there is a queue, weakness or absence of other payment methods, hurry and need never anticipated (ibid: 11)

Richard J. Holden and Ben Crash in 2010 in an article entitled "technology acceptance model: past and future medical care" increasing concern about the reaction of the users of health Information Technology (IT) showed the importance of theories predicting and explaining the adoption of health IT and its use are described. In this study, Technology Acceptance Model (TAM), 16 sets of data from remote healthcare practitioner studies were analyzed, studies in large samples and settings, health, research models, relationships, test and manufacturing operations is examined. Results show that the TAM anticipate a significant portion of the users of health IT, may benefit from several model changes. In addition to improving the quality of study and standards, the compliance model for future TAM specifically to the context of health care, using the extraction method studies www.elsevier.com/locate/yjbin (in available).

NGOs Chang, the name of the Park and Wang, John Falk and Margaret Mac logging in an article in 2010 entitled "age differences in perceptions among non-users to participate in online networks: development technology acceptance model" deals with the differences of age the harvest of online communities organized by the people who participate in these social spaces for their still relatively new. Using Technology Acceptance Model (TAM), we intend to further the factors that affect the individual to participate in online communities examined. The results indicate that "perceived usefulness" positive ruling to individual behavior, however, it became clear that "perceived ease of use" does not show significant differences in the perceived usefulness. The study also negative correlation between age and internet self-efficacy and perceived quality of online websites shows. However, the age adjustment was not considered. Overall, these findings suggest that the relationship between perceived ease of use, perceived usefulness and to participate in online communities does not change with age available in (www.elsevier.com/science/article).

Ronnie Chang and Doug Vogel, in his article in 2013 titled study "anticipates common user acceptance of the technology: technology acceptance model for e-Learning development", the company said. In this study, an experimental model was developed using survey data collected from 136 full-time students in a program that works to support Google applications registration had been carried out. According to the results, the determinants of adoption of major factors affecting the adoption of technology. In addition, subjective norm by peers, the relationship between attitude and intention to adopt technology was observed. The ability to share information on the environment and cooperative learning to understand the intentions and behavior of users to Google Apps platform.

Models and hypotheses: TAM (Technology Acceptance Model) the 1st time by Davis in 1989 for research in the field of social psychology was discussed. The theoretical model is still widely used by researchers. TRA and TPB are two basic theory of social psychology which led to the creation of the TAM. Based on the theory of TRA, behavioral performance of a particular behavior by making the person engaging in the activity to be identified. TPB theory on the assumption implies that the behavioral intention to perform different behaviors can be person's attitude toward the behavior, subjective norms and perceived behavioral control predicted. TAM as a compact model, predictive and powerful to explain and predict the behavior of decision-making and the adoption of a particular technology has been created. It claims that an individual's decision to use the technology depends on two specific behavioral belief of perceived usefulness and perceived ease of use. Perceived usefulness is the subjective expectations using a technology from the use of its own technology to improve his performance on this model which is believed based on the subjective perception of the technology, the technology affects their attitude. The model indicated that the use of ICT is determined that the intention and the desire to conduct themselves on the use of a particular technology, will improve his performance and second, the degree to which a person's subjective perception of ease of use believes that the use of a particular technology will be easy for him, going back (Rezaei, 2009). Subjective norm, the individual's perception is that many of the people who are important to him, think of the perceived usefulness of the degree to which a person believes. Use of ICT by the user, the result of the realization of a four-stage process that includes:

- External factors influence the beliefs users to use information and communication technology
- Member beliefs affect their attitude to the use of information technology. Attitude affects users for their tendency to use information and communication technology
- The willingness of users to use ICT to determine the level of their use

Environmental technology within the organization, the organization stressed that the process of trilateral context of the adoption and use of ICT affects the organization. Technological fields including technologies for internal and external organizations or technologies that are currently used in the organization and what those in the market but are not used. Organizational context factors such as target size of organization, relations and informal letter, the amount of unused resources available within the organization and centralization, formalization and complexity of the organization's management structure and covers the area of environmental, industrial situation in which the organization operates defines and contains the type of industry, the level of competition, stability and instability in the market, government transactions and rules and regulations. In total, these three factors underlying the decisions of the organization as factors that have influenced the adoption of technological innovation. Subjective norm, the individual's perception is that many of the people who are important to him think he should or should not do the behavior. Many studies the psychology of normal mental or social norm factor in encouraging the development of a person's behavior are known. Subjective norm liability or obligation of one user or more specifically his emotional attachment to the use of information technologies and communication networks and determined by three different processes influence individual behavior: compliance, identity and assimilation (ibid: 86). Image, one's perception of the social status through the use of an innovation. The image can be caused by increasing power and influence of the higher base effect on the perceived usefulness of positive knowledge (Yu *et al*., 2008). Because people often influence social norms in order to create or maintain a desirable body image within a reference group to react. When the concrete results of ICT, directly on potential adopters reveal, the more the advantages of the new technology and its implications for their job to understand. Direct relationship between the visibility and perceived usefulness of there as well as view of results, will have a positive impact on the perception of easy use. Individual terms of visibility somewhat trust the results of an innovation system and achieve the desired results reflect that the concept of self is defined (Yi *et al*., 2006). Among the proposed models to describe and predict user acceptance of information systems, technology acceptance model Davis, powerful and reliable cross-compliance system and offers the user behavior in order to use them. Davis, in this model, perceived ease of use as the extent to which a person believes that learning and using the system does not require much effort and perceived usefulness as the extent to which a person believes that using a particular system, job performance He improves has defined and suggests that the perceived ease of use and perceived usefulness directly by external variables are specified. Davis in 1993, picked up a service for users of e-Mail and text editors is studied. The results of his research show that features a system has a significant effect on perceived ease of use. When users are faced with a new and unfamiliar system, your impressions about the system based on their mental models of the system make. User's mental model of a system's internal representation of system features, structure and function points. In addition, based on the technology acceptance model and related research are expected to harvest users about the ease of use of the system have a direct impact on the perception of usefulness and behavioral intention to use of an information system. Similarly, it is assumed that user perceptions of the usefulness of the system, the direct impact on the intention to have the use of an information system. When users encounter a new system, more worried about their ability to learn and use the new system to the usefulness of the system. Therefore, methods that allow users to trust your ability to learn and improve system can have a significant effect on its acceptance. End-user training, research and support centers, user groups and management support can be most effective ways to improve the process as users' confidence in their ability to learn and use the processing technologies. Technology acceptance model, the first man to psychological factors influencing adoption of new technologies cited. In general, the acceptance or rejection of information systems technology acceptance model refers users directly affected by their perceptions of ease of use and usefulness of the system. This model is widely used in a range of processing technologies, organizational conditions and populations of users has been tested successfully. One of the main challenges and work style of modern organizations, the adoption and use of new technologies and to this end, much research has been carried out and various solutions have been proposed. One of the most beautiful models in this regard, Technology Acceptance Model (TAM) which was presented by Davis in 1989 and then revised by him and others. This model is perceived usefulness, perceived ease of use by the application of the factors in the adoption of technology that she introduced him. These factors led to changing attitudes and ultimately behavior change is the adoption and use of technology. The model was tested in various environments and according to

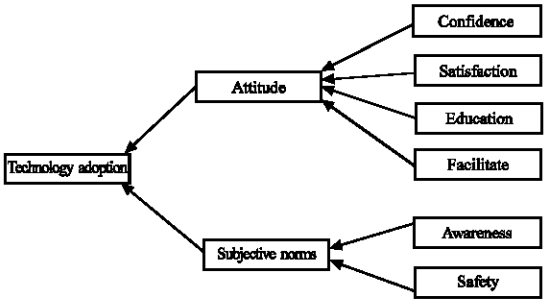

Fig. 1: Conceptual model

changes in the applied conditions are known. Sheikh and Blazing, TAM had developed and understanding of web security added to the user's attitude towards adoption of technologies that directly improve. In fact, the found dead model of Davis Model in this study as a model work in developing hypotheses and questionnaire have been used (Fig. 1). The hypotheses are:

- Reliance on IT staff by the general administration of customs Tehran on adoption of electronic customs by them is effective
- Satisfaction with IT staff on the adoption of electronic customs by the general administration of customs Tehran is effective
- Security of electronic customs general administration of customs in Tehran on adoption of electronic customs by the staff is effective
- Facilitating and reducing costs, the adoption of electronic customs systems of the general administration of customs staff Tehran is effective
- Knowledge of the system of electronic customs general administration of customs Tehran on its acceptance by employees is effective
- IT training to the staff of general administration of customs Tehran on adoption of electronic customs by them is effective

MATERIALS AND METHODS

The method is applied for the purpose of research using human cognition and knowledge through basic research provides optimization tools to solve human needs and improve, objects and the well-being and to improve the patterns in the development of human life is used (Jackson, 2003). In addition, the study of the nature and methods, descriptive because this research in order to discover the facts or what is done for this reason, the researcher does not talk about the rationale for the distribution of the phenomena discussed deals, although most of these studies have a descriptive purpose but some of them and also to determine the intrinsic relationship between pay phenomena. The data in this study consists of two parts, the first part of library and archival studies that have addressed the review of literature, books and research that is relevant, semi-relevant research (home and abroad) will pay for data collection writing and research foundations. The second part of the survey, according to which after determining the target population using a questionnaire to collect data from the general administration of customs staff Tehran then we use SPSS Software to analyze the information and test the hypotheses will be discussed. The study population of 555 people, all employees of the general administration of customs Tehran that it cannot be investigated because the whole society using simple random sampling method in which all people a chance to be in the sample population is using the sample, the sample size was 189 people (Table 1):

Table 1: Alpha value test questions

Row	Dimension	No. of questions	Cronbach α value
1	IT security	4	0.078
2	Facilitating and reducing costs using technology	4	0.079
3	Trust staff technology	4	0.078
4	Their knowledge of how to use technology	4	0.081
5	Staff satisfaction using technology	4	0.078
6	Staff training in the use of technology	4	0.079
7	Technology acceptance by staff	5	0.081

$$n = \frac{p(1-p)Nz_{\frac{\alpha}{2}}^2}{e^2(N-1) + p(1-p)z_{\frac{\alpha}{2}}^2}$$

$$= \frac{0.5(1-0.5)\ 555(1.96)}{(1.96-1) + 0.5(1-0.5)(1.96)} = 189$$

Where:

n = Sample size
N = Size of population
Z = Normal area under the curve at the level of 0.95 is equal to 1.96
p = Proportion of the population with a certain attribute
q = (1-p) = Proportion of the population lacks certain traits

RESULTS

Data analysis: In the descriptive information about the different variables based on the variables will be provided. This information includes frequency for each variable, means and standard deviations for the variables of the distance. Population and sample size depends was detailed in the third quarter, so the only frequency will be referred to the general picture of the display. The sample consisted of 189 is responsive (Table 2).

Table 2 shows the distribution of participants by gender, 79.0% of male respondents and 21.0% is seen as the respondents are women.

Table 3 shows the distribution of participants according to their age to enhance the age of respondents, frequency is presented in four categories, according to the results most people 44.0% between 31-40 years old people and the lowest 6.0% to 30 years of age. The mean age of respondents was 2.00 years (SD = 1.003 years).

Table 4 shows the distribution of participants based on their education which is seen as the highest response 46.0% of the license and the lowest response 2.0% of their doctoral studies.

In order to analyze the factors affecting the adoption by the general administration of customs staff Tehran, after describing each study variable for each question and the mean of them together, using the Spearman correlation test to evaluate and intensity of the relationship between independent variables and the dependent variable of each of the hypotheses examined and finally, using the Friedman test and Shannon entropy show that the effect of independent variables on the dependent variable which is higher (Table 5).

As can be seen in Table 6, the highest frequency in the answers of respondents, both large and medium-sized options and this shows that the staff of the general administration of customs Tehran to agree rather with technologies and accept it. In addition, the mean adoption variable (17.0000) is relatively high.

As can be seen from Table 7 the highest percentage of respondents in response options and other options rather average ratios of similar which indicates that Tehran general administration of customs staff to the organization's IT security assurance there are moderate. In addition, the mean security variables (12.0000) is the average. As can be seen from Table 8 the highest percentage of respondents answering options average options remaining almost of similar proportions, this shows that the staff of the general administration of customs Tehran to facilitate the entry of certain technology there are moderate. In addition, the mean facilitating variables (13.0000) is the average.

Table 2: Gender of respondents

Gender	Frequency (number)	Frequency (%)
Man	151	79.0
Female	38	21.0
Total	189	100.0

Table 3: Age of respondents

Age	Frequency (number)	Frequency (%)
30 years	13	6.0
31-40 years	82	44.0
41-50 years	79	42.0
51 years	17	8.0
Total	189	100.0

Table 4: Education of respondents

Education	Frequency (number)	Frequency (%)
Upper diploma	32	16.0
BA	87	46.0
MA	68	36.0
PhD	2	2.0
Total	189	100.0

Table 5: Income of respondents

Income	Frequency (number)	Frequency (%)
Higher than 800 thousand toman	6	3.0
Between 1500-900	97	51.0
Between 2300-1600	74	39.0
>2400	12	7.0
Total	189	100.0

Table 6: Distribution of indicators related to technology acceptance

Questions	Very low	Low	Average	High	Very high
Do you agree with the introduction of new technologies in the organization?	3.0	7.0	19.0	41.0	30.0
Do you know the beneficial use of new technologies in the organization?	4.0	8.0	22.0	43.0	23.0
Do you know to win new technologies in the organization?	10.0	9.0	28.0	36.0	17.0
Are you positive you get new technologies to the organization?	7.0	12.0	28.0	32.0	21.0
Are you effective familiarity with information technology and technology adoption by your organization?	7.0	10.0	41.0	32.0	10.0

Technology acceptance: Mean = 17.0000; SD = 4.0000

Table 7: Distribution of indicators related to security

Questions	Very low	Low	Average	High	Very high
Do you know of new technologies in the organization as a threat to the human resources within the organization?	7.0000	14.0	31.0	24.0	24.0
Do you trust the administrators to import new technologies in achieving organizational goals?	12.0000	12.0	40.0	31.0	5.0
Is the view of the results of the use of new technologies in the organization is to increase your confidence in these technologies?	11.0000	9.0	32.0	24.0	14.0
Do you know of new technologies to the organization and rules imposed by management?	11.0000	17.0	37.0	23.0	12.0

Technology acceptance: Mean = 12.0000; SD = 3.0000

Table 8: Distribution of indicators for facilitating

Questions	Very low	Low	Average	High	Very high
Do you know of new technologies to increase productivity in the organization?	4.0000	7.0	30.0	33.0	26.0
Do you know of new technologies in the organization to reduce costs and save resources?	8.0000	11.0	30.0	27.0	24.0
Do you know that new technologies facilitate the organization has been doing?	15.0000	8.0	46.0	19.0	12.0
Do you know of new technologies to improve the organization's performance?	8.0000	15.0	47.0	24.0	6.0

Facilitating: Mean = 13.0000; SD = 3.0000

Table 9: The distribution of the indicators of confidence

Questions	Very low	Low	Average	High	Very high
Do you know of new technologies to enhance the credibility of the organization?	1.0000	10.0	31.0	25.0	33.0
Do you have confidence in new technologies?	10.0000	12.0	29.0	38.0	11.0
Are you sure you want to secure the use of new technologies to protect the information?	28.0000	24.0	32.0	9.0	7.0
Is the arrival of new technologies to enhance the sense of security you been?	17.0000	12.0	43.0	20.0	8.0

Confidence: Mean = 12.00000; SD = 2.04431

Table 10: Distribution of indicators related to knowledge

Questions	Very low	Low	Average	High	Very high
Do you know of new technologies in the organization, according to the organization's goals?	7.0000	12.0	31.0	35.0	15.0
Do you know the effective use of new technologies in the organization's internal and external communications?	7.0000	10.0	31.0	28.0	24.0
Are you aware of the disadvantages of new technologies to the organization?	9.0000	15.0	51.0	21.0	4.0
Is the arrival of new technologies in the stress and anxiety in you?	17.0000	27.0	33.0	19.0	4.0

Awareness: Mean = 12.0000; SD = 2.0000

Table 11: Distribution of indicators related to satisfaction

Questions	Very low	Low	Average	High	Very high
Do you have the satisfaction of working with new technologies in the organization?	17.0000	15.0	31.0	23.0	14.0
Are you aware of the benefits of new technologies to the organization?	8.0000	19.0	40.0	28.0	5.0
Are you new technologies in the organization leads to better measure the performance of your organization?	15.0000	11.0	47.0	19.0	8.0
Are you new technologies to reduce the workload of you?	9.0000	25.0	42.0	10.0	14.0

Satisfaction: Mean = 12.0476; SD = 3.0000

Table 12: Distribution of indicators related to education

Questions	Very low	Low	Average	High	Very high
Do you know the training courses to better use and communicate better with new technologies useful to the organization?	8.0000	3.00	33.0	26.0	30.0
The adoption of new technologies by your colleagues in the organization of its acceptance by you is effective?	11.0000	15.0	45.0	24.0	5.0
Is the arrival of new technologies led to the more specialized functions of the organization?	17.0000	15.0	27.0	35.0	6.0
Is the arrival of new technologies led to the variety of subjects is something for you?	18.0000	26.0	31.0	22.0	2.0

Education: Mean = 12.0000; SD = 3.0000

As can be seen from Table 9 the highest percentage of respondents answering options average options remaining almost of similar proportions, this shows that the staff of the general administration of customs Tehran technologies to the trust are moderate. In addition, the average value of variable reliability (12.0000) is the average.

As can be seen from Table 10 the highest percentage of respondents in response options and other options rather average ratios are close to each other, this shows that the general administration of customs staff Tehran to moderate knowledge and technologies to the organization. In addition, the mean between knowledge (12.0000) is the average.

As can be seen from Table 11 the highest percentage of respondents in response options and other options rather average ratios are close to each other, this shows that the staff of the general administration of customs Tehran technologies organizations are moderately satisfied. In addition, the mean satisfaction (12.0476) is the average.

As can be seen from Table 12 the highest percentage of respondents in response options and other options rather average ratios are close to each other, this shows that Tehran general administration of customs staff training in moderately trained to enter the IT organization. The mean value of the variable training (12.0000) is the average.

Table 13: Inferential statistics related to aggregates

Variables	Min.	Max.	Mean	SD
Adoption	6.00	25.00	17.000	4.000
Security	4.00	20.00	12.000	3.000
Facilitating	4.00	19.00	13.000	3.000
Confidence	8.00	18.00	12.000	2.044
Awareness	6.00	19.00	12.000	2.000
Satisfaction	5.00	19.00	12.047	3.000
Education	4.00	20.00	12.000	3.000

Table 14: Kolmogorov-Smimov test to assess data distribution

Variables	Kolmogorov-Smimov statistic	Significant level (Sig.)	Results
Technology acceptance	0.050	0.010	Abnormal
Security	0.095	0.000	Abnormal
Facilitating	0.070	0.003	Abnormal
Confidence	0.096	0.000	Abnormal
Awareness	0.011	0.001	Abnormal
Satisfaction	0.081	0.004	Abnormal
Education	0.021	0.000	Abnormal

Some of the statistics in the above Table 13 can be related to each of the variables such as minimum and maximum, mean and standard deviation observed. The mean of each variable (dependent and independent) because of 4 questions obtained are compared with the number of 12. So, if you see the mean of all variables are equal to or higher than 12, indicating their distribution.

The above Table 14 numbers are derived from the Kolmogorov-Smirnov test to measure the distribution of data can be seen. This number is obtained for each of the variables.

Since all these numbers significant level (Sig. value obtained) the number are less than $\alpha = 0.05$ distribution of data can be concluded that the questionnaire was not normal and therefore, should be used non-parametric tests for this reason, the selection and the relationship between variables was assessed by Spearman correlation test 1.

Test the hypotheses: Using Spearman correlation test, the relationship between variables were analyzed with the results follows.

First hypothesis: Trust the technology Tehran is effective on acceptance by the customs general administration of customs staff through their electronic customs.

- H_0: reliance on IT staff by the general administration of customs Tehran is not effective on the adoption by their electronic customs
- H_1: reliance on IT staff by the general administration of customs Tehran is effective upon acceptance by their electronic customs

The significance level of <0.05 correlation coefficient above, we conclude that reliance on the adoption of the employees affected (i.e., reject the hypothesis H_0 and the alternative hypothesis is accepted). The amount and mark the Spearman correlation coefficient (0.090) reflects the confidence the adoption of technology by employees. In other words, in the view of respondents, increased confidence will lead to adoption by them (Table 15).

Table 15: Results of Spearman correlation test technology acceptance and confidence

Confidence	Values
Technology acceptance	
Spearman	0.090
Significant level (Sig.)	0.000
Number	189.000

Table 16: Spearman correlation analysis technology acceptance and satisfaction

Satisfaction	Values
Technology acceptance	
Spearman	0.071**
Significant level (Sig.)	0.001
Number	189.000

**Correlation is significant at the 0.01 level (2-tailed)

Second hypothesis: Satisfaction with IT staff general administration of customs of the adoption by their electronic customs.

- H_0: satisfaction with IT staff general administration of customs Tehran is not effective on the adoption by their electronic customs
- H_1: general administration of customs staff satisfaction and technology Tehran is effective upon acceptance by their electronic customs

Based on the significant level of correlation is <0.01 above that concluded that satisfaction with the adoption of the employees affected. (i.e, reject the hypothesis H_0 and the alternative hypothesis is accepted). The amount and mark the Spearman correlation coefficient 0.071, indicating satisfaction with the adoption by employees. In other words, in the view of respondents, satisfaction is due to technology adoption by them (Table 16).

Third hypothesis: Customs general administration of customs Tehran is effective electronic system security on the adoption by their electronic customs.

- H_0: security of electronic customs general administration of customs Tehran is not effective on the adoption by their electronic customs
- H_1: security of electronic customs general administration of customs Tehran is effective upon acceptance by their electronic customs

Table 17: Spearman correlation analysis technology acceptance and security

Security	Vlaues
Technology acceptance	
Spearman	0.024**
Significant level (Sig.)	0.001
Number	189.000

Table 18: Spearman correlation analysis technology adoption and facilitating

Facilitating	Values
Technology acceptance	
Spearman	0.056**
Significant level (Sig.)	0.001
Number	189.000

**Correlation is significant at the 0.01 level (2-tailed)

The significance level of <0.01 correlation coefficient above Table 17, we conclude that the adoption of security technologies by employees affected (i.e., reject the hypothesis H0 and the alternative hypothesis is accepted). The amount and mark the Spearman correlation coefficient (0.024) reflects the impact of the adoption of security technologies by employees. In other words, in the view of respondents, an increase of security due to the acceptance of them.

Fourth hypothesis: Facilitating and reducing costs by using electronic customs general administration of customs Tehran is effective upon acceptance by their electronic customs.

- H_0: facilitating and reducing costs by using electronic customs general administration of customs Tehran is not effective on the adoption by their electronic customs
- H_1: facilitating and reducing costs by using electronic customs general administration of customs Tehran is effective upon acceptance by their electronic customs

The significance level of <0.01 correlation coefficient above Table 18 we conclude that facilitate the adoption of the employees affected (i.e., reject the hypothesis H_0 and the alternative hypothesis is accepted). The amount and mark the Spearman correlation coefficient (0.0056) shows the effect of facilitating the adoption of technology by employees. In other words from the perspective of the respondents, the use of technology to facilitate the organization is done.

Fifth hypothesis: Knowledge of the system of electronic customs general administration of customs Tehran is effective upon acceptance by their electronic customs.

- H_0: knowledge of the system of electronic customs general administration of customs Tehran is not effective on the adoption by their electronic customs

Table 19: Spearman correlation analysis technology acceptance and awareness

Awareness	Values
Technology acceptance	
Spearman	0.031**
Significant level (Sig.)	0.002
Number	189.000

Table 20: Spearman correlation analysis technology adoption and training

Training	Vlaues
Technology acceptance	
Spearman	0.031**
Significant level (Sig.)	0.002
Number	189.000

**Correlation is significant at the 0.01 level (2-tailed)

- H_1: knowledge of the system of electronic customs general administration of customs Tehran is effective upon acceptance by their electronic customs

The significance level of <0.01 correlation coefficient above Table 19 we conclude that the awareness of adoption of the employees affected (i.e., reject the hypothesis H_0 and the alternative hypothesis is accepted). The amount and mark the Spearman correlation coefficient (0.031) represents the knowledge of the adoption by employees. In other words, in the view of respondents, increased awareness is leading to adoption by their electronic customs.

Sixth hypothesis: IT training to staff electronically by the customs general administration of customs Tehran is effective upon acceptance by their electronic customs:

- H_0: IT training to staff electronically by the customs general administration of customs Tehran is not effective on their adoption by their electronic customs
- H_1: IT training to the staff of the general administration of customs Tehran is effective on the adoption of electronic customs by their electronic customs

The significance level of <0.01 correlation coefficient above Table 20 we conclude that education on the acceptance of the employees affected (i.e., reject the hypothesis H_0 and the alternative hypothesis is accepted). The amount and mark the Spearman correlation coefficient (0.049) reflects the adoption by the training staff. In other words, in the view of respondents, an increase in training due to technology adoption by them.

According to Friedman index facilitate drug most effective in explaining the dependent variable so, the most important factor that will facilitate technology adoption by Tehran's customs staff in the use of technology. After

that the way you can see next to each indicator ratings are affecting technology adoption. Entropy is a very important concept in the social sciences, physical and theoretical information. When the data is a decision matrix, fully known, the entropy method can be used to measure weight. The idea of this method is that the variation in the value of the index increases, it is more important indicator. Entropy in information theory, a measure of uncertainty that p_i is expressed with probability distribution (Table 21 and 22).

Shannon entropy test output shows the results if there is confidence that the greatest impact on technology adoption. Based on the Shannon entropy is a variable that minimum weight is more important that the variable is less likely is more important (Table 23).

Table 21: Friedman test for comparison of the assumptions

Number	Degrees of freedom	Sig.
189	6	0.001

Table 22: Ranking table components of technology acceptance

Variables	Means
Facilitating	4.00
Satisfaction	3.01
Confidence	3.00
Awareness	3.00
Security	3.00
Education	3.00

Table 23: Variables based on frequency

Variables	Very low	Low	Average	High	Very high	Sum*
Security	81	98	258	211	106	756
Facilitating	68	80	281	193	134	756
Confidence	106	112	253	173	112	756
Awareness	79	117	272	194	94	756
Satisfaction	87	133	303	150	83	756
Education	103	115	250	203	85	756

*Each variable is derived from four questions that divided after the 4 189 756 equivalent to a sample obtained

Table 24: Shannon entropy

Dimensions	Rank	W = 1 (weight)
Security	3	0.171209
Facilitating	6	0.211758
Confidence	1	0.103259
Awareness	4	0.174200
Satisfaction	5	0.200502
Education	2	0.139072

Table 24 shows the output of Shannon entropy analysis on the basis of trust is seen as the greatest impact on technology adoption. Based on the Shannon entropy is variable, the minimum weight is more important variable that is actually less likely than is more important.

DISCUSSION

This study aimed to investigate the effect of different factors such as ease of satisfaction, confidence, awareness, security and education on the adoption by the general administration of customs staff Tehran. Therefore, after reviewing the literature and various theories and hypotheses developed in accordance with the questionnaire was conducted and the validity and reliability of the sample size (189) using some questionnaires were distributed and collected sample data and we finally, using SPSS Software and selection of appropriate statistical tests were used to test the hypothesis (Table 25). In this study, we discuss the implementation of research findings with previous studies.

Allahyari Fard research as factors affecting the acceptance of electronic banking, a comparative study of traditional and electronic banking services in Iran and the results show that the technology had an impact in reducing the cost and time to provide services to customers. That in this respect the results which would facilitate technology and reduce cost.

Shannon entropy test output shows the results if there is trust greatest impact on technology adoption. Based on the Shannon entropy is a variable that minimum weight is more important that the variable is less likely is more important.

Shannon entropy test output shows the results if there is confidence that the greatest impact on technology adoption. Based on the Shannon entropy is a variable that minimum weight is more important that the variable is less likely is more important.

Shannon entropy test output shows the results if there is confidence that the greatest impact on technology

Table 25: The results of the study hypothesis

Number of theory	Variables	Pearson-Spearman correlation test	Friedman test (ranking)	Level of significance (Sig.)	Test results
1	Confidence	0.090	3	0.000	H_0 is rejected and H_1 hypothesis was accepted
2	Satisfaction	0.071	2	0.001	H_0 is rejected and H_1 hypothesis was accepted
3	Security	0.024	5	0.001	H_0 is rejected and H_1 hypothesis was accepted
4	Facilitating	0.056	1	0.001	H_0 is rejected and H_1 hypothesis was accepted
5	Awareness	0.031	4	0.002	H_0 is rejected and H_1 hypothesis was accepted
6	Education	0.049	6	0.001	H_0 is rejected and H_1 hypothesis was accepted

adoption. Based on the Shannon entropy is a variable that minimum weight is more important that the variable is less likely is more important.

Shannon entropy test output shows the results if there is confidence that the greatest impact on technology adoption. Based on the Shannon entropy is a variable that minimum weight is more important that the variable is less likely is more important.

CONCLUSION

A standard questionnaire was gathering information. After testing hypotheses based on the Spearman correlation test was conducted, results showed that the impact of independent variables on "technology acceptance" to the security variable equations 0.024, facilitating the numerical equivalent of 0.056, trust the numerical equivalent of 0.090, knowledge of numerical equivalent of 0.031, satisfaction with the numerical equivalent of 0.071 and training with a number of 0.049 are effective on the acceptance of technology.

RECOMMENDATIONS

Based on the results of each of the hypotheses we are to make recommendations for each. Since, it is based on the results of the first hypothesis testing staff general administration of customs Tehran to accept a high degree of confidence in the technology is presented with the following suggestions.

SUGGESTIONS

Since, when considering the question of trust between managers and employees of the general administration of customs Tehran are to have confidence in their policies, managers must have the confidence to advance the goals of the organization and suggested that the objectives of transparent and policies for staff in addition to increasing their confidence to increase the rate of technology adoption by employees.

Since, the staff to ensure the preservation of information in response to questions about the use of technology in the organization had little response, it is recommended that in order to trust them, by increasing awareness of the safety data technology to the organization actions taken input.

Coordinating the organization's goals with employee awareness technologies. To strengthen critical thinking and critical spirit of the staff in order to increase their confidence in the spirit of self-control. Improved working conditions and environment through the use of technology to enhance the sense of ego on the staff.

Since, the results obtained from testing the second hypothesis Tehran general administration of customs staff great satisfaction in relation to technology adoption within the organization.

Provides statistics and work efficiency in the use of technology to enhance the satisfaction and create a competitive spirit among employees.

Carry out measurements and provide employees with defined intervals to compare their performance with their individual functions at intervals and determine the growth or lack of growth performance of his time technology.

Provides a graph that shows a decrease in the workload of their employees for the use of technology in order to encourage them to use it consistently.

The active participation of all employees in the proposals through an online network offering easy access to organizational forms in order to increase employee satisfaction through participation in decision-making.

Since, the results obtained from testing the third hypothesis Tehran general administration of customs personnel do not secure adoption in the organization is recommended.

Since, the visibility leads to increased confidence and sense of security among employees, surveys conducted with intervals of say, 6 months of employee satisfaction with the results it is suggested that technology available to employees to self-evaluation and inform the other Partners.

Provides a graph staff before the arrival of technology and providing information to them for development (explain policies and objectives) and the raising of their adoption. Get the benefits of IT staff and improve individual and organizational performance.

Assuring the employees in this regard is that the technology take their place. Clarifying the objectives and plans of the organization by managers to their staff to better acceptance of the technology.

To provide staff familiar with the use of technology in the field of information security and job security in the area.

Optimization of procedures and laws and the speed and accuracy in delivering and receiving the results of using technology to increase confidence in the IT security staff. Visibility of the impact of direct investment in improving staff performance.

Since, the results obtained from testing the fourth hypothesis from the perspective of staff general administration of customs Tehran's use of technology to facilitate and reduce the cost and material organization, the following suggestions are suggested:

To provide growth in productivity and a reduction in costs as a result of the use of technology to encourage more people to use the technology.

Encouraging and taking better reward for employees who have to interact with technology in order to motivate others. Work with the latest technologies in the areas of diversification for employees.

Improving the level of labor productivity by reducing costs and energy and materials. Easy to work and eliminating redundant tasks. Reduce customer service and provide real time feedback to staff.

Since, it is based on the results of testing Tehran fifth general administration of customs staff have little knowledge of technology acceptance in organizations recommend the following.

Notifying the staff of the goals of the organization is looking to use technology makes employees more work as a member of the organization in line with these objectives.

Create a safe environment for staff and clarification of goals for them to reduce stress and anxiety and improve their performance.

Reduce employee resistance to change through increased awareness of the organization's objectives. Awareness of the abilities and talents of senior managers' brainy and excellent staff.

Since, it is based on the results of the sixth hypothesis testing technology education from the perspective of staff general administration of customs Tehran at the bottom of the evaluation, the following suggestions are suggested.

Training courses for the staff before and during Mansour technologies to improve the performance of their organizations. Specialization of tasks and specify the use of technology in the organization to employees.

Show the differences between working and diversity issues to staff working in the presence and absence of technology in the organization. Formation of multiple and continuous training courses in the field of technology.

The establishment of a coherent work of strengthening the relationship between allocation and loop through technology, professional organization for the state.

Shannon entropy test output shows the results if there is confidence that the greatest impact on technology adoption. Based on the Shannon entropy is a variable that minimum weight is more important that the variable is less likely is more important.

A research project in the best conditions cannot respond to all the questions or questions that arise during the investigation. Always at the end of the research raised new questions as to other researchers suggested that new topics. In this study, the following topics as areas for future research are proposed.

Implementation of technology adoption in the general administration of customs Tehran research model in a longer period of time and compared with the results in the previous period.

Evaluation of technology adoption in other similar organizations by using Davis and Sheikh Model and compare the results with the general administration of customs Tehran. It is recommended that further research be conducted to assess the success of this model in Iranian organizations and companies that have attempted to implement it.

Because the study could not be imported in any of the parameters affecting the dependent variable in this study, it is suggested other possible variables affecting technology adoption in the organization of staff examined in another study to identify the most effective alternatives to policy in the future.

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