# The Role of Corporate Governance on Tax Justice (Horizontal Equity and Vertical Equity)

**Abbas Allahyari**
PhD candidate, Science and Research Branch, Islamic Azad University, Tehran, Iran
allahyari.abbas@gmail.com

**Zahra Pourzamani**
Associate Professor, Central Tehran Branch, Islamic Azad University, Tehran, Iran
(Corresponding Author)
zahra.poorzamani@yahoo.com

**Taghi Torabi**
Associate Professor, Science and Research Branch, Islamic Azad University, Tehran, Iran
ttttorabi@gmail.com



## ABSTRACT

The purpose of this study is to examine the role of corporate governance in the concept of tax justice. The current research contributes to the field of applied research and is regarded as a descriptive survey research, testing four main hypotheses and eight special hypotheses. The required data for this research were obtained through a questionnaire distributed among financial managers of 133 companies listed in Tehran Stock Exchange.

The results of the study were obtained using structural equation modeling and SmartPls software. It was determined that all corporate governance variables have a positive and significant relationship with tax justice; however, no significant relationship was found between tax justice and shareholders' equity measure. It is suggested that companies implement corporate governance principles firmly. In addition, companies can help the government create tax justice by respecting the rights of all stakeholders through corporate governance.

## Keywords:

Tax Justice, Corporate Governance, Corporate Governance Criteria.

## 1. Introduction

Corporate governance mechanism is one of the elements expected to be related to tax management. The relationship between this mechanism and corporate performance has been examined and approved in numerous investigations. Various studies have shown that the board size, the board composition, the duality role of CEO, and the size of the audit firm are among the elements of corporate governance mechanisms that affect tax management (Pourheidari, 2011: 3).

In spite of the government's reliance on taxpayers' declarations, the declared tax in all countries is often not identical to the specified tax; this is referred to as tax breach. One of the most important factors in this difference is the lack of efficiency in corporate governance and the lack of transparency of the information provided by firms, which results in the infringement of the rights of some of the stakeholders. In other words, managers may take measures that solely correspond to the interest of the shareholders of the company and ignore the interests of other stakeholders. One of the main factors in improving economic efficiency is corporate governance mechanisms which include a set of relationships between the company, the board, the shareholders, and other stakeholders. The necessity of corporate governance arises from the conflict of interests of the participants (stakeholders) in the corporate's composition. The conflict of interests, referred to as the agency problem, is by itself the result of two main reasons: first, each participant has different objectives and preferences; and, second, no one has complete information about the actions, knowledge, and preferences of the others. Assuming the absence of effective performance mechanisms of corporate governance, this distinction will obviously create a situation for the managers to work towards their own interests rather than the interests of shareholders (Berle & Means, 1968). Corporate governance mechanisms affect the information that companies disclose to the shareholders and other stakeholders and reduce the likelihood of a complete and desirable disclosure of information (Didar et al., 2014: 410).

Handling government tasks and functions is costly and therefore needs some sources to earn money. Government revenue is obtained from various sources, the most common and desirable of which is taxation. Therefore, the tax system is the relationship between government and people to finance the activities of the government. Laws are defined by a powerful affirmation of the collective relations of human beings and tax laws determine how much each citizen's share of the total tax burden is. Theorists attempt to establish the principle of tax justice in order to prescribe the distribution of tax burden among the people (Banizamani, 2011: 8).

Thus, the effect of corporate governance variables on tax justice is examined in this research. Since corporate governance tries to meet the interests of all stakeholders, and on the other hand, as the governments that formulate and implement tax policies are one of the major stakeholders of the corporates, the investigation of this relationship can lead to vital results. It is also aimed to investigate to what extent better formulation and implementation of the corporate governance mechanism and more transparent provision of information can help governments in determining more just tax policies.

## 2. Literature Review

The word "governance" is associated with directing. Several definitions have been proposed for corporate governance. The most important factor distinguishing these definitions can be the inclusion scope of corporate governance. From one viewpoint, this system can be regarded as the relationship between managers and shareholders, the theoretical foundation of which is the agency theory in its limited form. On the other side of the spectrum, however, corporate governance involves the company's relationship with all its stakeholders, whose theoretical foundation can be the stakeholder theory. The other definitions and attitudes to corporate governance can be placed on a spectrum with the minimal and maximal points defined earlier. An example of these definitions is given below.

According to Cadbury's (1992) report, "corporate governance is the system by which companies are directed and controlled". The main focus is on fulfilling the duty of senior organizational executives in adhering them to the principles of transparency, integrity, and accountability. Also, Parkinson (1944) believes that corporate governance is the process of monitoring and controlling the performance of corporate's executives in such a way as to ensure the interests of shareholders (Hassas Yeganeh, 2008). According to the definition proposed by Organization for Economic Co-operation and Development (2004), corporate governance includes a set of relationships between executives, board members, shareholders, and other stakeholders of the corporate. It also includes a structure for defining corporate's objective, the ways to achieve them, as well as how to evaluate and monitor the performance (Mehrani & Safarzadeh, 2011).

Based on the conducted investigations (Hassas Yeganeh & Salimi, 2011), corporate governance includes four dimensions: property effects, shareholders' rights, transparency, and effectiveness of the board of directors. Each of these dimensions has several components and each component consists of several indices. The dimensions and how they are measured are fully presented under the description of research variables.

On the other hand, justice has always been one of the first and foremost concerns of mankind. This issue has attracted scholars in different ways and various levels. Justice is a social concept whose fulfillment has been one of the aspirations of mankind throughout history. Economic justice is one of the implications of social justice, which can even be viewed as having all aspects of social justice, since desires, resources, conditions, and competitions among individuals can be explained by economic expression. Being highly noticed, economic justice is one of the most important issues in the field of economics. One of the pillars of economic justice is distributive justice, meaning that for one "to have more" requires another one "to have less". The most important application of distributive justice is in the allocation of scarce goods, services, and resources. To this end, governments use tax to achieve it. The taxation and collection of taxes follow the objectives below:

1) Income objectives (generating income and providing government funding)
2) Distributive objectives (collecting tax from income owners and distributing it to support the poor and low-income individuals)
3) Stabilizing objectives (stabilizing the inflation and stagnation rate)
4) Allocative objectives (allocating taxes to direct people's consumption towards some special products) (www.eata.ir)

Adam Smith, the prominent economist of the classical school, introduced four main principles as principles of an optimal tax system (kabinga, 2016: 5):

1) Fairness
2) Certainty
3) Convenience
4) Efficiency

This section discusses the studies that somewhat deal with the relationship between corporate governance and tax.

Kiesewetter and Manthey (2017) conducted a study on the relationship between corporate governance and tax avoidance in German firms. In this paper, the relationship between corporate governance and tax avoidance was analyzed. The analyses showed that the strong corporate governance features of the firm lead to a reduction in effective tax rates for the firms listed in German stock exchange. The paper contributed to the available research by establishing a causal relationship between corporate governance and taxation.

Armstrong et al. (2015) conducted a research entitled "Corporate Governance, Motivation, and Avoidance". Using qualitative regression, this study demonstrated that a positive correlation exists between the board's independence and financial complexity for a low tax avoidance level, while a negative relationship exists between the same variables for high tax avoidance level. Such results indicate that with more intense level of tax avoidance, these corporate governance features will have a stronger relationship.

In a study entitled "The Effect of Corporate Governance on Tax Aggressiveness Policy of Companies Listed in Tehran Stock Exchange", Sepasi and Fat'hi (2015) examined the relationship between some of the features of corporate governance, including the ratio of the board of directors, the ratio of changes to the board of directors, and the dual role of the chairman of the board on tax aggressiveness policies. The results of this research indicated that the ratio of the board of directors, the ratio of changes to the board of directors, and the dual role of the chairman of the board do not have a significant effect on tax aggressiveness policies. However, the tax status and the ratio of return on assets are either positively or negatively related to the tax aggressive policy.

Abdoli et al.'s (2013) research entitled "Investigating the Relationship between Book-Tax Difference and Corporate Transparency" assessed the interaction between corporate transparency and tax policies of corporates and addressed different domains of the relationship between these two important issues in accounting. Using transparency criteria of Standard & Poor's Financial Services LLC (2002), this investigation also tried to evaluate the degree of corporate transparency in a sample of firms listed in Tehran Stock Exchange and examine its correlation with the tax policy of sample firms. The results of the study indicated that there is a negative correlation between corporate transparency regarding financial performance, information disclosure, and the criterion of the firms' aggressive tax policy. According to the conducted studies, however, it was determined that property effect and ownership structure of corporate governance have no significant relationship with aggressive tax policies. This is also true for the relationship between the composition and structure of the board of directors, which are subcategorized under transparency of corporate governance.

Pourheidari et al. (2013) carried out a study entitled "Investigating the Impact of Tax Avoidance on the Transparency of Financial Reporting of Firms Listed in Tehran Stock Exchange". In this study, the indices used to avoid tax payment and transparency of financial reporting were the effective tax rate and accrual quality, respectively. The results of the study showed that tax planning activity reduces the financial reporting transparency of the company. In other words, avoiding paying taxes requires concealing facts and complex transactions that negatively affect the company's information environment and reduces the transparency of financial reporting.

Khoddamipour and Amininia (2013) investigated the relationship between tax avoidance and debt costs, as well as the impact of institutional ownership on this relationship. The results indicated that the level of institutional ownership has no significant effect on the relationship between tax avoidance and debt costs.

In their study entitled "The Impact of the Board on Avoidance of Taxation", Lanis and Richardson (2011) concluded that the number of non-executive directors has a significant negative relationship with aggressive tax trend. In other words, the higher the number of non-executive members of the board, the less likely the company is to manage the tax.

Minnick and Noga (2010) examined the effects of the features of corporate governance principles on tax administration. They showed that bonus plans act as an incentive for managers to invest in long-term plans and tax breaks. In addition, the findings revealed that tax management provides benefits to shareholders and that tax management is positively correlated with the increase in shareholders' equity.

Satori (2008) indicated that the reactions between corporate governance and taxation are reciprocal; on the one hand, corporate governance rules have structural effects on compliance with tax obligations of companies and, on the other hand, tax plans (from the government's viewpoint) and linking them to tax strategies (from the company's viewpoint) can have a profound effect on the creation of a dynamic corporate governance.

In their study entitled "Tax Avoidance and Strong Incentives", Desai and Dharmapala (2007) concluded that high tax rates worsen the systems of corporate governance principles and, in contrast, low tax rates improve them, which will ultimately lead to higher tax revenues.

Friese et al. (2006) came to the conclusion that the tax code could affect corporate governance principles by offering concessions or imposing penalties. Additionally, the structure of corporate governance principles is influenced by how the company manages the taxes. Also, the tax system can influence corporate governance principles during dividend payments.

In his study, Desai (2006) discussed that high tax rates lead to the worsening of corporate governance systems, and in contrast, low tax rates improve corporate governance systems, leading to higher tax revenues (Laridasht Bayaz et al., 2016). This study was a contribution to promote tax-related literature.

## 3. Methodology

### 3.1. Research hypotheses

The research hypotheses were proposed based on theoretical foundations and corporate governance variables as follows:

According to Hassas Yeganeh and Salimi (2011), corporate governance has four dimensions, property effect, shareholders' rights, transparency, and effectiveness. On the other hand, justice is a value concept; however, different value judgments and criteria are interpreted differently. The experts believe that the concept of justice is the result of thinking and social satisfaction, and that there are two kinds of interpretations of this concept. These interpretations consist of horizontal equity and vertical equity (American Association of Accountants, 2007). The research hypotheses are as follows:

**H1. The property effect of corporate governance has a significant effect on tax justice.**

Special Hypotheses:

1.1. The property effect of corporate governance has a significant effect on horizontal (tax) justice.

1.2. The property effect of corporate governance has a significant effect on vertical (tax) justice.

**H2. The shareholders' rights of corporate governance have a significant effect on tax justice.**

Special Hypotheses:

2.1. The shareholders' rights of corporate governance have a significant effect on horizontal (tax) justice.

2.2 The shareholders' rights of corporate governance have a significant effect on vertical (tax) justice.

**H3. The transparency of corporate governance has a significant effect on tax justice.**

Special Hypotheses:

3.1. The transparency of corporate governance has a significant effect on horizontal (tax) justice.

3.2. The transparency of corporate governance has a significant effect on vertical (tax) justice.

**H4. The effectiveness of corporate governance has a significant effect on tax justice.**

Special Hypotheses:

4.1 The effectiveness of corporate governance has a significant effect on horizontal (tax) justice.

4.2 The effectiveness of corporate governance has a significant effect on vertical (tax) justice.

In this research, a questionnaire containing personal general information, corporate's general information and specialized information was used to collect data. This questionnaire consisted of two parts. The first part included general questions consisting of 7 items. The second part consisted of 26 specialized multi-choice items related to the subject of the research, asking respondents to answer them based on their own professional and specialized knowledge.

The statistical population of the research included financial managers of firms listed in Tehran Stock Exchange. The subjects were selected through simple random sampling, whose number was determined by the Cochran formula to be 240. Accordingly, 240 questionnaires were distributed among the financial managers of the sampled companies; despite repeated follow-ups by the researcher, only 133 subjects replied to the questionnaires.

In order to qualitatively analyze the general information obtained from the first part of the questionnaire, frequency distribution, mean, median, and mode were utilized. In the second level, using inferential statistics methods (structural equation modeling) through the PLS software, the data were analyzed and the research hypotheses were tested.

In the theoretical part, in order to collect the required data, the library method was applied. In this method, by referring to books, magazines, and Internet databases, the theoretical data required for this research was also collected.

## 3.2. Research variables

- **Corporate governance**

Corporate governance is a set of intra-corporate and extra-corporate control mechanisms that establishes an appropriate balance between the equity rights, on the one hand, and the needs and authorities of the board, on the other hand; ultimately, these mechanisms provide reasonable assurance to shareholders, fund providers, and other stakeholders regarding the maintenance of their own interests (Hemmatfar et al., 2011).

- **Property effect**

The property effect in this research includes the following components and indicators: ownership concentration, ownership transparency, and institutional shareholder ownership (Hassas Yeganeh and Salimi, 2011: 10).

- **Shareholders' rights**

Shareholders' rights include three components and several indicators, including the voting procedures and community meetings, dividend rights, equal behavior with all shareholders; the last component involves the indicators of reporting corporate financial statements to all shareholders (Jafari, 2014).

- **Transparency**

Transparency consists of four components, each having several indicators. In the present study, the following components and indicators are taken into consideration:

The observance of the disclosure regulations of the firms listed in stock exchange, the audit information, and the disclosure of remuneration and shares of the members of the board (Hassan Yeganeh & Salimi, 2011: 10).

- **The board's effectiveness**

The success of the board of directors is dependent upon monitoring the ethics, independence, composition, structure, resources, perseverance, experience, and skill sets of all board members and their working relationships with other contributors in the corporate governance structure (that is the management, independent auditors, and investors) (Rezaei, 2007).

- **Vertical tax justice**

Vertical equity, which is interpreted as the principle of ability to pay, means taxes must treat individuals with different economic status differently. In other words, to realize vertical equity, taxes are required to be assigned unequally for individuals with different incomes (American Association of Accountants, 2007).

- **Horizontal tax justice**

Horizontal equity means placing the tax burden equally in the identical condition and placing the tax burden unequally in non-identical conditions. In order to achieve horizontal equity, equal conditions must be created for individuals to be taxed equally. Some experts state that in horizontal equity, equal treatment of individuals occurs in the equal conditions, even if they have earned their income in different ways (American Association of Accountants, 2007).

## 4. Results

Descriptive statistics of the observed research variables are as follows:

**Table 1. Descriptive statistics of the observed research variables**

| | Item | Mean | Min. | Max. | SD |
|---|---|---|---|---|---|
| Property effect | Q1 | 4 | 3 | 5 | 0.577 |
| | Q2 | 4.08 | 3 | 5 | 0.640 |
| Shareholders' rights | Q3 | 4.11 | 2 | 5 | 0.623 |
| | Q4 | 4.15 | 3 | 5 | 0.543 |
| Transparency | Q5 | 4.56 | 3 | 5 | 0.512 |
| | Q6 | 4.41 | 3 | 5 | 0.565 |
| | Q7 | 4.54 | 3 | 5 | 0.543 |
| Effectiveness | Q8 | 3.58 | 1 | 5 | 0.750 |
| | Q9 | 3.56 | 1 | 5 | 0.731 |
| | Q10 | 3.70 | 1 | 5 | 0.660 |
| Vertical equity | Q11 | 3.69 | 1 | 5 | 0.789 |
| | Q12 | 3.55 | 1 | 5 | 0.891 |
| | Q13 | 3.63 | 1 | 5 | 0.839 |
| | Q14 | 3.60 | 1 | 5 | 0.920 |
| | Q15 | 3.66 | 1 | 5 | 0.886 |
| | Q16 | 3.38 | 1 | 5 | 0.883 |
| | Q17 | 3.59 | 1 | 5 | 0.816 |
| | Q18 | 3.43 | 1 | 5 | 0.932 |
| Horizontal equity | Q19 | 3.60 | 1 | 5 | 0.776 |
| | Q20 | 3.74 | 1 | 5 | 0.734 |
| | Q21 | 3.43 | 1 | 5 | 0.801 |
| | Q22 | 4.12 | 1 | 5 | 0.632 |
| | Q23 | 3.94 | 2 | 5 | 0.699 |
| | Q24 | 4.03 | 2 | 5 | 0.644 |
| | Q25 | 4.05 | 2 | 5 | 0.677 |
| | Q26 | 4.06 | 2 | 5 | 0.665 |

## 4.1. Fitting measurement models

### 4.1.1. Reliability

Reliability is assessed through three ways: measurement of factor loads, Cronbach's alpha, and composite reliability.

#### 4.1.1.1. Measurement of factor loads

The criterion value for the coefficients of factor loads is 0.4, confirming that the variance between the construct and its indices is greater than the variance of the measurement error of that construct; this also demonstrates that the reliability of that measurement model is acceptable (Hulland, 1999). If a value smaller than 0.4 is obtained after calculating the factor loads between the construct and its indices, the indices must be modified or excluded from the research model. As the Items 23 and 24 had factor loads smaller than 0.4, they were excluded from the model so that the other criteria were not affected by them. After excluding the above-mentioned items and re-implementing the model, the factor load of the items were as follows.

#### 4.1.1.2. Cronbach's alpha coefficient and composite reliability

According to the data analysis algorithm in PLS, after calculating the factor loads of variables, it is time to calculate and report the Cronbach's alpha coefficients and composite reliability of the constructs. The coefficient value greater than 0.7 indicates that the model is reliable. The values for all constructs were greater than 0.7, indicating the model's proper reliability.

**Table 2. Factor load of each of the observed research variables**

| Construct | Item | Factor load |
|---|---|---|
| Property effect | Q1 | 0.937 |
| | Q2 | 0.939 |
| Shareholders' rights | Q3 | 0.907 |
| | Q4 | 0.929 |
| Transparency | Q5 | 0.880 |
| | Q6 | 0.905 |
| | Q7 | 0.841 |
| Effectiveness | Q8 | 0.893 |
| | Q9 | 0.941 |
| | Q10 | 0.860 |
| Vertical equity | Q11 | 0.841 |
| | Q12 | 0.814 |
| | Q13 | 0.857 |
| | Q14 | 0.780 |
| | Q15 | 0.873 |
| | Q16 | 0.824 |
| | Q17 | 0.847 |
| | Q18 | 0.774 |
| Horizontal equity | Q19 | 0.816 |
| | Q20 | 0.769 |
| | Q21 | 0.727 |
| | Q22 | 0.450 |
| | Q25 | 0.716 |
| | Q26 | 0.636 |

**Table 3. Cronbach's alpha coefficients and composite reliability of the latent variables**

| Latent variable | Title in the model | Cronbach's alpha coefficient (Alpha >0.7) | Composite reliability coefficient ( Alpha >0.7) |
|---|---|---|---|
| Property effect | P effect | 0.862 | 0.936 |
| Shareholders' rights | Shareholder | 0.815 | 0.915 |
| Transparency | Transparency | 0.849 | 0.908 |
| Effectiveness | Effectiveness | 0.880 | 0.926 |
| Tax Justice | Tax Justice | 0.899 | 0.917 |
| Vertical equity | V Justice | 0.934 | 0.945 |
| Horizontal equity | H Justice | 0.779 | 0.845 |

### 4.1.2. Convergent validity

Convergent validity evaluates the correlation of each construct with its own variables (indices). The AVE benchmark calculated by PLS software is used for this purpose. The acceptable value for AVE is 0.5 and higher. In second-order models, the AVE coefficient must be initially calculated for the first-order latent variables (all variables except tax justice); then it is time for the second-order latent variable (tax justice), the value of which should not be extracted from the model output, but must be calculated manually. The AVE value of the second-order variable is equal to the average value of the second power (square) of the factor loads of its dimensions. Therefore, the AVE value for the second-order construct of tax justice was equal to 0.712.

#### 4.1.3. Divergent validity

Divergent validity is the third criterion for examining the fitness of measurement models. Fornell and Larcker (1981) suggest a matrix for evaluating divergent validity, which is similar to the matrix shown in the output of Smart PLS in Latent Variable Correlation section, except that the main diameter of this matrix contains the root AVE values of latent constructs. The values of the original diameter are represented by 1; thus, the matrix of Fornell and Larcker for examining the divergent validity of the research model is as follows. It should be noted that only the first-order latent variables are introduced in Fornell and Larcker's matrix.

According to the above table, the root AVE values of the latent variables in the present study, which can be seen in the fields located in the matrix's main diameter, are greater than the correlation between them, arranged in the fields located in the lower left part of the main diameter. Therefore, it can be stated that in the present study, the constructs (latent variables) in the model interact more with their own indices than with those of the other constructs. In other words, the divergent validity of the model is acceptable.

**Table 4. Average extracted variance (AVE) of latent variables**

| Latent variable | Title in the model | Average extracted variance (AVE >0.5) |
|---|---|---|
| Property effect | P effect | 0.879 |
| Shareholders' rights | Shareholder | 0.843 |
| Transparency | Transparency | 0.767 |
| Effectiveness | Effectiveness | 0.808 |
| Tax Justice | Tax Justice | 0.712 |
| Vertical equity | V Justice | 0.684 |
| Horizontal equity | H Justice | 0.500 |

**Table 5. Fornell and Larcker's matrix for divergent validity**

| Constructs | Effectiveness | H justice | P Effect | Share Holder | Transparency | V justice |
|---|---|---|---|---|---|---|
| Effectiveness | 0.899 | | | | | |
| H justice | 0.370 | 0.707 | | | | |
| P effect | 0.245 | 0.365 | 0.938 | | | |
| Shareholder | 0.219 | 0.399 | 0.535 | 0.918 | | |
| Transparency | 0.204 | 0.391 | 0.351 | 0.293 | 0.876 | |
| V justice | 0.213 | 0.460 | 0.364 | 0.250 | 0.321 | 0.827 |

#### 4.1.4. Multicollinearity test

To calculate the multicollinearity test of the observed variables, the inflation variance index (VIF) was used in which the values smaller than 5 are acceptable (Mohsenin & Esfidani, 2014: 149).

(Each of the components)

$$VIF = \frac{1}{1-R^2}$$

$R^2$ is the squared factor loading of each element and its corresponding construct

The VIF values for all the observed variables were less than 5, indicating that there is no collinearity between the observed variables of each latent variable.

### 4.2. Fitness of the structural model

According to the data analysis algorithm in the PLS method, after considering the fitness of measurement models, it is time to fit the structural model of the research. Contrary to the measurement models, structural model does not require any observed variable, and only examines latent variables along with the relationships between them.

**Z significance coefficients (t-values)**

According to the algorithm, several criteria were used to examine the fitness of the structural model of the research, the first and most basic criterion of which was the z significant coefficients or t-values. The fitness of structural model using t coefficients is such that if the sample size is greater than 120, then the values greater than 1.96 at the 95% confidence level are significant and, if they are greater than 2.66, they are significant at 1% level. As shown in Fig. 2, the values of coefficients corresponding to the path of latent variables, except for the path of shareholders' rights to tax justice, were greater than 1.96, indicating the significance of the paths and the appropriateness of the structural model.

The second criterion for examining the fitness of a structural model in this research is $R^2$ coefficients corresponding to the model's intrinsic (dependent) variables. $R^2$ is a criterion that indicates the effect of an extrinsic variable on an intrinsic variable, and three values of 0.19, 0.33, and 0.67 are considered as the criterion value for weak, moderate, and strong $R^2$ (Mohsenin & Esfidani, 2014: 150). It is worth mentioning that this coefficient is not calculated for extrinsic variables. According to Fig. 3, the calculated $R^2$ value for tax justice, horizontal equity, and vertical equity were 0.289, 0.545, and 0.880, respectively. Based on the criterion value, these values confirmed the appropriateness of the structural model fitness.

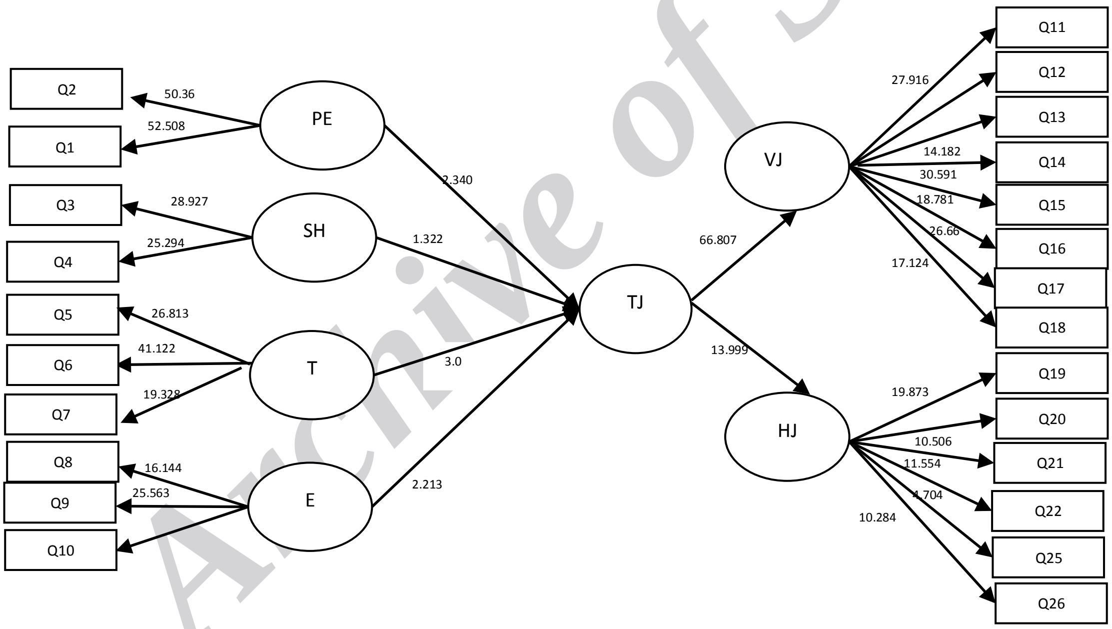


**Fig. 1. Z significant coefficients**

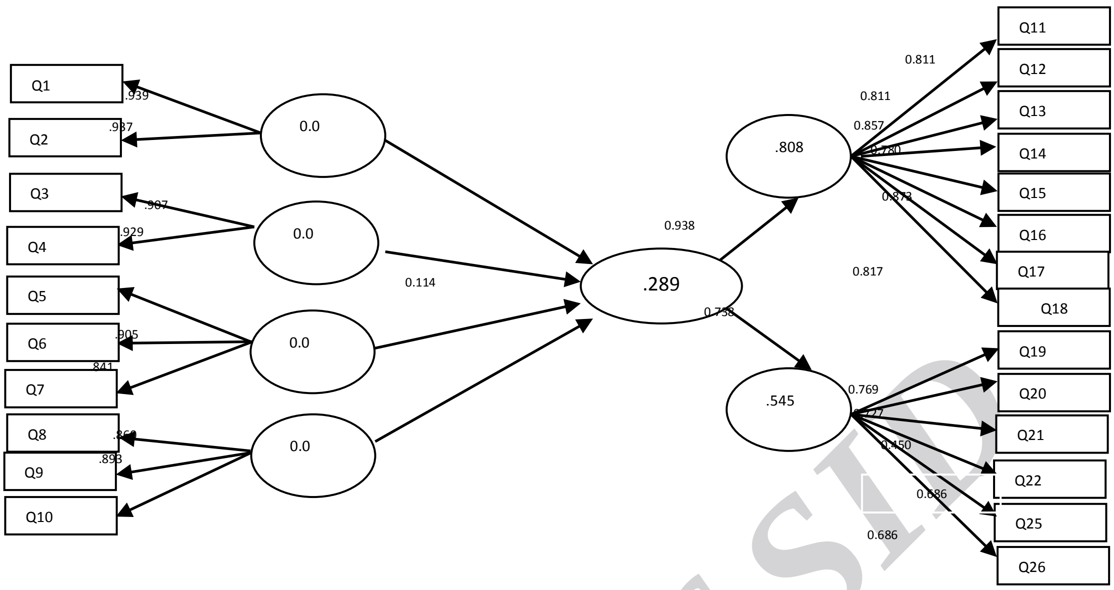


Fig. 2. $R^2$ values

## 4.3. Fitting the general model (GOF criterion)

The general model includes both the measurement and structural model; the fit test for a model will be completed once confirming its fit. To examine the general model's fit, only one criterion, called GOF, was used. This criterion was calculated using the following formula:

$$GOF = \sqrt{\overline{Communalities} \times \overline{R^2}}$$

The value of $\overline{\text{Communalities}}$ was obtained by the average of shared values of the first-order latent variables. These values for the first-order latent variables are described in the following table, which was equal to 0.747.

**Table 6. Average shared values of latent variables**

| Latent variables | Average shared values |
|---|---|
| Effectiveness | 0.808 |
| H justice | 0.500 |
| P effect | 0.879 |
| Shareholder | 0.843 |
| Transparency | 0.767 |
| V justice | 0.684 |
| Average of the above values | 0.747 |

On the other hand, the model output shown in Fig. 3 indicates that the $R^2$ value of the model's intrinsic variables for the variables of tax justice, vertical equity, and horizontal equity were 0.289, 0.880, and 0.545, respectively. Thus, $R^2$ is equal to 0.571 (It should be noted that the $R^2$ values are counted for the first- and second-order variables). Thus, the order of GOF criterion for the above study is as follows.

$$GOF = \sqrt{\overline{Communalities} \times \overline{R^2}}$$
$$= \sqrt{0.747 \times 0.571} = 0.653$$

Based on the three values of 0.01, 0.25, and 0.36 regarded respectively as weak, moderate, and strong for GOF (Mohsenin & Esfidani, 2014: 73), obtaining the value of 0.653 for GOF indicates that the model in the present study enjoys a strong general fit.

## 4.4. Testing the hypotheses

### 4.4.1. Sobel test

To test the effect of an intermediate variable, there is a popular test called Sobel test, which is used to examine the significant effect of the mediation of a variable in the relationship between the two other variables. In Sobel test, a Z-value is obtained by the formula below; if this value exceeds 1.96, the significance of the mediation effect of a variable can be confirmed at the 95% confidence level:

$$Z-Value=\frac{a\times b}{\sqrt{(b^2\times s_a^2)+(a^2\times s_b^2)+(s_a^2\times s_b^2)}}$$

Where $a$ is the value of the path coefficient between the independent and the intermediary variable,
$b$ is the value of the path coefficient between the intermediary and the dependent variable,
$S_a$ is the standard error corresponding to the path between the independent and the intermediary variable, and
And $S_b$ is the standard error corresponding to the path between the intermediary and the dependent variable.
According to the above parameters, Z-Value for each of the above sub-assumptions is listed in Table 7.
The hypotheses and obtained results, including path coefficients, T-value, and the result of confirmation or rejection of the hypotheses, are shown in the following table.

**Table 7. Hypotheses tested and obtained results**

| Hypothesis | Path coefficient | T-value Z-value | Result |
|---|---|---|---|
| Main hypothesis 1: The effect of governance on tax justice | 0.230 | 2.340 | Not rejected |
| Sub-hypothesis 1.1: The effect of governance on horizontal equity | 0.170 | 2.571 (Sobel test) | Not rejected |
| Sub-hypothesis 1.2: The effect of governance on vertical equity | 0.216 | 2.611 (Sobel test) | Not rejected |
| Main hypothesis 2: The effect of shareholders' rights on tax justice | 0.114 | 1.322 | Rejected |
| Sub-hypothesis 2.1: The effect of shareholders' rights on horizontal equity | 0.084 | 1.112 (Sobel test) | Rejected |
| Sub-hypothesis 2.2: The effect of shareholders' rights on vertical equity | 0.107 | 1.118 (Sobel test) | Rejected |
| Main hypothesis 3: The effect of transparency on tax justice | 0.248 | 3.030 | Not rejected |
| Sub-hypothesis 3.1: The effect of transparency on horizontal equity | 0.183 | 3.069 (Sobel test) | Not rejected |
| Sub-hypothesis 3.2: The effect of transparency on vertical equity | 0.233 | 3.135 (Sobel test) | Not rejected |
| Main hypothesis 4: The impact of effectiveness on tax justice | 0.176 | 2.213 | Not rejected |
| Sub-hypothesis 3.1: The impact of effectiveness on horizontal equity | 0.130 | 2.346 (Sobel test) | Not rejected |
| Sub-hypothesis 3.2: The impact of effectiveness on vertical equity | 0.165 | 2.376 (Sobel test) | Not rejected |

## 5. Discussion and Conclusions

Testing the research hypotheses show the following results:

1) The value of the path coefficient from "governance effect" to "tax justice" was equal to 0.230 and the t-statistic was 2.304, indicating that "corporate governance" has a positive and significant effect on "tax justice". Property effect involves ownership concentration (including the indices of the percentage of the largest major shareholder and the percentage of free floating shares), ownership transparency (including the index of having a transparent ownership structure), and institutional shareholder ownership (including the index of having institutional shareholder ownership that, in case it is reinforced, one can expect better tax justice). On the other hand, "ownership" affects "horizontal equity" by 17% (0.738 × 0.230) and influences the "vertical equity" by 22% (0.230 × 0.938).
2) The value of the path coefficient from "shareholders' rights" to the "tax justice" was equal to 0.114 and t-statistic was 1.322, indicating that "shareholders' rights" have no significant effect on "tax justice". In addition, considering the low impact of shareholders' rights on horizontal and vertical tax justice ([8%] 0.738 × 0.114 and [11%] 0.938 × 0.114), it can be stated that this variable has no significant effect on these two dimensions of tax justice. With regard to the rejection of this hypothesis, it can be said that companies should always consider the interest of a wide range of stakeholders and take into account everyone's rights equally and fairly. Perhaps considering the relationship between all stakeholders and the concept of tax justice,

rather than only considering the relationship between shareholders and tax justice, can lead to having a significant effect. In fact, one of the most important stakeholders of the firms is the government.

3) The value of the path coefficient from "transparency" to "tax justice" was 0.248 and the t-statistic was 3.030, indicating that the "transparency" has a positive and significant effect on "tax justice." In other words, as the transparency enhances, tax justice also improves. Observing the regulations of company information disclosure, information corresponding to the audit, and disclosure of remuneration and shares of the board can lead to greater tax justice.
4) The value of path coefficient from the "effectiveness" to "tax justice" was equal to 0.176 and the t-statistic was 2.213, indicating that "effectiveness" has a positive and significant effect on "tax justice". In other words, as the effectiveness enhances, tax justice improves. Disclosures corresponding to the remuneration and the shares of the board members, including the size (number) of board members, the percentage of non-executive board members, the separation of the chairman's duties from those of the CEO, the presence of the board of directors in order to form and document the board meetings, collection of the required information, implementation of technical affairs requested by the board members, and assurance to the implementation of the board's legal duties can all help bring tax justice.
5) Since no research has been carried out to date on the relationship between corporate governance and tax justice, the research results can only be compared with those of the studies that address the relationship between corporate governance and taxation. In this sense, it can be stated that the results of this research is in line with those of Barth et al. (2013), Richardson (2012), Lanis and Richardson (2011), Minnick and Noga (2010), Armstrong et al. (2010), Satori (2008), Dyreng et al. (2008), Imam and Malik (2007), Richardson and Lanis (2007), Desai et al. (2007), Desai and Dharmapala (2006), Friese et al. (2006), Desai (2006). However, the results of the domestic investigations conducted in Iran, including Sepasi and Fat'hi (2015), Abdoli et al. (2013), Khoddamipour and Amininia (2013), and Babajani and Abdi (2010) do not confirm a significant relationship between corporate governance and taxation.

Since the observed variables of corporate governance, with the exception of shareholders' rights, have a positive and significant impact on tax justice in this study, it can be concluded that by increasing these variables, vertical and horizontal tax justice will also enhance. From the theoretical viewpoint, the observed variables of corporate governance, including the observance of the rights of all stakeholders, the presence of non-executive members in the board, the independence of the audit committee, and reports on the received money by board members can lead to better monitoring of the company; consequently, it is expected that the increased monitoring improves tax justice. Thus, it is recommended to the Tax Administration that obliges stock firms through legal channels and through the administration of Tehran Stock Exchange to apply the principles and concepts of corporate governance in order to promote the level of tax justice in the context of distributive justice. On the other hand, with the consideration of the rights of all stakeholders, rather than just those of shareholders, better tax justice can be achieved. It is suggested that the present research be distinctively carried out on different industries.

Since the impact of shareholders' rights on tax justice is rejected in this research, it is recommended that its causes be investigated in an independent study.

## References

1) Abdoli, M. R., Shourvarzi, M. R. & Mirzae, S. (2013). Investigating the relationship between book-tax difference and corporate transparency. Journal of Financial Accounting.Year 5. No. 19. Autumn 2013. Pp. 69-90.
2) Armstrong Christopher S, L.Blouin Jennifer, D.Jagolinzer Alan, F.Larcker David. (2015). Corporate governance, incentives, and tax avoidance. Journal of Accounting and Economics. Volume 60, Issue 1. August 2015. Pages 1-17.
3) Babajani, J. & Abdi, M. (2010). The relationship between corporate governance and taxable income

of companies. Financial Accounting Research. Vol. 5, Issue 3. Autumn 2010. Pp. 65-85.

4) Banizamani, S. (2011). Justice in the distribution of taxes. Donyay-e Eghtesad Daily, No. 2325. p.8.
5) Barth, M.E., Cram, D.P. & Nelson, k. (2001). Accruals and the prediction of future cash flows. The accounting Review. 76. 27-58.
6) Berle, A. A. & Means, G. C. 1968. The modern corporation and private property (Revised edition). New York: Harcourt, Brace & World, Inc.
7) Desai, M. & Dharmapala, D. (2006). Corporate tax avoidance and high powered incentives. Journal of Financial Economics. 79 (1): 145-179.
8) Didar H, Mansourfar G, Kafami M. (2014). Investigating the Effect of Corporate Governance Mechanisms on Tax Dividend in Tehran Stock Exchange. Accounting and auditing reviews, 21(4), pp 409-430.
9) Dyreng, S., Hanlon, M., Maydew, E.,(2008). Long-run corporate taxavoidance. Accounting Revew. vol 83. 61–82.
10) Farhang, M. (1993). The great dictionary of economic science. Alborz Publishing. Tehran.
11) Friese, A., Link, S. & Mayer, S. (2006). Taxation and CorporateGovernance. Springer Berlin Heidelberg. Berlin. Germany.
12) Gompers Paul A, Ishii Joy L and Metrick Andrew. (2003). Corporate Governance and Equity Prices. working paper 8449.
13) Guiding Principles for Tax Equity and Fairness. (2007). Issued by the Tax Division of theAmerican Institute of Certified Public Accountants.
14) Gupta, S., and Newberry, K.(1997). Determinants of the variability in corporate effective tax rate: Evidence from longitudinal data. Journal of Accounting and Public Policy. Vol.16, No 1, pp. 1-39.
15) Hassas Yeganeh, Y. & Salimi, M. J. (2011). A Model for Ranking Corporate Governance in Iran. Quarterly Journal of Empirical Studies of Financial Accounting. Issue. 30. Pp. 1-35.
16) Hemmatfar, M., Aslani, M., & Lotfalian, F. (2012). The Pattern of Islamic corporate governance. Journal of Auditor. Year 14. No. 59. P. 116.
17) Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. Strategic Management Journal. 20(2), 195-204.
18) Jafari, M. (2014). Investigating the usefulness of corporate governance dimensions in determining the value of a company in the form of a model based on accounting variables. PhD Thesis. Science and Research University of Tehran.
19) Kabinga M. (2016). Principles of Taxation. Paper Introduction to the Project Tax Justice & Poverty. www.pdfs.semanticscholar.org.
20) Khoddamipour, A. & Torkzadeh Mahani, A. (2011). Taxation and conservatism in financial reporting and the relevance of accounting information. Journal of Financial Accounting Research. Issue 3. Autumn 2011.
21) Kiesewetter Dirk, Manthey Johannes. (2017). The Relationship between Corporate Governance and Tax Avoidance Evidence from Germany using a Regression Discontinuity design Quantitative Research in Taxation. Arbeitskreis Quantitative Steuerlehre Quantitative Research in Taxation Discussion Papers.pp 1-16
22) Klapper, L. F., and I. Love. (2003). Corporate Governance, Investor Protection, and Performance in Emerging Markets. Journal of Corporate Finance. vol 195.1–26.
23) Lanis, R, and G. Richardson. (2011). Corporate Social Responsibility and Tax Aggressiveness. Electronic copy available at: http://ssrn.com/abstract=1904002.
24) Lanis, R, and G. Richardson. (2011). The effect of board of director composition on corporate tax aggressiveness. Journal of Accounting and Public Policy. Vol 30 (1): 50-70.
25) Laridasht Bayaz, M., Qaemmaqami, K., & Kahromi, Q. (2015). Investigating the factors affecting tax avoidance in South Khorasan Province, Iran, with emphasis on cultural components. Journal of Behavioral and Valued Accounting. Year 1. No. 1. Spring and Summer of 2015. Pp. 139-164.
26) Mehrani, K. & Safarzadeh, M. H. (2011). Explaining the relationship between corporate governance and profit quality and native approach. Journal of Accounting Knowledge. Year 2. No. 7. Winter 2011. Pp. 69-98.
27) Mihir A. Desaia, Alexander Dyckb, Luigi Zingalesc,ch. (2007). Theft and Taxs. Journal of Financial Economics. Vol 84. 591–623.
28) Minnick Kristina, Noga Tracy. (2010). Do corporate governance characteristics influence tax

management. Journal of Corporate Finance. Vol 16. 703–718.

29) Mohandes, A. & Taqavi, M. (1987). Public finances. First Printing. Farvardin Publishing. Tehran. Pp. 123-124.
30) Mohsenin, Sh. & Esfidani, M. R. (2015). Structural equations based on partial least squares approach using smart-PLS software. Mehrian Publishing. Tehran.
31) Pourheidari, O., Fadavi, M. H., Amininia, M. (2014). Investigating the impact of tax avoidance on financial reporting of companies listed in Tehran Stock Exchange. Quarterly Journal of Economic Research. Issue 52. Spring 2014. Pp. 69-85.
32) Rezaee, F. (2007). Investigating the Effect of Panel Composition on the Performance of Companies Accepted in Tehran Stock Exchange. Master's Thesis. Alzahra University.
33) Richardson, G., Lanis, R. (2007). Determinants of the variability in corporate effective tax rates and tax reform: Evidence from Australia. Journal of Accounting and Public Policy. vol 26 (6): 689-704.
34) Satori, N. (2008). Effects of strategic tax behaviors on corporate governance. September 1, university of Michigan. Available at SSRN: http://ssrn. com/ abstract=1358930 or http://dx.doi.org/10.2139/ssrn.1358930.
35) Sepasi, S. & Fat'hi, R. (2015). The effect of corporate governance on tax aggressive policy of companies listed in Tehran stock exchange. Journal of Management Accounting. No. 25. Summer 2015. Pp. 49-59.
36) She'ri, S. & Saber, M. (2007). The relationship between the percentage of non-executive members in the composition of the board of directors and institutional investors and the prediction of corporate profits. Empirical Financial Accounting Studies. Spring 2007. No. 17. Pp. 63-104.