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TAX AVOIDANCE AND FINANCIAL PERFORMANCE OF NON-FINANCIAL QUOTED COMPANIES: EMPIRICAL EVIDENCE FROM MOROCCO

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ABSTRACT

The purpose of this article is to examine the relationship between tax avoidance (TA) and the financial performance (FP) of non-financial companies listed on the Moroccan stock exchange. FP is measured by a widely recognized accounting indicator which is the return on assets (ROA). TA is measured by the effective tax rate (ETR), a key indicator for assessing tax practices. This study uses a quantitative methodology based on the analysis of secondary data collected from the financial reports published by 32 non-financial companies listed on the Casablanca Stock Exchange (CSE). The analysis period spans five consecutive years, from 2018 to 2022. The generalized least squares (GLS) regression method was used to examine whether the relationship between TA and FP is significant. Indeed, the ETR exhibits an inverse relationship with TA, as a higher ETR corresponds to a lower TA. The results of this study reveal that the relationship between corporate TA and FP is significantly positive. Given that most research on the relationship between TA and FP focuses on Chinese, American and Australian companies, conducting research in new regions with different regulations could lead to different results. In this respect, the Moroccan context, characterized mainly by increased digitization of tax administration, the diversity of tax benefits accorded to certain priority sectors, the global economic disruption caused by the Covid-19 pandemic and the fiscal stimulus measures taken by the authorities during this crisis, represents a new context for studying the relationship between TA and FP.

Keywords: tax avoidance, financial performance, effective tax rate, return on assets, Morocco

JEL Classification: G30, H26

INTRODUCTION

In an environment marked by growing dynamism, increased globalization and the advent of social responsibility, TA is vital to all companies worldwide. They are under pressure to optimize their tax burden and become more competitive in the marketplace. Moreover, as FP is an essential indicator of company management performance (Ahinful et al., 2023), understanding the effect of corporate TA on FP has become an essential issue for tax authorities, managers and investors.

Researchers in the field of taxation and finance have paid particular attention to the effect of TA on FP. While the academic literature is still debating the repercussions that TA might have on FP, the findings are divergent. One school of thought defends the idea that TA is seen as a value-maximizing activity, transferring wealth from the state to the company's shareholders (Kim et al., 2011). This transfer of value occurs naturally when TA practices are free of additional costs for investors (Desai & Dharmapala, 2009). This was also confirmed by (Heitzman & Ogneva, 2018), who found that stock returns increase with TA. Another conflicting view revealed a significantly negative relationship between TA and firm value (Z. Chen et al., 2016; Minh Ha et al., 2021; Nebie & Cheng, 2023) this is explained according to (X. Chen et al., 2014; Ftouhi et al., 2015) by high agency costs.

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According to a review of 79 articles on TA by (Kovermann & Velte, 2019), most of the research and studies carried out focus on American, Chinese and Australian companies. This means that conducting research in regions with different regulations could lead to different results (Krzysztof et al., 2021). In this sense, the digitization and deployment of a new information system by the Moroccan tax authorities has led to more tax audits, which could increase the tax risk associated with TA strategies. Consequently, the Moroccan context provides a new context for examining the impact of companies' TA strategies on their FP. Thus, the integration of the Covid-19 period would provide a fresh look at how these companies reacted and adapted to the crisis.

Our study represents an empirical essay focusing on the relationship between TA and the FP of non-financial quoted companies. The choice of the non-financial sector is justified by the significant differences that exist between financial and non-financial companies, both structurally and in terms of accounting and taxation. In addition, the period for collecting empirical data included the COVID-19 pandemic and its aftermath, a choice motivated primarily by the disruptive nature of this event on the global economy.

The purpose of this research is to examine the relationship between TA and the FP of listed non-financial companies in Morocco. More precisely, the objectives of this study are as follows:

1. Empirically test the relationship between TA and the FP of non-financial companies in Morocco.
2. Mobilize the GLS method, in order to correct any heteroskedasticity and autocorrelation problems present in panel data.
3. Study the relationship between FP and certain company characteristics such as size, capital intensity, age, leverage and growth with the aim of better understanding the determinants of FP in relation to TA practices.
4. Offer practical insights for tax managers and regulators on how TA behaviour can influence the financial health of companies in an emerging country like Morocco.

The authors conducted an empirical study using financial reports published by listed non-financial companies to examine the relationship between TA and FP. Thus, a research question was formulated in this article:

RQ: What is the relationship between TA and FP of listed non-financial companies in Morocco?

To answer this question, the research adopts the GLS regression method and the hypothesis is formulated as follows:

H_0: There is a negative relationship between TA and FP of listed non-financial companies in Morocco.

Then a quantitative analysis using a research sample of 32 listed non-financial companies in Morocco. Next, two software packages were used for data analysis: SPSS v.25 and Stata v.18. Statistical tests were carried out to assess the relationship between TA and corporate FP. Tests included descriptive statistics, correlation analysis and regression tests. Based on these results, the article proposes recommendations for companies to enhance their FP through the use of tax strategies.

The hypothesis is formulated on the basis of a synthesis and analysis of previous research presented in the literature review. The research methodology is detailed, and the results are presented in the following section. Finally, the conclusion is based on the interpretation of the results obtained.

LITERATURE REVIEW

Conceptual review

Tax avoidance and related sub-concepts

Tax planning is identified as a legal approach that enables companies to decrease their taxes, and by introducing several methods, mechanisms and practices, it can also take the name of "TA", "profit shifting" and "income shifting" (M. Cooper & Nguyen, 2019). According to (Jamei, 2017), TA is the set of legal actions that enable the reduction of tax obligations. As for profit shifting, it mainly consists of taking advantage of the disparities that exist between the tax rates between two different jurisdictions (M. Cooper & Nguyen, 2019). This refers to the international character that the notion of TA could have, which allows multinationals, through the creation of several subsidiaries, to minimize their taxes, by shifting the revenues of the entities of a given group to a more favourable tax jurisdiction (Ftouhi & Ghardallou, 2020).

While these researchers describe TA as a legal practice that enables the reduction of tax, (Richardson et al., 2013) focus on the notion of tax aggressiveness as an action that consists in the reduction of the tax base through TA activities, which

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may be legal, illegal or in the grey zone. Thus, (Frischmann et al., 2008) define it as the act of "taking significant tax positions based on relatively weak facts".

However, tax evasion has emerged to refer to intentional and illegal actions taken to reduce taxes legally due, by declaring lower income, failing to file tax returns, overstating deductions and bartering to evade taxes (Allam et al., 2023; Alm et al., 2019).

Financial performance

Performance, in a more general sense, refers to the achievement of an organization's objectives, whatever their nature and variety. Performance can also be considered as the result of a process, as the action that makes success possible. The success achieved is not subject to subsequent evaluation, but must be built up progressively through a management process involving the definition and communication of expected objectives, the specification of activities to be carried out, and the control of rewards and information linked to results (Bourguignon, 1997). Furthermore, when addressing the financial aspect, it refers to the evaluation of the achievement of financial objectives through appropriate indicators (Bala Ado et al., 2021). In this context, two categories of indicators can be distinguished:

1. *Accounting indicators* help to measure a company's actual, realized performance as reported in its annual financial statements, offering an advantage over other methods that assess investors' future expectations. A second advantage of accounting metrics is that, by combining several measures such as ROA and ROS, they provide an overall view of performance. However, their exclusive use also has important limitations. Firstly, although accounting measures assess a company's FP, they do not take into account non-financial aspects. Secondly, the reliability of accounting indicators depends on the quality of the financial reports produced by the company, whose data are historical, manipulable by managers and subject to differences in accounting procedures. Finally, comparability from one country to another, and from one study to another, is difficult because of the wide variety of measures and the divergence of accounting standards (Ahamed et al., 2023; Kuznyetsova et al., 2017; Thanos & Papadakis, 2012).
2. *Stock market indicators* such as Tobin's Q, dividend yield, price/earnings ratio and market value are used to measure stock market performance. They differ from accounting indicators, which are often considered manipulative and misleading when it comes to explaining the value added created. In this context, an empirical study by Stewart in 1994 indicated that EVA outperformed conventional earnings-based measures by around 50% in explaining changes in shareholder value. Thus, (Gapenski, 1996) pointed out that EVA only measures the effectiveness of management in a given year, whereas MVA evaluates this effectiveness since the company's creation. However, all these stock-market indicators are influenced by investors' emotions (Ahamed et al., 2023; Altaf, 2016).

Theoretical review

Hoffman's tax planning theory

Several studies have focused on Hoffman's tax planning theory. In this theory, tax planning or TA aims to minimize the tax payable by taxpayers by managing their financial income. To this end, companies seek to exploit loopholes in tax legislation to achieve attractive tax savings, thereby improving their performance (Hoffman & William, 1961). To achieve this, companies wishing to opt for TA must reduce their taxable income, which forms the basis for calculating taxes, to the strict minimum, without having a negative effect on accounting income (Olamide et al., 2019). The theory also indicates that a positive relationship between company performance and TA only occurs when its cost does not exceed its benefits (Kawor & Kportorgbi, 2014).

Agency theory

The agency theory (Jensen & Meckling, 1976) defines agency as a contract by which one or more people (the principal) confer part of their decision-making power by performing tasks on their behalf to another person called (the agent). However, this agency relationship can become problematic when the interests of the two parties diverge. Transposed to tax context, the principal asks the agent to lower the amount of taxes to be paid to the state, by using techniques and means that comply with the legislation (Putra et al., 2018). Thus, the transactions carried out by managers or agents in the context of TA can be transformed into a means of diverting the company's resources, so that, instead of increasing the company's value, they contribute to its decrease, this allows us to hypothesize that the governance of the company impacts its performance (Tackie et al., 2022).

Stakeholder theory

Stakeholder theory was developed by Freeman in 1984 and promotes the idea that the purpose of the company is "to serve as a vehicle for coordinating the interests of stakeholders" (Donaldson & Preston, 1995). Stakeholders are defined as "those groups or individuals with whom the organization interacts or has interdependencies" and "any individual or group that may affect or is affected by the organization's actions, decisions, policies, practices or objectives" (Carroll & Buchholtz, 2008). Traditional theories of the firm attribute to the firm the function of maximizing shareholder returns, in contrast to stakeholder theory, which defends the idea that the firm should take into account the interests of all its stakeholders (Gibson, 2000). In this context, companies with a high social conscience are increasingly engaging in corporate social responsibility practices. At the same time, they are reducing their reliance on TA activities, which are often perceived as immoral. Tax managers must therefore opt for effective tax management that improves returns for investors while paying taxes owed to the state (Felix & Mamidu, 2021).

Empirical review and hypothesis Development

Researchers in the field of taxation have not reached a consensus on the impact of TA on FP, given that TA practices can generate benefits or create costs (VU & LE, 2021). In this context, some studies have based their measures of FP on accounting indicators, while others have used stock market indicators.

For research based on stock market indicators, many studies suggest that TA can create or reduce company value. Others have found that TA has no impact on value.

According to (Nebie & Cheng, 2023) the relationship between ETR and firm value is negative, suggesting that family firms have reduced agency costs because of the low number of agency conflicts, which in turn increases firm value. Furthermore, (Bryant-Kutcher et al., 2012; VU & LE, 2021) have shown that ETR is negatively associated with firm value. Thus, according to (Ji & Shan, 2018) TA generates agency costs, however, for well-governed firms, these costs are reduced which contributes to increasing firm value. In contrast, (Ftouhi et al., 2015) identified a negative and significant relationship between TA and firm value due to information asymmetry and the risks associated with TA. This result is in line with that found by (X. Chen et al., 2014) as a result of agency costs. According to (Z. Chen et al., 2016) TA could increase a company's value if it strengthens its internal supervision and management capacity to take advantage of the benefits associated with TA. Thus, (Minh Ha et al., 2021) reported that companies with strong state ownership practice little or no TA, which always negatively impacts firm value.

Nevertheless, (SALAWU et al., 2017) highlighted the absence of causality between TA and firm value in a study carried out on a sample of 50 non-financial companies. In this sense, corporate reputation could play a decisive role in the impact of TA on firm value. For example, research by (Hanlon & Slemrod, 2009) demonstrated that a company's share price is reduced when news of its participation in tax shelters is revealed. Thus, a survey by (Graham et al., 2014) found that for 69% of executives, reputation is ranked second among all the factors that explain why companies do not opt for TA strategies, and showed that 57% of public companies claim that the increase in earnings per share is the result of a TA strategy.

Among the research conducted in the field of TA and based on accounting indicators, there is the research of (Olamide et al., 2019), which showed that the ETR negatively impacts FP measured by ROE. On the other hand, (Olayiwola & Okoro, 2021) measured FP by ROA, and showed the importance of managing and supervising TA strategies to have a positive impact on FP. This confirms the findings of (Desai & Dharmapala, 2009) who studied the effect of governance on the impact that TA has on firm value and concluded that well-governed firms are better equipped to monitor managerial performance and minimize agency problems, resulting in a greater positive effect of TA on firm value.

In the Moroccan case, this debate remains little explored, particularly from an empirical point of view. Despite the reform of the 1980s, the Moroccan tax system remains marked by structural vulnerabilities (Benkejjane et al., 2024). These have led to an increase in tax pressure and growing sectoral disparities between 1990 and 2020. The results of the (Belahouaoui & Attak, 2024) study show that, while digitization and improved services encourage tax compliance, a lack of trust and transparency can accentuate TA practices.

Considering all these findings, it is assumed that there is a significant relationship between TA and FP in the Moroccan context. The following hypothesis is therefore formulated:

H_0: There is a negative relationship between TA and FP of listed non-financial companies in Morocco.

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AIMS AND OBJECTIVES

This research analyzes the bidirectional relationship between tax avoidance (TA) and the financial performance (FP) of listed non-financial companies in Morocco. It seeks to determine whether TA practices influence FP, but also whether, conversely, better FP enables firms to allocate more resources to optimizing their tax strategies. More specifically, the study aims to empirically test the relationship between TA and FP in the context of Moroccan non-financial companies. It mobilizes the Generalized Least Squares (GLS) method to address potential issues of heteroskedasticity and autocorrelation in panel data. The research also investigates the relationship between FP and firm-specific characteristics such as size, capital intensity, age, leverage, and growth, with the objective of gaining a deeper understanding of the determinants of FP in relation to TA practices. Finally, the study seeks to provide practical insights for tax managers and policymakers on how TA behaviour can influence the financial health of firms in an emerging economy like Morocco.

METHODS

Sample and data collection

The aim of this study is to examine the relationship between TA and FP. The study population consists of 63 non-financial companies listed on the CSE during the period 2018-2022. We excluded from our sample newly listed companies that did not have all the necessary data, companies with negative earnings and companies whose data were deemed unbalanced. Data collection was based on published financial reports.

Table 1 shows our sample of 32 companies meeting the requirements of our study:

Table 1. Sample selection process. *(Source: authors' elaboration)*

Total non-financial companies listed on the CSE	**63**
(-) Number of newly listed companies	(-) 05
(-) Number of companies with negative earnings	(-) 14
(-) Number of companies with unbalanced data	(-) 12
(=) Number of eligible companies	(=) 32

Model specification and variable measurement

To test our hypothesis, the following model was adopted

$$FP_{it} = \beta_{0it} + \beta_1 ETR_{it} + \beta_2 CI_{it} + \beta_3 LEV_{it} + \beta_4 GW_{it} + \beta_5 SIZE_{it} + \beta_6 AGE_{it} + \varepsilon_{it,}$$

where: FP will be measured by an accounting indicator.

This is ROA, being an accounting measure, provides indications of the efficiency with which a company's assets are used to generate profits (Dede & Mohd Haizam, 2019; Gu et al., 2024; Kyere & Ausloos, 2021; Wu et al., 2012). In this research paper, ROA will be calculated according to the following formula:

ROA = Net income / Total assets,

In this sense, measures commonly chosen by researchers include disparities between accounting and tax information and the ETR (Mgammal & Ku Ismail, 2015; Tang, 2020). ETR is considered the most relevant measure for judging a company's ability to reduce its tax burden (Nafti et al., 2020). It is used by policymakers as an indicator to synthesize the overall impact of tax incentives, providing insight into corporate tax systems (Richardson & Lanis, 2007). In this study, the ETR is calculated as follows:

ETR = Total tax expenses / Earnings before tax,

where: ETR to measure TA.

Investment in this type of asset minimizes the tax burden and influences TA measures (Monika & Noviari, 2021). In this research work, CI is evaluated as follows:

CI = Total non-current assets / Total assets,

where: CI stands for capital intensity, which is defined as the sum of investment activities in fixed assets carried out by organizations (Sugeng et al., 2020).

As such, it represents the company's ability to finance its assets with long-term debt (Rashid et al., 2015). In this article, it is defined as follows:

LEV = Long-term debt / total assets,

where: LEV stands for Leverage, which is defined as "the proportion of assets financed by debt with a maturity of more than one year" (Paeleman et al., 2024).

In this research, GW is measured as follows:

$GW = (Sales_t - Sales_{t-1}) / Sales_{t-1,}$

where: GW stands for growth. In this context, several studies have based their evaluation of company GW on sales GW (Z. Chen et al., 2016).

For this reason, the tax burden varies according to the size of the companies (JAFFAR et al., 2021). In this research, size is calculated as follows:

SIZE= log (total assets),

where: SIZE, as indicated by political cost theory, companies with high sales expose themselves to an increased tax burden due to existing laws, public scrutiny and social oversight (Adejumo et al., 2022).

It represents the natural logarithm of years of incorporation (D'Amato & Falivena, 2020; Olarewaju & Olayiwola, 2019).

AGE = log (the difference between the year of establishment and years of observations).

where: AGE, refers to the duration of a company's operation since its establishment (Kalbuana et al., 2023; Kawor & Kportorgbi, 2014).

RESULTS

Descriptive statistics

We begin our analysis of the impact of TA on the FP of non-financial quoted companies with a descriptive examination of all the variables analyzed. Table 2 below provides an overview of the sample characteristics, including mean, standard deviation, maximum and minimum values.

Analysis of the data in Table 2 shows significant variations. ROA varies with an average of 0.073, showing moderate profitability of the assets in the sample studied. As for the ETR, it also shows considerable variation, with an average of 0.369, showing that non-financial companies in Morocco pay various ETR ranging from 4.1% to 99%. The CI shows an average of 0.416, reflecting the importance of non-current assets in the total assets of the companies analyzed. The LEV shows an average of 0.144, demonstrating the relatively low level of indebtedness of Moroccan non-financial companies. The GW shows an average of 0.209, with considerable variation in GW rates.

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Table 2. Descriptive Statistics.

	Minimum	Maximum	Mean	Standard deviation
ROA	0.001	0.300	0.073	0.049
ETR	0.041	0.990	0.369	0.172
CI	0.015	1.050	0.416	0.235
LEV	0	0.55	0.144	0.145
GW	-0.950	24.090	0.209	1.915
SIZE	17.800	27.700	21.543	1.801
AGE	2.480	5.540	3.821	0.537

Correlation results

Analysis of the correlation matrix presented in Table 3 revealed several relationships between all the variables studied. A weakly negative correlation is observed between ROA and ETR, illustrating a trend where a higher ETR is associated with a lower ROA. On the other hand, a moderate positive correlation is observed between CI and LEV, as well as between SIZE and LEV, suggesting that higher degrees of CI and larger company size are correlated with higher LEV, this result is in line with that found by (Bala Ado et al., 2021). On the other hand, weakly negative correlations between GW and LEV, and between SIZE and ROA, suggest trends where higher GW rates are associated with slightly lower levels of LEV, while larger companies tend to have slightly lower ROA, this result is contrary to that found by (Kipesha, 2013; Osunsan et al., 2015). In addition, moderate negative correlations between AGE and LEV, as well as between AGE and SIZE, indicate relationships where older companies tend to have lower LEV and be slightly smaller in size. These findings offer insight into the underlying dynamics between the variables studied.

As this correlation matrix reveals, the potential presence of multicollinearity could be concerning, as the correlation coefficients between different independent and control variables are significant. To assess multicollinearity more precisely, variance inflation factors (VIF) were calculated when estimating the regression model. These VIFs allow us to determine whether the independent variables show signs of multicollinearity. Our results confirm that none of the VIFs exceed five for any of our independent variables. We therefore conclude that multicollinearity is not a major problem for our study.

Table 3. Correlation results.

	ROA	ETR	CI	LEV	GW	SIZE	AGE	VIF
ETR	-0.146	1						1.074
CI	0.001	0.018	1					1.646
LEV	-0.219	-0.151	0.544	1				1.638
GW	-0.060	-0.001	-0.045	-0.030	1			1.002
SIZE	-0.139	0.101	0.450	0.341	-0.019	1		1.299
AGE	0.060	-0.073	-0.027	-0.240	0.015	-0.090	1	1.100

Regression results

1. *Autocorrelation test:* Given that a regression analysis thus requires an examination of the autocorrelation of the residuals, the Durbin-Watson test provides a statistic whose value should approach 2. The Durbin-Watson test provides a statistic whose value should approach 2. In this study, the value obtained according to Table IV is equal to 1.218, allowing us to conclude that there is little positive autocorrelation in the model's residuals.

Table 4. Result of the Durbin-Watson test.

Statistical measure	R	R square	Adjusted R-square	Std. error of estimate	Durbin-Watson test
Result	0.351	0.123	0.089	0.047	1.218

2. *Heteroscedasticity test*: The results of the heteroscedasticity test presented in Table V reveal indications of its presence in the research model. Indeed, the ETR variable displays a statistical significance of 0.024, below the commonly accepted 0.05 threshold. However, the other variables, CI, LEV, GW, SIZE and AGE showed no significance below 0.05. This suggests that heteroscedasticity is present in the model and is mainly influenced by ETR.

Table 5. Result of the heteroscedasticity test.

Variable	ETR	CI	LEV	GW	SIZE	AGE
t-statistics	-2.279	-1.188	1.008	-1.304	-0.594	1.010
Significant	0.024	0.237	0.315	0.194	0.554	0.314

To study the association between corporate TA and the FP, the presence of heteroscedasticity and autocorrelation in panel data was raised. Consequently, the GLS regression method was adopted. It is used when the variances of the observations are unequal and/or when there is some correlation between the observations. For this reason, the ordinary least squares (OLS) method is considered statistically inefficient and could lead to erroneous results (Ftouhi et al., 2015). In this study, the relationship between ETR and financial profitability is negative (-0.0563208) indicating that a high ETR is associated with a low ROA. This relationship is significant given that the P-value (0.011) is below the commonly accepted threshold of 0.05.

According to Razali et al. (Razali et al., 2018) ETR has an inverse relationship with TA Indeed, a higher ETR means less TA. Consequently, our study reveals that the relationship between the company's TA and its FP is positive.

Table 6. Regression results.

ROA	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
ETR	-0.0563208	0.0220699	-2.55	0.011	-0.0995769	-0.0130647
CI	0.0513411	0.0199714	2.57	0.010	0.0121979	0.0904843
LEV	-0.1214503	0.0323968	-3.75	0.000	-0.1849468	-0.0579539
GW	-0.0015833	0.001919	-0.83	0.409	-0.0053444	0.0021778
SIZE	-0.0031144	0.0023232	-1.34	0.180	-0.0076678	0.0014389
AGE	-0.0039214	0.0071637	-0.55	0.584	-0.0179619	0.0101192
Cons	0.1726772	0.0558799	3.09	0.002	0.0631546	0.2821998

DISCUSSION

The main purpose of this article is to examine the relationship between TA and FP of non-financial companies listed on the Moroccan stock exchange between 2018 and 2022. The TA and the FP of non-financial performance are positively correlated, and the empirical results rejected the null hypothesis and recognized the positive relationship. This indicates that companies are increasingly aware of the key role played by TA in their FP, particularly in a crisis context. It should be noted that an inverse relationship between TA and PF is possible. Indeed, if a company improves its profitability, it may have better resources and capacities to implement more sophisticated tax avoidance strategies, which would lead to an inverse causality between these two variables.

In addition, these results can also be explained by the Moroccan tax incentive framework, as well as by the stimulus measures adopted during the COVID-19 health crisis. Firstly, there is a multitude of incentives for start-ups, or those operating in one of the priority sectors, which could require significant resources. Secondly, and as part of the management of the Covid-19 crisis, the Moroccan Tax Administration has taken a series of tax measures to support economic activity, including tax deadline rescheduling, and cash contributions made to the "Special Fund for the Management of the Covid-19 Pandemic" are considered as donations, and as such are deductible from taxable income (Carter & Bensal, 2024). Thirdly, the proactivity of Moroccan SMEs with their tax practices, as part of their overall strategy (Laguir et al., 2015). Finally, the perception of TA by Moroccan companies as a strategy for correcting a perceived imbalance in the tax system. This is because a significant number of Moroccan taxpayers consider the current Moroccan tax system to be inequitable, believing that tax rates are excessive and that the distribution of the tax burden between different categories of taxpayers is unfair (Belahouaoui & Attak, 2023). This dynamic could partially explain the observed effect of TA on FP indicators, as shown by our GLS model.

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These results are also consistent with empirical studies, such as those published by (Nebie & Cheng, 2023) which demonstrate a negative correlation between ETR and TA, indicating that ETR and Tobin's Q are inversely related. They are also consistent with the findings of (VU & LE, 2021) having found that ETR and Tobin's Q are negatively correlated, but state involvement may impact this relationship by acting as a moderator that modifies the impact of TA on firm value. Similarly (Heitzman & Ogneva, 2018), assert that stock returns tend to increase depending on the level of TA practiced in the company.

However, these results differ from those of (X. Chen et al., 2014), who demonstrate that TA behaviour increases agency costs and reduces firm value, and (Z. Chen et al., 2016) who indicate that the relationship between TA and market value is negative. Similarly, (Ftouhi & Ghardallou, 2020) argue that TA negatively affects the value due to higher agency costs.

The academic literature on the relationship between TA and performance reveals divergent results, testifying to a lack of unanimity among researchers.

CONCLUSIONS

This research applied the GLS method to examine the relationship between TA and FP. This method is adapted to handle panel data, particularly by correcting for problems of heteroscedasticity and correlation between errors. The findings show that TA has a significant and positive impact on the FP of non-financial companies in Morocco. These results are important for Moroccan companies, particularly those operating in the non-financial sector.

Given the positive impact of TA on FP, companies must first of all improve their TA practices and try to internationalize their operations to maximize the benefits of international tax regulations. This could include setting up subsidiaries in low-tax locations (Fuest et al., 2022).

Secondly, given the growing trend towards the digitalization of tax administration in Morocco, companies should invest in the digitalization of their TA systems to limit tax risks due to human error, reduce compliance costs and increase transparency (Fatmasari et al., 2023; Odunayo Adewunmi Adelekan et al., 2024).

Finally, certain industries in Morocco benefit from preferential tax regimes. Companies should take advantage of these benefits by targeting investments in sectors offering tax incentives, such as renewable energies or exports, to improve their after-tax return.

The study on TA and FP in Morocco is relevant and contributes to improving research in the field of TA. The originality of this article is to study the relationship between TA and FP in the Moroccan context, characterized mainly by increased digitalization of tax administration, diversity in tax benefits granted to certain sectors, and the global economic perturbation resulting from Covid-19 pandemic, represents a new context for studying this issue.

This study has certain limitations, notably the assumption of correct specification of variance-covariance in GLS and the failure to take into account fixed effects, which may introduce bias. In addition, the relative smallness of the sample limits the generalization of the findings. The research focuses only on the non-financial sector, which does not allow analysis of the sectoral specificities of tax practices.

For future research, it would be worthwhile expanding the sample and conducting separate sectoral analyses to examine sectoral differences. The use of fixed-effect models or the Generalized Method of Moments would also improve the robustness of the results by controlling for unobservable company-specific characteristics.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

All Authors have contributed equally.

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CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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УХИЛЯННЯ ВІД СПЛАТИ ПОДАТКІВ І ФІНАНСОВІ ПОКАЗНИКИ НЕФІНАНСОВИХ КОМПАНІЙ, ЩО КОТИРУЮТЬСЯ НА БІРЖІ: ЕМПІРИЧНІ ДАНІ З МАРОККО

Метою цього дослідження є вивчення взаємозв'язку між ухиленням від сплати податків (СП) та фінансовими показниками (ФП) нефінансових компаній, що котируються на Марокканській фондовій біржі. ФП вимірюється загальновизнаним бухгалтерським показником, яким є рентабельність активів (ROA). СП – незалежна змінна – вимірюється ефективною податковою ставкою (ЕПС), ключовим показником для оцінки податкової практики. У цьому дослідженні використана кількісна методологія, заснована на аналізі вторинних даних, зібраних із фінансових звітів, опублікованих 32-ма нефінансовими компаніями, зареєстрованими на фондовій біржі Касабланки (CSE). Період аналізу охоплює п'ять років поспіль, із 2018 по 2022 рік. Метод узагальненої регресії найменших квадратів (GLS) був використаний для вивчення того, чи є зв'язок між СП й ФП значущим. Справді, ЕПС демонструє обернену залежність від СП, оскільки вищий ЕПС відповідає нижчому СП. Результати цього дослідження свідчать, що взаємозв'язок між корпоративною СП й ФП є значною мірою позитивним. Ураховуючи, що більшість досліджень взаємовідносин між СП й ФП зосереджена на китайських, американських та австралійських компаніях, проведення досліджень у нових регіонах з іншими правилами може призвести до різних результатів. У цьому відношенні марокканський контекст,

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що характеризується головним чином посиленою диджиталізацією податкового адміністрування; різноманіттям податкових пільг, які надають певним пріоритетним секторам; глобальним економічним збоєм, спричиненим пандемією Covid-19; і заходами фіскального стимулювання, вжитими владою під час цієї кризи, дає новий контекст для вивчення взаємозв'язку між СП й ФП.

Ключові слова: ухиляння від сплати податків, фінансові показники, ефективна ставка податку, рентабельність активів, Марокко

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