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The Unbreakable Nexus: Harnessing Governance Mechanisms to Curb Tax Evasion

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Abstract

This work examines the main determinants of tax evasion within publicly traded companies. The literature review indicates that there are several practices used by Tunisian companies to eliminate their tax obligations, including group size, profitability, intangible assets and debts.

Thus, this study aims to obtain empirical evidence on the effect of corporate governance mechanisms on tax evasion, which becomes a proxy for the current ETR (effective tax rate). The samples for this study consisted of 20 manufacturing companies listed on the Tunisian Stock Exchange between 2012 and 2022. Hypothesis testing used multiple regression analysis. The result of this study shows that the percentage of shares held by members of the board of directors and the percentage of institutional shareholding have a positive effect on tax evasion in part, but that the number of board members administration and the percentage of independent members do not have a simultaneous effect in defining tax evasion.

Keywords: Tax evasion, Corporate governance, board members administration.

1. Introduction

Taxes are an important element in consolidating the country's budget revenues. In Tunisia, revenue from the tax sector represents the highest percentage compared with other sources of income. Tax revenue is therefore the main source of revenue in Tunisia. Tax is coercive when each person or party is required to pay debts and penalties if they fail to meet their tax obligations, without any direct benefits. According to Allingham and Sandmo in Simanjuntak & Imam (2012), no taxpayer is willing to pay taxes, but there is no other way but to obey. Higher tax payments force taxpayers to make efforts to pay taxes efficiently, such as unfavourable tax evasion, which consequently reduces the country's revenue. Tax evasion attitude can be divided into acceptable tax evasion and unacceptable tax evasion (Fadhilah, 2014).

Tax evasion is a kind of violation of the law, but tax avoidance is the use of a legal loophole, or in other words, the formal abuse of the law where exemptions and incentives are legal. Another difference between tax avoidance and tax evasion may be the difference in response to disclosure. In the case of tax avoidance, the person is not concerned about the disclosure of their act, as they have not committed any illegal act; however, in the case of tax avoidance, the disclosure of a person's actions may lead to legal consequences, offences and penalties. Although the objective of both is to exclude tax, the way in which this is achieved is different and distinguishes the two issues (Hanlon and Heitzman, 2010). Empirical evidence indicates that a variety of factors, including the existence of numerous exemptions in the tax structure, can also influence tax evasion and avoidance. Studies indicate that while the exemptions envisaged in the rules are generally intended to support certain regions, sectors and industries, we need to be mindful that exemptions and incentives may not always have a positive return.

These measures have a negative effect on people's attitude towards a kind of corruption on the part of the government against the population, which can affect the performance and behaviour of other taxpayers (Zehi and Khani, 2010). Some researchers argue that the implementation of tax evasion policies can have a negative effect on society. Especially when a company has intentionally or solely executed a plan with the sole aim of avoiding tax, and appears unwilling to pay a fair share of its revenues for the provision of public goods to the

government, and this failure causes irreversible harm to the community (Lanis and Richardson, 2011).

The government expects an attitude of tax obedience from the company or entity. This includes the attitude of a tax-compliant taxpayer, showing that taxpayers always pay taxes in accordance with actual conditions, which will increase government revenue. On the other hand, a company, as a taxpayer, regards tax as an expense and aims to maximise its profits and pay minimum tax without breaking the law by avoiding tax. Corporate governance has been established by the requirement in tax management of transparency, accountability, independence and fairness (Winarsih et al., 2014). The above description shows the relationship between good corporate governance (represented by executive remuneration, executive character, company size, institutional ownership, proportion of auditors on the board, audit committee and quality audit) and tax avoidance actions undertaken by the company.

Executive remuneration is financial remuneration made up of shares, share options, salaries, allowances and performance-related bonuses. Previous studies have highlighted the various influences of executive remuneration on tax evasion. Rego and Wilson (2012) suggest a positive relationship between compensation and corporate tax evasion. The study measured the components of remuneration through shares and stock options that lead the executive to have a motivation similar to that of shareholders. Executives will devote time and effort to tax avoidance, in order to increase the company's wealth.

Tax avoidance is generally achieved through the policies adopted by a company's management. Company directors tend to take more risks when making decisions about their company. Executive character has a significant impact on corporate tax evasion. Executive character has a significant impact on corporate tax evasion (Budiman & Setiyono, 2012).

The size of the company also determines the level of investor confidence in it. The larger the company, the greater the opportunity it has to make itself known to the public, making it easier for the public to obtain information about the company. Company size, debt structure and asset composition, which are used as indicators to measure company characteristics, can also detect tax evasion. The size of the firm (total assets) held by the firm may also affect the firm's potential to commit tax evasion (Sartori, 2008).

Institutional ownership is a proportion of share ownership held by institutions such as insurance, banks or other institutions at the end of the year (Simarmata & Cahyonowati, 2014).

Institutional ownership has a significant influence on management monitoring as it will encourage optimal management control, which can thus reduce conflicts of interest. Institutional investors can reduce the cost of debt by reducing agency problems, which can reduce the risk of tax evasion (Fadhilah, 2014).

The Board of Commissioners is composed of independent and non-independent commissioners. Independent commissioners are not drawn from affiliates, while non-independent commissioners are drawn from affiliates (Fadhilah, 2014). Affiliates are parties with business relationships and kinship ties to control the shareholders, directors and members of the commissioners as well as the company itself (KIKG, 2006).

The main purpose of this work is to analyse the effects of governance mechanisms on tax evasion by listed companies, by quantifying the extent to which they succeed in stabilising the current situation. More specifically, the question that interests us, and around which this work is structured, is the following: What are the transmission effects of governance mechanisms on tax evasion?

This raises four series of questions.

- 1) Is there a relationship between the percentage of shares held by board members and tax evasion?
- 2) What is the impact of the number of board members on tax evasion?
- 3) Does the percentage of institutional shareholding affect tax evasion?
- 4) What is the relationship between the percentage of independent board members and tax evasion?

Our main question is therefore as follows: Do corporate governance mechanisms have an effect on tax evasion?

The main purpose of this study is to analyse the effects of corporate governance mechanisms on tax evasion by listed companies in Tunisia.

Our main contribution is that this research enriches previous studies on governance and tax evasion in Tunisia. It may be useful to various stakeholders, in particular managers, investors and the State.

To this end, the concepts of corporate governance and tax evasion and the relevant theoretical foundations will be discussed. Following a literature review, research hypotheses will be

proposed (section 2). The methodology and results will be interpreted in section 3 and, finally, the last section of this study provides the conclusion (section 4).

2. Literature review

Armstrong et al (2015) examined the impact of governance on tax evasion. They found a positive relationship between the percentage of independent board members and tax evasion. They also found that companies with greater institutional ownership engage in more tax evasion.

Richardson et al (2014) examined whether or not executive incentives led to a reduction in tax evasion. The results of their study indicated that firm financial position, executive tax allocation and executive performance rewards and incentives are positively and significantly associated with tax evasion.

Dhaliwal et al (2011) conducted a study to investigate the relationship between tax evasion and the amount of cash held in the firm. The results of their study indicated that there is a negative relationship between tax evasion and the amount of cash. They also found that this negative correlation is weaker in companies with stronger governance mechanisms.

Lanis and Richardson (2011) concluded that the number of non-executive board members has a negative and significant relationship with aggressive tax policies. In other words, the higher the number of non-official board members, the less inclined the company is to financial management.

Minnick and Noga (2010) conducted a study in which they investigated the effects of characteristics of corporate governance principles on fiscal management. They found that rewards encourage managers to invest in long-term plans and reduce taxes. The results also indicated that tax management has benefits for shareholders and that tax management is positively associated with an increase in shareholder profits. Mashayekhi and Seyyedi (2015) conducted a study on corporate governance and tax evasion in companies listed on the Tehran Stock Exchange. The relationship between some important corporate governance norms, including institutional ownership, independence and board size, and tax evasion was investigated. To this end, 146 companies listed on the Tehran Stock Exchange between 1992 and 2012 were studied. The results indicate that there is no significant relationship between corporate governance and tax evasion.

Rezaei and Azimi (2018) conducted a study on the relationship between corporate governance mechanisms and tax management in companies listed on the Tehran Stock Exchange. In order to test this hypothesis, 80 companies were selected between 2004 and 2011. The results indicated a significant relationship between the independence of board members and the variables of effective tax rate on cash, effective tax rate on long-term cash, effective tax rate on liabilities and effective tax rate on long-term liabilities.

Babajani and Abdi (2010) conducted a study to investigate the relationship between corporate governance and taxable profits of companies, in which the relationship between corporate governance and taxable profits was investigated. This investigation was carried out by examining the relationship between some of the most important criteria of corporate governance, including the number of non-functioning members on the board of directors, the combined role of the executive (duality of executive duties) and institutional shareholders, looking at the percentage difference between expressed and certain taxable profit. The results indicated that there was no significant difference between the average percentage difference between expressed and certain taxable profit in companies that met the standards of the corporate governance principles compared with those that did not have corporate governance standards in place. In both companies, the percentage difference was significant between expressed and certain taxable profit.

Based on the theoretical principles and research objectives, the following hypotheses are put forward:

- H1: There is a significant relationship between the percentage of shares held by board members and tax evasion.
- H2: There is a significant relationship between the number of board members and tax evasion.
- H3: There is a significant relationship between the percentage of institutional shareholders and tax evasion.
- H4: There is a significant relationship between the percentage of independent board members and tax evasion.

3. Methodology, Data description and Results

Given the research objectives, this study is applied and quasi-experimental in nature. A multiple linear regression equation was used for data analysis and hypothesis testing. All required data was extracted from actual company data included in the Capital Market Board reports. Eviews 12 software was used to analyse the data.

Although the main objective of companies is to ensure good governance, this plays an essential role in the degree of tax evasion, because their ability to achieve the desired objectives depends on the influence of the board of directors on the business. The objective of this work is to evaluate and analyse the transmission effect of corporate governance mechanisms on tax evasion using a multiple regression model.

To this end, we present a methodology for estimating the elasticity of governance mechanisms in order to determine the extent to which they contribute to tax evasion. Prospective analysis of the impact of governance mechanisms on tax evasion has been the subject of several recent studies.

3.1. Data

Our sample is made up of companies listed on the Tunis Stock Exchange and required to publish their consolidated financial statements (Aissi, 2009 and Jarboui, 2008). Table 1 provides summary data on the composition of the sample. We used annual data from 2012 to 2022.

Our sample was initially composed of 73 companies listed on the Tunisian stock exchange in 2022. The sample was then reduced to 20 companies over the entire 2012-2022 period. We excluded newly listed companies, due to the unavailability of complete information over the entire study period. Finally, we have eliminated financial and banking companies.

Our sample therefore consists of 20 companies listed on the stock exchange since 2012. We eliminated data from companies that lacked information over the entire study period. Finally, all the financial data used were collected manually from the consolidated financial statements and annual reports published by the Tunisian Financial Markets Authority (CMF).

Table 1 summarises the different variables used.

Table 1. Summary of variables used and data sources

Variables	indicators	Measure	Data sources
dependent	EV	EV = Applied tax rate -	Financial Markets

		Effective tax rate 'ETR ETR= cash tax paid on cash flows	Council (CMF).
Independent Variables	BZ	This is the total number of members of the Board of Directors.	Financial Markets Council (CMF).
	CMP	Equal to the percentage of shares held by members of the Board of Directors.	Financial Markets Council (CMF).
	ND	Percentage of Board members not in office.	Financial Markets Council (CMF).
	INSINV	The institutional shareholding percentage (INSINV) is equal to the percentage of shares held by the State and public companies.	Financial Markets Council (CMF).
Control variables	Size	Ln (total assets)	Financial Markets Council (CMF).
	ROA	Net profit/total assets	Financial Markets Council (CMF).

3.2. Results

Before analysing these variables using the multiple regression model, we will present a descriptive study of the annual data covering the period from 2012 to 2022.

Table 2: Descriptive statistics for the study data

	EV	BZ	CMP	ND	INSINV	ROA	SIZE
Mean	-1.591613	8.250000	51.84981	0.253896	20.84810	1.027673	18.36671
Median	0.173996	8.000000	61.45500	0.181818	9.370000	0.048340	18.73191
Maximum	5.053256	14.00000	90.97300	0.833333	79.80000	143.1693	22.95448
Minimum	-184.8242	2.000000	0.000000	0.000000	0.000000	-0.114546	11.17903
Std. Dev.	12.77255	3.070890	26.19347	0.255080	24.33598	10.12022	2.120201
Skewness	-13.56134	-0.288789	-0.450341	0.905361	0.883137	13.01131	-1.642993
Kurtosis	194.3560	2.728302	2.164775	2.780010	2.651817	179.8031	6.837653
Jarque-Bera	342400.4	3.734640	13.83092	30.49849	29.70878	292751.3	233.9817
Probability	0.000000	0.154537	0.000992	0.000000	0.000000	0.000000	0.000000
Sum	-350.1548	1815.000	11406.96	55.85714	4586.583	226.0880	4040.676
Sum Sq. Dev.	35727.25	2065.250	150255.5	14.24941	129700.5	22429.74	984.4604
Observations	220	220	220	220	220	220	220

From this table we can see that the average level of tax evasion was '-1.59'. This shows that the average values of tax evasion are very high. A growing number of companies evading tax is responsible not only for the loss of corporate credibility, but also hinders the growth process. Similarly, the mean values of the other explanatory variables in the model are above the minimum desirable level.

Before analysing these variables using the multiple regression model, we used unit root tests to assess the order of integration of the variables. The stationarity of all variables was tested using the ADF (Augmented Dickey-Fuller) and PP (Phillips- Perron) procedures to avoid any ambiguity in the order of integration of the variables. The results presented in Table 3 show that all the variables are integrated of order 0 I(0).

Table 3. Stationarity test

Variables	ADF Test		PP Test	
	In level	First difference	in level	First difference
EV	79.4451*** [0.0002]	115.378 [0.0000]	114.943*** [0.0000]	279.549 [0.0000]
BZ	2.353594*** [0.0000]	5.471741 [0.0001]	2.439659*** [0.0000]	5.872020 [0.0000]
CMP	1.38629*** [0.0000]	1.38629 [0.0000]	12.4408*** [0.0020]	5.25451 [0.0000]
ND	1.510119*** [0.0000]	3.467854 [0.0000]	3.791022*** [0.0073]	16.50879 [0.0001]
INSINV	4.07182*** [0.0036]	9.449640 [0.0000]	12.4408*** [0.0020]	5.25451 [0.0723]
SIZE	92.8054*** [0.0000]	92.8054 [0.0000]	81.4701*** [0.0001]	186.810 [0.0000]
ROA	64.0308*** [0.0093]	81.2477 [0.0001]	89.9760*** [0.0000]	198.757 [0.0000]

SC is used to choose the number of optimal delays for the ADF tests, whereas « Bandwidth » is used for PP tests. The critical values related to ADF and PP tests were provided by MacKinnon (1996). The bracketed figures represent the delay levels based on the information criterion of Schwarz. Figures between square brackets represent Newey-West bandwidth's automatic selection using the Bartlett kernel. Note that only the constant is included in tests. (***) , (**) and (*) denote statistical significance at the 1%, 5% and 10% levels respectively

The variables included in our model are annual and include tax evasion (EV), board members (BZ), percentage of shares held by board members (CMP), percentage of board members not in office (ND), percentage of shares held by the state and public enterprises (INSINV), company size (SIZE) and company profitability (ROA).

To make this work more concrete, we begin with a correlation analysis of a representative sample of seven indicators. The parameters in the table refer to the correlation coefficients between the different variables in the study. Of the 28 correlations that fill the off-diagonal elements of the table, no value is greater than 0.7 in absolute value.

Table 4. Correlation matrix

Correlation Probability	EV	BZ	CMP	ND	INSINV	ROA	SIZE
EV	1.000000 -----						
BZ	-0.001611	1.000000 -----					
CMP	0.044559	0.161475	1.000000 -----				
ND	0.056097	-0.185496	-0.038585	1.000000 -----			
INSINV	-0.089877	0.227672	-0.045814	-0.249805	1.000000 -----		
ROA	0.000446	0.089332	-0.054392	-0.027993	-0.051022	1.000000 -----	
SIZE	0.068267	-0.063422	0.308136	0.073260	0.138272	-0.179557	1.000000 -----

As mentioned in the methodology and dataset above, the results were tested by individual null hypotheses such as the lag test. The objective of the study is to analyse the reaction of tax evasion of listed companies through the multiple regression model. In fact, the existence of a relationship between tax evasion and the various explanatory variables in the model makes it possible to demonstrate a causal relationship between them, at least in one direction.

We note that once the phenomenon of tax evasion has appeared in a given place, the speed of its spread becomes increasingly rapid over time. This brings us back to the determinants of the phenomenon.

Hypothesis results

➔ There is a significant relationship between the number of board members and tax evasion.

- H0: There is no significant relationship between the number of board members and tax evasion.

- H1: There is a significant relationship between the number of board members and tax evasion.

Table 6 shows that the significance level of the test for the variable "number of BZ board members" is greater than 5% ($P > 0.05$); consequently, H0 is approved and H1 is rejected. Consequently, we can say that the relationship between the two variables is rejected and that the hypothesis is not confirmed. We can therefore say that there is no significant relationship between the number of board members and tax evasion. By increasing the number of board members, it is possible to reduce control of the company and the board will thus seek to reduce taxes.

➔ There is a significant relationship between the ratio of independent members and tax evasion.

- H0: There is no significant relationship between the ratio of independent board members and tax evasion.

- H1: There is a significant relationship between the ratio of independent board members and tax evasion.

It can be observed in Table 8 that the significance level of the t-test for the variable "number of serving non-member members" is $< 5\%$ ($P < 0.01$); therefore, H0 is rejected and H1 is approved. We can therefore say that the relationship between the two variables is rejected and that the hypothesis is not confirmed. Consequently, we can say that there is no significant relationship between independent board members and tax evasion. The reason for this may be that the role of non-executive members in corporate governance and supervision of executives assigned to Tunisian companies has remained in name only, or that the simultaneous membership of non-executive members on the boards of several companies may lead to a reduction in their effectiveness.

➔ There is a significant relationship between the percentage of shares held by board members and tax evasion.

- H0: There is no significant relationship between the percentage of shares held by board members and tax evasion.

- H1: There is a significant relationship between the percentage of shares held by board members and tax evasion.

It can be seen in Table 5 that the significance level of the test for the variable the percentage of shares held by board members 'CMP' is less than 5% ($P < 0.05$); therefore, H_0 is approved and H_1 is rejected. Therefore, we can be 99% sure that tax evasion is affected by the percentage of shares held by board members, or in other words, the percentage of shares held by board members has a significant relationship with tax evasion. The results of the T-test indicate that the relationship is positive, which means that there is a direct effect of the independent variable on the dependent variable, so that an increase in the percentage of shares held by board members would lead to an increase in the rate of tax evasion. This means that companies with more directors benefit from greater tax avoidance. Shareholders are generally expected to prefer tax avoidance. Nevertheless, research suggests that family owners are more concerned than others about potential fines and reputational damage from government audits and are less inclined to tax avoidance (Chen et al. 2010).

The percentage of shares held by members of the board of directors (CMP) used as a proxy for company development shows that it is a key determinant of tax evasion. Its sign is positive and significant. Hence, an increase in the number of shares held by members of the board of directors leads to an increase in tax evasion.

➔ There is a significant relationship between the percentage of institutional shareholding (INSINV) and tax evasion.

- H_0 : There is no significant relationship between the percentage of institutional shareholding (INSINV) and tax evasion.

- H_1 : There is a significant relationship between the percentage of institutional shareholding (INSINV) and tax evasion.

Table 7 shows that the significance level of the test for the institutional variable (INSINV) is less than 5% ($P < 0.01$); H_0 is therefore rejected and H_1 is confirmed. We can therefore say that the relationship between the two variables is confirmed. We can therefore state that there is a significant relationship between the percentage of institutional shareholding (INSINV) and tax evasion. This would perhaps be justified by the fact that there is a lack of adequate supervisory performance of institutional owners (Pourheydari and Amininia, 2014).

Furthermore, the sign of the percentage of institutional shareholding (INSINV), which is equal to the percentage of shares held by the State and public companies, is unexpected, positive and significant. Thus, the percentage of institutional shareholding (INSINV) has a positive and significant influence on tax evasion. Therefore, tax evasion can be a useful action

to reduce real tax in these circumstances, and this is why companies that intend to reduce their taxes look for other solutions such as government intervention, a good number of qualified board members, good earnings management, etc. The results also show that the profitability of public companies is significantly lower than that of private companies. The results also show that company profitability and size have a positive and significant effect on tax avoidance. Thus, increasing company profitability is increasingly becoming one of the main drivers of tax evasion.

Table 5. Model estimates for the first hypothesis

$$EV_{it} = \alpha_1 + \alpha_2 CMP_{it} + \alpha_3 SIZE_{it} + \alpha_4 ROA_{it} + \varepsilon$$

<i>description</i>	Coefficient	Standard deviation	t-statistic	Prob
<i>CMP</i>	2.98***	2.76	10.82816	0.0000
<i>Size</i>	1.59***	4.72	3.358771	0.0009
<i>ROA</i>	6.03***	7.03	8.572065	0.0000
<i>C</i>	0.304545***	1.96	1.55	0.0000

(***), (**) et (*) désignent une signification statistique aux niveaux de 1 %, 5 % et 10 %, respectivement.

Table 6. Model estimates for the second hypothesis

$$EV_{it} = \alpha_1 + \alpha_2 BZ_{it} + \alpha_3 SIZE_{it} + \alpha_4 ROA_{it} + \varepsilon$$

<i>Description</i>	Coefficient	Standard deviation	t-statistic	Prob
<i>BZ</i>	8.88	0.001380	0.064373	0.9487
<i>SIZE</i>	-0.001108	0.002028	-0.546395	0.5854
<i>ROA</i>	-0.000474	0.000425	-1.114960	0.2661
<i>C</i>	0.324062***	0.039804	8.141402	0.0000

(***), (**) et (*) désignent une signification statistique aux niveaux de 1 %, 5 % et 10 %, respectivement.

Table 7. Model estimates for the third hypothesis

$$EV_{it} = \alpha_1 + \alpha_2 INSINV_{it} + \alpha_3 SIZE_{it} + \alpha_4 ROA_{it} + \varepsilon$$

<i>Description</i>	Coefficient	Standard deviation	t-statistic	Prob
<i>INSINV</i>	2.22***	4.72	4.707152	0.0000

<i>SIZE</i>	4.48***	3.50	12.78980	0.0000
<i>ROA</i>	1.21***	2.35	4.146156	0.0000
<i>C</i>	0.304545***	6056	4.65	0.0000

(***), (**) et (*) désignent une signification statistique aux niveaux de 1 %, 5 % et 10 %, respectivement.

Table 8. Model estimates for the fourth hypothesis

$$EV_{it} = \alpha_1 + \alpha_2 ND_{it} + \alpha_3 SIZE_{it} + \alpha_4 ROA_{it} + \varepsilon$$

<i>Description</i>	Coefficient	Standard deviation	t-statistic	Prob
<i>ND</i>	4.13	1.44	0.286759	0.7746
<i>SIZE</i>	-2.32	4.65	-0.049892	0.9603
<i>ROA</i>	-3.86	3.12	-0.123712	0.9017
<i>C</i>	0.338861***	0.007667	44.19806	0.0000

(***), (**) et (*) désignent une signification statistique aux niveaux de 1 %, 5 % et 10 %, respectivement.

4. Conclusion

The transmission effect of governance mechanisms on tax evasion for listed companies was analysed using a multiple linear regression model. This study examines the main determinants of tax evasion within groups of Tunisian companies listed on the Tunis stock exchange. The results of the model confirmed the presence of a significant relationship over the study period, which means that governance mechanisms such as the percentage of shares held by the State and public companies, the total number of board members, the percentage of shares held by board members and the percentage of independent board members are related to tax evasion. It can be concluded that these four variables represent the main determinants of tax evasion within companies. Consequently, they contribute significantly to the variation in tax evasion.

However, our study has several limitations. Firstly, the data used in our study comes from the financial statements published by listed companies, while unlisted companies are excluded from our sample. Secondly, the abolition of the tax consolidation regime in Tunisia does not allow for a proper assessment of the impact of these determinants on the company's effective tax rate.

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