The Electronic Tax in the Tax System of
(Case Study of the Tax administration of Kurdistan Province)

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ABSTRACT

Electronic Tax is one the most important phenomena resulting from using information and communication technology and information management and had a great evolution in planning and taxation. On the one hand, it increased the relationship with the state administration of taxation and on the other hand, it extended the domain identification of new tax bases and virtual collection of some types of taxes. This research is for identifying and analyzing the barriers to the implementation of e-tax in the tax administration of Kurdistan Province and prioritizing these barriers.

The results indicate these criteria and sub-criteria that affect the implementation of e-tax have different priorities; environmental, behavioral and organizational factors had classified respectively. Lack of electronic banking services for tax preparation and lack of adequate legal security in electronic trading are two sub-criteria with maximum and minimum effect on implementing e-tax and other sub-criteria are in a range between those sub-criteria.

KEYWORDS: Tax, electronic tax, information technology, taxpayer, the tax administration of Kurdistan Province.

1. INTRODUCTION

Electronic tax is one the most important phenomena resulting from using information and communication technology and information management and had a great evolution in identifying and receiving taxation. (Schallheim, 2004) On the one hand, it increased the relationship with tax administrations and on the other hand, it extended the domain identification of some types of taxes. This phenomenon is beneficial for tax administrations, because, by using expert work force, advanced electronic hardware with different financial and management capacities, will be able to provide a wide range of services for taxpayers; also, reviewing, auditing and tax payment will be faster and more accurate. (Karimi, 2005, 65).

Hence, it is necessary to review and identify the environmental, organizational and behavioral aspects of the barriers to implementing electronic tax in the tax administration of Kurdistan Province. If we do not use electronic systems in tax administrations, there will be stagnation and weakness in tax activities in the near future. Finding barriers to the creation and implementation of electronic systems will support taxpayers, increase tax knowledge and finally reduce tax levy of tax administrations, especially, the tax administration of Kurdistan Province. (Kumar, 2002)

Establishing electronic tax and using information technology in the interaction between tax administrations and taxpayers have many advantages such as providing fast and reliable tax services all day, online tax payment, preventing tax frauds and increasing tax revenue of tax administrations. However, for implementing electronic tax, we need to know the abilities and capacities of those administrations that want to provide e-tax. (Karimi, 2005, 65).

Hence, before everything, we must identify the barriers to implementing e-tax in tax administrations. In this area, except in the last few years, we did not have many expert talks; however, recently, the state tax administration has taken some steps toward providing e-tax. There were necessary steps, but not sufficient.

In this research, we review the literature of this subject and identify the barriers to implementing e-tax in the tax administration of Kurdistan Province and then we prioritize these barriers.

We encounter many challenges during creating and developing e-tax in the tax administration of Kurdistan Province. Identifying and providing solutions to overcome these obstacles is the most important aim of this research. Therefore, we try to identify these barriers based on 3C's model of Pratt et al[1] (2008) and we offer some solutions with a thorough analysis. According to this model, the barriers had classified into three categories as follows: (Pratt et al, 2008)

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1 . Pratt et al

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1. Environmental barriers (underlying barriers): these barriers are not in the scope of organization authority and underlie behavioral and organizational barriers. We will discuss legal, cultural and technological aspects of these barriers.
2. Organizational barriers (structural): these barriers include non-human factors of administration such as structure, internal technology and domestic laws and regulations. We discuss them.
3. Behavioral barriers (content): these barriers include factors that are relating to work force such as lack of expertise, lack of support from senior managers and personnel's resistance to change. (The same resource).

We encounter many challenges during creating and developing e-tax in the tax administration of Kurdistan Province. Identifying and providing solutions to overcome these obstacles is the most important aim of our research. Secondary objectives can be stated as follows:
1. Identifying the sub-criteria of implementing electronic tax
2. Prioritizing these criteria and sub-criteria

Nowadays, the world is moving towards being electronic. Electronic business is one the most popular trends in electronic commerce, because the internet network has a unique charm and e-business involves many virtual processes such as series of supply and demand, financial reports and reports related to clients.

Electronic business has many benefits such as increasing efficiency by improving business processes and in the world of e-business, there is a possibility to go into new markets and companies have an opportunity to enter the international market. (Nik Bakhsh Tehrani, Azar Saberi, 2004, 24).

2. MATERIALS AND METHODS

Our research methodology is descriptive and among different types of descriptive researches, this one is a survey, so, our methodology is a descriptive survey one.

The data has mainly collected by a questionnaire that has 23 questions based on 5-point Likert scale.

Questions 1 to 8 are about the first hypothesis, 9 to 17 are for the second hypothesis and 18 to 23 are about the third hypothesis.

We used Paired Comparison Questionnaire for the section about the ranking of those barriers that affect implementation of e-tax from expert opinion. After identifying and sorting ultimate barriers that affect implementation of e-tax and interviewing some of tax experts, we have drawn the decision tree. Then, by using the decision tree, we have designed a questionnaire for prioritizing barriers that affect implementation of electronic tax.

The statistical community and sample

Our sample includes all managers, assistant managers, heads, assistants and tax senior experts of the tax administration of Kurdistan Province.

For our research sample, we used simple random sampling and it includes all managers all managers, assistant managers, heads, assistants and tax senior experts of the tax administration of Kurdistan Province and then we act based on the random sampling.

Since our statistical population is accessible and limited, we used Cochran's theorem to determine sample size:

$$n = \frac{N \times z^2{}_{\alpha/2} \times p \times q}{\varepsilon^2 \times (N-1) - z^2{}_{\alpha/2} \times p \times q} = \frac{100 \times (1.96)^2 \times 0.5 \times 0.5}{(0.05)^2 \times 99 - (1.96)^2 \times 0.5 \times 0.5} \approx 80$$

To analyze the data analytically and for hypotheses testing, we use analytical and non-parametric statistical techniques. For statistical hypothesis testing, we use Bionomial Test[2] and for ranking environmental, organizational and behavioral barriers, we use AHP method. (Azar Momeni, 2003, 9).

RESULTS AND DISCUSSIONS

The first main hypothesis: environmental barriers impede the implementation of e-tax in the tax administration of Kurdistan Province.
For analyzing and testing the first main hypothesis, we will use three specific hypotheses as follows:

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2 . Bionominal Test

Specific hypothesis testing (1-1):

Null hypothesis (H_0): legal factor (legitimate) does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): legal factor (legitimate) impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$

$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis shows at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 71% of respondents believe the legal factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (1-2):

Null hypothesis (H_0): cultural factor does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): cultural factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$

$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 69% of respondents believe the cultural factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (1-3):

Null hypothesis (H_0): technological factor does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): technological factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$

$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 79% of respondents believe the technological factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

The second main hypothesis: organizational factors impede the implementation of e-tax in the tax administration of Kurdistan Province.

For analyzing and testing the second main hypothesis, we will use four specific hypotheses as follows:

Specific hypothesis testing (2-1):

Null hypothesis (H_0): political and domestic policy factors do not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): political and domestic policy factors impede the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$

$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 81% of respondents believe the political and domestic policy factors impede the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (2-2):
     Null hypothesis (H_0): tax laws factors do not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): tax laws factors impede the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

     The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 68% of respondents believe the tax laws factors impede the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (2-3):
     Null hypothesis (H_0): technological factor does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): technological factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 81% of respondents believe the technological factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (2-4):
     Null hypothesis (H_0): structural factor does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): structural factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \leq 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

     The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 80% of respondents believe the structural factor impedes the implementation of e-tax in the tax administration of Kurdistan Province.

The third main hypothesis: behavioral factors impede the implementation of e-tax in the tax administration of Kurdistan Province.
For analyzing and testing the third main hypothesis, we will use three specific hypotheses as follows:
$$H_0 : p(\mu > 3) \leq 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

Specific hypothesis testing (3-1):
     Null hypothesis (H_0): lack of expert work force does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): lack of expert work force impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \le 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 76% of respondents believe lack of expert work force impedes the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (3-2):
Null hypothesis (H_0): lack of support from tax senior managers does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): lack of support from tax senior managers impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \le 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 78% of respondents believe lack of support from tax senior managers impedes the implementation of e-tax in the tax administration of Kurdistan Province.

Specific hypothesis testing (3-3):
Null hypothesis (H_0): personnel's resistance to change does not impede the implementation of e-tax in the tax administration of Kurdistan Province.

Alternative hypothesis (H_1): personnel's resistance to change impedes the implementation of e-tax in the tax administration of Kurdistan Province.

$$H_0 : p(\mu > 3) \le 0/5$$
$$H_1 : p(\mu > 3) > 0/5$$

The results of the mentioned hypothesis indicates at a 95% confidence level, the significance level of p-value is less than error rate; so, H_0 is rejected and H_1 is accepted. In other words, 73% of respondents believe personnel's resistance to change impedes the implementation of e-tax in the tax administration of Kurdistan Province.

3. CONCLUSION AND SUGGESTIONS

A. Conclusion

The Internet and e-commerce provide new opportunities and challenges for tax system. Using the Internet for tax business has many advantages for tax administrations. Therefore, some major stimuli lead tax administrations to the electronic world. These stimuli can increase the relationship with taxpayers, reduce costs, improve services and develop new tax sources. If we look at the status of tax administrations in developed countries, we realize tax administrations have been slower than other offices and industries in adopting e-commerce methods, because, there are some major barriers in this area. Some of the reasons that impede the movement of tax administrations towards e-tax are high cost of hiring professionals who have an experience in information technology, technical and regulatory differences of safety issues and maintaining privacy, the complexity of some of the tax laws and above all, the normal fear and precaution of tax system.

B. Suggestions

Some suggestions based on the theoretical results of this research

1. The environmental aspect:
- Creating an adequate basis for public access to the Internet
- Accurate and clear definition of cybercrime and determining its related penalties
- Developing the knowledge of electronic commerce and increasing public awareness about the benefits of e-commerce
- Increasing the knowledge of using computer and the Internet among people and tax administrations
- Creating an appropriate telecommunication for implementing e-commerce in the country
- Reforming commercial and tax laws; and monitoring and tracking their related participants
- Compiling legal rules for taxpayers especially in the area of electronic signature, signing contracts and e-tax transactions

2. The behavioral aspect:
- Improving the knowledge of senior managers in the ICT field
- Sending office managers or personnel of tax administrations to the pioneering countries in creating e-tax
- Engaging adequate experts in the ICT and e-tax fields for tax administrations
- Reducing personnel's resistance to changes through various means including training, informing and other educational measures
- Making taxpayers sure about exchanging information and documents via the Internet and computer networks

3. The organizational aspect:
- Adopting politics, policies and appropriate programs about e-tax field by tax administration of the country
- Providing educational programs about the Internet, computers and e-tax for human resources (personnel)

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