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INNOVATION ACCEPTANCE AND CUSTOMER SATISFACTION. A SURVEY ON TAX INFORMATION SYSTEMS

ACEPTACIÓN DE LA INNOVACIÓN Y LA SATISFACCIÓN DEL CLIENTE: UNA ENCUESTA SOBRE LOS SISTEMAS DE INFORMACIÓN TRIBUTARIA

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ABSTRACT

The pace of introducing innovation-based products and services to the market is increasingly fast and it significantly affects customer satisfaction, not only for consumer products and services, but also in the delivery of public service services. This paper uses innovation acceptance and technology adoption models to investigate the acceptance and satisfaction of taxpayers from introduction of new tax information system in Iran. By a review of existing models and related effective factors, a conceptual model has been developed based on DeLone-McLean model, and was applied on users in the Iranian tax information system. Findings of this research show that factors that lead to information transparency and more participatory users have a positive effect on innovation acceptance and the satisfaction of users of such technologies.

KEYWORDS

Innovation Acceptance; Customer Satisfaction; E-government; Tax Information System.

RESUMEN

El ritmo de introducción al mercado de productos y servicios de base innovadora es cada vez más rápido y afecta significativamente la satisfacción del cliente, no sólo por los productos y servicios de consumo, sino también en la prestación de los servicios públicos. Este artículo utiliza los modelos de aceptación de la innovación y de adopción de tecnología para investigar la aceptación y satisfacción de los contribuyentes en cuanto a la introducción de nuevos sistemas de información tributaria en Irán. A través de una revisión de los modelos existentes y los factores efectivos relacionados, ha sido desarrollado un modelo conceptual basado en el modelo DeLone-McLean y fue aplicado en usuarios en el sistema de información tributario iraní. Los hallazgos de esta investigación muestran que los factores que contribuyen a la transparencia en la información y a generar usuarios más participativos tienen un efecto positivo en la aceptación de la innovación y la satisfacción de los usuarios de dichas tecnologías.

PALABRAS CLAVE

Aceptación de la innovación; Satisfacción del cliente; Gobierno electrónico; Sistema de información tributaria.

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INTRODUCTION

Information and Communications Technology (ICT) has changed the way people interact as well as the way governments serve the public, in a process that we know it as digital government or e-government (Kyem, 2016). This process enhances the delivery of government services to citizens, the interaction of government and industry, the provision of information to citizens; and for a more efficient management of government (Raghunathan, Kumar and Thamaraiselvi, 2015).

E-governance is defined with more than one definition. Chen and Hsish (2009) define it as improvement of the quality of services and governance by the use of ICT. UNESCO defines it as follow: "E-Governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective" (Unesco,2016). The United Nation Public Administration Network, E-Governance defines e-government as "the application of ICT tools in (1) the interaction between government and citizens and businesses, and (2) in internal government operations to simplify and improve democratic governance." (UNPAN, 2016).

Governments, all around the world and at different levels, adopt new technologies to modernize public sector processes and service delivery so that they can improve citizen–government relationship (Dawes, 2010; Dawes & Helbig, 2010; Lathrop & Ruma, 2010; Merkel, 2013; Noveck, 2009); and to achieve outcomes such as efficiency, accountability, enhanced public services, cost-savings and similar management benefits (OECD, 2003; Gant, 2004; Gil-Garcia, 2005). But the delivery of new technologies becomes successful when customers accept innovations and adopt the offered technologies. The aim of this study is to determine the acceptation of the tax information systems, and to examine what factors can encourage and persuade the tax payers to use tax information systems. Since these factors raise people to use the new offered technology, it is important to identify those factors. The aim of this paper is to assess the factors that affect the acceptance of innovation by tax payers toward the new tax information system in Iran.

LITERATURE

Innovation Acceptance and Technology Adoption

Innovation studies have been conducted in various fields of research during the time (Baregheh, Rowley & Sambrook, 2009). Such studies have been associated with productivity, growth, business development and similar concepts (Fagerberg, 2005; Kaplinsky et al., 2009, Khajeheian, 2014). Innovation promotes entrepreneurship and new venture creation (Khajeheian, 2013; Salamzadeh and Kawamorita, 2017) and it allows companies to stay competitive (Khajeheian, 2016). Considering such impact, innovation has always been a popular research topic for many of researchers in the field of management as well as practitioners in the field of Information Systems (Avgerou, 2008). Gonzalez-Perez and Velez-Ocampo argues that managerial

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

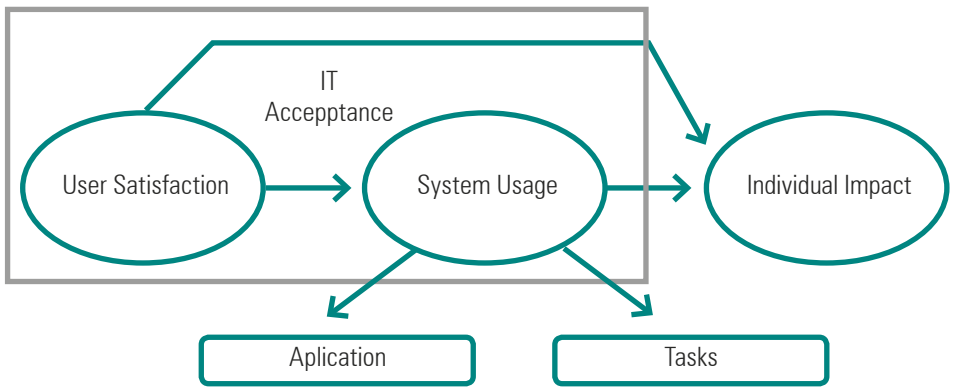
commitment lowers the cost of adaptation with technology (2014, p. 541). However, the increasing application of innovations, especially technological innovations in services, is not without challenge and part of the challenge come from the acceptance of Innovation and technology readiness. By Parasuraman & Colby (2015), Technology readiness describes the individual's propensity to use new technologies for different purposes. Technology readiness associates with Innovation acceptance (Lippert and Govindarajulu, 2015) and is one of the important factors that determine the success of application of an innovation in a society.

Parasuraman (2000) developed a 36-item technology readiness index (TRI). That scale consisting of four dimensions: optimism, innovativeness, insecurity and discomfort. Since then, technology readiness index has been applied for example in the context of self-service technologies (Gelderman et al.2011; Liljander et al., 2006), mobile services (Chen et al., 2013; Sophonthummapharn & Tesar, 2007) and wireless technology users (Chang & Kannan, 2006). Researches have incorporated technology readiness with other technology adoption models such as Unified Theory of Acceptance and Use of Technology (UTAUT) (Chiu, Fang, & Tseng, 2010), Technology Acceptance Model (TAM) (Lin et al.2007; Walczuch et al., 2007) and Expectation-Confirmation Model (Chen et al., 2013). Also cross-cultural validity of the scale has been assessed (Meng et al., 2009). Technologies change over time and the rapid development of new technologies led to the development of an updated and streamlined technology readiness index, that called TRI 2.0 (Parasuraman & Colby, 2015). TRI 2.0 scale has been updated to match with the recent changes in the technology environment, and at the same time the scale has been streamlined to a compact 16- item scale to be more easily adopted as a part of research questionnaires.

the Technology Acceptance Model (TAM) of Davis et al (Davis,1989; Davis, Bagozzi, Warshaw,1989) is one of the most widely used models of information systems (IS) that explain or predict the motivational factors in user acceptance of technology. Perceived ease of use refers to the degree to which an individual belief that the use of an information system is free from effort, while perceived usefulness is a perception that using a particular system enhances one's job performance (Davis et al., 1989). It is generally assumed that personality does influence an individual's technology adoption behavior (McElroy et al., 2007; Devaraj et al., 2008). Thus technology acceptance model and technology readiness have been integrated in the prior research (e.g. Walczuch et al., 2007; Lin et al., 2007).

Igbaria and Tan (1997) presents relationship of IT acceptance and individual impact, that was based on the theoretical perspectives of DeLone and McLean and conceptualization of Rogers (1983) of innovation. As it is shown in Figure 1, this model includes three variables of user satisfaction, system usage and individual impact. This model proposed that the degree of user satisfaction has a positive effect on the level of usage. Also user satisfaction and system usage effect on individual impact.

Figure 1. The impact of IT acceptance on individuals: A nomological net model.



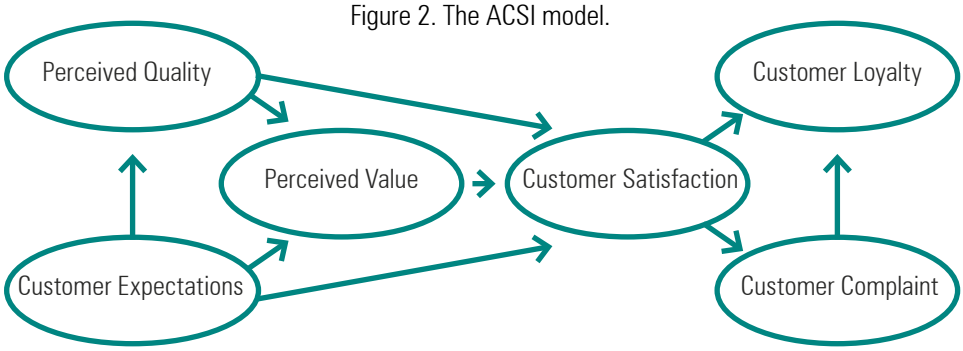
Source: Igbaria and Tan, 1997, p. 115.

Two variables of user satisfaction and system usage are frequently used for evaluation of IT success. Fishbein and Ajzen (1975) state that individual's attitudes play a vital role in the respective behavior. Some other researchers confirm the relation of user attitudes to their technology acceptance (Dillon and Morris, 1996; Venkatesh et al., 2003; Mun et al., 2006; Bhatti, 2007).

American Customer Satisfaction Index (ACSI)

The American Customer Satisfaction Index (ACSI) raised based on the Swedish Customer Satisfaction Barometer (SCSB), that successfully introduced in 1989 as a tool to assess the customer satisfaction (Fomell, 1992). The ACSI based on two theories of QSP (Quality, satisfaction and performance) and Hirschman's exit-voice theory (1970). This model measures the cause and effect relationship that drivers of satisfactions (customer expectations, perceived service quality, perceived value) are on the left side, satisfaction in the center and outcomes of satisfaction (customer complaints, customer loyalty) on the right side. (see Figure 2).

Figure 2. The ACSI model.



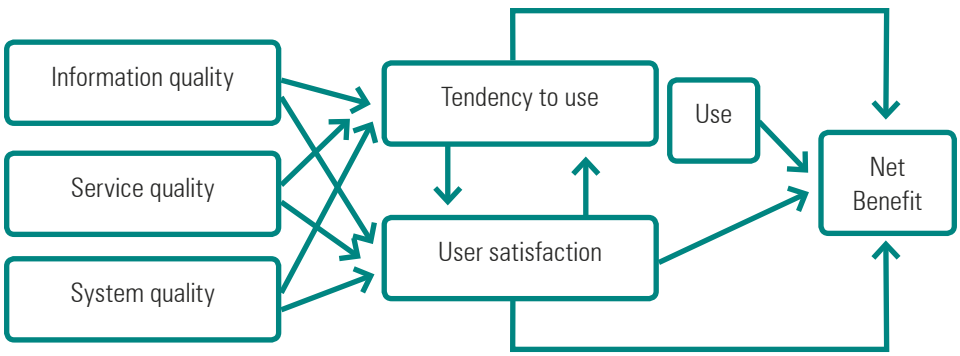
Source: http://www.theacsi.org/about-acsi/the-science-of-customer-satisfaction.

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

DeLone-McLean Model of Information Systems Success

Model of Information Systems Success of DeLone and McLean (2003) incorporates six elements of system quality, information quality, use, user satisfaction, individual impact, and organizational impact. Information quality (semantic level) and system quality (technical levels) are two key antecedents of user satisfaction. Information quality assessed by measuring information attributes and system quality assessed by measuring of ease of use (Doll & Torkzadeh, 1988; Rai & Welker, 2002). DeLone and McLean added service quality to the original model and identified it as an additional antecedent of user satisfaction. Figure 3 shows their model.

Figure 3. The updated version of DeLone-McLean success model, 2003.



Source: DeLone, W. H. & McLean, E. R., 2003, p. 24.

Factors affecting this model are defined as follows:

- Quality System: Adaptability, Availability, Reliability, Response Time, Usability
- Quality of Information: Completeness, Ease of Understanding, Personalization, Relevance, Security
- Service Quality: Assurance, Empathy, Responsiveness
- Use: Nature of Use, Number of Visits to the Sites, Number of On-Line Transactions
- User Satisfaction: Repeated Purchase, Repeated On-Line Purchase, Applied Survey
- Advantages: Cost Savings, Expansion of Markets, Additional Sales, Reduced Search Cost, Time Saving. (DeLone-McLean, 2003)

Studies in other countries

Three studies have been conducted regarding the evaluation of satisfaction rate of users of information systems in Azerbaijan, Malaysia and Taiwan.

Government of the Republic of Azerbaijan has undertaken a series of corrective actions to be linked with the global economy and enhance the quality of people's lives

including changes in the tax system that began in 2005. Using the Automated Tax Information System (ATIS) in 2006 could be considered as one of the achievements that led to the creation of an e-government initiative. Its main purpose is to provide an opportunity for taxpayers to fill out and submit their income tax returns via the Internet without having to go to the tax office. In the country's bid to the modernize the government, VAT and electronic invoices were introduced as a product since January 2010. As a result, taxpayers can send electronic invoices for sold products and provided services. For Satisfaction Evaluation, the first step should be providing services to assess knowledge and satisfaction. In the next stage, taxpayers should be aware of the existence of this service. The third step should be taken to evaluate the knowledge and satisfaction. And the final step is to improve the system with regard with the results of previous step. In the survey implemented in August-September 2010, Key parts of the final report on behalf of the selected areas were determined to check every service structure as follows: General Information Services, the level of understanding of the services, the differentiation of services and the level of public satisfaction, Recommendations for improving service. (Shikhaliyev,2011)

In 2006, the Malaysian Inland Revenue Board (MRIB)proposed the adoption of electronic forms as part of an e-government initiative. This was to happen in the context of customer to government relationship., Here, the users could fill out forms manually or electronically. Since then, electronic forms have been on the increase in Malaysia. However, the issues related to the quality of electronic services lead to user dissatisfaction. Although the number of e-forms has increased, the issue of user dissatisfaction discussed above impeded the achievement of the objectives for adopting electronic forms by up to 80%. Hence, considering the nature of the system quality is vital. This research is based on an updated version of the Delone- McLean model. Here the three factors of service quality, information quality and system quality have been considered in order to achieve information systems success, where the following results have been achieved: 1) the data quality has a direct relationship with the users' consent, 2) the existence of a quality system is directly related to user satisfaction, 3) Quality of service is directly related to the user satisfaction, 4) User satisfaction is directly related to the main perceived benefits (convenience) of users, 5) User satisfaction has a direct relationship to the main perceived benefits (efficiency) of users (Islam et al., 2012).

In Taiwan, the National Tax Administration (NTA) is responsible for collecting tax returns and the income tax returns are filled out in three ways namely: manually, electronically and via the usage of two-dimensional barcodes. Although, the use of barcodes is considered as an electronic method. Taiwan launched its on-line tax-filing system since 1998. The on-line tax-filing system reduced the costs of printing and distribution. The satisfaction of the users of the system is based on the usefulness of the system, in which, DeLone- McLean model is used. In this study, the information quality, system and service quality have been divided into the sub- factors as follow: 1) Information Quality: a) Informative, b) Accuracy; 2) System Quality: a) Access, b) Interactivity, c) Ease of use; 3) Service Quality: a) Responsiveness, b) Reliability, c) Empathy (Chen, 2010).

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

METHODOLOGY

This study is an applied research. The aim of applied research is to develop the practical knowledge in a particular area. This study is a survey and is descriptive. Questionnaires were used to gather data from the taxpayers. These questionnaires contained information on the demographics of the respondents, general questions regarding the project and 24 questions measured with Likert scale of 5. The Likert scale ranged from totally agree to totally disagree. The questionnaire questions are reported in this study in blocks of factors: 2 for training,2 for respecting rights, 4 for facilities and perceived values, 5 for perceived quality, 3 for complaints and 5 for satisfaction. The questionnaire gathered the opinion of taxpayers with different types of personality. Demographically, on average, respondents reported 46.4 years of job experience. The most common levels of education were BA and MA. The most common age of the respondents was between 30-40 years old. The gender of respondents was reported as 37.1% women and 58.8% men. (See appendix).

SPSS 20.0 was used to analysis the data. Data analysis involved descriptive statistics for demographic information and inferential statistics to study the correlation coefficient between independent and dependent variables and linear regression. It has been used to test 11 hypotheses that were extracted from the theoretical framework.

Data Collection

The sample population of this research was selected from value added taxpayers in Tehran. The random sampling method was used for sampling. The five scale Likert questionnaire were distributed among the taxpayers at the Tehran Taxpaying services for 15 days. Since, the VAT system has greatly reduced the number of in-person refers, and many real taxpayers use internet café services, the number of respondents produced 150 questionnaires. After removing wrongly filled questionnaires, 102 questionnaires formed the sample of study. The questionnaire is attached in the appendix of the paper.

Theoretical Framework

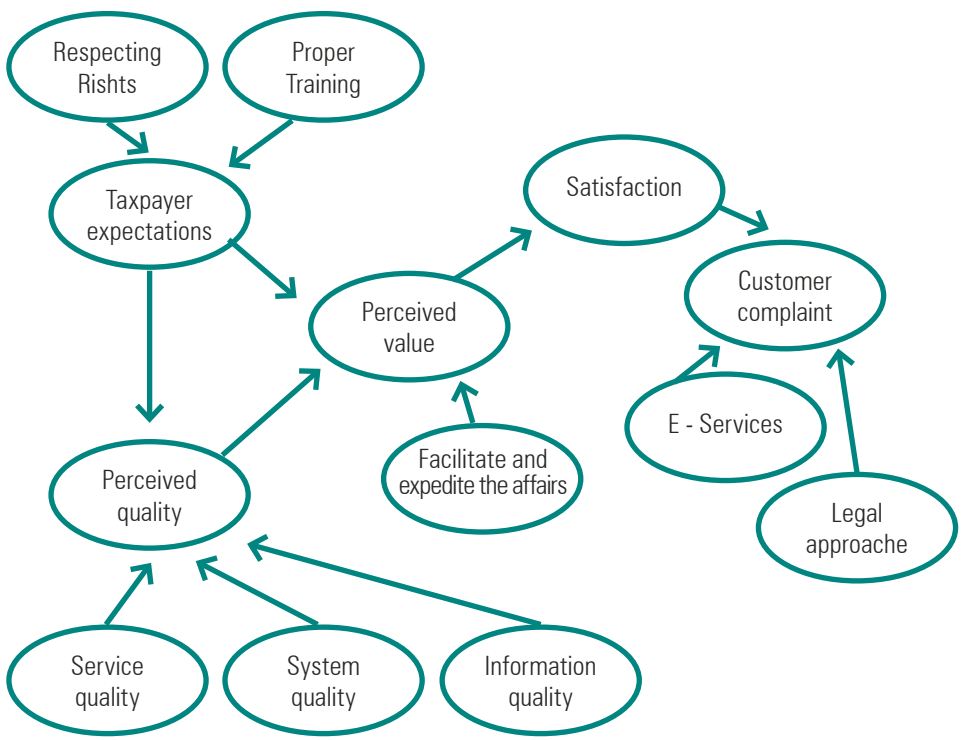
ACSI is the basis for this model. The variables: taxpayer exceptions, perceived quality, perceived value and satisfaction are extracted from this model with the difference that loyalty is not applicable for taxpayers, because there is no other alternative to compete with. Since perceived quality in the ACSI has an effect on Satisfaction and based on DeLone -McLean model information service and system quality is related to satisfaction, so we can extend the perceived quality on ASCI model to service quality, system quality and information quality. In other words, each of the three sections do have an impact on the perceived quality from user and consequently on its satisfaction.

Increasing awareness and knowledge is one of factors that was studied in Azerbaijan which has an effect on satisfaction and the acceptance system by users.

In this model, for increasing awareness, training was considered and the training has been named as one of the expectations from taxpayer. Especially, given that many users are advanced in age and are phrase not computer literate. Another user expectation is to respect for their rights. In some cases, may be due to system errors such as disruption of the Internet, the user wiped out part of the information. In this case, appropriate solutions must exist for respecting the rights of the users. On the other hand, the integrated tax systems; especially in the audit section, creates the need to establish a uniform procedure for the whole country. This will also prevent discrimination between taxpayers.

In the complaints section, attention has been drawn to two issues. The first complain is as result of the establishment of procedures and legal processes and may indirectly lead to dissatisfaction with the system. The second complain is specific to the system, such as system outages, sluggishness and the lack of confidence in the system which directly leads to the user dissatisfaction. Thus, the framework of this research is presented based on the following: expectations and perceived quality effect on the value perceived; the value perceived influences on the user satisfaction and that increased satisfaction will have an influence on the rate of compliant effectively.

Figure 4. Conceptual model of user acceptation of VAT system.



Source: Authors.

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

Hypotheses

Eleven hypotheses were extracted to be tested:

- The user complaints on the rules and procedures has an impact on his/her dissatisfaction of the system.
- Facilitating and the quality of service provided by the system has an impact on user satisfaction of the system.
- Proper training has an impact on user satisfaction of the system.
- Respecting the rights of user has an impact on his/her satisfaction of the system.
- Information quality has an impact on user satisfaction of the system.
- Service quality has an impact on user satisfaction of the system.
- System quality has an impact on user satisfaction of the system.
- Meeting the perceived quality has an impact on user satisfaction of the system.
- Meeting the user expectations of the value-added tax system has an impact on user satisfaction of the system.
- Perceived value has an impact on user satisfaction of the system.
- Reduction of complaints increases user satisfaction of the system.

STATISTICAL ANALYSIS

In this section, the statistical analysis was presented by using SPSS software.

Table1. Evaluating the reliability of the research tools by the Cronbach's alpha measurement.

Research variables	Cronbach's alpha values
Proper training	0.935
Facilitate and expedite of the affairs	0.804
Respecting the right of	0715
Quality	0.813
Complaints of electronic services	0.703
Complaints of legal procedures	0.765

Source: Authors.

The Cronbach's alpha coefficients for all variables are higher than the significant level of 0.7; therefore, all variables have good reliability.

Data Analysis Techniques

SPSS software was used to analyze the data. Descriptive statistics involving central indicators and dispersion in the form of mean and standard deviation on one hand, and inferential statistics in the form of calculations of correlation coefficients and linear regression model on the other hand. Then, the standardized coefficient beta (β) has been used in the regression equations to determine the presence and power of corresponds in a given model.

Research Findings

The following information is obtained of all the respondents:

Table 2. Demographic information of respondents.

Frequency	Frequency percentage	Job experience
45	46.4	5-10 years
22	22.7	10-15 years
8	8.2	15-20 years
11	11.3	20-25 years
7	7.2	25-30 years
2	2.1	More than 30
Frequency	**Frequency percentage**	**gender**
57	58.8	male
36	37.1	female
Frequency	**Frequency percentage**	**Education**
11	11.3	diploma
19	19.6	associate degree
29	29.9	BA
28	28.9	MA
6	6.2	PhD
Frequency	**Frequency percentage**	**Age**
13	13.4	Under 20 years old
20	20.6	Between 20-30 years old
27	27.8	Between 30-40 years old
20	20.6	Between 40-50years old
10	10.3	Between 50-60 years old

Source: Authors

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

Table 3 shows the mean and standard deviations values for independent variables.

Table 3. Descriptive statistics of independent variables.

Mean	Standard deviation	Independent variables	Research variables
2.8723	0.79360	User complaints of rules and processes	
3.4276	0.84147	Facilitate and expedite the affairs by the system	
3.0851	1.04119	Proper training	
3.6593	0.83737	Respecting the user rights	
3.1474	1.10095	Information quality	Dependent variable: the degree of user satisfaction
3.2234	1.10866	Service quality	
3.3511	1.02346	System quality	
3.1073	0.82827	Meeting the perceived quality	
3.5208	1.00503	Meeting user expectations	
3.0947	1.59227	Perceived value	
3.4869	1.09540	Complaint decrease	

Source: Authors

According to Table 4, it can be seen that the mean of the variable, user complaints of rules and procedures is 2.87; the mean of the variable, facilitation and expedition of the affairs by the system is 3.42; the mean of the variable, proper training is 3.08; the mean the variable, respecting the user rights is 3.65; the mean of the variable, the information quality is 3.14, the mean of the variable , service quality is 3.22; the mean of the variable, system quality is 3.35; the mean of the variable, meeting the perceived quality is 3.10; the mean of the variable, meeting user expectations is 3.52; the mean of the variable, perceived value is 3.09, and the mean of the variable, complaint decrease is 3.48.

In the table below, the correlation coefficient between independent and dependent variables of the study is examined.

Table 4. The correlation coefficient between independent and dependent variables.

Number	Level of significance	Correlation coefficient	Independent variables	Research variables
97	0.555	-0.63	user complaint of rules and processes	
97	0.000	0.484**	Facilitate and expedite the affairs by the system	
97	0.048	0.207*	Proper training	
97	0.000	0.417**	Respecting the user rights	
97	0.000	0.644**	Information quality	Dependent variable: The degree of user satisfaction
97	0.000	0.537**	Service quality	
97	0.000	0.472**	System quality	
97	0.000	0.744**	Meeting the perceived quality	
97	0.000	0.525**	Meeting user expectations	
97	0.000	0.458**	Perceived value	
97	0.000	0.599	Complaint decrease	

Source: Authors.

According to the table, there is a relationship at the significance level of 0.05 between the independent variables and dependent variables (except user complaints of rules and procedures that has the lowest correlation with the degree of user satisfactions; so, it was not significant) in all cases. Among the independent variables, the variable that indicates the meeting of the perceived quality with the correlation coefficient of 0.744 has the highest correlation with respect to user satisfaction. Likewise, the variable that indicates proper training has the lowest correlation with respect to user satisfaction.

As it was mentioned earlier, the linear regression model has been used to test the hypotheses. The level of significance of regression that is shown with beta standardized coefficient is considered as the basis of inference to display existence and the power of relations between variables in all the assumptions. Table 4 shows the results of hypotheses tests in the form of regression model.

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

Table 5. Results of the research hypotheses tests in the form of regression analysis

Durbin-Watson statistic	β	F	R^2	Regression model first hypothesis		
1.531		0.035	0.004	Characteristics of the model	User satisfaction	
	3.441			Fixed value		
	-0.063			User complaints of rules and procedures		
Durbin-Watson statistic	**β**	**F**	**R^2**	**Regression model second hypothesis**	User satisfaction	Dependent variable
1.845		25.732	0.234	Characteristics of the model		
	1.155			Fixed value		
	0.484			Facilitate and expedite the affairs by system		
Durbin-Watson statistic	**β**	**F**	**R^2**	**Regression model third hypothesis**	User satisfaction	
1.543		4.108	0.043	Characteristics of the model		
	3.812			Fixed value		
	0.207			Proper training		
Durbin-Watson statistic	**β**	**F**	**R^2**	**Regression model fourth hypothesis**	User satisfaction	
1.713		18.562	0.174	Characteristics of the model		
	1.239			Fixed value		
	0.417			Respecting user rights		
Durbin-Watson statistic	**β**	**F**	**R^2**	**Regression model fifth hypothesis**	User satisfaction	
1.671		65.23	0.415	Characteristics of the model		
	1.277			Fixed value		
	0.644			Information quality		
Durbin-Watson statistic	**β**	**F**	**R2**	**Regression model sixth hypothesis**	User satisfaction	
1.798		36.931	0.289	Characteristics of the model		
	1.564			Fixed value		
	0.537			Service quality		

Table 5. Results of the research hypotheses tests in the form of regression analysis. Continued

Durbin-Watson statistic	β	F	R2	Regression model seventh hypothesis	User satisfaction	Dependent variable
1.541		26.059	0.223	Characteristics of the model		
	1.575			Fixed value		
	0.472			System quality		
Durbin-Watson statistic	**β**	**F**	**R2**	**Regression model eighth hypothesis**	User satisfaction	
1.903		103.877	0.523	Characteristics of the model		
	0.291			Fixed value		
Durbin-Watson statistic	**β**	**F**	**R2**	**Regression model ninth hypothesis**	User satisfaction	
1.502		35.408	0.276	Characteristics of the model		
	1.217			Fixed value		
	0.525			Meeting user expectations		
Durbin-Watson statistic	**β**	**F**	**R2**	**Regression model tenth hypothesis**	User satisfaction	
1.578		24.405	0.210	Characteristics of the model		
	1.790			Fixed value		
	0.458			Perceived quality		
Durbin-Watson statistic	**β**	**F**	**R2**	**Regression model eleventh hypothesis**	User satisfaction	
1.522		42.206	0.312	Characteristics of the model	User satisfaction	
	1.282			Fixed value		
	0.559			Complaints decrease		

Source: Authors.

First Hypothesis: User complaints of Rules and Procedures Impacts on User Satisfaction

The result of the first hypothesis**:** The modified coefficient of determination (R2) is 0.4% of the available variance in the user satisfaction variable. The standardized

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

coefficient beta is not significant at 0.05 level for the variable of user complaints of the rules and procedures (β = -0.063). Accordingly, we reject the first hypothesis. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5 and there is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Second Hypothesis: Facilitate and Expedite Affairs by System Impacts on User Satisfaction

The result of the second hypothesis: As it is seen, the modified coefficient of determination (R2) explains 23.4% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for facilitating and expediting the affairs by the system's variable (β = 0.484). Accordingly, the second hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model.

The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Third Hypothesis: Proper Training Impacts on User Satisfaction

The result of the third hypothesis: The modified coefficient of determination (R2) explains 4.3% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for variable of proper training (β = 0.207). Accordingly, the third hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Fourth Hypothesis: Respecting User Rights Impacts on User Satisfaction

The result of the fourth hypothesis: The modified coefficient of determination (R2) explains 17.4% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for variable of respecting user rights (β = 0.417). Accordingly, the fourth hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Fifth Hypothesis: Information Quality Impacts on User Satisfaction

The result of the fifth hypothesis: The modified coefficient of determination (R2) explains 41.5% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for information quality variable (β = 0.644). Accordingly, the fifth hypothesis will be accepted. The results show that Durbin-

Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Sixth Hypothesis: Service Quality Impacts on User Satisfaction

The result of the sixth hypothesis: The modified coefficient of determination (R2) explains 28.9% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for service quality variable (β = 0.537). Accordingly, the sixth hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Seventh Hypothesis: System Quality Impacts on User Satisfaction

The result of the seventh hypothesis: The modified coefficient of determination (R2) explains 22.3% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for system quality variable (β = 0.472). Accordingly, the seventh hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Eighth Hypothesis: Meeting Perceived Quality Impacts on User Satisfaction

The result of the eighth hypothesis: The modified coefficient of determination (R2) explains 55.3% of the available variance in user satisfaction variable. The standardized coefficient beta) is significant at 0.05 level for meeting perceived quality variable (β = 0.744). Accordingly, the eighth hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Ninth Hypothesis: Meeting User Expectations Impacts on User Satisfaction

The result of the ninth hypothesis: The modified coefficient of determination (R2) explains 27.6% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for meeting user expectations variable (β = 0.525). Accordingly, the ninth hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

Tenth Hypothesis: Perceived value Impacts on User Satisfaction

The result of the tenth hypothesis: The modified coefficient of determination (R2) explains 21% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for perceived value variable (β = 0.458). Accordingly, the tenth hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Eleventh Hypothesis: Complaints Decreasing Impacts on User Satisfaction

The result of the eleventh hypothesis: The modified coefficient of determination (R2) explains 31.2% of the available variance in user satisfaction variable. The standardized coefficient beta is significant at 0.05 level for complaint decrease variable (β = 0.559). Accordingly, the eleventh hypothesis will be accepted. The results show that Durbin-Watson statistic is ranged from 1.5 to 2.5. There is no strong autocorrelation between the errors of the regression model. The lack of autocorrelation between errors is accepted as one of the basic assumptions of the regression in the fitted model.

Totally, 10 hypotheses out of 11 research hypotheses are confirmed and one hypothesis is not confirmed. Also, satisfaction of the value added tax system was assessed at 63.79%.

CONCLUSION

With the emergence and spread of innovations in information technology, satisfying the users is a crucial factor in the success and the acceptance of technology. The more the level of satisfaction, the more the usage of electronic services, and it applies especially in e-governance services. This research contributes towards more knowledge on the acceptance of innovation by investigating taxpayers' satisfaction from the new installed value added tax system.

Since e-governance services are offered to citizens in the form of the electronic media, the quality of these service is investigated based on the DeLone-McLean model. In this model the quality of information systems is divided to three parts: quality systems, quality of service and quality of information; and all three parts impact on perceived quality in American satisfaction index. There is no concept of loyalty in the use of VAT electronic systems, because by law, the taxpayers must submit their tax return in the manner determined by the authorities in Organization of Tax Affairs.

The model examined for this study showed that complaints are considered from two perspectives: complaints about the electronic services and complaints arising from legal procedures. The former has an indirect impact on the user. While the latter has a direct impact on the user satisfaction. Data analysis showed that user dissatisfaction with procedures and tax laws do not affect the acceptance of VAT

electronic system and the hypothesis dealing with this issue was not confirmed. Moreover, it was found that the perceived value has a significant impact on user satisfaction. Also the perceived quality effects on perceived value and the user satisfaction, and the user satisfaction rate has an impact on complaint rate.

Finally, this model of satisfaction is recommended for consideration on the other information systems in future researches. Also it is suggested that the sample population be expanded to cover whole country. Since, the loyalty factor is not applied in this model, it is suggested that the systems with assessment on loyalty to be studied. At the end, it is suggested the model be reviewed and evaluated to identify factors contributing to acceptance of mobile applications as well.

MANAGERIAL APPLICATION

The following are recommended to IT managers and public authorities from the findings of the research:

- Perceived quality in information systems consisted of three parts. These are system quality, quality of information and quality of service. These three quality attributes should be considered and improved simultaneously.
- It is time-consuming for seniors and aging users to adopt new technology. So, free training courses as well as easy instructions are essential to enhance their ability to use the technology and increase their satisfaction. The setup of call centers can also be an effective solution.
- The introduction of new electronic systems, alongside existing poor infrastructure increases the chances of failure in the system. For this reason, it is important to consider measures and procedures that would not violent the user rights.

Paying attention to user complaints and resolving the issues will improve user satisfaction and increase system utilization.

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APPENDIX
Questionnaire

Row	Question	Very little	Little	Average	Much	Too much
1	Training course is required to use the VAT system.					
2	Guideline and additional explanations are essential for filling the necessary forms.					
3	VAT system leads to facilitate matters.					
4	VAT system leads to accelerate matters.					
5	Value added tax leads to transparency of information and can save time and money.					
6	VAT system results in availability of information.					
7	Similar procedures in VAT systems are required to maintain payers' rights.					
8	Similar procedures in VAT systems are necessary to prevent acts of tastes.					
9	A mechanism to protect the rights of payer is necessary in case of error in VAT system.					
10	VAT system is accessible, usable, reliable, and its response time is going to be appropriate.					

AD-minister Nº. 30 january-june 2017 pp. 149 - 171 · ISSN 1692-0279 · eISSN 2256-4322

APPENDIX
Questionnaire. Continued

Row	Question	Very little	Little	Average	Much	Too much
11	VAT system is safe, understandable and complete.					
12	VAT system is responsive and aligned.					
13	Quality of system of value added tax is appropriate.					
14	Quality of system of value added tax is in accordance with expectations.					
15	There are Problems and complaints in the implementation of legal and administrative procedures.					
16	Problems or complaints arise due to the VAT system using.					
17	Legal and administrative proceedings problems lead to dissatisfaction of the system of VAT.					
18	Benefits and value of VAT system are appropriate.					
19	What is the extent of your complaints and problems of VAT system?					
20	Perceived quality of system of value added tax is effective on the satisfaction of the system.					
21	Meeting user expectations of VAT system impacts on satisfaction of the system.					
22	Reducing complaints of VAT system will cause increasing user satisfaction.					
23	Your satisfaction is triggered by facilitating and expediting the affairs by the VAT system.					
24	What is the extent of your satisfaction of VAT system?					