The Effect of Electronic Tax Payment System on Taxpayer Satisfaction

Farideh Gomar and Mohammad Nazaripour

Department of Accounting, Hamedan Branch, Islamic Azad University, Hamedan, Iran.
Department of Accounting, University of Kurdistan, Sanandaj, Iran.

ABSTRACT

This study attempts to investigate the effect of using internet to pay tax on taxpayers’ satisfaction. The research population is all taxpayers of Hamedan city of Iran who pay their taxes through electronic. Using Cochran’s statistic, 384 taxpayers were selected as sample. The research data was gathered through a questionnaire. In order to measure the validity of questionnaire and to measure the reliability of questionnaire, content validity coefficient and Cronbach’s alpha were used respectively. The gathered data was analyzed by structural equation modeling using LISREL software. For this purpose, first confirmatory factor analysis and then path analysis were done. According to the research findings, system quality and service quality have meaningful influence on taxpayers’ satisfaction but information quality has no meaningful influence on taxpayers’ satisfaction that pays their taxes electronically.

INTRODUCTION

Taxes are regarded as the most common and the most important financial resources for providing general revenue, and one of the most efficient and the most effective tools of financial policy in the world, by which the government can provide many social and welfare services for people, and direct many social and economic movements and activities.

In Iran's economy, the country's tax revenues are also one of the main elements of the government's budget. Knowing the extent of obtainable tax revenues of different tax resources, beside the optimized allocation of resources to collect them, assists the government in accurate financial planning and determines the extent of public participation in financial providing of the government's general expenses. Meanwhile, the basic question of government officials and policymakers is that with the available legal and economic conditions and supposing the constant efficiency and tax effort and considering the performance in previous years, what extent of tax is obtainable for future years and can be predicted. One of the most important applications of economic models is to predict the future values of economic variables. In fact, economic model can be tested by the accuracy of their predictions. So, if an economic model is successful in explaining the available relations among variables, it should be able to predict accurately the future [2]. The estimation of tax potential capacity around a country or a province can provide and reveal the required information about the economic power of the country or the province in providing tax resources for meeting financial problems and implementing the economic policies, and would assess the tax attempts of the involved people. In previous studies about tax potential capacity of the country, it has been determined that there is a considerable gap between tax potential capacity and actual taxes. Around the country's provinces, the studies also show a tax gap [3].

The rapid growth of information technology, especially in two last decades, is regarded as the most important change factor in society and organization. One of the most important applications of electronic government is to provide the government's electronic tax services for taxpayers in which taxpayers, with filling electronic income tax return as online (through Internet), addition to significant time savings and cost reductions, pay the best their taxes [4]. Therefore, high tendency to electronic government raises the question that whether taxpayers tend to pay their taxes electronically.

Considering the effects of taxes on economic variables, appropriate tax policies making to revise and improve the system is of considerable importance. In executing electronic taxation, the use of information...
technology and mechanization of the country tax system can increase taxpayers' satisfaction and convenience of taxation [5]. The identification of tax capacity, creating information networks of internal and external to the organization (about taxpayers) as well as improving the efficiency of tax collection of the country requires the application of innovative technologies in the field of implementing electronic systems for taxation and administrative mechanization.

One of the most important effective factors on the change of traditional tax system into electronic tax system is to consider taxpayers wants and support and cooperate with them. The review of the researchers' studies and managers' experiences in advanced countries indicates that it is inevitable to continuously revise and reconsider the systems and methods of working, and improve them according to the progress of sciences and technologies in today world, because unless the system could not meet the increasing requirements of the society and is doomed to decline [5].

2- Review Of Related Literature:

Lee et al. [6] embarked on an experimental study of the effect of quality records on the acceptance of tax electronic payment systems by taxpayers. On the basis of the collected data from 141 Taiwanese experienced taxpayers, the study has reviewed the acceptance and the effect of quality records on the perception of usefulness of taxpayers and the perception of convenient usage of evaluation system. The results showed that: 1- Technology acceptance model is a reliable model to review the acceptance of tax internet payment system from taxpayers; furthermore, the perception of system usefulness before the perception of the usage convenience affects the taxpayers to use this electronic tax system; 2- Some issues like information system quality, information quality as well as system reliability as being positive affect displaying the usefulness of system; 3- Information quality affects positively the perception of usage convenience.

Yang et al [7] performed another research titled “the indexes of electronic services acceptance” which declared tax payment system and internet record by using planned behavior theory-based theoretical model. The hypothesis based on planned behavior theory model had been expanded in this research in order to evaluation the users' acceptance. The findings of user's acceptance studies indicate that when users meet a new software packet, various factors affect their decisions including the manner and time of using it. The results of data analysis consist of:

1. About the users who have accepted the technology as well as those who have not accepted it, the perceived usefulness, reliability and compatibility are regarded as significant indexes for the viewpoint to tax internet payment and record.
2. Personal innovations do not have a significant effect on their beliefs. This experimental finding indicates that the users, accepting electronic services before others, do not enjoy higher levels of personal innovation. It is possible that acceptance by using tax internet payment and record is not a problem, but it is an interesting work for the acceptors having personal innovation.

Shayesteh and Naeimi [8] performed a research titled "the study of tax payment process in Iran and its improvement procedures". The results of this research indicated that payment process in tax offices is one of the most important information and tax processes, which would lead to facilitate and reduce the time of taxation as well as taxpayers' satisfaction and customers' reverence. Furthermore, Elizabeth and Fumiko [9] did a research titled "customers' payments and technology acceptance". By using poll and data collection, they introduced an approach for expanding the usage of card readers in department stores and concluded that tendency to use electronic payment instruments is more than tendency to traditional instruments [5].

3. Theoretical Frameworks Of The Research:

3.1. Electronic tax:

Electronic tax is a certain issue of electronic government's services, because the use of electronic tax is more complicated than other electronic government's services. Tax payment and taxation in Taiwan and many other countries was simply by paper. In 1998, three alternative methods were introduced to citizens: 1. Manual method, 2. Two-dimensional barcode method, 3. Internet method. Manual method is boring, complicated and full of paper for both taxpayer and tax offices. Taxpayers usually calculate complicatedly by using pen and calculator. Then they, personally or by post, deliver tax reports to tax offices [10].

Tax office, after delivering tax reports, uses the collected services in order to enter the related information to tax. Wrong control is a time-consuming and full of error process which has been traditionally performed by employers. But in two other methods, taxpayers can decide on whether they send their information by internet to tax office, or print two or three pages including their information associated with barcode and post them to tax office. For paying tax by internet, a taxpayer, who has public original certificate, can download his/her tax information through internet. This certificate is given by public office. Taxpayers should generally support the accuracy of their tax records and information without any taking trouble to enter the information. Therefore, tax internet payment method facilitates tax payment process for taxpayers. Mechanization and modernization in their general concept, information technology and informational systems are accepted as a powerful and well-
known factor, and the increase of investment in this field causes the increase of productivity and cost savings [11].

3.2. Information Quality:
Information quality depends on the user's perception of the output value of informational system. So, many of its measurements are perceptive – such as accuracy, prevalence, timing of the output, reliability, perfectness, compression, format, connection, understandability; report's usefulness, etc. [6] There is a tight relationship between information quality and information value. In recovery of information quality, the factors like appropriateness, validity, reliability, significance during the time, perfectness, accuracy, aesthetics, and being on-time will finally be determinative [12].

3.3. System Quality:
It is a degree to which an information system includes the intended features and it is measured through four scales: usage facility, system flexibility, systems integration and reaction time [13]. Executives' information system, group decision making system and electronic messaging system are of the most important information advanced features. Executive information system consists of the application of computer technology for supplying information requirements of an organization's executives.

3.4. Services Quality:
It is the difference between customer's expectations from received service and his/her perceptions of the service actually received [14]. Quality is the field of products and physical goods have great background, but in the field of services, quality does not have long background. Services include some features which make them different from goods. These features from the viewpoints of Arshli, Hazer, Werander.

Include: intangibility, incorruptible, high mental involvement of customer, being simultaneous of the product, consumption and homogeneity [15].

3.5. Taxpayers' Satisfaction:
It is the degree to which actual performance of a tax office provides the customer's expectations [16].

4. Methodology:
The present methodology is descriptive and of correlation type. The present research's population includes all taxpayers of Hamedan city who have used from electronic income tax return system in tax organization. The number of this population is unrestricted. This research used Krejcie and Morgan [17] in order to determine sample volume.

According to the proposed values in this table as well as on the basis of the studied statistical population volume which is unrestricted, it has been selected a sample of at least 384 members.

In this research, sampling method is of probability type. Probability sample is a sample in which each member of the statistical population is selected by chance or probabilities. In some samplings, each member of the population has the same chance as another member; while in many samplings, it is possible that the members of the population do not have the same chance as each other. Anyway, in all probability samplings, this probability that a member is selected as a sample does not get zero [18]. Among probability methods, sample random method has been chosen, because in this method, each member of the population has the same chance as other members.

5. Data Collection Instruments:
In the present research, questionnaire is data collection instrument. To do so, standardized questionnaire of Chen et al [19] model has been used.

6. The Determination Of Questionnaire's Reliability And Validity:
There are different methods to measure reliability. This research has applied Chronbach Alpha technique for measuring the scales' reliability.

<table>
<thead>
<tr>
<th>Table 1. The Chronbach alpha values of the research variables</th>
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<tbody>
<tr>
<td>Chronbach alpha values</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>0.87</td>
</tr>
<tr>
<td>0.85</td>
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<tr>
<td>0.9</td>
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<tr>
<td>0.77</td>
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<tr>
<td>0.8</td>
</tr>
<tr>
<td>0.75</td>
</tr>
<tr>
<td>0.77</td>
</tr>
<tr>
<td>0.83</td>
</tr>
<tr>
<td>0.9</td>
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</tbody>
</table>
In order to evaluate the applied questionnaire's validity, content validity evaluation method was used. To do so, poll forms were given to 10 referees. According to referees' reply, a coefficient can be achieved to measure the extent of referees' confirmation in the field of relevance with concept which is called content validity coefficient of item (CVCI). CVVI index of the research's model dimensions is attained as follows:

Table 2: The values of CVCI content validity index of variables.

<table>
<thead>
<tr>
<th>CVCI values</th>
<th>variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>Accessibility</td>
</tr>
<tr>
<td>80</td>
<td>Interaction</td>
</tr>
<tr>
<td>90</td>
<td>Usage convenience</td>
</tr>
<tr>
<td>90</td>
<td>Informing</td>
</tr>
<tr>
<td>90</td>
<td>Accuracy</td>
</tr>
<tr>
<td>90</td>
<td>Meet / supply</td>
</tr>
<tr>
<td>90</td>
<td>Reliability</td>
</tr>
<tr>
<td>80</td>
<td>Empathy</td>
</tr>
</tbody>
</table>

It should be mentioned that the more the confirm coefficient is, the more the content validity will be [20].

Fig. 1: operational model of the research.

7. Analysis methods:
Data statistical analysis has been performed by structural equations model method by using Lisrel software 8.5 [21]. Structural equations modeling has been implemented through two steps. In the first step, confirmatory factor analysis was firstly used to assess the amount to which latent variables are represented by using the indexes in our proposed measurement models. In the second step, when measurement model was accepted, route analysis was applied to test the structural model.

Diagram 1: The estimation of structural model of the research in the standard values.

First Hypothesis:

*Information quality has a significant effect on taxpayers' satisfaction when using online tax system*

As mentioned in the diagram of estimating structural model of the research, information quality has slight and inconsiderable effect of \(-0.01\) on user's satisfaction. It seems that this value is not considerable. T-value confirms its insignificance, because it is less than the supposed value 1.96 with confidence level 0.95 and error level 0.05. So, it can be said that they are observed some evidences for rejecting this hypothesis, and it cannot be confirmed.
Diagram 2: The estimation of structural model of the research in estimating t-values.

Second Hypothesis:

System quality has a significant effect on taxpayers’ satisfaction when using online tax system.

The above mentioned diagrams have shown that system quality has a positive and direct effect with the value 0.58 on user's satisfaction. T-value also affirms its significance, because it is more than the supposed value 1.96 in confidence level 0.95 and error level 0.05. So, it can be declared that there were not evidences for the rejection of this hypothesis and it can be confirmed and accepted.

Third Hypothesis:

Services quality has a significant effect on taxpayers’ satisfaction when using online tax system.

The mentioned diagrams have shown that services quality has a positive and direct effect with the value 0.18 on user's satisfaction. T-value also affirms its significance, because it is more than the supposed value 1.96 in confidence level 0.95 and error level 0.05. So, it can be declared that there were not evidences for the rejection of this hypothesis and it can be confirmed and accepted.

In SEM, maximum probability method was used to estimate the pattern and some other indexes were applied to investigate model's fitness. They have been evaluated the most common statistical fit indexes including absolute fit model (the chi-square statistic x2), parsimony correction indexes (root mean square error of approximation (RMSEA)), comparative fit indexes (Bentler-Bonett index or NFI, comparative fit index (CFI)), Tucker-Lewis index (TLI), and predicting fit indexes (Akaike information criterion (AIC)); if Kai square is not statistically significant, the pattern's appropriate fitness would be stated, but this index is usually significant in larger samples, and so T index is not regarded as an appropriate index for the pattern's fitness. Therefore, for reducing the sensitivity of Kai square index to sample volume, we used the value of χ2/df which the values less than 5 indicate the desired fitness [22]. The value close to one for the indexes of TLI, NFI, CFI, and the values less than 0.05 or equal 0.05 for the indexes of RMSEA declare the appropriate and desired fitness.

Table 3: The indexes for the evaluation of fitness's goodness of the research's structural model.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kai square statistic</td>
<td>94.74</td>
</tr>
<tr>
<td>Fitness's goodness index (GFI)</td>
<td>0.96</td>
</tr>
<tr>
<td>Adjusted fitness's goodness index (AGFI)</td>
<td>0.92</td>
</tr>
<tr>
<td>Root mean square error of approximation (RMSEA)</td>
<td>0.037</td>
</tr>
<tr>
<td>Root mean square error of remaining (RMR)</td>
<td>0.030</td>
</tr>
<tr>
<td>Bentler-Bonett normal fit index (NFI)</td>
<td>0.97</td>
</tr>
<tr>
<td>Comparative fit index (CFI)</td>
<td>0.98</td>
</tr>
<tr>
<td>Relative fit index (RRI)</td>
<td>0.96</td>
</tr>
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</table>

As can be seen in the above table, Kai square value equals 94.74 with freedom degree 44. The less the value of x^2 is, and in other words, the less the proportion of x^2 to df is, the better fitness the model will have and the more appropriate will be. In this model, the proportion is about 2.15. In the mentioned chart, the index of GFI has been = 0.96. This index can be between zero to one, and the close values to one show the better adaptation of the model. The values above 90 percent are usually considered as being acceptable [23]. Therefore, about this criterion, it can be said that the model enjoys an appropriate fitness. The adjusted fitness's goodness index (AGFI) also shows the value 0.92. On this basis, the model can also be seen as having an appropriate fitness. The index of RMR equals 0.030. The closer this criterion is to zero, the higher the model's goodness fitness will be. Hence, it can be declared that about this criterion, the model has an appropriate fitness. Root mean square
Discussion And Conclusion:

On the basis of the research’s findings in testing the hypothesis of a research, information quality does not have a significant effect on the satisfaction of the users of online tax system. The loaded value on the user's satisfaction equals -0.01, and t-value equals -0.06 that the value is not significant in confidence level 0.95 and error level 0.05, because this value is less than 1.96. This finding is not supported by Chen's finding [19], and Chen's finding rejects it. In the explanation of this finding of the present research, it can be presented that because the taxpayer himself/herself has not been involved in working with online systems, so it is followed that the taxpayer's works have been done by educated people, accounting experts and coffee nets and computer service makers. Therefore, system's quality has not affected the taxpayers' satisfaction. Hence, the effect of information quality on the satisfaction of the users of online tax system was not statistically signified. On the basis of the attained findings from structural equations modeling, services' quality has a significant effect on the satisfaction of the users of online tax system. The loaded value on the user's satisfaction equals 0.18 and t-value equals 2.05 that the value is significant in confidence level 0.95 and error level 0.05, because it is more than 1.96. This finding is supported by Chen's finding [19] and Chen's finding confirms it.

Moreover, the attained evidences from structural equations modeling determine that system quality has a significant effect on the satisfaction of the users of online tax system. The effect value of this variable on user's satisfaction variable equals 0.58 and t-value equals 2.47 that the value is significant in confidence level 0.95 and error level 0.05, because it is more than 1.96. This finding is supported by Chen's finding [19] and Chen's finding confirms it. Facilitating conditions consist of two following subset: reference factors such as computer equipment’s and relative issues to technology which may totally disrupt the usage. Therefore, if taxpayer does not access to computer equipment’s and technology is low, s/he would not agree to use electronic tax services. In total, it can be said that the selection of payment method by taxpayers is directed through their technologies and the conditions of resource facilitating. For taxpayers who are not satisfied by manual method and tended to accept electronic services in the field of tax, the lack of computer resources makes obstacles and disrupts using them. The decrease of system errors and the increase of transactions' speed will increase the acceptance of this technology.

9. Suggestions:

It is suggested that tax offices make electronic tax services easier so that all people can use it. One of the important approaches in this field can be good designing the website, because with good design and considering the similar pattern in all tax offices, it will be easier the work with it for the users and it is not anymore needed to learn the guide and its instructions in each visit of various websites. In order to increase the usefulness of tax electronic payment, it is suggested to the organization to provide better services' quality and information system quality; for example, responding more quickly, reducing the costs of access to computer and internet by creating free websites in tax offices, diversity and speed of service, speed up page loading and increasing the speed of transactions (especially at the end of July) etc., the establishment of several free phone line and email and using the expert users to respond quickly to calls and emails, encourage to use online systems such as giving discounts to the taxpayers who have electronic signatures.

It is suggested that tax offices establish some bases in each area, and experts are put in this place or she provides required trainings to coffee nets and computer service makers in order that they can accurately perform the required electronic services for each taxpayer so that they would not have to go to the office for fixing the problem and answering the questions.

Because of repeated reference of taxpayers to tax offices, it is suggested that tax offices reduce the four quarterly periods of presenting tax returns of surplus value and the statement of seasonal transactions of article 169 Q.M.M into two six-monthly periods or one annual period. And they can reduce the reference of taxpayers to tax offices by the establishment and making online the system for recording salaries lists, the record of the statement of involved payments in the article 104 Q.M.M, online record of value added tax returns, completely online record of the statement of seasonal transactions (elimination of off-line), which make taxpayer to use more the electronic systems, and therefore, lead to reduce wasting time as well as increase the taxpayers’ satisfaction.

According to the purposes of tax organization in order to obey taxpayers and increase their satisfaction, tax offices can annually investigate the amount of taxpayers' satisfaction. About this, it is suggested to design a questionnaire with the subject of satisfaction from all different units and parts of tax offices. At the end of each year when recording tax returns, they put it in their websites so that before recording tax returns, taxpayers have to reply the questionnaire and participate in the poll.
REFERENCES