Identifying the Effective Factors for the Improvement of Tax Compliance

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Abstract   *Due to the international sanctions against Iran, the tax discussions and the necessity of increasing tax credits have been overemphasized. Tax evasion and its influential factors have been examined by various researchers; however, the ways to improve the tax compliance have been rarely investigated in Iran. Therefore, the present study aims to examine the ways by which the tax compliance could be improved. The population is composed of the taxpayers in Yazd province. The sample is constituted of 383 taxpayers selected based on Cochran's formula and stratified random sampling. This is an applied study using descriptive surveys to collect the required data from a researcher-made questionnaire including 18 elements. The collected data is then analyzed by different statistical methods such as exploratory factor analysis (EFA) and independent mean comparison. The findings support the significance of the questionnaire elements from the perspective of the participants. The results of EFA also reveal that about 62.767 percent of the tax compliance is a function of four factors of social, individual, structural and legal factors.*

Key words   Tax Evasion, Tax Compliance, Tax Culture, Explorative Factor Analysis

1. Introduction

The social economy rests on some devices known as agents to accomplish their tasks. Government is one of these agents. The extension of the governmental interference in the economic and social fields and also the development of the governmental commitments to achieve some goals such as economic growth, price stability and justice distribution of the incomes have increased the governmental expenditures. The tax revenues are of high significance in financing the governmental affairs of the developed countries. However, the inflationary structure and inefficient tax system in the developing countries caused tax revenues to comprise an insignificant percentage of gross domestic products (Shorvarzi and Rahmani, 2011). The Persian Gulf countries own two third of the oil and gas reserves of the globe; that is why, the United States of America always pays a special attention to these countries for the strategic objectives. Following the Iranian Revolution of 1979, this interference of the United States was criticized. In response to this proceeding, United States of America imposed sanctions against Iran to change the behavior of the Iranian government. These sanctions were first imposed by Jimmy Carter and changed into different forms since then. The economic sanctions and the mutual limitations were intensified to include the firms dealing with Iran. The United States of America reasoned that Iran used these investments and commercials to advocate the terrorists and nuclear weapons and also protection of the extremist and violent groups to disturb the peace of the Middle East. These reasons were criticized by many analysts and observers (Yavari and Mohseni, 2010). Many of the economic experts believe that continuing the crisis on the international financial markets led to the reduction of the oil price and the second economic turmoil around the globe. The economic development plan seeks to reduce the oil dependency of Iran. To achieve this goal, the economy of Iran should be segregated from oil and the oil waste in the economy should be treated. This requires increasing the efficiency of the tax system.

The present study aims to identify the factors influencing the improvement of tax compliance. The rest of the paper is organized as follows. The next section reviews the prior literature. The research questions and hypotheses are then developed. The population, sampling, reliability and validity and data analyses in addition to the conclusions and suggestions for the future studies are finally presented.

2. Theoretical Bases and Research Background

2.1. Tax Compliance

There is no comprehensive definition provided for the tax compliance in the tax regulations of Iran. The tax experts provide different definitions based on the various perspectives. Some of these definitions are:

a. Confirming all or a portion of the specified tax by the taxpayers.

b. Paying taxes based on income tax returns and the agreement of tax organization and societies unions.

c. Voluntary commitment to the texts and nature of the tax regulations and the informed acceptance of tax and following the tax regulations by the taxpayers.

d. If the taxpayer accepts the taxable income documented in the income tax return or agrees with the tax administration upon the article 239 of direct tax rule and pays the specified tax in this stage (Kamali and Shafiei, 2011).

2.2. Effective Factors of Tax Compliance

Based on the prior studies, four factors impacting the tax compliance include social, individual, legal and structural factors. The factors and their related elements are defined in the next section.

2.3. Social Factors

Socialization means confirming the rules, thinking approaches, ideas, beliefs, traditions, ethical values and internalizing these elements and their implementation. In other words, socialization is a process by which the individuals become consistent with the social environment and gradually feels as a member of the society. The tax system structure should be established so that the employees are respectful and are financially and spiritually supported so that they don't dare to commit a financial crime in terms of financial frauds and corruptions (Zehi and Mohammad Khanli, 2010). The tax justice is very significant and the tax should be received in accordance with the financial ability of the people and economic practitioners (Shamshiri, 2007). In most cases, the key factors impacting the tax evasion include underground economy, complexity, corruption of the tax system and regulation and corruption (Blackburn *et al,* 2012).

Tax injustice is a result of different rates (Arbex, 2013). Based on the economic literature, the financial corruption has a significant and negative impact on the relative contribution of tax in the gross domestic products. The financial corruption reduces investments, prevents the informal portion of the economy, removes the balance of the tax system and destroys the tax behavior of the taxpayers. These elements result in the reduction of the relative share of tax revenues in the gross domestic products (Karimi Patanlar *et al*, 2011). The underground economy undermines the vertical and horizontal justice of the tax system and also the bases of the economic system. Tax is a device used for redistributing the income and modifying the wealth of the society. By reducing the tax revenues, there will be no equitable distribution of revenues and wealth (Zehi and Mohammad Khanli, 2010). The taxpayers should be induced to pay their taxes by identifying the payment methods of the society, increasing the confidence in the tax authorities and reducing the discriminations (Lashkari Zadeh and Azizi, 2010). These affairs increase the tax culture of the country. Tax is known as the social treatment and security (Alm *et al*, 2012)

2.4. Structural Factors

Reducing the economic prosperity of the society by the government, using cash in the transactions and lack of an integrated banking system are the most important factors of tax evasions classified as structural factors. The authorities should be aware that the weaknesses of the governmental plans might be effective in collecting tax or tax evasion. There is an interaction between the monetary system and low

level of the public services of the government; therefore, the planners, policy makers and economic authorities should promote the credit cards, clarify the monetary flow and link the monetary system of the country to the tax system. By doing so, the level of the public services and goods improves (Ghorbani, 2010).

2.5. Legal Factors

Tax evasion depends on legal factors. In fact, the strong regulations reduce the impact of the cultural variables on tax evasions (Bame Aldered *et al*, 2012). Some individuals work against their legal commitments (Bauman and Friehe, 2012). There is a positive relationship between tax rates and tax evasion (Levaggi and Menoncin, 2012). Tax rules are not transparent (Prinz *et al*, 2013).

2.6. Individual Factors

Behavior is an effective factor having a direct impact through private incentives and an indirect impact through the behaviors of the others (Calbiati and Zanella, 2012). It seems necessary to consider the ethical dimensions of the individuals to perceive the tax administrations. Any individual might have specific personal ethical rules and have good feelings by paying tax to the government (Christian and Alm, 2012).

Naderan and Sedighi (2008) conducted a study about the impact of tax and its components on the underground economy. They found that the components of the direct tax have no significant effects on the underground economy, but import tax has no significant relationship with the underground economy. However, this relationship holds for sales tax.

Nourbakhsh and Javadi Nikgoo (2009) investigated the barriers of establishing a value added tax system in Iran. They concluded that all external and internal variables are effective in the unsuccessful operation of the value added tax system in Iran.

Pour Zamani and Chamghaneh (2009) examined the reasons for the difference between taxable income of the merchandising enterprises and the final tax by the tax departments. Their findings supported the significant difference between taxable income of the merchandising companies and final tax of the taxpayers. In addition, the elements of this difference are significant.

Zehi and Mohammad Khanli (2010) tested the factors impacting the tax evasion by the administrative agents of the tax affairs in Eastern Azerbaijan. Their findings revealed that the lack of tax belief among the people and perceiving the performance of the other taxpayers are effective in tax evasion. However, the visions of tax employees and taxpayers are not consistent. The corruptions among the tax authorities are not effective in tax evasions and the opinions of the employees and taxpayers are not consistent.

Lashkari and Azizi (2010) conducted a study to identify the effective factors in enhancing the tax culture in Iran. Their conclusions are as follows: 1. the culture of tax among the people is lower than the average. 2. Lack of awareness about the significance of tax payment is a barrier of enhancing tax culture. 3. By simplifying and rationalizing tax rules and tax collection steps, the tax culture enhances. 4. Educating people about the tax regulations and rules reduces the problems of the tax authorities. 5. Increasing the justice and applicability of the tax organizations impacts the enhancement of the tax manners. 6. Honesty and accountability of the taxpayers are the factors for improving tax cultures.

Vilenlipator (2011) examined tax evasions by the experts. The results showed that increasing the audit costs and accounting costs are effective in tax evasions. Debaker et al (2012) investigated the corruptions resulted from the foreign culture by the evidences from the tax evasions of US firms in different industries. It was found that increasing the firm size impacts the corruption.

Durham et al (2012) examined the impact of revenues and income levels on the tax acceptance in a dynamic environment. They concluded that there is no considerable consistency between revenues and the intended framework.

Xuepegliu (2013) tested tax avoidance by importing and found that the China imports have relatively influenced on the value added tax to guide the commercial functions.

3. Research Questions and Hypotheses

To test the relationship between the dimensions and elements of the tax compliance by the second order factor analysis, one hypothesis is developed. In addition, two questions are considered.

3.1. Research Questions

1. What are the effective factors in improving tax compliance?
2. What are the roles of these factors in tax compliance?

3.2. Research Hypotheses

The main hypothesis: There is a positive significant relationship between identified factors of exploratory factor analysis (EFA) and tax compliance.

3.3. Population and Sampling

This study considers the taxpayers of Yazd as the population, which includes 152607 individuals. The sample is selected by stratified random sampling based on Cochran's formula. The sample finally includes 383 taxpayers.

3.4. Data Collection

Using various references in Iran and foreign countries, the effective elements in compliance tax have been identified. These studies include: Cullis *et al* (2012), Blackburn *et al* (2012), Tan and Yim (2013), Bazart and Bonein (2013), Hebous and Lipator (2013), Kastlunger *et al* (2013), Mohseni Tabrizi *et al* (2010) and Lashkari and Azizi (2010). Some variables are extracted from these references. Based on the opinions of some experts such as professors and limited numbers of taxpayers and financial controllers, these variables are examined and finally 18 variables are selected and used in a questionnaire distributed among the participants. The final questionnaire is composed of two sections. The first section is about the demographic characteristics of the respondents and the second section asked the questionnaires to express their opinion about the significance of any of the statements in terms of tax compliance. Using a five-point Likert scale (ranging from a very insignificant to very significant), the responses are demonstrated. The variables are selected based on the theoretical bases and the corrected opinions of the experts and the validity of the questionnaire is confirmed. In addition, the reliability of the questionnaire is measured by Cronbach's alpha and the findings are presented in table 1.

Table 1. Cronbach's Alpha of the tax compliance

Element	Number of Questions	Cronbach's Alpha
Social Factors	8	.972
Individual Factors	4	.969
Structural Factors	2	.973
Legal Factors	4	.969

3.5. Data Analysis

After analyzing the descriptive statistics, one sample t-test was used to determine the effect of the elements on the tax compliance. Using exploratory factor analysis, the relationship between the factors has been examined. As shown in the table below, all elements are effective in the improvement of tax compliance (95% of significance) and the first element is significant at 90 percent of significance. Based on the intended confidence level of this study (95%), the first question is eliminated for the further examinations.

Table *2.* One-sample t-test

Questions	Test Value = 3					
	Degree of freedom	T statistics	Significance of the test	Mean difference	Confidence level (95%)	
					Lower level	Upper level
q18	382	251.14	.000	.744	.64	.85
q14	382	867.10	.000	.666	.55	.79
q3	382	205.10	.000	.658	.53	.78

Questions	Test Value = 3					
	Degree of freedom	T statistics	Significance of the test	Mean difference	Confidence level (95%)	
					Lower level	Upper level
q6	382	529.8	.000	.593	.46	.73
q13	382	455.9	.000	.587	.47	.71
q5	382	392.8	.000	.556	.43	.69
q4	382	408.8	.000	.564	.43	.70
q12	382	335.8	.000	.535	.41	.66
q7	382	357.6	.000	.376	.26	.49
q9	382	370.5	.000	.295	.19	.40
q16	382	630.4	.000	.277	.16	.39
q2	382	701.3	.000	.227	.11	.35
q8	382	701.3	.000	.211	.10	.32
q15	382	449.2	.015	.149	.03	.27
q17	382	109.2	.036	.149	.01	.29
q10	382	-663.2	.000	-.175	.30	.05
q11	382	-727.2	.000	-.185	.31	.05
q1	382	-801.5	.070	-.345	-.46	-.23

3.6. Exploratory Factor Analysis

Based on this method, the researcher aims to uncover the underlying structure of a relatively large set of variables and the primary assumption of the researcher is that any variable might be associated with any of the factors (Momeni, 2010).

Table 3. Adequacy index of sampling and Bartelet

ade Kaiser Meyer Olkin		.817
Bartlett Test	Chi- squared	1414.728
	Degree of freedom	78
	Significance	.000

The values higher than 0.6 represent the adequacy of sampling and the confidence level of zero for the Bartlett test shows the fit of the factor model. In addition, a varimax rotation is used in all analysis steps for exploiting the factors.

Table 4. Eigenvalues

Questions	Primary	Exploited values
q3	1.000	.549
q4	1.000	.731
q5	1.000	.619
q6	1.000	.665
q7	1.000	.499
q8	1.000	.684
q9	1.000	.705
q10	1.000	.757
q11	1.000	.802
q12	1.000	.484
q15	1.000	.484
q17	1.000	.620
q18	1.000	.561

The primary column of the above table shows the values extracted from the primary data. The higher values (maximum 1) describe the suitable application of factor analysis. On the other hand, the exploited values of the factors confirm the suitable data for the factor analysis. The table below shows that the specific values of the four factors are higher than 1 and the suggested factor structure will involve four factors and the variance has 62.676 percent of the accumulated variance.

Table 5. Total exploited variance

factors	Specific values			Total squared of exploited factor loadings			Total squares of the rotated factor loadings		
	Total	Variance percentage	Total variance percentage	Total	Variance percentage	Total variance percentage	Total	Variance percentage	Total variance percentage
1	4.107	31.594	31.594	4.107	31.594	31.594	3.257	25.056	25.056
2	1.754	13.494	45.088	1.754	13.494	45.088	1.853	14.252	39.308
3	1.235	9.501	54.589	1.235	9.501	54.589	1.545	11.881	51.189
4	1.063	8.177	62.767	1.063	8.177	62.767	1.505	11.578	62.767
5	.805	6.195	68.962						
6	.765	5.882	74.844						
7	.653	5.025	79.869						
8	.578	4.444	84.313						
9	.509	3.916	88.229						
10	.434	3.338	91.566						
11	.399	3.068	94.635						
12	.376	2.892	97.527						
13	.321	2.473	100.00						

As observed in the above table, the variables have high loadings on one factor of the final rotated matrix which is also represented in table 6.

Table6. Rotated Matrix				
Questions	Factors			
	1	2	3	4
q3	.733	-.090	.026	-.059
q4	.838	.152	.064	-.038
q5	.760	.120	.153	.051
q6	.755	.288	.109	.006
q7	.528	.330	.323	-.087
q8	.258	.108	.774	.081
q9	.031	.050	.829	.123
q10	-.136	-.007	.304	.804
q11	.087	.005	-.037	.890
q12	.617	.316	.025	.060
q15	.236	.641	.112	-.066
q17	.247	.734	-.019	.140
q18	.007	.743	.084	-.045

Based on the results of the exploratory factor analysis, it was found that four factors have essential effects on the tax compliance. These factors including social, individual, structural and legal factors along with their effective factors are shown in the below chart.
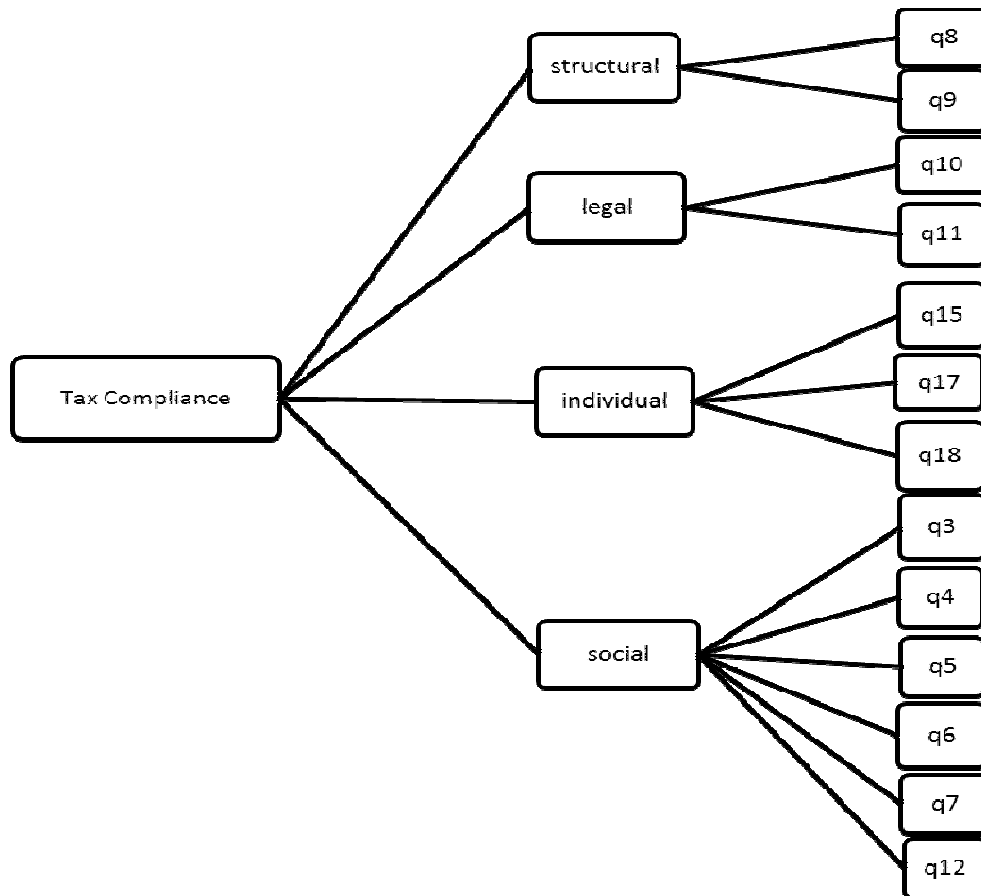
q8: Develop a comprehensive information system and automate tax affairs

q9: Feeling respectful and required to follow the tax rules

q10: Increasing tax penalties

q11: Intensifying tax punishments

q15: Dominance over tax rules

q17: The beliefs of the taxpayers to the state officials and reinforcement of the political attitudes among taxpayers

q18: Accountability of taxpayers in the society

q3: Controlling tax authorities and preventing corruptions

q4: Developing tax justice in the society

q5: Preventing tax evasion through eliminating underground economy

q6: Correct consumption of the tax resources by the government and reporting transparency

q7: Appropriate awareness by the social media about the tax and the efforts taken to improve tax culture

q12: Fitting the tax rates to the profitability level of different operations and avoidance of the consistent tax rate

4. Conclusion and Discussion

The findings reveal that the social, individual, structural and legal factors are the effective elements in tax compliance.

Based on the statistical results of the study, it is found that all factors and their related elements are significant. However, the social factors are known as the most effective ones in tax compliance and its related elements are sorted as follows:

1. Development of tax justice in the society
2. Prevention of tax evasion through omitting the underground economy.
3. Correct consumption of the tax resources by the government and reporting transparency
4. Controlling tax authorities and preventing corruptions among them

5. Fitting the tax rates to the profitability level of different operations and avoidance of consistent tax rates

6. Appropriate awareness by the social media about the tax and the efforts taken to improve the tax culture.

It is generally concluded that the development of tax justice has been identified as the most important element.

Research based suggestions

The findings of the study show that the social factors and their elements are the most influential factors of tax compliance. Therefore, the following suggestions are provided:

• The government and the tax administration office are suggested to develop the tax justice in the society through omitting the underground economy and also by the correct consumption of tax resources

• The public media is offered to improve the tax culture in the society through broadcast and radio programs.

• The tax administrative organization is suggested to conduct more accurate studies about fitting tax rates and preventing single rate tax

• In terms of the individual factors and the specific significance of these factors, the organizations and governmental agencies and authorities are suggested to reinforce the accountability sense of different fields of community and enhance the beliefs and confidence of the people to the authorities.

• In terms of the structural factors, the government and the tax administrative organization are offered to develop a comprehensive information system and automate the tax system because this issue has been always considered but has never been appropriately implemented.

• To reinforce the legal factors, the tax administrative organization is offered to intensify the tax punishments and increase the fines.

Directions for future research

• The future research might be conducted in other communities such as tax authorities and academics. The findings of these studies might be compared with the present study.

• The researchers are offered to conduct studies about approaches to reinforce the accountability sense of the community and to develop tax justice.

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