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DO BUSINESS CHARACTERISTICS AND ECONOMIC FACTORS AFFECT EFFECTIVE TAX RATE? AN EVIDENCE FROM SOUTHEAST ASIA

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Abstract

The corporate tax burden is known to have a substantial impact on company management and the formation of national policy. One of the ways to measure the tax burden is by using effective tax rate (ETR). Prior research suggests that each region's characteristics may influence ETR within the region to varying degrees. Thus, the purpose of this study is to assess the impact of business characteristics and economic factors on ETR in Southeast Asia. There are 852 Southeast Asia companies used as samples in this study. The data is taken from S&P Capital over five periods from 2015-2019 and examined using a random effect regression model by STATA. The findings indicate that business characteristics and economic factors have a limited impact on ETR. By highlighting the factors that affect ETR in Southeast Asia, companies and policymakers can make better tax plans and policies.

INTRODUCTION

In many countries, taxation plays a crucial role. It supports various activities, developments, and government policies, including those to attract new investments (Badan Koordinasi Penanaman Modal, 2021), reduce CO2 emissions (Helven, 2022), and so forth. It is therefore not surprising that the government regulates its statutory tax rate (STR) to align with its other policies. STR is primarily the proportion of tax that taxpayers, including businesses, must pay. KPMG (2019) reported that the average "worldwide" STR in 170 countries fell from 32.00 percent in 2000 to 23.79 percent in 2019. By lowering corporate tax rates, nations anticipate attracting more foreign investors. (Schwab et al., 2022).

Using the effective tax rate (ETR) is one way to obtain a more accurate estimate of the corporate tax burden (Government Accountability Office, 2008). ETR incorporates more relevant variables required to compute tax (Fonseca Díaz, Fernández-Rodriguez, Martínez Arias, 2011 as cited in Moreno-Rojas, González-Rodríguez and Martín-Samper, 2017). For example, ETR includes the actual cash amount that companies pay to the government. The ETR value has been included at the discretion of tax planning, which corporate income does consider.

Prior studies have evaluated the determinants of ETR with the purpose of providing more information for policymakers in analyzing the fairness of their tax system, evaluating factors that may cause ETR variations in a specific region or country, and so on. Among the determinants of ETR analyzed in prior studies are business characteristics and economic factors. Size, leverage, and asset structure are the three most commonly used proxies of business characteristics (Fernández-Rodríguez and Martínez-Arias, 2014; Irlacher and Unger, 2018; Çağrı, 2019; Panda and Nanda, 2021). STR, economic freedom, and GDP are used as proxies of economic factors (Phillips, 2003; Delgado, Fernández-Rodríguez and Martínez-Arias, 2012; Miller and Kim, 2016; Fonseca-Díaz, Fernández-Rodríguez and Martínez-Arias, 2019).

However, there is still conflicting and inconclusive evidence regarding the variables that influence ETR in particular regions. In particular, prior research reveals a variety of findings regarding the effects of business characteristics and economic factors on ETR in various regions or countries. In several studies, ROA had a significant and positive effect on ETR in certain countries (Delgado, Fernández-Rodríguez и Martínez-Arias, 2012), yet it also negatively affected ETR in other countries, such as China, Malaysia, Mexico, and India (Adhikari, Derashid, Zhang, 2006; Wu, et. al., 2012; Fernández-Rodríguez, Martínez-Arias, 2014). Another example is Molina-Morales, Amate-Fortes Guarnido-Rueda (2011) suggests that GDP should have a positive relationship with ETR. While Fernández-Rodríguez, García-Fernández, and Martínez-Arias (2021) conclude there is no significant relationship between GDP and ETR, This shows that the topic of the factors that affect ETR is still interesting and should be looked at more in other places, like Southeast Asia.

The divergent results may indicate that each region may have distinctive characteristics that influence ETR within the region to varying degrees. Southeast Asia, for instance, is a developing region that promotes investment friendliness to attract more capital. According to the Political Power Theory, large corporations are likely to negotiate with governments regarding their burdens under these conditions. The theory posits that larger companies have greater tax planning flexibility, allowing them to decrease their ETR by exerting pressure on authorities (Barbera, Merello, and Molina, 2020) However, if companies in Southeast Asia have the ability to negotiate their tax burden, then their book-tax conformity becomes lower. The book-tax conformity theory explains the relationship between accounting revenue and tax revenue (Watrin, Pott, Ullmann, 2012). Low book-tax conformity is characterized by a large disparity between accounting and tax incomes, as companies have more leeway to use various deductible and non-deductible items. Eventually, this difference may affect the tax burden and ETR of the companies. Consequently, it is necessary to evaluate the determinant factors of ETR in Southeast Asia in order to gain a better understanding of the effect of the firm's influence on ETR in Southeast Asia.

The second reason why more study is required is to assess the influence of business characteristics and economic factors on ETR because governments in Southeast Asia are still responsible to maintain their tax revenue level despite the fact that they provide incentives for new investments. The Optimal Taxation Theory proposes that subject to a set of constraints, a tax system should be implemented so as to maximize a social welfare function (Mankiw, Gregory, and Matthew Weinzierl, 2008). Therefore, although companies may have the power to lower the corporate tax burden, a country is still obliged to maintain a high level of tax collection in order to maximize tax revenue used for social welfare.

The third reason is unlike most of the prior studies, our study incorporates firm growth as a factor in Southeast Asia business characteristics. Fernández-Rodríguez, García-Fernández, and Martínez-Arias (2021) found that the firm's growth is likely to impact corporate tax planning. The growth of the company is one of the business characteristics that can be observed by tracking sales growth. It is determined by comparing the percentage change in sales between the current year and the prior year (Sawarni et al., 2022).

Finally, there is limited research on ETR in Southeast Asia. Prior research has tended to focus on European firms (Barbera, Merello, and Molina, 2020) or a single nation, such as India (Panda & Nanda, 2021), Turkey (Çağrı, 2019), and Ethiopia (Mascagni & Mengistu, 2019). Fernández-Rodríguez, García-Fernández, and Martínez-Arias (2021) additionally assess ETR in BRICS (Brazil, Russia, India, China, and South Africa) and MINT (Mexico, Indonesia, Nigeria, and Turkey) nations. Even though prior studies utilize Southeast Asia in their research, they restrict their analysis to a single nation, such as Indonesia (Nurkholisoh and Hidayah, 2019). Southeast Asia is one of the fastest-growing regions in the world, so focusing on it as a region is important. The region's average GDP growth of 4.6% exceeds the global average of 3.2%, which stands at 3.2%. The region's combined GDP represents approximately 34 percent of the global total, or approximately $2.5 trillion. This region's STR has decreased from 21.91 percent in 2013 to 20.80 percent in 2019 as a result of several countries reducing their STR and others maintaining theirs (Asian Development Bank, 2021).

Therefore, this study aims to examine the extent of the impact of business characteristics and economic factors on the effective tax rate (ETR) in Southeast Asia. This research contributes to both the literature and practice of taxation. It provides empirical evidence regarding factors that influence ETR in Southeast Asia, as opposed to a single nation. In addition, companies could use the study as a guide for tax administration. Regarding the design of fiscal policies by governments, our research offers guidance based on business and economic considerations.

METHODS

This research applies a quantitative approach. The quantitative approach provides an organized, fact-based, and truthful illustration of the data and relationships between the variables tested so that the relationships between variables can be analyzed (Purnomo et al., 2022; Ikhsan et al., 2022). There are two types of data collection in this study. They are financial and economic data. The financial data is from S&P Capital IQ, while the economic data is collected from the World Bank, the Heritage Foundation, and KPMG. Both data were examined using STATA 14. The final observation data set is a well-balanced panel based on data from 2015 to 2019 due to the limitations of economic data published by each country.

The research objects are public or listed companies from ten Southeast Asian countries. However, this study only uses five countries as a representation of the Southeast Asia region. They are Thailand, Indonesia, the Philippines, Malaysia, and Vietnam. The other Southeast Asian countries are excluded from our research area due to various reasons. For example, Myanmar is excluded since it does not have publicly available data. Listed companies in Cambodia are also removed from this research since they have insufficient information related to the variables used in this research. Timor-Leste and Brunei Darussalam do not have any information about their public companies in 2015, which means that both countries cannot be analyzed. Finally, Laos does not have any public companies. Thus, the number of people selected as the object of this research is 3,097, as shown in Table 1.

Table 1. Selected Population

	Population
Indonesia Stock Exchange (IDX) Listed Companies	745
Stock Exchange of Thailand (SET) Listed Companies	762
Bursa Malaysia (KLSE) Listed Companies	936
Ho Chi Minh Stock Exchange (HOSE) Listed Companies	402
Philippines Stock Exchange (PSE) Listed Companies	252
Total Population (number of companies)	3,097

The authors use three criteria to select our research sample. First, the companies must be listed in either IDX, SET, KLSE, HOSE, or PSE from 2015–2019. Second, over the course of five years, the companies must have collected complete data on all variables used in this research. Third, the companies must have positive CASHETR as well as METR. Table 2 shows that there are 852 listed companies with 4.260 observations that can be analyzed further.

Table 2. Selected Sample

Sample Criteria	Number
Countries	5
Observation years (2015-2019)	5
Companies	3,097
Uncompleted data and Improper criteria	(2,245)
Total Sample (companies)	852
Total Observations (companies*years)	4,260

This study examines variables used in Fernández-Rodrguez, Garcia-Fernández, and Martnez-Arias (2021). The independent variables are categorized into (1) business characteristics and (2) economic factors. The business characteristics include size (company size), leverage (leverage), intensity of capital (intensity of inventory), return on assets (profitability), and firm growth (growth). This study uses revenue instead of sales to measure the growth variable under the assumption that revenue could still represent the company's income from its operational activities. In economic factors, this study uses STR (statutory tax rate), ECONFREE (economic freedom index), and GDPGROWTH (gross domestic product growth). The dependent variable, ETR (effective tax rate), is defined in two measurements for the purposes of this study.They are CASHETR and METR. Cashetr is one of the most commonly used terms in previous research.It is the cash taxes paid on the pretax income of the entity in year T. METR, on the other hand, is the ratio of CASHETR of entity i in year t to the STR current in each year and country.This measure of ETR is relatively new (Tang, Mo, and Chan, 2017). When several countries are being studied over time, it is suggested to measure ETR using METR because CASHETR could be weighted for each year as well as firm by the STR in force (Fernández-Rodrguez, Garcia-Fernández, and Martnez-Arias, 2021). Table 3 explains the research operating variables.

Table 3. Operating Variable

Research Variable	Indicator of Measurement	References
CASHETR (Dependent)	$\frac{\text{Cash Taxes Paid}}{\text{Earnings Before Taxes}}$	Wang et al., (2018); Fernandez-Rodríguez, E. et al., (2021)
METR (Dependent)	$\frac{\text{CASHETR}}{\text{Statutory Tax Rate}}$	Amiram et al. (2013); Tang et al. (2017); Fernandez-Rodríguez, E. et al., (2021)
Business Characteristic Variables (Independent)		
Size of the company (SIZE)	The total assets logarithm	Delgado et al. (2012); Fernandez-Rodríguez, E. et al., (2021)
Leverage (LEV)	$\frac{\text{Total Debt}}{\text{Total Assets}}$	Delgado et al. (2012); Fernandez-Rodríguez, E. et al., (2021)
Intensity of Capital (CAPINT)	$\frac{\text{Gross PPE}}{\text{Total Assets}}$	Delgado et al. (2012); Fernandez-Rodríguez, E. et al., (2021)
Intensity of Inventory (INVINT)	$\frac{\text{Inventories}}{\text{Total Assets}}$	Delgado et al. (2012); Fernandez-Rodríguez, E. et al., (2021)
Return on Assets as Profitability (ROA)	$\frac{\text{Earnings Before Income Tax}}{\text{Total Assets}}$	Delgado et al. (2012); Fernandez-Rodríguez, E. et al., (2021)
Firm Growth (GROWTH)	$\frac{\text{Revenue}_{\text{year t}} - \text{Revenue}_{\text{year t-1}}}{\text{Revenue}_{\text{year t-1}}}$	Delgado et al. (2012); Fernandez-Rodríguez, E. et al., (2021)
Economic Factor Variables (Independent)		
Statutory tax rate (STR)	Every country's statutory tax rate for each year	Atwood et al. (2010); Atwood et al. (2012); Delgado et al. (2012); Tang (2015); Fernandez-Rodríguez, E. et al., (2021)
Economic freedom index (ECONFREE)	Economic freedom index, that goes from 0 to 100 and divides countries into five categories	Molina-Morales et al. (2011); Fonseca-Díaz et al. (2014); Miller and Kim (2016); Fernandez-Rodríguez, E. et al., (2021)
Gross domestic product growth (GDPGROWTH)	$\frac{\text{GDP}_{\text{year t}} - \text{GDP}_{\text{year t-1}}}{\text{GDP}_{\text{year t-1}}}$	Fonseca-Díaz et al. (2019); Fernandez-Rodríguez, E. et al., (2021)

The random-effect model which is also known as the Generalized Least Square (GLS) are used after performing Hausman test. The following regression models are constructed into 4 models. The first two models are used to examine the effect of business characteristics towards CASHETR and METR The second ones are designed to evaluate the impact of both business characteristic and economic factor variables towards CASHETR and METR.

$$\text{CASHETR} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 LEV_{i,t} + \beta_3 CAPINT_{i,t} + \beta_4 INVINT_{i,t} + \beta_5 ROA_{i,t} + \beta_6 GR_{i,t} \quad \text{.....(1)}$$

$$\text{METR} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 LEV_{i,t} + \beta_3 CAPINT_{i,t} + \beta_4 INVINT_{i,t} + \beta_5 ROA_{i,t} + \beta_6 GR_{i,t} \quad \text{.....(2)}$$

$$\text{CASHETR} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 LEV_{i,t} + \beta_3 CAPINT_{i,t} + \beta_4 INVINT_{i,t} + \beta_5 ROA_{i,t} + \beta_6 GR_{i,t} + \beta 7 STR_t + \beta 8 ECONFRE_t + \beta 9 GDPGROWTH_t \quad \text{.....(3)}$$

$$\text{METR} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 LEV_{i,t} + \beta_3 CAPINT_{i,t} + \beta_4 INVINT_{i,t} + \beta_5 ROA_{i,t} + \beta_6 GR_{i,t} + \beta 7 STR_t + \beta 8 ECONFRE_t + \beta 9 GDPGROWTH_t \quad \text{.....(4)}$$

RESULTS

Table 4 displays sample compositions and descriptive statistics for all variables used in regression models. Panel Data A depicts the total number of publicly traded companies available in each Southeast Asian country used as a sample for research. Malaysia, Indonesia, Thailand, and Vietnam are Southeast Asian nations with a greater average tax burden in 2015–2019, as their ETR is greater than their STR and their METR ratio is greater than 1.0. The descriptive statistics of the research sample are depicted in Panel Data B. The overall company size is 2,530936 and the standard deviation is 0.8226267, indicating that all companies have a similar mean as the value is close to 1. Observing the METR in Panel B, the average is 2.196522, which indicates that companies did not manage to pay less tax than the STR mandates, as the value is greater than 1. In general, the data for the Southeast Asian nations represented are normally distributed.

Table 4. Descriptive Statistics

Panel Data A: Sample Composition, means by country					
	Means by country				
	Indonesia	Malaysia	Thailand	Philippines	Vietnam
ASHETR	0.44423	1.14252	0.21518	0.20371	0.21008
METR	1.77694	4.76049	1.07591	0.67903	1.01478
SIZE	2.68608	2.40925	2.40165	3.07751	2.40293
LEV	0.22359	0.20241	0.25588	0.26835	0.26039
CAPINT	0.52258	0.47545	2.05397	0.41166	0.45758
INVINT	0.15106	0.16664	0.16338	0.12689	0.19540
ROA	0.08665	0.07921	0.08399	0.07230	0.08654
GROWTH	0.09882	0.07105	0.30846	0.19386	0.38929
STR	0.25	0.24	0.20	0.30	0.21
ECONFREE	61.52000	72.93004	65.57730	63.93596	53.29693
GDPGROWTH	5.03433	4.88536	3.44058	6.57775	6.75911
Number of Companies	152	243	213	96	148

Panel Data B: Descriptive Statistics per Sample					
Variable	Obs	Mean	Std. Dev.	Min	Max
CASHETR	4,260	.5183534	3.335002	.0000562	73.15217
METR	4,260	2.196522	13.8871	.0001873	304.8007
SIZE	4,260	2.530936	.8226267	.7730547	5.309127
LEV	4,260	.2370589	.1670994	5.20e-06	.8823529
CAPINT	4,260	.8681961	4.39006	.0015974	145.7135
INVINT	4,260	.1635623	.161357	.0000111	.9048929
ROA	4,260	.0822281	.0750117	-.170024	1.019936
GROWTH	4,260	.2044746	2.647709	-.996111	114.7143
STR	4,260	.2329859	.0311297	.2	.3
ECOFREE	4,260	64.6324	6.88833	51.69464	74.5
GDPGROWTH	4,260	5.06692	1.293328	2.266434	7.149457

This study examined the data in three steps: (1) examining the White-test to evaluate heterodcedasticity, (2) performing a Durbin-Watson step to evaluate autocorrelation, and (3) applying Pearson Correlation to test multicollinearity.The results of the correlation are shown in Table 5. It shows that the data in this study are free from the multicollinearity assumption, as all data are valued higher than +/- = 0.8.

Table 5. Correlation Matrix

Pearson Correlation								
	CASHETR	METR	SIZE	LEV	CAPINT	INVINT	ROA	GROWTH
CASHETR	1.0000							
METR	0.4995	1.0000						
SIZE	-0.0357*	-0.0367*	1.0000					
LEV	-0.0136*	-0.0134*	0.0781	1.0000				
CAPINT	-0.0001*	0.0008*	0.0159*	0.0181*	1.0000			
INVINT	0.0011*	0.0014*	-0.1240	0.0415*	-0.0008*	1.0000		
ROA	-0.0195*	-0.0196*	-0.0945	-0.1360	-0.0107*	0.0095*	1.0000	
GROWTH	-0.0038*	-0.0039*	0.0015*	0.0005*	-0.0028*	0.0136*	0.0041*	1.0000
	CASHETR	METR	STR	ECOFREE		GDPGROWTH		
CASHETR	1.0000							
METR	0.4995	1.0000						
STR	0.0142*	0.0077*	1.0000					
ECOFREE	0.0460*	0.0451*	0.0995	1.0000				
GDPGROWTH	-0.0088*	-0.0105*	0.2059	-0.2376		1.0000		

To determine the best estimation model between the fixed effect and random effect models, this study applies the Hausman Test. The test results show that random-effect models are considered the best to interpret, as prob>chi2 in four tests has values greater than 0.05. Table 6 displays the results of four regression models. All models suggest that business characteristics and economic factors partially affect CAHETR and METR, hereinafter referred to as ETR. Only firm size and profitability are among the business characteristic variables that have a significant impact on ETR.Firm size negatively affects ETR in all models. For example, in model 1, SIZE is significant at 1% with a coefficient of -0.27611, and in model 2, SIZE is significant at 1% with a coefficient of -1.16551.Similarly, as shown in model 1, profitability has a negative impact on ETR. In model 2, ROA has a negative impact on CAHETR and METR, with coefficients of -3.64912 and -15.52276, respectively. Meanwhile, other business character variables in this study, such as leverage, intensity of capital, intensity of inventory, and firm growth, do not affect ETR because their p-value is greater than 0.1. For example, the p-values in models 1 and 2 between LEV towards CASHETR and LEV towards METR are 0.366 and 0.387, respectively. Firm growth also does not affect ETR because the p-values between growth towards CASHETR and growth towards METR are 0.383 and 0.364, respectively, in the two first models. In terms of economic factors, our findings suggest that only economic freedom and GDP growth affect ETR. The regression models show that economic freedom has a significant and positive effect on ETR, specifically CASHETR with a coefficient of 0.01986 in model 3 and METR with a coefficient of 0.0860454 in model 4. This study also found that GDP growth significantly affected ETR. It is shown by the regression model (GDPGROWTH towards CASHETR with a coefficient of -0.05894 in model 3 and GDPGROWTH towards METR with a coefficient of -0.2386927 in model 4). As a result, unlike economic freedom and GDP growth, STR has a small effect on ETR, with a coefficient of 2.33251.

Table 6. Regression Results

	CASHETR (Model 1)		METR (Model 2)	
	Coefficient	t (p-value)	Coefficient	t (p-value)
SIZE	-0.27611	0.009*	-1.16551	0.008*
LEV	-0.12100	0.366	-0.42140	0.387
CAPINT	0.00184	0.371	0.00946	0.343
INVINT	0.18456	0.346	0.79071	0.342
ROA	-3.64912	0.000*	-15.52276	0.000*
GROWTH	-0.00282	0.383	-0.01367	0.364
Adjusted R^2	0.0067		0.0068	
Observations	4,260		4,260	
	CASHETR (Model 3)		METR (Model 4)	
	Coefficient	t (p-value)	Coefficient	t (p-value)
SIZE	-0.32776	0.003*	-1.351808	0.003*
LEV	-0.04811	0.446	-.1001471	0.473
CAPINT	0.00246	0.331	.0117909	0.307
INVINT	0.18756	0.344	.7598887	0.347
ROA	-3.46236	0.000*	-14.7062	0.000*
GROWTH	-0.00379	0.345	-.0171895	0.331
STR	2.33251	0.212	-	-
ECOFREE	0.01986	0.024*	.0860454	0.020*
GDPGROWTH	-0.05894	0.074	-.2386927	0.079
Adjusted R^2	0.0134		0.0129	
Observations	4,260		4,260	

*Significant level at 5%

DISCUSSION

Our research indicates that Southeast Asia has unique characteristics that impact ETR within the region. In Southeast Asia, only specific business characteristics and economic factors influence ETR. They are also distinct from other regions, such as China, the European region, etc. This study emphasizes the significance of analyzing business characteristics and economic factors in various regions, including Southeast Asia, in order to better comprehend why the ETR in each region may vary.

Our findings indicate that business characteristics have a partial effect on the effective tax rates of Southeast Asian companies. Our empirical evidence suggests that firm size and ROA negatively affects ETR which

indicates that companies in Southeast Asia have more ability and power to influence authorities to lower their ETR. This finding is consistent with political power theory. The theory suggests that larger companies have the ability to lower their ETR because they have great influence with authorities (Siegfried, 1972 as cited in Delgado, Fernández-Rodríguez и Martínez-Arias, 2018). For example, large companies are likely to be in a better position to negotiate their tax obligations with regulators. Our finding also supports some prior studies' results, such as Sudibyo and Bawono (2016), Fernández-Rodríguez and Martínez-Arias (2014), Fernández-Rodríguez, García-Fernández and Martínez-Arias (2021), Irlacher and Unger (2018), Vintilă, Gherghina and Păunescu (2018), Belz, von Hagen, Steffens (2019), Barbera, Merello, Molina (2020), and Adhikari, Derashid and Zhang (2006). Larger companies may also have better tax planning since they have more resources, which enables them to do profit-shifting activities that cause lower ETR (Barbera, Merello and Molina, 2020).

Southeast Asia's status as a developing region seems to be a reason why companies are more likely to negotiate their tax rate with the government in exchange for privileges to retain business operations in the region. Southeast Asia depends on the private sector and seeks more investments. In Southeast Asia, there are numerous examples of large private companies receiving preferential access to additional tax incentives. In Thailand, for instance, high-tech companies and those that enhance the nation's competitiveness are exempt from corporate income tax, import duty on machinery and raw materials, and export duty.(Rastogi, 2018). In Malaysia, companies that operate in industrial area management, media and tourism, and other strategical sectors get 70% and 100% income tax exemption for up to 5 years (Wong and Partners, 2014). In Indonesia, the government offers tax holiday of up to 100% and free tax if the net profit is invested back in Indonesia (Asmara, 2018).

Our findings contradict those of Aksoy Hazır (2019), Fernández-Rodríguez et al. (2021), and A. K. Panda & Nanda (2021) and the political cost theory suggested by Watts & Zimmerman (1978). According to the theory, large corporations are more compliant with public visibility, which makes them more susceptible to greater regulatory action by the government, or in other words, the government's primary target for increasing tax revenues from the corporate business sector. Therefore, large-scale enterprises have higher political costs when compared to small firms (Sudibyo & Bawono, 2016).

Unlike the effect of company size and ROA, our finding demonstrates that leverage, capital intensity, inventory intensity, and growth have an insignificant effect on the tax burden of companies. This implies that book-tax conformity is low in Southeast Asia. Low book-tax conformity indicates a significant disparity between accounting income and taxable income. The book-tax conformity theory suggests when companies prepare their financial and tax statements, they include several considerable discretions, such as deductible and non-deductible items. These discretions directly influence the amount of the corporate tax burden and ETR, which may be different from accounting income (Watrin, Pott and Ullmann, 2012).

There are several reasons why book-tax conformity is indicated to be low in Southeast Asia. It appears that businesses in Southeast Asia engage in proper tax planning practices to achieve optimal tax saving (Richardson and Lanis, 2007; Panda & Nanda, 2021). These practices allow companies to manage their taxable income which eventually influences the final amounts to be paid as income tax expenses as a part of ETR. This makes the variables mentioned becoming irrelevant when it comes to ETR due to inconsistency. For instance, companies conduct fiscal reconciliation that shows a different amount of accounting income and taxable income through deductible items application. Such reconciliation that leads to inconsistency between increase/decrease accounting income and income tax expense that companies pay makes components such as profitability, debt, assets, expenses, and revenues become irrelevant to the ETR.

In addition, companies in Southeast Asia may have a greater ability to negotiate their taxes with the appropriate authorities and take benefit of incentives (Sudibyo & Bawono, 2016) by that they could have more resources to manage their tax burden through tax management (Richardson and Lanis, 2007; Panda & Nanda, 2021). For instance, the companies could take advantage of double tax avoidance in their respective countries (Kemenkeu, 2017). This policy allows companies in the ASEAN region to adjust their income tax expenses following the double tax avoidance and eliminate double tax expenditures between two countries. Many countries in the Southeast Asia have agreed to this agreement except Myanmar and Cambodia (Kemenkeu, 2017).

Our findings contradict the studies that demonstrate that growth, leverage, capital intensity, and inventory intensity have significant effects on ETR. For example, Barbera et al., (2020), Siew Yee et al. (2018), and Panda & Nanda (2021) find that that inventory intensity and growth positively affect ETR. On the other hand, Aksoy Hazır (2019), Azari (2020), Fernández-Rodríguez et al. (2021) suggest that leverage, capital intensity, and growth negatively affect ETR. They mainly argue that higher leverage is expected to cause lower ETR since the company will pay higher debt interest, which then lowers its income. Capital intensity should also be negatively associated with ETR because higher capital intensity will cause higher depreciation and lower income. On the other hand, inventory intensity and growth positively affect ETR because the more companies operate and generate income, the more corporate income tax must be paid (Fernandez-Rodríguez, E. et al.,, 2021).

Regarding the effect of economic factors on ETR, our data analysis shows that economic freedom has a significant and positive impact on ETR. Economic freedom is basically the fundamental right owned by a person to control their own property and labor (Miller et al., 2022). It is divided into several categories. The first category is government size (government spending, fiscal health, and tax burden). Second, the rule of law (judicial effectiveness, government integrity, and property rights). The third and fourth categories are open markets (investment freedom, financial freedom, and regulatory efficiency) and regulatory efficiency (labor, business, and monetary freedoms), respectively.

Conceptually, higher economic freedom should lead to a lower ETR. In an economically free society, governments allow capital, labor, and goods to freely move and limit any excessive constraints that jeopardize the freedom itself. Since Southeast Asia needs more investment, it is likely to establish policies that promote simpler investment regulations and greater investment freedom (Miller et al., 2022) even shows that Indonesia, Malaysia, Thailand, the Philippines, and Vietnam are categorized as countries with moderate economic freedom. Historical data shows that companies tend to invest in Southeast Asia when the governments offer certain benefits and ease of investment. For example, Vietnam advocates for the improvement of its institutions and laws governing investment incentives, such as the preferential rate of income tax, which is typically reduced from 20% to 17%, 15%, and 10% (Deloitte Vietnam, 2017). As a result, higher economic freedom is likely to reduce ETR.

However, our findings suggest that economic freedom leads to higher ETR in Southeast Asia and not the other way around. One plausible reason is that the influence of the optimal taxation theory proposed by Mankiw, et. al (2008). The theory suggests that the country would create and do all it could to optimize tax revenue while improving social welfare. This includes facilitating the company's establishment permit while imposing different taxes on those companies. In the case of Southeast Asia, economic freedom is significant because the region still requires external funding (IMF/OECD, 2017) such as grants for business, infrastructure funds, or other investment funds (Vietnam Briefing, 2016; Deloitte Vietnam, 2017). The greater a country's economic freedom, the more expansive its economic autonomy.. This might attract new foreign investment to put in place their significant fund. As a result of imposing economic freedom, the government implements a variety of fiscal policies to maximize tax revenue collection. For example, the Indonesian government increases non-taxable income for calculating personal income tax from IDR50 million to IDR60 million at a rate of 5% and adds one additional line at 35% for income more than IDR5 billion (Asmara, 2018). By doing those efforts, the total corporate tax burden will still be high which leads to higher ETR.

Our findings do not support prior studies, e.g. Fonseca-Díaz, Fernández-Rodríguez and Martínez-Arias (2019), Fernández-Rodríguez, García-Fernández, and Martínez-Arias (2021) that suggest that economic freedom is an insignificant determinant of ETR. Those studies, however, argue that economic freedom insignificantly affects ETR because their samples are developed countries, e.g. European countries. In other words, that economic freedom may not be a relevant factor to determine ETR in developed regions. Our research, on the other hand, indicates that economic freedom is a significant determinant of ETR in Southeast Asia, a developing region.

Our second finding related to the economic factor is that GDP and STR have an insignificant effect on ETR in Southeast Asia. GDP represents the monetary value of finished goods and services produced by a country in its territory within a specific period of time. It is the change in a nation's economic output that is used to measure its yearly economic growth. One possible reason why GDP does not affect ETR significantly is that Southeast Asian governments also have a duty to maintain a certain level of tax revenue even though they offer tax incentives to attract new investments. It is common for countries to increase their GDP by attracting foreign direct investment, including by offering tax incentives. For instance, Vietnam offers two primary incentives for new investments: preferential tax rates (reduced tax rates) and tax holidays (Vietnam Briefing, 2016; Deloitte Vietnam, 2017). All of these efforts could result in a higher GDP and a lower ETR in developing nations (Fernández-Rodríguez, García-Fernández and Martínez-Arias, 2021). To compensate for the tax incentives, Southeast Asian nations such as Vietnam improve their tax collection by investigating tax evasion and resolving tax arrears. These initiatives increased state revenue by up to 7.5%. (Vietnam Briefing, 2016). Therefore, their ETR might not be affected by the growth of their GDP.

Similarly, in Southeast Asia, the statutory tax rate (STR) has an insignificant effect on the effective tax rate (ETR). STR should, in theory, reflect the tax burden on corporations. Nonetheless, due to tax incentives and other policies, STR has no impact on ETR (Sudibyo & Bawono, 2016). Furthermore, Moreover, because this study employs samples from Southeast Asian nations where STR has increased and decreased simultaneously, the effect of STR on ETR is insignificant (Fernández-Rodríguez, García-Fernández, and Martínez-Arias, 2021). Most nations combine STR reductions with tax base expansions in order to preserve tax collection (Fernández-Rodríguez, García-Fernández, and Martínez-Arias, 2021). As a result, the collection of governmental income tax is inconsistent with STR reduction, as the STR decreases while the corporate income tax remains constant or even increases. This renders STR irrelevant in terms of ETR (Government Accountability Office, 2008).

CONCLUSION

This research aims to examine the impact of business characteristics and economic factors on ETR in Southeast Asia. The result demonstrates that business characteristics and economic factors partially influence ETR. The only determinants of ETR in Southeast Asia are firm size, profitability, and economic freedom. Our research indicates that large corporations in Southeast Asia appear to have a greater ability to exert influence on government officials in order to obtain tax reductions. The lack of book-tax conformity among Southeast Asian businesses is therefore not surprising. For instance, firms with greater profitability typically have a lower ETR. In addition, our study suggests that governments in Southeast Asia are likely to compensate their incentives to attract large corporations with other policies in order to maintain a certain level of tax revenue. As a region with moderate economic freedom that provides a variety of benefits and incentives to attract more investments, Southeast Asia may establish policies that allow them to collect revenue from other types of tax sources.

Our study contributes to both academics and practice. First, our study provides empirical evidence that companies' ability to negotiate with governments plays an important role in determining ETR in Southeast Asia. Companies appear to benefit from increased private-sector investment needs.This provides convenience for overseas companies to invest in the Southeast Asia region. Second, Southeast Asia needs to find various revenue sources to compensate for the incentives it gives. The governments need to ensure that their overall revenue from taxes is not decreased when they ease investment regulations, provide tax incentives, and so forth.

This study, however, has several limitations. First, our study does not analyze the potential impact of different types of companies on ETR. This limitation opens the door for future research to include foreign direct investment and local companies as ETR factors when considering Southeast Asia as a developing region. Future studies could also incorporate other potential determinates of ETR, such as the "institutional environment," which refers to a series of legal systems, government governance, and economic as well as social environments utilized to establish the basis of production, exchange, and distribution. The second limitation of this study is that we do not analyze the determinants of ETR in each Southeast Asian country. Future research, therefore, may seek comparative analysis about the determinants of ETR in every Southeast Asian country. This analysis will provide a more comprehensive understanding of the relationship between the unique characteristics of each Southeast Asian country and their ETR.

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