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Determinants Affecting Effective Tax Rates of Listed Companies in Vietnam

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Abstract

The research analyses the Effective Tax Rates (ETRs) determinants of Vietnamese publicly listed firms. The primary motivation is the need for studies on tax declaration behaviors and tax compliance at the company level in Vietnam. This research focuses on listed companies on the Ha Noi Stock Exchange (HNX) and Ho Chi Minh City Stock Exchange (HoSE) during the period from fiscal year 2019 (FY2019) to FY2023 following the list of Vietnam's 500 most prominent enterprises (VNR500) in 2023 announced on November 17, 2023, excluding companies in financial sectors (i.e. performing activities related to banking, insurance, stock brokerage or other financial services as their main business activities). Financial and non-financial data were extracted from the financial statements (FS) concerning the variables appropriate to the research model and the Vietnamese market. The study establishes the relationship between ETRs and company-specific characteristics such as size, leverage, fixed assets ratio, inventory, and profitability. The application of panel data analysis finds that the tax obligations are significantly determined by the company's profitability, with the supplementary effects from fixed assets and leverage ratio. It is one of the initial studies in the context of publicly listed Vietnamese companies and their ETRs; therefore, it can give some general information about the tax burden of publicly listed Vietnamese companies and provide some suggestions for other studies.

Keywords: Effective tax rate, tax compliance, Vietnam tax regulation.

1. INTRODUCTION

Taxes are the most crucial part of making contributions to state budgets. The government must effectively manage the taxation system to ensure fairness in society, which is a basis for stable development. During the process of production and doing business activities, there are several types of taxes that companies have to declare and pay on time; otherwise, they shall be fined. In reality, many companies are looking for ways to reduce the amount of tax payables, especially the amount of Corporate Income Tax (CIT). This is why companies' ETRs are usually at lower levels than Statutory Tax Rates (STRs). Based on the formula of ETR calculation, two factors should be taken into account: actual tax expenses and earnings before taxes:

ETR = (Tax expenses)/(Earnings before taxes)

It is straightforward to calculate ETRs according to the public financial statements. Since ETRs reflect a company's actual tax burden, specific studies in this regard for the Vietnamese market can evaluate firm-specific characteristics. The principal purposes are to assess taxation management by the government and corporate tax control of companies' management boards. Many studies have investigated the factors that influence a firm's ETRs. However, most of this research has focused on US, EU, and Australian businesses. Only some studies have examined businesses in emerging economies, especially in Vietnam. Therefore, this research is conducted due to concerns.

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2. LITERATURE REVIEW

The research "Effective tax rates and firm size: the case of the Dominican Republic," written by Pierre Bachas, Anne Brockmeyer, Roel Dom, and Camille Semelet, published in January 2022, shows the variation of ETRs across the firm size distribution by calculating ETRs at the enterprise level. In detail, the researchers utilized administrative tax returns of the Dominican Republic's enterprises and a transparent methodology leading to comparable results. Overall, the study shows the average ETR among all research objects (i.e., 16%) and proves that ETRs tended to grow over the firm size distribution from 2006 to 2015; however, they decreased at the top for the largest enterprises.

Considering that the relationship between ETRs and their determinants is a complicated topic, studies on this matter usually highlight only a specific factor. The research "The Relation between Effective Tax Rates and Firm Profitability" by Erin Henry and Richard Sansing, published in January 2019, demonstrates the association between ETRs and return on assets (i.e., ROA). The researchers developed a complex model to examine the association between ETRs and profitability in samples of enterprises. In addition, the researcher also took advantage of previous studies, which suggested an array of control variables such as firm size, leverage, the ratio of intangible assets to total assets, capital expenditure, advertising expenses, loss carryforward, foreign operations, property, plant and equipment, selling and administrative expenses and research and development expenses. In summary, the ETRs of tax-favored enterprises shall decrease in income, and the ETRs of tax-disfavored enterprises shall increase in income. The tax avoidance effect could explain this result.

However, there are some studies which can present a comprehensive perspective. Their authors have provided us with reliable theoretical bases and rigorous reasoning methods. For instance, the research "Determinants of Effective Tax Rates in Turkey," written by Çağrı Aksoy Hazır and published in Research in Business (2019), shows an analysis of the determinants of ETRs through Turkish public listed companies data. The author focused on four determinants: (1) firm size, (2) leverage, (3) asset mix (including capital intensity and inventory intensity), and (4) profitability. A regression model was used to test the relationships between the four factors above and the ETRs. Regarding the results obtained from this study, the average ETR in Turkey is lower than the normal STR here, which was at the level of 20% by the time the research was carried out. It is appropriate and in line with previous studies. In addition, the regression results have shown that the average ETR of Turkish publicly listed companies was 15% at the time of the research being conducted, and the level of ETR is under the STR of 20%.

A considerable number of studies around the world have explored which determinants can affect the ETR of an enterprise. According to the reachable research, most were based on the financial information of companies in the USA, Australia, and Europe. Only a small portion has been conducted in emerging countries so it induces a research gap for new studies in the Vietnamese market. Even so, existing studies have demonstrated discrepancies in results. The primary reason is that studies regarding this topic depend mainly on specific characteristics of companies. These characteristics vary from country to country, region to region, and even within a particular country.

3. METHODOLOGY

3.1. Descriptive statistics and correlation analysis

The descriptive statistics of samples shall be conducted via Stata/MP 17.0 Software and Microsoft Excel. The descriptive statistics of variables and correlation analysis for panel data shall be conducted via Stata/MP 17.0 Software.

3.2. Regression model analysis

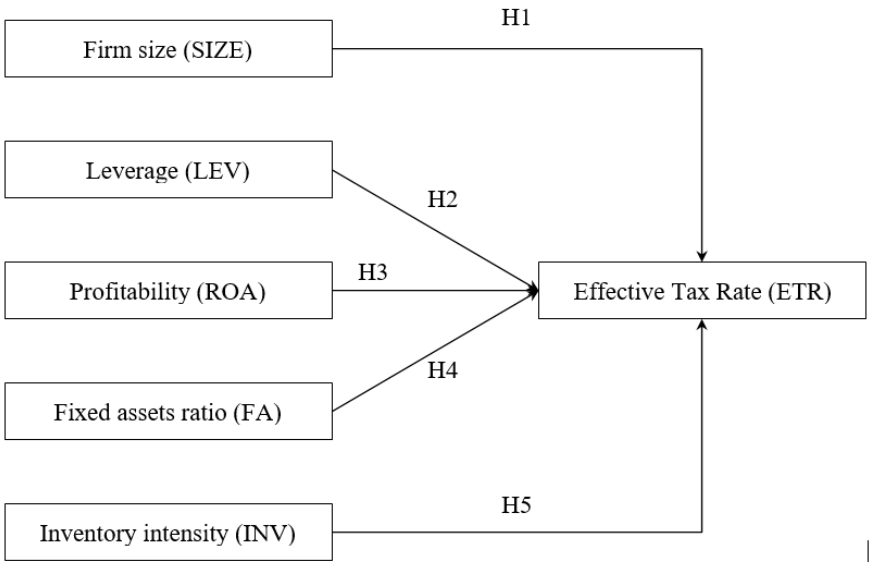
Combining the advantages of the cross-sectional and time series models, the panel data model is used to test the relationships regarding determinants of ETR. In this study, regression analysis was carried out using Pooled Ordinary Least Squares (POLS), Fixed Effects Model (FEM), Random Effects Model (REM) and Generalised Least Squares (GLS). POLS is the most basic regression model for panel data analysis. It estimates model parameters by combining both cross-section data and time series data. It does not differentiate between cross-section data and time series data. POLS assumes that there are no unobservable entity-specific effects.

FEM is also used in the analysis of panel data. FEM is a model which represents the observations in terms of explanatory variables that are considered as if the quantities are non-random. In other words, this type of statistical model has model parameters being fixed or non-random quantities. REM is another method for panel data

analysis. While FEM concentrates on variations within groups, REM treats unobserved entity-specific effects as random and uncorrelated with the dependent variables. GLS is a method used to estimate unknown parameters in a linear regression model. In many cases, after taking an appropriate test, GLS will be used to improve the efficiency of data estimation. The GLS model is suitable for fitting linear models on data sets that exhibit heteroskedasticity or auto-correlation.

In addition, several tests related to the model's results shall be conducted together; therefore, the most appropriate model for this case will be selected appropriately. F-test is used for cases in which the authors would like to choose the more effective one between POLS and FEM. Breusch – Pagan Lagrangian test is used for cases in which the authors would like to choose the more effective one between POLS and REM. The Hausman test is used for cases in which the authors would like to choose the more effective one between FEM and REM. The multicollinearity test is used to define whether multicollinearity exists or not. The heteroskedasticity test and autocorrelation test are used to define whether the GLS model should be taken to improve the data estimation efficiency of POLS, FEM and REM.

3.3. Research variables and hypotheses



a) Firm size (SIZE)

In any aspect, firm size is a criterion that suits Vietnamese markets. This criterion can give a general view of a company. Firm size can refer to the scale on which the enterprises operate. In practice, it shows the company's capacity and can be measured by total assets, authorized capital, total revenue, and number of employees. The primary one is the potential effects of firm size on tax burdens. As mentioned when reviewing the existing studies on this factor, there is a controversy over firm size's impact on tax liabilities. On the one hand, some authors supposed that larger companies must deal with strict regulations and pay more taxes. This situation can lead to a desire for tax evasion, in which the company intentionally gives wrong declarations for tax purposes to reduce its burdens in this regard. Other authors suggested that larger firms should have more effective tax planning and management and receive more incentives from the Government. It will lead to a decrease in ETR, even though the amount of tax payment increases (but obligations do not increase as significantly as the profits). The second opinion may be more appropriate based on a review of Vietnamese markets. Firstly, larger companies are usually capitalized. They operate as a corporation and have many subsidiaries under control. Therefore, there are many new projects accordingly. Considering that the variety of business sectors and the large number of new investments will lead to several opportunities for applying CIT incentives, firm size is predicted to have a positive relationship with the ETRS.

Firm size is measured as the natural logarithm of net revenue during the FY under assessment. Due to inconsistent results and theoretical perspectives of previous studies, any relation between firm size and ETRs can be expected.

H1: There is a relationship between firm size and ETRs.

b) Leverage (LEV)

Per a review of existing studies on factors that have an influence on ETRs, the leverage ratio has been taken into account by several authors. Actually, in Vietnam, the leverage ratio is popular in assessing the business position. This ratio shows the capital structure of a company. It indicates that the company is currently financed from debts or equity as the major source of financing. In existing studies, the leverage ratio has been considered as it relates to interest expenses, which can be subtracted from the taxable profit. In Vietnamese markets, this theory is useful, as interest is also deducted before CIT calculation, similar to other countries. As a result, the predicted sin of this relationship is negative. The reason is that firms with higher debts, then higher interest, have less tax burdens and lower ETRS. However, there are still some previous results showing that the relationship between these two variables is positive. Interest expenses, in some cases, are not considered deductible expenses. The leverage is usually calculated by using total debts divided by total equity or total assets. The association of leverage and ETR can be negative.

H2: There is a relationship between leverage and ETRs.

c) Profitability (ROA)

Profitability should also be considered as an important factor in this model. As profit is the most concerning aspect of many companies in Vietnam, it is appropriate to be analyzed. Corporate health is demonstrated clearly via this ratio. Return on Assets (ROA), which is used in this research, shows the effectiveness of using assets in generating profit. In comparison with the measures based on sales and equity, ROA has some more advantages because it reflects the income earned per investment. Per normal understanding, in case profits increase, tax burdens increase. Thus, the prediction of many studies on this variable is a positive sign. However, even though this variable does not cause arguments as much as firm size, there are still some inverse opinions. The major basis is the incentives scheme. Therefore, it is still a determinant that can induce unexpected results.

H3: There is a relationship between profitability and ETRs.

Due to the previous results, an increase in ROA can lead to an increase in ETRs.

d) Fixed assets to total assets ratio (FA)

H4: There is a relationship between fixed assets to total assets ratio and ETRs.

Fixed assets to total assets ratio (FA) is measured as average fixed assets divided by average total assets during each fiscal year under assessment. Another factor included in this research is the ratio of fixed assets to total assets. The predicted sign is negative due to many reasons. As discussed in the previous research, fixed assets incurred depreciation expenses during their useful lives, which are also deducted from the income before calculating CIT. Thus, the amount of tax burdens, and ETRS accordingly will decrease.

In Vietnam, the aforementioned reason is not the only explanation for this expectation on the relationship between investment in fixed assets and ETRS. A significant increase in fixed assets is a requirement for new investment projects; therefore, when a company acquires fixed assets in a large amount, it may introduce a new investment in the near future. As new investments can receive many tax incentives in Vietnam, the investment in fixed assets is possibly a sign leading to a decrease in ETRS.

To discuss on the other hand of this variable, there are still some matters that can cause unexpected results between the fixed assets ratio and the ETRS. Considering that fixed assets management is very difficult and tax authorities shall require many supporting documents for the fixed assets and their depreciation charge, if the company can not control fixed assets effectively, it will receive negative results in which depreciation expenses become non-deductible even when a large number of resources are put into fixed assets. For example, the competent authorities may request handover minutes and documents proving the exact start date and end date of each asset, which many companies do not store in full.

e) Inventory intensity (INV)

The final factor included in this research is inventory intensity. Inventory is short-term assets while fixed assets are long-term; they are 02 important components of the asset mix. Some companies allocate their resources to invest in fixed assets on inventory. In this case, the predicted sign is positive. However, note that inventory is a

factor which many previous research shows an insignificant relation with ETRS. This observation can be a prediction, too.

H5: There is a relationship between inventory intensity and ETRs.

Within this model, inventory intensity (INV) is measured as average inventories divided by average total assets during each year under assessment.

4. RESULTS AND DISCUSSION

4.1 Descriptive statistics of variables

As shown in Table 4.1, the average ETR regarding these samples is about 21.55%. Actually, the normal CIT rate in Vietnam is 20%. Therefore, the result is higher than the normal tax rate for companies. The reason is that samples include companies in the natural resources exploitation sector, which are subject to a CIT rate of 32% to 50%. In addition, the result shows a clear difference in ETR among companies, with a minimum of 0% and a maximum of 340%. The maximum of ETR belongs to a corporation in the real estate sector. Per clarification data obtained previously for checking abnormal results, it is noted that this case has to perform many adjustments for tax purposes in the relevant FY, which leads to the amount of tax burden being higher than EBT. In which the loss of its subsidiaries contributes the largest amount. Regarding other variables, LEV shows that in the capital structure, financing from debts contributes to a larger portion in comparison with equity, and leverage is at a relatively high level. Investments in fixed assets and inventories are relatively similar and not high, with an average of 23% and 20%, respectively. The variances between the maximum value and the minimum value of independent variables can show the variety of companies included in the samples.

Table 4.1. Descriptive statistics of all variables per the research model

Variable	Number of observations	Mean	Standard deviation	Minimum	Maximum
ETR	390	.2154703	.1983091	0	3.402124
SIZE	390	22.51849	1.310099	18.28219	26.4405
LEV	390	1.587355	2.247146	.0360834	26.54137
ROA	390	.0969702	.0784507	.0006453	.4178536
FA	390	.2309018	.1628008	.0010938	.8696564
INV	390	.2023826	.1624975	.0000584	3.402124

4.2. Correlation analysis of variables

Table 4.2. Correlation analysis of variables

	ETR	SIZE	LEV	ROA	FA	INV
ETR	1.0000					
SIZE	0.1648*	1.0000				
LEV	0,1299*	0.0488	1,0000			
ROA	-0.2318*	0.0891**	-0.3334*	1.0000		
FA	-0.1297*	-0.0239	-0.2200*	0.0765	1.0000	
INV	0.0249	0.0804	0.1660*	0.0091	-0.3575*	1.0000

Note: * and ** denote statistical significance at the 5% level and 10% level, respectively. Other displaying coefficients stated in the table indicate insignificant relationships between the two variables.

In accordance with the correlation matrix, the dependent variable (i.e., ETR) has a positive and significant correlation with two independent variables, SIZE and LEV. The dependent variable also has a negative and significant correlation with two independent variables, ROA and FA. The largest correlation between an independent variable and ETR is ROA, with a coefficient of -0.2318. Accordingly, per this correlation matrix, ROA will be the variable that has the most significant effect on ETR regarding the samples within the scope of this study only. The aforementioned variables have statistical significance at the level of 5%. It ensures the meaningfulness of these results. However, the remainder - INV, shows that it does not have a significant impact on the dependent variable. These results may be used in prediction for further analysis below.

Regarding the association between independent variables, it is noted that LEV has significant relationships at the level of 5% with others, exclusive of SIZE. Another remark is that FA and INV have a negative and significant relationship. It complies with a practical action stated in the theoretical framework on inventory intensity, in which companies allocate resources for fixed assets on purchasing inventories. It is also a way to reduce ETR.

4.3. Regression model analysis results

Table 4.3. GLS results

Independent variables	Coefficient according to GLS model
SIZE	0.00567
LEV	0.00353*
ROA	-0.203***
FA	-0.0473**
INV	-0.00216
C	0.104

Note: *, ** and *** denote statistical significance at the 10% level, 5% level and 1% level, respectively.

- **The inverse relationship between profitability (ROA) and ETR**

The relationship between Profitability and ETR is defined by the inverse relationship between independent variables (i.e., ROA) and ETR, with the coefficient of ROA being negative (-0.203) and significant. The statistical significance of the relation is at the 1% level, by which hypothesis H3, "There is a relationship between profitability and ETRs," is accepted. As shown by these regression results, higher profit levels of publicly listed companies in Vietnam have led to lower ETRs. It seems contrary to the prediction as well as some results from existing studies. However, this result can be explained based on some reasons as below:

The incentives scheme regarding taxes in Vietnam is extremely diverse. There are many types of tax incentives to which companies can submit dossiers for application in respect of several particular objectives. Therefore, the number of companies in Vietnam that have obtained incentives is relatively huge. Due to this practical observation, in case many companies in Vietnam have tax preferences, the general relationship between these two variables remains negative for understandable reasons.

Per assessment on a case by case basis, in Vietnam, there are policies for tax reduction and tax exemption from the establishment date of a company. For example, the company shall be entitled to tax exemption during the period of 02 years and a 50% tax reduction in the following 04 years when having new investment projects in some specific industrial parks prescribed under Decree 218/2013/ND-CP. In this case, during the period of tax exemption and reduction, regardless of a significant increase in profit, the tax burdens of this company will stay unchanged (even at the level of 0% in 02 initial years). These cases can affect the general intention of the relationship among variables.

The effect of ROA on ETR within this model is the most significant. This result shows that, regarding companies under the group of samples for this research, many of them can obtain tax incentives in accordance with Vietnamese regulations. In addition to this result, Derashid, C., & Zhang, H. (2003) and Noor et al. (2010) observed similar results by investigating Malaysian companies. Considering that both Vietnam and Malaysia are in Southeast Asia and have cooperated in many sectors, some similarities may be able to be explained. However, this matter is out of the scope of this research and requires detailed analysis as well as effort.

- **The inverse relationship between fixed assets to total assets ratio (FA) and ETR**

The relationship between the fixed assets to Total assets ratio and ETR is defined by the inverse relationship between independent variables (i.e., FA) and ETR, with the coefficient of FA being negative (-0.0473) and significant at the meaningful level of 5%. Despite the fact that its effect in ETR is lower than the effect of ROA, it is still an important variable contributing to this model. Hypothesis H4, "There is a relationship between fixed assets to total assets ratio and ETRs," is accepted. The result of this variable is in accordance with expectation, as the higher the number of fixed assets is, the higher depreciation expenses shall be subtracted from the taxable income of the companies.

In practice, there is more than one reason which can explain this result for particular tax environments and applicable tax policies in Vietnam. Per Law No.32/2013/QH13, taking effect from 01 January 2014, companies are subject to tax exemption, tax reduction, and preferential tax rates (i.e., 10%, 15%, or 17%, depending on specific cases) regarding new investment projects. It means that even after the tax preference period for the company has finished, it can obtain new incentives for new projects (it does not need to establish a new entity).

However, the new projects are required to meet some detailed conditions to obtain tax incentives, including a condition regulating that fixed assets must increase by at least 20% in comparison with the initial amount of fixed assets. Considering that other conditions are difficult to achieve, many companies choose to increase their total

fixed assets and then submit application dossiers with supporting documents proving the amount of fixed assets newly acquired to authorized authorities. In this case, the significant increase in fixed assets amount and the respective decrease in tax burdens shall occur in a similar FY under assessment, which leads to an inverse relationship.

- **The inverse relationship between leverage ratio (LEV) and ETR**

The relationship between leverage ratio and ETR is defined by the inverse relationship between independent variables (i.e., LEV) and ETR, with the coefficient of LEV being positive (0.00353) and significant at the meaningful level of 10%. The inverse relation is contrary to the prediction. In this case, to have an appropriate explanation, some more detailed studies on particular companies should be conducted, and these actions are beyond the scope of this thesis. However, according to the theoretical basis on leverage ratio and its potential association with ETRs, this result can be explained as follows:

The debt structure of the company includes a large portion of short-term liabilities, and they do not require any charge for holding them or require a small amount, which cannot affect the ETR of the company. In this case, interest expenses cannot be incurred. Thus, it will not have any effect on the tax position. The company's related parties perform the long-term debts to minimize tax burdens. However, regarding financing activities with related parties, all parties participating in these transactions must comply with Vietnamese regulations. Any breach will lead to fines and penalties.

- **The relationship between firm size (SIZE) and ETR**

The result shows that the firm size of listed companies in the Vietnamese Stock Markets has an insignificant influence on the ETRs. That is in accordance with the observation and conclusion of Liu & Cao (2007). Actually, larger companies in Vietnam, especially listed companies in observations for this research, usually have several business activities in several sectors and industries. As a result, a company may obtain many different types of tax incentives. Thus, it seems more normal if they have lower ETRs than others. However, the research results state that these two variables have insignificant relationships. In this case, instead of taking an assessment of corporations listed on the stock exchanges, studies in the future should focus on each subsidiary's activities. Therefore, when assessing financial information, the financial position of each entity will not affect others.

- **The relationship between inventory intensity (INV) and ETR**

The result shows that the inventory intensity of listed companies in Vietnamese Stock Markets has an insignificant influence on the ETRs. That is also in accordance with the observation and conclusion of Derashid & Zang (2003) and Liu & Cao (2007).

- **Other comments on all research results**

Due to the discrepancies and controversial arguments among existing studies, determinants of the company's ETR may vary among different tax environments and applications. Details from the companies under assessment should be obtained to analyze the exact tax position and its association with other factors. However, it is challenging because some information is only for their internal uses and records. This research was conducted to investigate and analyze the determinants of publicly listed companies' ETRs in the Vietnamese Stock Exchange. Based on the FS information, the effective tax rate of each company was calculated, and the results showed that the average ETR of Vietnamese publicly listed companies is 21.55% and above the STR of 20%. Per panel data estimation procedures, the data show that some of the explanatory variables used in the previous literature significantly affect the tax burden of Vietnamese publicly listed companies. The regression results show that firm size and inventory have an insignificant effect on ETR, while profitability has the most significant effect on ETR compared to other variables.

The results could be more conclusive regarding the variables, especially inventory intensity and firm size. Regarding inventories and firm size, the results indicated an insignificant association between inventory intensity and ETRs, even though these two factors have to be observed and treated as significant. Effectively, this study confirms the existence of an association between ETRs and profitability, leverage, and investments in fixed assets. The study adds to the literature on the relationship between ETR and firm-specific characteristics in such an emerging market.

Moreover, the results from this study will provide additional information on the tax obligations of listed companies in the Vietnamese market for those relevant to accounting, financial services, and tax sectors. Various groups, such as students in tax sectors, tax researchers and anyone using tax-related information for their decisions, may also be interested in the results of this study.

5. RECOMMENDATIONS

5.1. Recommendations on the directions of studies on this matter in the future

This study shall provide general information on the initial approach to ETRs and its determinants from FY2019 to FY2023 regarding the target companies listed on HNX and HOSE within Vietnam. In the future, these results can be compared with similar research for other markets, especially in Southeast Asia. Due to the limitations of this research, which make the study far from the fulfillment on this matter, there are some comments for further research and analysis in the future as below: The first aspect that can be improved in the following studies shall be the scope of work under this research. Considering that the timeline for the issuance of this thesis is only more than two months, there is an array of criteria in the scope that can be broadened in the future, including:

(1) The number of listed companies involved in the research. Within the scope of this graduation thesis, the number of companies under assessment is only 78, according to the list of VNR500 and some additional conditions for the selection process. As mentioned in Chapter 3 on samples of data, this research does not involve any effect of companies having loss during the period under assessment and having no CIT burden on EBT before adjustments are implemented by other amounts accordingly. In practice, the number of companies currently listed on the HNX and HoSE is more significant than those already assessed in this study. According to the State Securities Commission of Vietnam (SSC), the recently updated number of listed companies on HNX and HoSE are 322 and 398, respectively. These statistics are as of the end of April 30, 2024. Therefore, an increase in the number of companies included in the sample list is necessary for more detailed and comprehensive results in this regard in the future.

(2) In addition to the necessary increase in the number of companies under assessment, the scope of time and location should also be expanded in further research on ETRS and its determining factors. In Vietnam, besides listed companies on the HNX and HoSE, there are a large number of companies on UPCOM (in which transactions of stocks do not meet requirements for listing on HNX and HoSE), about 871 companies at the end of April 2024, according to State Securities Commission of Vietnam. These companies on UPCoM also show their strength in their business sectors and have several outstanding business performances, like those listed on the HNX and HoSE. Furthermore, transactions on OTC or limited liability companies should be assessed with publicly listed companies, as mentioned in this research. The reason is that if a study can reach out to a wide range of companies that have different ownership structures, it will be more attractive to managers at all levels of companies in Vietnamese markets, as well as will provide a more comprehensive conclusion in this regard for further tax management of both companies and the Government. Companies listed on the HNX and HOSE usually have more prominent size and sustainability in tax management. Thus, including small and medium enterprises (SMEs) will bring unexpected results and discrepancies due to various business characteristics. Results, therefore, will be more reliable and can reflect the exact situation of Vietnamese markets in this regard. Another note is that the time range can be extended for more than five years. Since existing study authors frequently use a time range of 5 years, this range still needs to be increased. Some studies involve ten years of data, which requires much effort. However, if the research timeline is longer, it is possible to carry out the analysis with more years for more reliable results.

(3) Another improvement that should be made in addition to the comments stated above is to broaden the concern of non-financial data on this matter. In practice, matters related to taxation are not only affected by financial data on the public FSs. They are also affected and have effects on social backgrounds. Therefore, it is crucial to consider non-financial measures when assessing the ETRS' determinants. However, collecting and selecting non-financial data will be difficult because many of these kinds of data are not appropriately disclosed to external users. For example, the effectiveness of tax planning and management of companies can significantly influence tax burdens. However, they face the fact that the details are usually confidential due to the awareness of competitive advantages in the management system. Other information, including Enterprise Registration Certificate (ERC) and Investment Registration Certificate (IRC) regarding authorized capital, business activities, changes over the years, and specific tax incentives applications for each case, are also tricky for external users. They are only provided to competent authorities if required or financial services firms for their support. Thus, this advice is more difficult to implement than these two recommendations initially.

The second aspect that should be developed in the future is the model, relevant variables, and research methods. They are essential in research. Since this thesis has approached a new matter in Vietnam, which was rarely considered before, the model used to assess it no longer fulfills all potential variables. Therefore, reviewing and developing a more comprehensive model to assess this research topic is necessary. As mentioned above, in the broadening of the scope of work, some non-financial variables should be considered, such as applicable tax incentives of each company, effectiveness in tax management, general incentives for companies with different characteristics (location, business sector, business model), the number of employees, the situation of over employment, test of controls, status and honesty of information disclosures, or effort in decrease tax burdens.

In addition, although financial data has already been included in this study, there still needs to be a research gap for which other authors can add new criteria for assessing ETRS' determinants. For example, as per the review of existing research for this thesis, non-deductible expenses directly affect ETRS, and this amount is usually disclosed in the Notes to FSs (i.e., Note on CIT). As a result, this variable was considered for inclusion in this research; however, due to a few inconsistencies regarding the Note on CIT of different companies, it was excluded this time. Considering that requirements on information disclosures have been improved and completed day by day, a belief in the possibility of collecting this kind of data is undeniable.

Another financial factor that should be considered is the consolidated influence of subsidiaries on the parent company. Per the review and assessment of FSs, a relevant note of the subsidiaries' financial position is that this factor significantly influences the parent company. It may even increase a company's tax obligations to an extremely high level, which is higher than EBT.

In addition, other factors, such as the effects of exchange rates and adjustments in provisions and accruals, should also be considered in the research. Research methods should be reviewed and added for further purposes. Additionally, the sample list should be coded more scientifically for a more straightforward analysis. The third aspect that can be improved is further comments on business management at the company level, even for the Government's management. It depends on the experience of people who research because providing professional advice is complex and requires a deep understanding of business characteristics, taxation systems, and general tax policies. However, in cases where the authors can provide these kinds of comments, they will add value to the research and make it more practical and applicable.

5.2. Recommendations for the Government in tax management at the country level

Firstly, the Government, including all competent authorities in every sector, should improve the consistency and clarity of the legal documents (i.e., Decree, Circular, Decision, Official Letter, etc.) on adjustments in corporate income for tax purposes. Therefore, the business will have clear guidance on calculating CIT obligations as well as applying for CIT incentives. In addition, it also improves the efficiency of tax-related procedures, including registering, declaring, and paying processes.

Secondly, the Government should ensure appropriate levels of incentives regarding each object (i.e. companies). The reason is that if the incentives scheme is not clear, some negative actions may be done by companies for tax evasion purposes. This may cause a loss in the state budget and significantly affect other financing activities of the Government in the community. Therefore, despite the fact that tax incentives can be used as the most effective method to encourage businesses, the amount and regulations applied for each type of incentive are still reviewed, amended, and supplemented annually to ensure the sustainability of society's development.

Thirdly, some unnecessary administrative procedures can be reduced for the convenience of both the Government and companies. Regarding this matter, high-quality technology should be brought into practice. It can provide significant support in the process of implementing and solving administrative procedures. As a result, official letters from the businesses sent to the competent authorities shall be handled quickly and effectively, and the results will be sent out immediately after these processes.

5.3. Recommendations for management system at the company level

There are also some suggestions for managers of listed companies as well as managers of other types of companies. Similar to the comments which are added for the Government mentioned in the previous section, these suggestions below are also for reference only. Firstly, the companies must ensure the efficiency and effectiveness of their accounting system. Any fraud or misstatement in the accounting system, regardless of whether they are caused by the person in charge or by technology, shall lead to unmeasurable risks in tax aspects. Considering that there are some adjustments (the total amount of these adjustments depends on each case) between accounting

purposes and CIT purposes, the Company should have appropriate management to decrease the negative effects of these adjustments and make use of positive effects (if any). For example, there are some expenses incurred that do not have enough supporting documents proving that they are related to the production and business activities or proving that the actual payments are made. In this case, these expenses should not be treated as deductible expenses for CIT purposes, and appropriate adjustments regarding these amounts should be made. They will increase the amount of tax that must be paid by the company.

Secondly, companies should be aware of the incentives scheme in Vietnam, including all types of incentives that they can obtain to reduce tax burdens. In Vietnam, there are many incentives for companies with different characteristics and different sectors to encourage the production and business activities of some fields and areas that the Government may be concerned. Thus, the awareness of companies in this regard will help them to make use of the incentives in accordance with the Government's policies without doing any negative action for tax reduction purposes.

Thirdly, each company should conduct an analysis itself to define which factors can have a significant influence on their tax burdens. As shown during this research, the results from popular factors are still different among different countries or characteristics of the companies included in the sample list. Understanding the nature of a company will help managers deal with tax obligations effectively. As discussed, regarding tax aspects, companies should have suitable tax planning and tax management policies. Fourthly, companies should not do any negative actions due to the desire for tax reduction, which does not comply with the applicable regulations. A popular wrong action is to purchase invoices from illegal suppliers or use fake invoices to rationalize expenses without valid supporting documents.

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