Int. J. Nonlinear Anal. Appl. 14 (2023) 1, 1399–1411
ISSN: 2008-6822 (electronic)
http://dx.doi.org/10.22075/ijnaa.2022.27622.3662

Identifying key factors affecting the tax avoidance process in private companies: Combining interpretive structural modeling approaches and network analysis process

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(Communicated by Mohammad Bagher Ghaemi)

Abstract

The purpose of this study was to identify the key factors affecting the tax avoidance process in private companies. The present study is in the category of basic research in terms of purpose and in terms of nature and method, is a descriptive and case study with private companies in Iran. The statistical population of this research is experts familiar with the topic, which includes professors and experts in the field of taxation. A sample number of 20 experts answered the questions through purposeful judgmental sampling. In order to present the model and identify the key factors, the interpretive structural modelling approach with the help of Matlab software has been used as a qualitative approach. In the quantitative part, to weight and prioritize the factors, the multi-criteria decision approach has been used with the help of a network analysis process and Super Decision software. The results of interpretive modelling showed that the factors of financial leverage, company size, product market competition and financial constraints that are adjacent to the strategic red line, in addition to being strategic research variables, are classified as linked variables. The findings of the network analysis process also showed that the V10 criterion, which is "social trust", is the most important and therefore the most important sub-criterion in presenting the tax avoidance model. The V6 benchmark, which is "financial constraints", is then the second priority. Factors of competition in the product market and corporate social responsibility are ranked third and fourth.

Keywords: tax avoidance process, interpretive structural modeling, network analysis process, private companies
2020 MSC: 91G15, 65D17

1 Introduction

Taxation is an important and valuable tool that may influence the policies and basic decisions of business units in different countries. On the one hand, it is considered a mandatory cost for the business unit and on the other hand, it affects the way of investing as well as financing companies [1]. Therefore, one of the most important planning and

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Received: May 2022 *Accepted:* July 2022

activities that companies pursue is to reduce the cost of taxes. To the extent that shareholders are satisfied with the tax reduction activities by the directors, they are not worried about the consequences of tax risk, such as paying more taxes in the future, tax penalties, and so on. Tax avoidance can generally be seen as the use of complexities, techniques, and gaps in tax law that reduce the company's costs, leading to the transfer of wealth from the government to shareholders. Wealth transfer that may have ambiguities regarding the realization of its future cash flows [5]. For this reason, in recent years, the field of taxation has been increasingly considered by governments in public and even political debates [21]. Taxation is an essential aspect of modern life and in addition to its important role in the field of financial reporting, it forms a major part of government revenues, especially in developed countries. Budgets that governments receive from taxes are used to provide essential services and public goods. Therefore, the willingness of individuals to pay taxes has an important role in creating the economic and social well-being of any country [20]. In reality, however, there is sometimes no such willingness to pay taxes. Creating tax revenue is one of the most important economic fields. Developing economies are unable to meet tax revenue targets, whereas this is different in developed economies [12]. Various economic, political, and especially cultural factors are effective in generating government tax revenues, and in many cases, governments use tax incentives to generate tax revenues [18].

Tax avoidance means applying legal methods to change the financial position of individuals to reduce the amount of personal income tax debt. This can generally be done by asking for discounts and credits [38]. This experience is different from tax evasion because, in tax evasion, illegal methods such as underreporting income are used to evade taxes. The conceptual distinction between tax evasion and tax evasion relates to the legality or illegality of taxpayers' behaviour. In tax evasion, one does not have to worry about his actions being exposed. Tax avoidance arises from legal loopholes in the tax law [34].

In Iran, the development of the tax system is recognized as one of the main axes of economic development. In this regard, the replacement of tax revenues with unsustainable oil revenues has always been one of the most important pillars of the country's economic and social development programs, although its implementation has been associated with problems. Various political, economic and cultural factors play a role in this equation, among which the issue of tax evasion and related culture in Iran has received fewer attention [24]. With the creation of a coherent tax system, the government's reliance on oil revenues will be reduced and a large part of its current and development costs will be covered. In this regard, identifying the factors affecting tax avoidance in companies, especially private companies can be considered necessary in advancing the goals of the country and by achieving it, appropriate measures can be taken this regard.

Therefore, the purpose of this study is to investigate the factors affecting tax avoidance in private companies in Iran and the focus of this study is to achieve this goal and the research seeks to answer the following questions:

What are the factors affecting tax avoidance in private companies in Iran?

2 Theoretical Framework

Researchers have attributed the emergence and spread of the phenomenon of non-payment of taxes to various factors. Numerous studies on the areas of tax evasion have identified weaknesses in internal and external factors. The impact of these factors on culture and, consequently, the impact of the culture created on the financial and management systems and its subdivisions, such as the tax systems of each country, is certain. Therefore, the effective factors in creating a favourable tax culture can be divided into two categories: internal organizational and external organizations. Table 1 lists the most important factors affecting tax avoidance.

Table 1: Factors Affecting Tax Avoidance

Factors (criteria)	ID	under the criteria	Resources
Intra-organizational factors	V1	Financial Leverage	[13] [19]
	V2	size of the company	[8] [2] [3] [32]
	V3	Quality of internal information	[14] [13] [5]
	V4	Ownership structure	[27] [25]
	V5	Corporate governance	[26] [10] [40]
	V6	Financial limitations	[7] [33]
External factors	V7	Customer focus	[41] [11] [17]
	V8	Product market competition	[5] [30] [35]
	V9	Corporate social responsibility	[1] [28] [23]
	V10	social trust	[29] [22] [9]

2.1 Tax avoidance methods

Abnormal tax avoidance (Y1): The residual amount of model regression (1) in the form of rolling and for five years with companies in the same industry is an estimate of abnormal tax avoidance [16]:

$$PBTD_{i,t} = \beta_0 + \beta_1 TACC_{i,t} + \epsilon_{i,t}. \qquad \text{(Model 1)}$$

In Model 1, $PBTD_{i,t}$ represents the permanent tax difference and $TACC_{i,t}$ represents all accruals and is calculated using relationships:

$$PBTD_{i,t} = \left| \frac{TAXDIFF_{i,t}}{TA_{i,t}} \right|, \qquad (2.1)$$

$$TACC_{i,t} = \Delta CA_{i,t} - \Delta CL_{i,t} - \Delta CASH_{i,t} + \Delta STD_{i,t} - \Delta DEP_{i,t}. \qquad (2.2)$$

In relationships (2.1) and (2.2) $TAXDIFF_{i,t}$ diagnostic tax minus instrumental, $TA_{i,t}$ total assets,

$CA_{i,t}$ change in current assets,

$CL_{i,t}$ change in current liabilities, $CASHi, t$ change In cash,

$STD_{i,t}$ is the change in the current share of long-term debt and

$DEP_{i,t}$ is the depreciation expense of Company i in year t.

2.2 Factors Affecting Tax Avoidance

Auditor specialization in the industry: According to Palm Rose's model, an expert audit is considered that its market share (which is obtained by dividing the assets of auditors in an industry by the total assets of industry owners)

is the inverse of the number of companies Active in the industry to be more than half. In this study, number one is considered for specialized companies and zero for the rest. Industry Concentration: The Herfindahl-Hirschman index is used to measure the concentration of industry from the sum of the square root of the market share of all industries active in the market as described in:

$$HI = (\sum_{i=1}^{n} \frac{X_i}{X})^2. \quad \text{(Model 2)}$$

In Model 2, the number of industries in the market (n) is the size of market sales (X) and the market share of industries in the market (Xi). Rahbar Company Tax Policy: The company whose tax payment minus the diagnosis is higher in a given year than other companies in that industry-year is Rahbar Company [36].

Earnings Management: Used in the Jones (1990) model to evaluate earnings management. For this purpose, first the total accruals ($TACC_{i,t}$) are calculated according to Equation (2.2), then the regression of model 4 is applied in a five-year rolling and year-on-industry level:

$$\frac{1}{TA_{i,t-1}} TACC_{i,t} = \alpha_1 \left(\frac{1}{TA_{i,t-1}}\right) + \alpha_2 \left(\frac{1}{TA_{i,t-1}} \Delta REV_{i,t}\right) + \alpha_3 \left(\frac{1}{TA_{i,t-1}} PPE_{i,t}\right) + \epsilon_{i,t-1}. \quad \text{(Model 4)}$$

In Model 4 $AREV_{i,t}$ change in sales revenue, PPE_i, gross t of property, plant and equipment, $1 - TA_{i,t}$ total book value of assets and residual values of model regression (4) represent earnings management. Unconditional conservatism: The level of conservatism is estimated based on the Giuli and Hein model (2000) through model 5. The greater the value of the formula; The level of conservatism is higher:

$$CSCORE_{i,t} = \frac{AFCC_{i,t}}{TA_{i,t}} \times (-1). \quad \text{(Model 5)}$$

In Model 5 $CSCORE_{i,t}$ degree of conservatism, $AFCC_{i,t}$are operational accruals (the difference between operating profit and operating cash flow plus depreciation expense and $TA_{i,t}$ is the carrying amount of assets. Financial ratios: Financial ratios that have been used in [6] research are: net profit ratio, operating profit ratio, operating expenses to sales ratio, net profit per share, inventory turnover ratio, turnover period Inventory, net profit to fixed assets, net profit to equity, operating profit to fixed assets, operating profit to equity, working capital, net profit to working capital, operating profit to working capital, total turnover ratio Assets and fixed asset turnover ratio. Profit smoothing: According to [15], the smaller the ratio of model 6, the smoother the profit:

$$ES_{i,t} = \frac{SD_{i,t}(\frac{Earnings_i}{TA_i})}{SD_{i,t}(\frac{CFO_i}{TA_i})}. \quad \text{(Model 6)}$$

In Model 6, $ES_{i,t}$ smoothed profit, $SD_{i,t}$ $(Earnings_i/Ta_i)$ standard deviation of operating profit divided by net assets and $SD_{i,t}$ (CFO_i/TA_i) standard deviation of operating cash flow divided by net The assets of the company are i. Management Ability: To estimate the management ability following Demerjian et al. (2013), first using data envelopment analysis and model (7), the company's performance is estimated:

$$Max_\nu \theta = \frac{sales}{\nu_1 CoGs + \nu_2 PPE + \nu_3 OpeExp}. \quad \text{(Model 7)}$$

Model 7 defines sales sales, $CoGs$ cost of goods sold, PPE fixed assets, and $OpeExp$ operating costs. Capital cost: To evaluate the cost of common stock capital, the capital asset pricing model has been used:

$$E(R_i) = R_f + \beta(E(R_m) - R_f). \quad \text{(Model 8)}$$

In Model 8, $E(R_i)$ is the expected stock return, R_f is the risk-free return, is the stock beta, and $E(R_m)$ is the expected market return.

3 Methodology

Considering that the purpose of this study is to identify the factors affecting the tax avoidance process in Iranian private companies, it can be said that this research is fundamental in terms of purpose. The statistical population of this research in the two parts of interpretive modelling and network analysis process are experts familiar with the topic, which includes professors and experts in the field of taxation. There is a sample of 20 experts who were

interviewed in this study. All experts are tax managers and experts and several related university professors who have been selected by purposeful sampling. To check the validity of the measurement tool, content validity was used and a questionnaire was provided to professors and experts to confirm the accuracy of the questions. In the purposeful sampling of the present study, judgmental purposeful sampling has been used, which means that a limited number of people had the appropriate information to answer the research questions and finally 20 tax experts answered the questions. Questionnaires were collected through structured interviews. Experts in this study were people who had at least 10 years of experience in the field of taxation or teaching in the field of finance or taxation. Sampling continued until the theoretical saturation stage. Also, to determine the reliability of the measuring instrument, the value of the ICC coefficient in terms of compatibility and absolute agreement was approved.

In order to collect the desired information and measure the research indicators, a qualitative questionnaire for interpretive structural modelling that has a matrix structure was used. The indicators measured in the research, before being put in the form of a questionnaire, were judged by several experts on the subject of research in universities, and finally the agreed questionnaire as a tool for data collection and model design. The model of these questionnaires are pre-designed questionnaires for the ISM model and the research indicators are obtained from the research literature. After identifying the model, a quantitative questionnaire will be used to prioritize the criteria in the multi-criteria decision approach and the ANP method. In the ANP network analysis process technique, the pairwise comparison technique is used to prepare a questionnaire. Pair comparison is very simple and it is enough to compare the available elements in pairs. For this purpose, pairwise comparisons are usually made based on a 9-hour clock. If both elements are important, the number 1 is selected.

4 Analysis of research data and findings

4.1 Findings of interpretive structural modeling

Interpretive structural modeling is a qualitative tool based on structured interviews that shows the interaction between different variables and the relationships between variables as a hierarchical relationship [39]. This method is used to identify and show the relationships between different factors that can have complex relationships [4].

Initially, the variables that can affect the system are identified, these variables can include people, goals and tasks. At this stage, a self-interactive matrix (SSIM) is created. In this matrix, symbols are used that indicate availability.

V: If element i affects element j

A: If element j affects element i

X: Interaction of elements i and j

O: In the absence of a connection between elements i and j

Table 2: Self-interactive matrix (SSIM)

Factors	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
V1		A	A	A	X	O	X	O	V	
V2			O	A	O	A	O	O	O	O
V3				O	O	O	V	V	A	V
V4					O	O	O	V	A	V
V5						V	V	V	A	V
V6							V	V	O	O
V7								A	A	A
V8									A	O
V9										O
V10										

In order to achieve the initial access matrix, the symbols mentioned in Table (2) must be converted to zero and one symbol. Thus, the initial access matrix is obtained according to Table (3) and the following rules:

- If the input (i, j) in the structural self-interaction matrix is symbol V, in the initial access matrix (i, j) the number will be one and the input (j, i) will be zero.

- If the input (i, j) in the structural self-interaction matrix is symbol A, in the initial access matrix (i, j) the number will be zero and the input (j, i) will be number one.

- If the input (i, j) in the structural self-interaction matrix is the symbol X, in the initial access matrix (i, j) will be number one and the input (j, i) will be number one.

- If the input (i, j) in the structural self-interaction matrix is the symbol O, in the initial access matrix (i, j) the number will be zero and the input (j, i) will be zero.

Table 3: Initial access matrix

Factors	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
V1	0	0	0	0	0	1	0	1	0	1
V2	1	0	0	0	0	0	0	0	0	0
V3	1	0	0	0	0	0	1	1	0	1
V4	1	1	0	0	0	0	0	1	0	1
V5	1	0	0	0	0	1	1	1	0	1
V6	1	1	0	0	0	0	1	1	0	0
V7	0	0	0	0	0	0	0	0	0	0
V8	1	0	0	0	0	0	1	0	0	0
V9	0	0	1	1	1	0	1	1	0	0
V10	0	0	0	0	0	0	1	0	0	0

After the primary access matrix was obtained, the secondary relationships of the indicators were controlled. The secondary relationship is such that if the index i leads to the index j and also the index j leads to the index k, then the index i will also lead to the index k.

If this was not the case in the initial access matrix, the modified matrix and the missing relationships should be replaced; this is called initialization matrix matching. In this step, all secondary relationships between variables were investigated and the final access matrix was obtained according to Table 4.

The cells marked with *1 indicate that they are zero in the initial access matrix and are number one after compatibility (using MATLAB programming). In this matrix, the power of influence and the degree of dependence of each variable are also shown.

The influence of a variable is obtained from the sum of the number of variables affected by it and the variable itself, and the degree of dependence of a variable is obtained from the sum of the variables that are affected and the variable itself. MATLAB software was used to calculate the final access matrix. Finally, the amount of power or repetition 4 was calculated. The final formula for calculating this power was obtained from the following equation in which R_j is the initial availability matrix and R_f is the final availability matrix. Test power is indicated by K.

$$R_f = R_j^k = R_{j^{k+1}}, K > 1. \tag{4.1}$$

Table 4: Initial access matrix

Factors	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	Infiltrate
V1	*1	*1	0	0	0	1	*1	1	0	1	6
V2	1	*1	0	0	0	*1	*1	*1	0	*1	6
V3	1	*1	*1	0	0	*1	1	1	0	1	7
V4	1	1	0	*1	0	*1	*1	1	0	1	7
V5	1	*1	0	0	*1	1	1	1	0	1	7
V6	1	1	0	0	0	*1	1	1	0	*1	6
V7	0	0	0	0	0	0	*1	0	0	0	1
V8	1	*1	0	0	0	*1	1	*1	0	*1	6
V9	*1	*1	1	1	1	*1	1	1	*1	*1	10
V10	0	0	0	0	0	0	1	0	0	*1	2
Dependecy	8	8	2	2	2	8	10	8	1	9	

In the next step, using the access matrix, after determining the input and output sets, the sharing of these sets is obtained for each of the factors. The output set of a factor includes the factor itself and the factors that affect it,

which can be identified by the "1s" in the corresponding row. The input set of a factor includes the factor itself and the factors that affect it, which can be identified by the "1s" in the corresponding column. After determining the input and output sets, their share is determined for each of the factors.

Factors whose output and common set are quite similar are at the highest level of the interpretive structural model hierarchy. In order to find the components of the next level of the system, its highest level components are removed in the mathematical calculations of the relevant table, and operations related to determining the next level components are performed, such as the method of determining the highest level components. This operation is repeated until the components of all system levels are identified.

Table 5: Leveling of factors (first iteration step)

Row	Factors	Output set	Input set	Joint collection	Level
1	V1	1-2-6-7-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
2	V2	1-2-6-7-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
3	V3	1-2-3-6-7-8-10	3-9	3	
4	V4	1-2-4-6-7-8-10	4-9	4	
5	V5	1-2-5-6-7-8-10	5-9	5	
6	V6	1-2-6-7-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
7	V7	7	1-2-3-4-5-6-7-8-9-10	7	1
8	V8	1-2-6-7-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
9	V9	1-2-3-4-5-6-7-8-9-10	9	9	
10	V10	7-10	1-2-3-4-5-6-8-9-10	10	

Table 6: Leveling of factors (second iteration step)

Row	Factors	Output set	Input set	Joint collection	Level
1	V1	1-2-6-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
2	V2	1-2-6-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
3	V3	1-2-3-6-8-10	3-9	3	
4	V4	1-2-4-6-8-10	4-9	4	
5	V5	1-2-5-6-8-10	5-9	5	
6	V6	1-2-6-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
7	V8	1-2-6-8-10	1-2-3-4-5-6-8-9	1-2-6-8	
8	V9	1-2-3-4-5-6-8-9-10	9	9	
9	V10	10	1-2-3-4-5-6-8-9-10	10	2

Table 7: Leveling of factors (third iteration step)

Row	Factors	Output set	Input set	Joint collection	Level
1	V1	1-2-6-8	1-2-3-4-5-6-8-9	1-2-6-8	3
2	V2	1-2-6-8	1-2-3-4-5-6-8-9	1-2-6-8	3
3	V3	1-2-3-6-8	3-9	3	
4	V4	1-2-4-6-8	4-9	4	
5	V5	1-2-5-6-8	5-9	5	
6	V6	1-2-6-8	1-2-3-4-5-6-8-9	1-2-6-8	3
8	V8	1-2-6-8	1-2-3-4-5-6-8-9	1-2-6-8	3
9	V9	1-2-3-4-5-6-8-9	9	9	

Table 8: Leveling of factors (fourth iteration step)

Row	Factors	Output set	Input set	Joint collection	Level
3	V3	3	3-9	3	4
4	V4	4	4-9	4	4
5	V5	5	5-9	5	4
9	V9	3-4-5-9	9	9	

Table 9: Leveling of factors (fifth iteration step)

Row	Factors	Output set	Input set	Joint collection	Level
9	V9	39	9	9	5

After determining the levels of each factor and also considering the final availability matrix, the interpretive structure model is drawn. The final model obtained consists of 5 levels. Factors at the top of the hierarchy are less influential and more influential. The customer focus factor in relation to the research topic and explaining the pattern of influence of fundamental factors on the tax avoidance process in private companies is more effective and in contrast to corporate social responsibility, the factor has the most impact and the least impact. Other variables have both an effect and an effect on the proposed model (Figure 1).

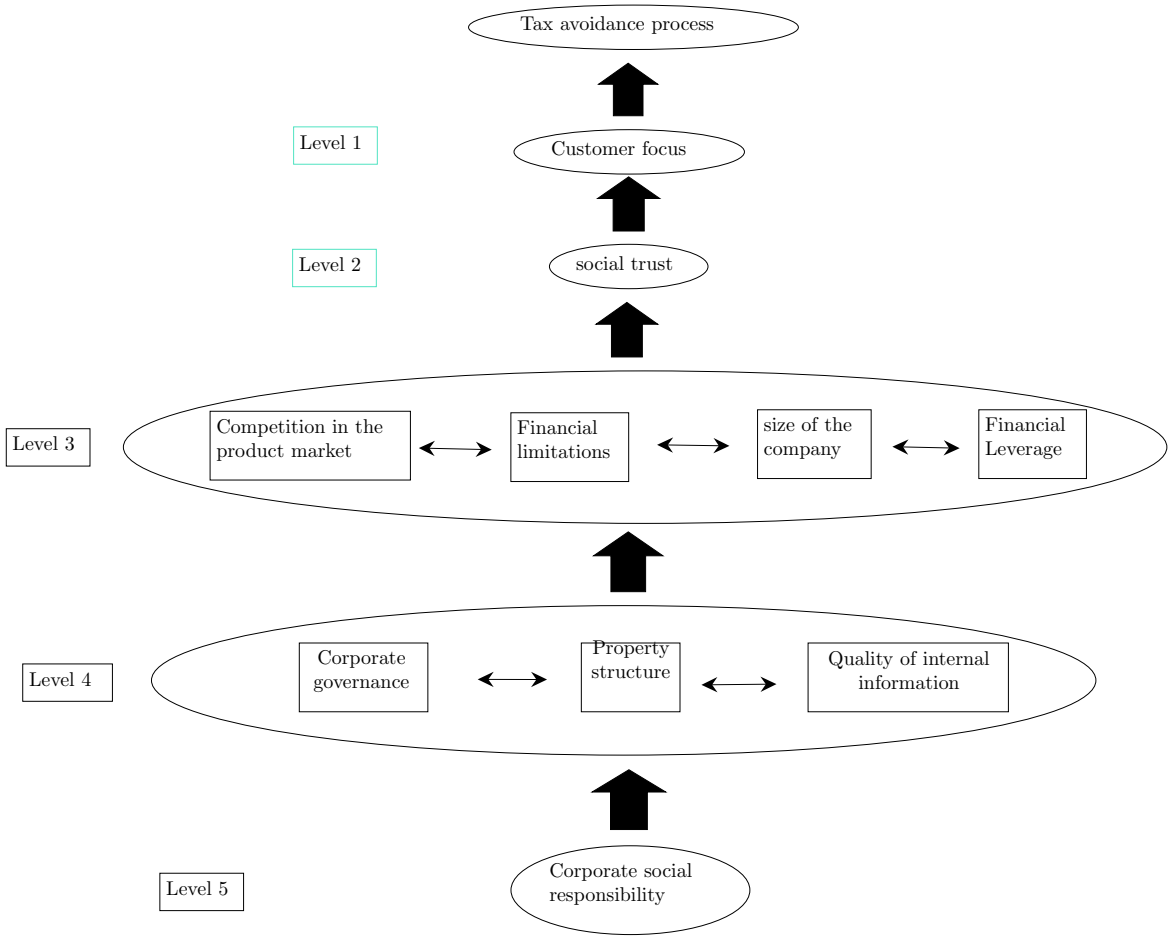


Figure 1: Interpretive structural modeling of research

After drawing the structural model, the permeability-dependency matrix diagram is created and the variables are classified into the following four categories.

Autonomous variables: This category includes variables that have weak and moderate guidance and dependence.

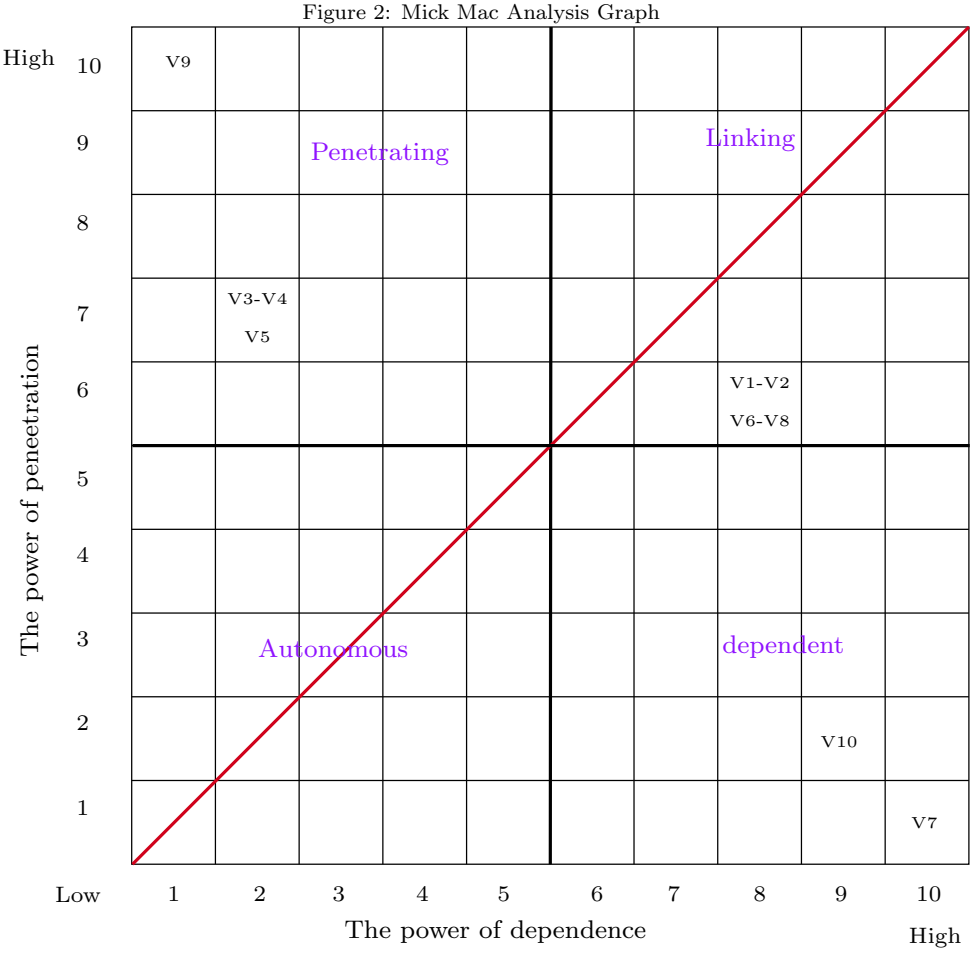
These variables are relatively unconnected to the system and have little or no communication with the system.

Dependent variables: These types of variables have low conductivity but relatively high dependence. These variables are usually outcome or goal variables.

Linked variables: These are the third category of variables that have high conductivity and high dependence. These variables are non-static because any change in them can affect the system, and finally, system feedback can change these variables again.

Influence variables: Variables that have high conductivity but low dependence are part of the influence variables or in other words, stimuli [31].

Figure 2: Mick Mac Analysis Graph



The results of Mick Mac's analysis (Figure 2) showed that 10 factors related to explaining the pattern of influence of fundamental factors on the tax avoidance process in private companies in terms of permeability and dependence are divided into three categories of influential, dependent and link factors. Factors of customer focus and social trusts such as low influence and power are highly dependent, so they are dependent factors. Factors of corporate social responsibility, ownership structure, corporate governance and quality of internal information such as high influence and low dependency are the main influencing factors or stimuli. Also, the factors of financial leverage, company size, product market competition and financial constraints that are adjacent to the strategic red line, in addition to being strategic research variables, are also classified as related variables.

4.2 Network analysis process

The network analysis process is one of the multi-criteria decision-making techniques. This model is designed based on the hierarchical analysis process and replaces the hierarchy network or nonlinear system or feedback system [37]. The first step in the network analysis process is to establish the model and structure of the problem. In fact, the subject matter should become a logical system such as a network. In the initial design according to the network analysis process

method, even internal dependencies are examined and the network structure is presented taking into account all the relationships. After the pairwise comparison matrices were collected according to the ANP questionnaire and the opinion of experts for all clusters, characteristic vectors and hypermatrices are presented. To provide general rankings, it is necessary to make connections between clusters. The structure of this communication (internal, external, and reciprocal) formed the original supermatrix. The unweighted supermatrix was created by adding the internal priority vector (significance coefficients) to the elements and clusters of the original supermatrix. The weighted supermatrix is then calculated by multiplying the values of the unweighted supermatrix in the cluster matrix. The next step in the network analysis process is to create a finite supermatrix. In fact, in this step, the weighted supermatrix must be infinitely multiplied so that each row converges to a number. And that number is the weight of that criterion or sub-criterion. Finally, in the last step, the criteria and sub-criteria for preparing the general ranking and prioritization in the ANP network model are shown in a normalized way. According to Table 10, the V10 criterion, which is "social trust", is the most important and therefore the most important sub-criterion in presenting the tax avoidance model. The V6 benchmark, which is "financial constraints", is then the second priority. Factors of competition in the product market and corporate social responsibility are ranked third and fourth. Other priorities are described in the table below. Also, the incompatibility index is less than 0.1, which is considered a desirable value.

Table 10: - Prioritization of factors affecting tax avoidance

Benchmark name	**Criterion symbol**	**Normalized weight**	**Amount**	**Priority**
social trust	V10	0.260	0.156	1
Financial limitations	V6	0.222	0.133	2
Product market competition	V8	0.200	0.120	3
Tax spirit and ethics	V9	0.166	0.099	4
social media	V7	0.149	0.089	5
Ownership structure	V4	0.210	0.084	6
Quality of internal information	V3	0.209	0.083	7
Financial Leverage	V1	0.209	0.083	8
Corporate governance	V5	0.203	0.081	9
Justice and trust in the tax system	V2	0.167	0.067	10

5 Discussion and Conclusion

Since taxes are one of the main sources of government revenue, trying to persuade people to pay them and prevent tax evasion is one of the government's priorities. Many developed countries of the world use tax revenues to improve and urbanize and create security within the country. Iran is one of the countries with low tax revenues and most of the country's expenditures are financed by oil revenues. Due to the unprecedented decline in oil prices and the budget deficit, the importance of tax revenues is doubling. According to the results of the present study, the highest degree of importance goes back to the criteria of social trust, financial constraints, product market competition, tax ethics and ethics and social media, respectively. Therefore, social trust is an important and cultural element. The existing literature also shows that social trust has a wide range of social and economic consequences such as facilitating economic growth and social productivity, international trade and investment, financial development, corporate financing, and business and business integration. Things are affected. According to the results, we predict that in societies with higher levels of social trust, managers will refrain from actions that may undermine the trust placed in them by society. As a result, they are expected to pay a fair share of their corporate tax. Therefore, we expect social trust to be negatively associated with tax avoidance.

Also, when companies are financially constrained, they are more motivated to avoid paying taxes to raise funds than other companies that have better access to the capital market because access to external financial resources is costly. By adopting bold tax behaviour, financially constrained companies can save more cash, and these companies tend to use the saved cash to solve the investment problem. According to the results of the study, it is suggested that the tax administration audits companies that have significant financial constraints more carefully because they are more likely to avoid tax avoidance than other companies and have a bold tax strategy. They follow. It, therefore, classifies them as high-risk tax companies. The results also show that companies that have more power in the product market, or in other words, are in a monopoly position, will engage in more tax avoidance activities. It is suggested that legislatures pay more attention to regulating regulatory matters in less competitive industries, and enact stricter rules to prevent tax evasion or tax evasion activities. Illegal taxes on these companies are considered.

Low tax morale is closely related to tax avoidance. In fact, in a society, the more people trust the government and the tax, legal and judicial system, the higher their tax ethics and, consequently, the more likely they are to pay taxes. Also, the more pessimistic people are about tax evasion, the higher their tax ethics and, consequently, the less likely they are to avoid taxes. And social norms in a society can shape the tax ethics of that society and affect the willingness of individuals to pay taxes and avoid tax evasion. The higher the tax ethics of taxpayers, the lower the tax avoidance and the higher the tax payment. In addition, social media can play a similar role in reducing or increasing tax evasion by taxpayers. Social media can encourage payment or increase tax avoidance through negative publicity.

Paying attention to the factors affecting tax avoidance both in society and in the environment of organizations can play a vital role in reducing tax avoidance. A society with lower tax avoidance and organisations that trust the government and do not evade paying taxes can be very productive and prosperous. This two-way positive behaviour will have positive consequences for both individuals and businesses operating in the environment.

It is suggested that this research be conducted in similar state-owned companies and its results are compared with the results of this research. It is suggested that the research be conducted in a wider time in order to increase the sample size so that the results can be accepted with more confidence. It is recommended to do this research with methods such as hierarchical process or learning machines and other econometric methods such as multi-criteria decision making.

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