

Does Income Tax Competition Remain Relevant In Attracting FDI? The Case of ASEAN Countries



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ABSTRACT: This study evaluates the impact of corporate income tax on foreign direct investment (FDI) in 6 Southeast Asian countries from 1999 to 2022, under the context of the preparation for the Global minimum tax application in many countries in and outside the region. Using classical panel data models (Fixed Effects and Random Effects model), the findings show no significant impact of corporate income tax on FDI inflows to ASEAN nations. Observing the effects of other factors on foreign investments, the study discovers the significant role of infrastructure in attracting FDI for the entire sample. Additionally, we find significant positive impacts of trade openness and significant negative impacts of political stability on FDI inflows for the developing nations in the area. Interestingly, we find positive relationships between economic shocks and FDI and the region's quick recovery of foreign investment flows. Based on the results, we provide several valuable academic and policy suggestions.

KEYWORDS: corporate income tax, tax competition, FDI, ASEAN

I. INTRODUCTION

Economic development is one of the main concerns for policymakers worldwide, especially for developing countries. Amongst the major determinants of economic growth, Foreign direct investments (FDI) play an undeniable role in creating jobs, improving living standards, increasing income, and generating higher government revenue (Xu & Wu, 2021). Various policies have been implemented to encourage the inflow of FDI, including income tax policy. In addition to specific tax incentives given to qualified investments, corporate income tax reduction is an often-used instrument for attracting FDI as it reduces the net returns of investments (IMF et al., 2015). After the global economic slowdown caused by the 2008 financial crisis, the declining corporate income tax rate trend became more apparent, resulting in tax competition among countries (Devereux et al., 2008). However, corporate tax cuts to attract FDI face potential challenges when the global minimum tax becomes officially effective in many countries in 2024. UNCTAD (2022a) notes that introducing the global minimum tax would significantly impact the location and scale of investment and profit-shifting activities and set a limit on downward tax competition between countries to attract real investment and tax base. Hence, it's crucial to prudentially assess the impact of tax cuts on FDI inflows in recent periods, particularly on FDI-attracting countries, to examine the possible effects of the global minimum tax and suggest suitable policy changes.

Amongst developing regions, ASEAN is the second-largest recipient of FDI (after China) and demonstrates continuous economic growth despite several economic shocks. According to UNCTAD (2022b), despite the 2020 Covid-19 pandemic, ASEAN's share of global FDI inflows rose significantly in the current period, from an annual average of 7% in 2011-2017 to 11% in 2018-2019, and 12% in 2020-2021. In addition, ASEAN countries are actively using tax cuts to attract more FDI since the economic downturn resulting from the financial crisis of 2008. For example, during the period from 2008-2022, some countries had significant reductions in corporate income tax rates, such as the Philippines (from 35% to 20%), Indonesia and Thailand (from 30% to 20%) or Vietnam (from 28% to 20%); some other countries had small decreases as their tax rates are already low like Malaysia (26% to 24%) and Singapore (18% to 17%). This trend is believed to make the ASEAN region more geographically favorable as multinational firms take regional importance into their investment decisions and tend to concentrate within specific areas (Ghemawat, 2003). Furthermore, most ASEAN countries have planned to implement the Global Minimum Tax (GMT) in 2024 (e.g. Thailand and Indonesia) or 2025 (e.g. Singapore and Malaysia), except for the case of Vietnam. In November 2023, the Vietnamese National Assembly approved the Resolution to apply a global minimum effective corporate tax rate of 15% for large multinational

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enterprises (MNEs) with global revenue of EUR 750 million or more from January 1, 2024 (MOF, 2023). Hence, Southeast Asian countries provide an exciting context for studies regarding the impacts of corporate tax cuts on FDI attraction.

Despite its common practice, the empirical findings regarding the impact of corporate income tax on FDI are somewhat inconclusive, particularly in the case of ASEAN economies. The majority of studies find significant negative influences of corporate income tax rates on the ability to attract FDI of a country, though the literature is quite scattered, with some studies using data from developed countries such as the US, EU, or OECD (Wijeweera et al., 2007; Eshghi et al., 2016; Zagler, 2023), African countries (Boly & Coulibaly, 2020; Edo et al., 2020; Mudenda, 2015; Saidu, 2015), Asian - Pacific countries (Xu & Wu, 2021); ASEAN (Siregar et al., 2020). Some studies found no impact of corporate income tax on FDI, such as the study of Sujarwati and Qibthiyah (2020) on 112 countries and the study of Jensen (2012) on 19 OECD countries. Surprisingly, few studies found a positive impact of corporate income tax on FDI, such as the study of Asih (2020) on ASEAN countries.

Due to the above reason, this study aims to assess the impact of corporate income tax competition on FDI inflows in Southeast Asian countries, considering the effects of two economic shocks of 2008 (the global financial crisis) and 2020 (the COVID-19 pandemic). We employ a panel data analysis with a sample of six ASEAN countries, namely Vietnam, Singapore, Thailand, the Philippines, Malaysia, and Indonesia, for 24 years (1999-2022). Our results report no impacts of the corporate income tax rate on FDI, suggesting that reducing corporate income tax should not be treated as the main factor attracting foreign investments. Additionally, we find significant positive impacts of infrastructure and economic shocks on FDI. Finally, we find the favorable role of trade openness and the adverse role of political stability on FDI inflows to developing nations in the regions.

This study contributes to existing literature in the following ways. First, it attempts to fill the literature gap regarding the impact of corporate income tax cuts on FDI in ASEAN countries. Second, it accounts for the effects of economic shocks in attracting FDI. Third, it provides valuable policy recommendations for ASEAN countries to consider factors that truly help to attract FDI while moving forward with the global minimum tax application.

The remainder of this paper is structured as follows. Section 2 discusses theoretical frameworks explaining the impacts of tax cuts on FDI and summarizes the empirical evidence. Section 3 presents the methods and data. Section 4 reports how corporate income tax influences FDI inflows in ASEAN countries. Section 5 concludes the paper.

II. LITERATURE REVIEW

A. Regulatory Frameworks

In the past, many theories or frameworks have been formed to explain and evaluate the relationship between FDI and an economy's micro and macro aspects (Dunning, 1979; Piggott & Cook, 1999). According to Dunning (1979), there are four important theories as follows:

First, the theory of industrial production organizations focuses on identifying and evaluating which advantages best explain the investment patterns of manufacturing enterprises when investing abroad. The main advantages pointed out are ownership, innovation and technology, and differentiation in production (Caves, 1971).

The second group of theories studies the financial aspects of businesses' overseas investment activities. Theories in this group are classified into two types: (1) theories that emphasize the imperfections of foreign exchange and capital markets, and (2) theories that extend portfolio theory to explain the distribution of foreign investment activities according to industry and geographical factors to diversify risks and stabilize income (Lessard, 1979).

The third group of theories focuses on explaining international production activities based on the theory of the firm. Accordingly, imperfect market conditions, especially in the buying and selling of important output and input factors, as well as the economic advantages of interdependent activities, have caused a business to decide to exploit foreign markets by internalizing the market for those output and input factors (Coase, 1937; Macmanus, 1972).

However, it can be seen that although the above three theoretical groups have been focused on research, they only explain some specific aspects of FDI. Therefore, the next theoretical framework - the Eclectic Paradigm method following the OLI framework - is considered the most comprehensive one to explain the effects of macro and micro factors on FDI (Dunning 1979). According to Dunning (1979), when deciding to invest abroad, a company will consider the following three tiers: ownership advantage (O), location advantage (L), and internalization advantage (I). Ownership advantages include business scale, diversification of products or production processes, ability to transfer advantages of scale, monopoly power, advanced technology, superior products, brands, trademarks, management capacity, and research and development capabilities. Location advantages include input cost groups such as cheap labor costs, availability of raw materials, transportation, and communication infrastructure, tax rates and tariffs, investment climate, political stability, and infrastructure. Internalization advantage is directly related to ownership advantage. This advantage appears when a company believes it can exploit internally through FDI instead of direct sales or licensing. This advantage will help businesses avoid transaction costs, quotas, tariffs, and price controls.

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Thus, the relationship between corporate income tax and FDI can be explained based on location advantage in the OLI framework. Specifically, according to Hajkova et al. (2007), because tax regulations can affect the decision to invest abroad by multinational companies, tax regulations related to royalties and shares will change (increase or decrease) tax benefits related to ownership. Hajkova et al. (2007) also believe that, in relation to location advantage, tax policies can determine the level of competitiveness of the host country compared to other investment-receiving countries. Furthermore, concerning internalization advantages, CIT can influence how much a multinational decides to internalize. This can happen because corporate income tax can affect the difference between pre-tax and after-tax profits of FDI. As explained above, internalization is when a company uses its ownership advantages instead of licensing companies in other countries to conduct business.

In addition to the OLI framework and the Electric Paradigm method, Tobin's Q theory of investment is one of the most commonly used theories to explain the relationship between taxes and investment. According to Klemm and Van Parys (2012), this theory explains the potential impact of taxes on FDI based on the neoclassical theory. The neoclassical investment theory of optimal capital accumulation describes how the demand for investment capital responds to the relative prices of factor inputs (Jorgenson, 1963).

Putting in perspective the relationship between taxes and FDI, Van Parys and James (2010) point out that the basic argument of neoclassical investment theory is that a firm will continue to make investments as long as the benefits from the investment are balanced with the cost of capital accumulation. In other words, as long as the benefit or net present value of the company's future cash flows is greater than the cost of capital, the company still gains from its investment. Therefore, when taxes affect a firm's cost of capital, taxes will also affect the level of investment in the sense that taxes will reduce the company's market value, thereby reducing the level of investment incentives. Specifically, Romer (1996) explains that increasing taxes will reduce corporate profits, thereby reducing market value.

B. Empirical evidence

The majority of studies find significant negative influences of corporate income tax rates on a country's ability to attract FDI.

One of the first studies to evaluate the impact of taxes, especially corporate income tax, on FDI, was Hartman's (1984) study. Hartman (1984) used time series data (1965-1979) to evaluate taxes' impact on US FDI investment. The results of this study show that when the corporate income tax rate decreases by 10%, FDI investment in the US increases by 20.9%. Similarly, research by Hines Jr (1993) evaluates the impact of different tax rates on FDI in US states and confirms that tax rates in each department have an important influence on FDI. Specifically, Hines Jr (1993) reports that a 1% change in tax rate will result in an 8% difference in investment proportion between foreign investors and all other investors.

Gastanaga et al. (1998) used data from 49 developing countries from 1970 to 1995 to evaluate the impact of taxes on FDI. They concluded that corporate income tax rates have a negative impact on FDI. The author explains that at this time, investment location has become an important factor affecting tax rates. With so many options for investing abroad, it's no surprise that investment decisions depend heavily on locations with lower tax rates. Similarly, research by Demirhan and Masca (2008) using data on 38 developing countries in the period 2000-2004 and research by Azemar and Delios (2008) on businesses in Japan also found a negative effect of the corporate income tax rate on FDI.

Buettner and Ruf (2007) evaluate the impact of tax rates on the decision to open branches abroad of German multinational companies. The authors showed that when tax rates increase by 10%, FDI will decrease by 12.5%. Hansson and Olofsdotter's (2008) study of 14 European Union countries in the period 1986-2004 demonstrated that FDI has a negative relationship with the difference in corporate income tax rates between the host country and the investing country. Specifically, when the tax rate difference increases by 1%, FDI will decrease by 2.5-4% for that country.

Research has recently focused on developed economies and some developing regions such as Western Europe or Africa. Economou et al.'s (2017) study evaluated factors affecting FDI in 24 OECD countries and 22 developing countries from 1980-2012. The results show that low tax rates are an important factor affecting FDI along with other factors such as market size, labor costs, and institutional factors in developing countries. As for developed countries, factors include trade openness, education system, market size, labor costs, gross capital formation, and taxes. Another study by Azemar and Dharmapala (2019) reported that FDI from 23 OECD countries to 113 developing countries increased by 97% between 2002 and 2012, and one of the reasons was the agreement to reduce taxes between these countries. Research by Esteller-Moré et al. (2020) also showed similar results, when the corporate income tax rate increased by 10%, the amount of FDI decreased by 3.4-1.9% in non-OECD countries in 2004. Using another approach, Zagler (2023) examines 26 OECD countries and concludes that an increase in the ratio of the statutory tax rate of FDI-receiving countries relative to the source country negatively influences FDI. Similar results are also found in studies of African economies, including the study of Boly and Coulibaly (2020) on 19 African countries; Edo et al. (2020) and Saidu (2015) on Nigeria; and Mudenda (2015) on Southern African countries. For the Asian regions, we found two studies by Xu and Wu (2021) on

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28 Asian-Pacific countries from 2000-2016 and Siregar (2020) on ASEAN countries from 1994-2018. Both studies report the adverse impact of corporate income tax rates on FDI inflows.

Nevertheless, many studies found no impact of corporate income tax on FDI. Jensen (2012) examines 19 OECD economies from 1980 to 2000 and concludes that corporate income tax rates and tax policy changes do not influence the flow of FDI. Hundany and Orviska (2014) assess data from 26 EU Member States from 2004 to 2011 and report no impact of the statutory corporate income tax rate on FDI along with significant impacts of other factors such as labor cost, the openness of the economy, GDP per capita, firing costs, and public debt. Kinda (2016) uses services and manufacturing firm-level data from 30 sub-Saharan African countries from 2000 to 2006 and concludes that taxation is not a significant driver for the location of foreign firms in the areas, while other factors such as institutions, human capital, and infrastructure are. The study by Sujarwati and Quibthiyyah (2020) on 112 countries from 2003 to 2017 finds no significant negative effect of the corporate income tax rate on net FDI inflows. Still, it reports that foreign investors are more interested in countries with broader market sizes and higher GDP.

Furthermore, the study of Asih (2020) on 6 ASEAN countries from 1996 to 2017, states that corporate income tax is found to have a significant positive effect on FDI while tax holidays and investment allowance show negative impacts. Asih (2020) concludes that the results should not be interpreted as that countries with higher corporate income tax rates are more attractive to foreign investors. Still, they should be referred to as evidence that reducing tax rates and providing tax incentives might play non-significant roles in drawing FDI into ASEAN countries.

From the above evidence, we find that the empirical evidence of corporate income tax and FDI are quite limited for the ASEAN region, and the current evidence is conflicting. By researching this topic using the context of ASEAN countries and their plans to apply Global minimum tax, we hope to make a valuable contribution to the current literature. Furthermore, as corporate income tax is not the only factor affecting FDI inflows, we also consider other important factors, including political stability, infrastructure, labor force, degree of economic openness, and economic shocks, as suggested in the literature (Nazir et al., 2022). We want to propose the following hypothesis:

H1: Corporate income tax rates have negative effects on FDI inflows in ASEAN countries in the period 1999-2022.

H2: Political stability, infrastructure, labor force, trade openness, and economic shocks have positive effects on FDI inflows in ASEAN countries in the period 1999-2022.

III. METHODS

A. *The model*

Empirical studies on the determinants of FDI are extensive, and they have proposed many interacting factors related to a country's ability to attract FDI, including (i) Market factors, (ii) Resources, (iii) Infrastructure, and (iv) Policy institutions.

Market factors include economic factors related to the host country, such as market size, growth level, competitiveness, economic growth, per capita income, investment level government, and international environment. Common measures for market factors are GDP growth, GDP per capita, and market size. In addition, many other measures have been used, such as the import/GDP ratio, export/import ratio, level of economic integration, and production/GDP ratio (Mundena, 2015). These factors not only affect the expected profit level (through the impact on the business's revenue and costs) but can also affect the level of risk that investors must bear, which in turn will affect the level of FDI attraction of the host country. Amirahmadi and Wu (1994) observe that FDI tends to move to countries with greater purchasing power and more open markets. The large market size of the host country would also allow foreign investors to exploit the economies of scale through the effective use of resources (Charkrabarti, 2001). Nevertheless, the empirical evidence is inconsistent on the relationship between market size and FDI, with some studies showing positive relationships (Ang, 2008; Asiedu, 2002) and some finding negative ones (Edwards, 1990; Jaspersen et al., 2000).

Resource factors include geographical location, resources, and human resources. Geographic location and resources have an important influence on FDI capital in fields such as tourism, hotels, mining, oil, etc. Countries that have the advantage of cheap raw natural resources are often attractive investment destinations for foreign investors. Countries with advantages in natural landscapes, water resources, environment, and raw materials will become attractive for investment capital in tourism services, hotels, and restaurants. The impact of human resource factors on FDI has been tested extensively through empirical studies, but empirical studies have yet to show consistent results. Some studies found positive evidence of cheap labor costs on FDI (Tsai, 1994; Hoang & Bui, 2015), while many have found negative ones (Saunders, 1982; Flamm, 1984; Culem, 1988) or no significant impact (ODI, 1997; Masron & Nor, 2013). Some other studies measure the quality of labor resources using different metrics, such as the "ratio of workers with degrees to the total number of workers" (Hans-Rimbert & Nguyen, 2002) or "number of university lecturers per 1000 people" (Mayer & Nguyen, 2005). However, the labor quality and FDI results are also inconclusive, with studies showing positive effects (Hans-Rimbert & Nguyen, 2002; Mayer & Nguyen, 2005) and some showing negative ones (Le, 2002).

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The infrastructure factor includes a system of facilities serving the socio-economy, such as transportation infrastructure, information technology, electricity and water, industrial-economic zones, and service infrastructure. In theory, when a country has high-quality infrastructure and is at a stage of development, it will attract more FDI due to increasing the potential efficiency of investment projects (Bakar et al., 2012). However, ODI (1997) states that countries with poor and undeveloped infrastructure can be a factor in attracting a large amount of FDI capital when their governments allow foreign parties to participate more in the infrastructure sector. Most of the studies confirm the favorable influence of infrastructure on FDI (Hoang & Bui, 2015; Asih, 2020) and few studies find no significant influence (Xaypanya et al., 2015).

The institutional factors include (1) state management decentralization mechanism and (2) policy system. Common measures of institutional factors include the level of institutional change, the number of internal armed attacks, the level of effectiveness of state management, the level of nationalism, or the role of government in the economy (Mundena, 2015). Common measures of the policy system include corporate income tax, tax incentive policies, management points for joint venture activities... In general, because institutional and policy factors have an important relationship with the stability of the socio-economic and political environment, a country with a good policy and institutional structure will be able to attract more FDI capital than a country with a poor policy and institutional structure (Benassy-Quere et al., 2007). This observation has been proven through quite consistent research results of empirical studies such as Du et al.'s (2012) study on US multinational companies investing in China from 1993 to 2000; or research by Nguyen et al. (2014) on FDI attraction of 20 provinces of Vietnam in the period 2006-2010. These studies all show that FDI capital flows tend to flow to localities with transparency in policy and institutional systems.

Hence, from the above literature and following the research model of Nazir et al. (2020), in addition to the corporate income tax rate (TR), which is the main independent variable of the model, the authors included other critical independent variables that affect the FDI, including financial stability index (PS), employment rate (LB), infrastructure (IF), and economic openness (DP). Furthermore, to account for the impact of economic shocks of the 2008 financial crisis and the 2020 COVID-19 pandemic, we added to the original model the CRISIS dummy variable. CRISIS takes the value 1 if the year is 2007, 2008, 2009, 2020, and 2021 (Coccia, 2022; RBA, 2024) and 0 otherwise. Specifically, the model is presented as follows:

$$FDI_{it} = \alpha + \beta_1 TR_{it} + \beta_2 PS_{it} + \beta_3 LB_{it} + \beta_4 IF_{it} + \beta_5 DP_{it} + \beta_6 CRISIS_t + \mu_{it} \quad (1)$$

In which:

- + FDI: foreign investment capital flows into each ASEAN country in the sample. Measured as a percentage of FDI inflows/GDP.
- + TR: normal corporate income tax rate according to the provisions of corporate income tax law in each country.
- + PS: Political Stability and Absence of Violence/Terrorism index.
- + IF: infrastructure, measured using electric consumption per capita.
- + LB: Labor force participation rate, measured as % of the total population age 15 and over.
- + DP: the openness of the economy, measured by the total import-export value over GDP in a year.
- + CRISIS: dummy, equal 1 for years with economic shock; and 0 otherwise.

B. Estimation methods

To test the impact of corporate income tax and other controlling factors on FDI, we implement panel data models, namely OLS, Fixed Effects, and Random Effects. The procedure is performed as follows. First, as the 6 economies are in the same regions with some common characteristics, we test cross-sectional dependence in the panel, using the Pesaran CD test. Second, the Pesaran CD test results help us to determine whether to use the first (LLC, IPS) or second-generation panel unit root test (Pesaran CIPS) (Kunst, 2016). Thirdly, we perform a panel data cointegration test to test for the presence of a long-run cointegration relationship, using the Kao or Pedroni test (if our sample demonstrates no cross-sectional dependence) or the Westerlund test (if our sample demonstrates cross-sectional dependence) (Stata, 2024). Fourthly, depending on the results of the 3 tests, appropriate panel estimation methods are used. Finally, we perform robustness tests using another measure of corporate income tax and subsamples.

C. Data

To evaluate the effect of corporate income tax on FDI, we use data from six ASEAN countries, namely Vietnam, Singapore, Thailand, the Philippines, Malaysia, and Indonesia, for a period of 24 years (1999-2022). The data are strongly balanced and collected from the World database.

Tables 1 and 2 present the descriptive statistics of FDI, corporate income tax rate, and other control variables used in the estimation model. Table 1 describes each variable.

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Table 1: Variable description

Variable	Variable name	Description
FDI	Foreign direct investment inflows	Percentage of FDI inflow over GDP
TR	Corporate income tax rate	Statutory corporate income tax rate
PS	Political stability	Political Stability and Absence of Violence/Terrorism index.
LB	Labor force participation	% of the total population age 15 and over
IF	Infrastructure	Electric consumption per capita (kWh per capita)
DP	Degree of economic openness	Ratio of the total import-export value over GDP
CRISIS	Economic shocks	Dummy, equals 1 for years with economic shock; and 0 otherwise

Table 2 presents the descriptive statistics of FDI inflows, corporate income tax rate, and other control variables of the model. As this table shows, ASEAN countries vary significantly regarding FDI attraction, statutory tax rate, political stability, labor resources, infrastructure, and degree of economic openness. Regarding FDI, the average FDI inflows in ASEAN regions account for more than 5%, but the highest ratio is 32%. Regarding the statutory tax rate, the average rate is more than 25%, with the lowest rate being 17% and the highest rate being 35%.

Table 2: Summary statistics of dependent and independent variables

Variable description	Variable	Obs.	Mean	Std. Dev.	Min	Max
FDI inflows	FDI	144	5.758	7.428	-2.757	32.691
Corporate income tax rate	TR	144	25.508	4.902	17.000	35.000
Political stability	PS	144	-0.210	0.946	-2.095	1.599
Labor force participation	LB	144	67.278	5.124	54.750	77.200
Infrastructure	IF	144	2929.783	2768.327	301.560	9168.817
Degree of economic openness	DP	144	151.893	104.257	32.972	437.327
Economic shocks	CRISIS	144	0.208	0.408	0.000	1.000

Obs. is the number of observations. Std. Dev is the standard deviation of each variable. The variables are defined in Table 1.

Table 3 reports the average value of each variable by country. Singapore and Vietnam attract the highest levels of FDI, followed by Malaysia and Thailand. The Philippines has the highest average tax rate of 30%, Singapore has the lowest average tax rate of 19%, and other countries's rates stay around the mean value of 25%. Singapore, Vietnam, and Malaysia demonstrate higher political stability levels than the other countries. Vietnam, Thailand, and Singapore have higher levels of labor participation than the different countries. Singapore and Malaysia rank the highest in infrastructure and degree of openness, followed by Thailand and Vietnam.

Table 3: Variable distribution by country

Variable description	Variable	Vietnam	Singapore	Thailand	Philippines	Malaysia	Indonesia
FDI inflows	FDI	4.865	20.787	2.653	1.725	3.299	1.221
Corporate income tax rate	TR	25.375	19.292	25.542	30.255	25.833	26.75
Political stability	PS	0.190	1.271	-0.6746	-1.21	0.183	-1.017
Labor force participation	LB	74.551	68.390	70.929	60.597	62.688	66.514
Infrastructure	IF	1274.595	8345.962	2124.6	732.648	4320.406	780.486
Degree of economic openness	DP	139.902	360.779	124.025	70.619	165.311	50.722
Economic shocks	CRISIS	0.208	0.208	0.208	0.208	0.208	0.208
Observations		24	24	24	24	24	24

The table report the mean value of each variable. The variables are defined in Table 1.

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IV. RESULTS

A. Estimation results

We perform different tests before estimating the baseline models to choose the appropriate panel data estimation method. First, we tested for cross-sectional dependence on the sample using the Pesaran CD test, and the results are presented in Table 4. The results show no cross-sectional dependence between panels in the estimation period from 1999 to 2022.

Table 4: Pesaran CD test for cross-dependence

H0: cross-sectional independence	
H1: cross-sectional dependence	
Pesaran's test of cross-sectional independence	1.172
Pr	0.2412

Second, due to the results of cross-sectional independence, we used the first-generation unit root test, which is reported in Table 5. The results show that the two variables, FDI and CRISIS, are stationary at the levels. However, the panel unit root tests fail to reject the null hypothesis at the 1% significance level, meaning that variables TR, PS, LB, IF, and DP are non-stationary in the levels. Therefore, we proceeded to test the stationary of the first differences, and the results showed that all of them were stationary in the first difference.

Table 5: Panel unit root test

H0: All Panel contain unit roots

H1: Some panels are stationary

Variable	Level of variables		First difference	
	Z(t)-stat.	p-values	Z(t)-stat.	p-values
FDI	-3.675	0.000	-7.107	0.000
TR	2.627	0.996	-4.912	0.000
PS	-1.985	0.024	-6.657	0.000
LB	1.980	0.976	-5.091	0.000
IF	4.683	1.000	-5.861	0.000
DP	-0.303	0.381	-5.575	0.000
CRISIS	-3.002	0.001	-3.002	0.001

Next, we test for panel cointegration using Pedroni and Kao tests, which are used for panels with cross-sectional independence. We find evidence of panel cointegration and proceed to use ARDL models to estimate the model. However, the assumptions of this model are not met, and no evidence of a long-run relationship was confirmed. This is consistent with the suggestion of Stata (2024), as panel cointegration is more appropriate for data containing many long panels (large-N and large-T case) while our panel is small-N large-T. We proceed to use traditional panel estimation methods, namely OLS, Fixed Effects, and Random Effects, to estimate the model. We continue to perform tests to confirm the assumption of OLS and find that our data and model contain no multicollinearity, no heteroscedasticity, and no autocorrelation. The baseline results are presented in Table 6.

Table 6: Corporate income tax and FDI in ASEAN country (1999-2022)

Variable description	Variables	Dependent variable: FDI inflows		
		Pooled OLS	Fixed Effects	Random Effects
Corporate income tax	D.TR	0.317 (0.58)	0.326 (1.50)	0.317 (0.58)
Political stability	D.PS	0.798 (0.29)	- 0.394 (-0.36)	0.798 (0.29)
Labor force participation	D.LB	0.295 (1.20)	0.0454 (0.15)	0.925 (1.20)
Infrastructure	D.IF	0.0131** (2.18)	0.00812*** (3.30)	(0.0131)** (2.18)

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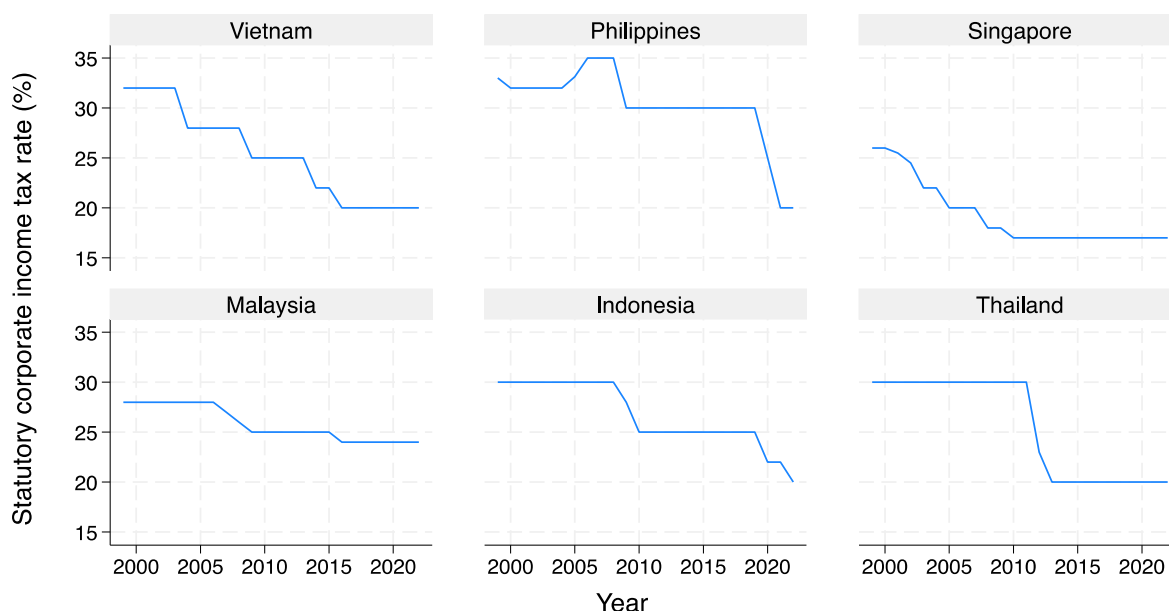
Degree of Economic openness	D.DP	0.00311	-0.0007	0.00311
		(0.06)	(-0.04)	(0.06)
Economic shocks	CRISIS	1.416	0.963	1.416
		(0.85)	(1.47)	(0.85)
Observations		144	144	144
R-squared		0.049	0.092	
F-test (prob>F)			0.0000	
Hausman test (Prob>chi2)			0.0000 (Random Effects is chosen)	

The variables are defined in Table 1. ***, **, and * represent significance at the 1%, 5%, and 10% levels, respectively.

The results in Table 6 suggest positive signs between corporate income tax and FDI inflows in ASEAN countries; however, the relationships are insignificant. This result is consistent with the study of Jensen (2012), Hundany and Orviska (2014), Kinda (2016), and Sujarwati and Qibthiyah (2020). The results can be interpreted as that statutory corporate income tax rate probably is not an important determinant of FDI inflows in Southeast Asian countries. Several reasons can explain the results. First, Li (2006) notes that the small impact of the corporate tax rate on the choice of international investors may be due to the ability of foreign firms to negotiate special tax incentives with the host government. Second, Sujarwati and Qibthiyah (2020) explain that corporate income tax is levied on all business sectors and applied worldwide, so the corporate income tax rate change will impact all companies without exception.

Furthermore, corporate income tax is influenced by many factors, such as economic conditions, government policies, or the fairness principles of taxpayers. This causes the sensitivity of FDI inflows to corporate income tax rate changes to be decreased. Third, as reviewed earlier, ASEAN countries are on the trend of cutting their corporate tax rate to around 20% (as seen in Graph 1), which might make each country more attractive to foreign investors than in earlier periods, but the tax advantage is reduced when all countries levy similar rates. However, as noted by Jensen (2012), though corporate income taxes may have a small influence on FDI decisions in the ASEAN region, they significantly impact firms' reported profit. The results of this study are drawn from the national-level data, hence it should not be concluded that corporate income tax cut does not matter at FDI firm levels.

Graph 1: Corporate tax rate changes in ASEAN countries from 1999-2022



In terms of control variables, we also find no significant impacts of political stability, labor resources, economic openness, and economic shocks on ASEAN countries' ability to attract FDI during the examined period. We found significant positive relationships between infrastructure and FDI inflows, which suggest that countries with better infrastructure will attract more FDI. This result is consistent with previous empirical results such as those of Hundany & Orviska (2014), Hoang and Bui (2015), World Bank (2018),

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and Asih (2020). This confirms the argument of Bakar et al. (2012) that a country with a higher infrastructure quality and at a developing stage will signal foreign investors of potential investment efficiency and attract more FDI.

We examine the corporate income tax rate and FDI inflows to ASEAN regions based on data availability. Our data are collected for six countries, of which five are categorised as developing countries and Singapore is a more developed economy. Singapore's GDP per capita in 2023 is US\$133.759, much higher than the ASEAN average of US\$16,183 (IMF, 2023). Hence, we proceed to test our hypotheses for a sub-sample of developing ASEAN economies, and the results are reported in Table 7.

Table 7: Corporate income tax and FDI in developing ASEAN countries (1999-2022)

Variable description	Variables	Dependent variable: FDI inflows		
		Pooled OLS	Fixed Effects	Random Effects
Corporate income tax	D.TR	-0.0235 (-0.19)	-0.0469 (-0.47)	-0.0235 (-0.19)
Political stability	D.PS	-0.179 (-0.28)	-0.0984 (-0.20)	-0.179 (-0.28)
Labor force participation	D.LB	0.088 (0.50)	0.0659 (0.47)	0.088 (0.50)
Infrastructure	D.IF	0.00975*** (4.84)	0.0044*** (2.48)	0.00975*** (4.84)
Degree of Economic openness	D.DP	0.0344* (1.85)	0.0299 (1.50)	0.0344* (1.85)
Economic shocks	CRISIS	1.015** (2.54)	0.667** (2.09)	1.015** (2.54)
Observations		115	115	115
R-squared		0.230	0.107	
F-test (prob>F)			0.0000	
Hausman test (Prob>chi2)			0.0000 (Random Effects is chosen)	

*The variables are defined in Table 1. ***, **, and * represent significance at the 1%, 5%, and 10% levels, respectively. Singapore is excluded from the original sample.*

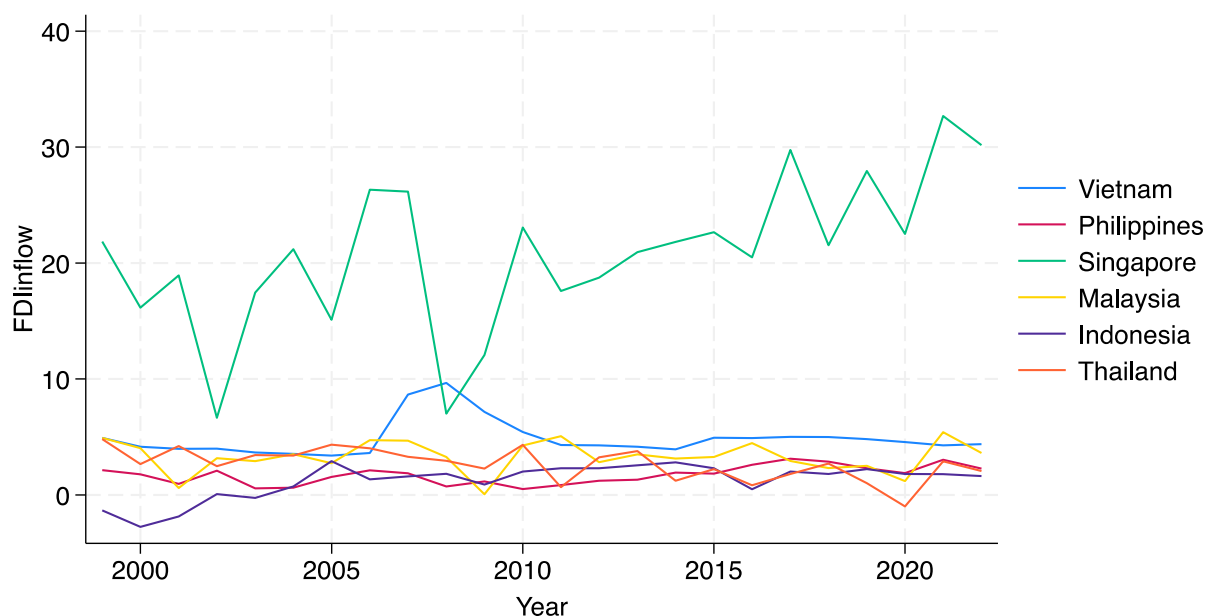
The results in Table 7 confirm our findings for the whole sample and provide some interesting additional information. Unlike the results for the entire sample, corporate income tax shows signs of negative impacts on FDI inflows in developing ASEAN countries. However, the impacts are not statistically significant. Infrastructure continues to have strong positive influences on international investors' decisions.

Additionally, we find significant positive effects of economic openness on FDI attraction in 5 less developed ASEAN economies. This is in line with the findings of Masron and Nor (2013), Hoang and Bui (2015), and Sujarwati and Qibthiyah (2020). Demirhan and Masca (2008) explain that a developing country's trade openness provides various benefits for foreign investors because it increases mobility and decreases both tariff and non-tariff barriers. Hence, as developing countries' economic and institutional conditions are not as stable as those of developed ones, their trade openness can be more sensitive to FDI inflows.

Furthermore, we find a significant positive relationship between economic shocks and FDI inflows in developing ASEAN economies. This result is quite interesting as it differs from previous literature's suggestion that FDI flows tend to decline during a crisis. Saleh (2023) gives a comprehensive summary of FDI inflow decline during economic shocks, such as the FDI to Southeast Asia falling 5-7% from 1997 to 1998 or global FDI flows falling 16% in 2008 and a further 40% in 2009. However, during our examined period from 1999-2022 and particularly in 2007-2009 (the global financial crisis) and 2020-2021 (the COVID-19 pandemic), the FDI inflows to ASEAN are actually at their peaks and recover quickly after the shocks, as shown in Graph 2. This might suggest that economic shocks happen when investments peak and it takes time for foreign investors to re-evaluate their investment decisions and take action (Saleh, 2023). Furthermore, due to economic shocks, foreign investors might increase their investments in regions that provide cheap resources to reduce costs.

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Graph 2: FDI inflows to ASEAN countries from 1999-2022 (% of GDP)



B. Robustness tests

To test the robustness of our results, we replace our main independent variable, corporate income tax rate (TR), with alternative tax measures. Devereux et al. (2008) and Mistura and Roulet (2019) argue that although FDI inflows are predicted to be sensitive to statutory rates, effective tax rates also make significant contributions. We use three alternative tax measures from the World Bank database, including total tax rate, profit tax, and the share of tax revenue in GDP. We re-estimate the models, and the results are reported in Table 8 for the entire sample and Table 9 for developing ASEAN countries. The results from the robustness tests confirm our baseline findings reported earlier.

Table 8: Corporate income tax and FDI in ASEAN country (1999-2022) – Robustness test

Variable description	Variables	Dependent variable: FDI inflows		
		Total tax rate	Share of tax revenue in GDP	Profit tax
Alternative corporate income tax measures	D.TR1	-0.301	-0.391	0.355
		(-0.67)	(-0.84)	(0.36)
Political stability	D.PS	-0.171	-0.415	1.479
		(-0.03)	(-0.08)	(0.47)
Labor force participation	D.LB	1.946	1.909	1.604*
		(1.51)	(1.52)	(1.70)
Infrastructure	D.IF	-0.00008	-0.0002	0.0122*
		(-0.01)	(-0.02)	(1.82)
Degree of Economic openness	D.DP	-0.0604	-0.0608	0.0123
		(-0.89)	(-0.91)	(0.21)
Economic shocks	CRISIS	-1.408	-1.243	1.425
		(-0.56)	(-0.49)	(0.71)
Observations		76	76	105

The variables are defined in Table 1. ***, **, and * represent significance at the 1%, 5%, and 10% levels, respectively. Corporate income tax rate is replaced by Total tax rate, Share of tax revenue in GDP, and Profit tax. We reports the results for Random Effects models.

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For the developing ASEAN sample, we find additional significant negative impacts of Political stability on FDI inflows for the Total tax rate and Share of tax revenue in GDP variables. This indicates that countries with higher political stability attract lower levels of FDI, which confirms the findings of Kurecic and Kokotovic (2017), Shan et al. (2018), and Le et al. (2023). Le et al. (2023) explain that developing countries with high levels of political stability may be accompanied by traits such as excessive government intervention or unfavorable regulatory policies, which might discourage foreign investors. In other words, foreign investors might have to cope with the risk of production inefficiencies when operating under restrictive regulations, unpredictable policy changes, or complex bureaucratic environments (Busse & Hefeker, 2007).

Table 9: Corporate income tax and FDI in developing ASEAN country (1999-2022) – Robustness test

Variable description	Variables	Dependent variable: FDI inflows		
		Total tax rate	Share of tax revenue in GDP	Profit tax
Alternative corporate income tax measures	D.TR1	-0.127	-0.158	-0.0739
		(-1.23)	(-1.51)	(-0.46)
Political stability	D.PS	-1.920*	-1.953*	-0.366
		(-1.72)	(-1.77)	(-0.73)
Labor force participation	D.LB	0.336	0.313	-0.009
		(1.23)	(1.19)	(-0.06)
Infrastructure	D.IF	0.0136***	0.0133***	0.00601***
		(4.46)	(4.42)	(3.76)
Degree of Economic openness	D.DP	0.0642**	0.0649**	0.0368**
		(2.35)	(2.41)	(2.08)
Economic shocks	CRISIS	1.566***	1.632***	0.222
		(2.83)	(2.95)	(0.64)
Observations		62	62	83

The variables are defined in Table 1. ***, **, and * represent significance at the 1%, 5%, and 10% levels, respectively. Singapore is excluded from the sample. Corporate income tax rate is replaced by Total tax rate, Share of tax revenue in GDP, and Profit tax. We reports the results for Random Effects models.

IV. CONCLUSIONS

This study analyzes the impacts of corporate income tax on FDI inflows in ASEAN countries from 1999 to 2022. We employ panel data estimation methods to analyze a balanced sample of 144 annual observations in 6 ASEAN nations.

Our study produces the following interesting results. First, our findings show that corporate income tax rates do not significantly impact the FDI inflows into the ASEAN region at the national level, implying that statutory corporate income tax rates might not be a main consideration of foreign investors when choosing to locate their investments overseas. Second, infrastructure significantly impacts FDI inflows, indicating that foreign investors favor ASEAN countries with better infrastructure conditions. Third, when we consider the impacts of corporate tax on FDI in developing ASEAN countries, we find significant positive impacts of economic openness and shocks on FDI inflows. This indicates that foreign investments are more sensitive to the degree of economic openness and shocks in the less developed ASEAN nations. Fourth, when we check the robustness of our results using different corporate income tax measures, we discover foreign investors prefer countries with lower levels of political stability in ASEAN.

Our results provide important practical implications for academics and policymakers in emphasizing the role of corporate income tax, infrastructure, economic openness, political stability, and economic shocks on FDI. First, given that corporate income tax has no significant impact on FDI inflows at the national level, we suggest that governments in the ASEAN region should not focus too much on reducing the corporate income tax rate to attract foreign investment, particularly under the current situation of implementing Minimum Global Tax that makes low statutory tax rates a less effective instrument to increase FDI inflows. Second, instead of reducing the corporate income tax rate, the governments in ASEAN nations should focus more on policy strengthening their infrastructure and increasing trade openness. Thirdly, for developing countries in the area, the results emphasize the importance of trade openness and political stability. Developing nations could increase their trade openness via various methods, including negotiating and entering into Free-Trade Agreements (FTAs) to reduce trade barriers between

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members; implementing measures to streamline and simplify administration and customs processes such as utilizing electronic systems; providing support for importers and exporters such as information services or market research; and enhancing infrastructure and logistics networks for cross border trade. As our results indicate, developing countries with higher levels of political stability have lower FDI inflows, so developing countries need to enhance their political stability and create an investment-friendly environment at the same time. Their government can implement measures such as simplifying regulations, reducing bureaucratic administration, applying anti-corruption policies, and promoting transparency and accountability in public administration.

Although this study contributes to the growing literature on tax policies and FDI in ASEAN countries, it has its following limitations: the sample does not cover the entire areas of ASEAN consisting of 11 countries due to missing data, and the study only focuses on corporate income tax as a measure of tax policies and competition. Hence, we suggest that future studies cover other countries in the ASEAN areas and use different measures of tax policies such as tax incentives and the application of Global minimum tax.

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REFERENCES

- 1) Abdioglu, N., Biniş, M., & Arslan, M. (2016). The effect of corporate tax rate on foreign direct investment: A panel study for OECD countries. *Ege Academic Review*, 16(4), 599-610.
- 2) Amirahmadi, H., & Wu, W. (1994). Foreign direct investment in developing countries. *The Journal of Developing Areas*, 28(2), 167-190.
- 3) Ang, J. B., (2008) Determinants of foreign direct investment in Malaysia. *Journal of Policy Modeling*, 30(1), 185-189. <https://doi.org/10.1016/j.jpolmod.2007.06.014>
- 4) Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different? *World Development*, 30(1), 107–119. [https://doi.org/10.1016/S0305-750X\(01\)00100-0](https://doi.org/10.1016/S0305-750X(01)00100-0)
- 5) Asih, N. D. P. (2020). Assessing the Effects of Tax Policy on Foreign Direct Investment in Southeast Asia (Doctoral dissertation, Victoria University).
- 6) Azémar, C., & Dharmapala, D. (2019). Tax sparing agreements, territorial tax reforms, and foreign direct investment. *Journal of Public Economics*, 169(1), 89–108. <https://doi.org/10.1016/j.jpubeco.2018.10.013>
- 7) Azémar, C., & Delios, A. (2008). Tax competition and FDI: The special case of developing countries. *Journal of the Japanese and International Economies*, 22(1), 85–108. <https://doi.org/10.1016/j.jjie.2007.02.001>
- 8) Bakar, N. A., Mat, S. H. C., & Harun, M. (2012). The impact of infrastructure on foreign direct investment: The case of Malaysia. *Procedia-Social and Behavioral Sciences*, 65, 205-211. <https://doi.org/10.1016/j.sbspro.2012.11.112>
- 9) Bénassy-Quéré, A., Coupet, M., & Mayer, T. (2007). Institutional Determinants of Foreign Direct Investment. *The World Economy*, 30(5), 764–782. <https://doi.org/10.1111/j.1467-9701.2007.01022.x>
- 10) Boly, A., Coulibaly, S., & Kéré, E. N. (2020). Tax policy, foreign direct investment and spillover effects in Africa. *Journal of African Economies*, 29(3), 306-331. <https://doi.org/10.1093/jae/ejz032>
- 11) Buettner, T., & Ruf, M. (2007). Tax incentives and the location of FDI: Evidence from a panel of German multinationals. *International Tax and Public Finance*, 14(2), 151–164. <https://doi.org/10.1007/s10797-006-8721-5>
- 12) Busse, M., & Hefeker, C. (2007). Political risk, institutions and foreign direct investment. *European journal of political economy*, 23(2), 397-415. <https://doi.org/10.1016/j.ejpoleco.2006.02.003>
- 13) Caves, R. E. (1971). International Corporations: The Industrial Economics of Foreign Investment. *Economica*, 38, 1-27. <https://doi.org/10.2307/2551748>
- 14) Chakrabarti, A. (2001). The Determinants of Foreign Direct Investments: Sensitivity Analyses of Cross-Country Regressions. *Kyklos*, 54, 89-114. <https://doi.org/10.1111/1467-6435.00142>
- 15) Coccia, M. (2022). COVID-19 pandemic over 2020 (with lockdowns) and 2021 (with vaccinations): similar effects for seasonality and environmental factors. *Environmental Research*, 208, 112711. <https://doi.org/10.1016/j.envres.2022.112711>
- 16) Coase, R. (1937). The Nature of the Firm, *Economica*, 4, November
- 17) Culem, (1988). The Locational Determinants of Direct Investments Among Industrialized Countries. *European Economic Review*, 32, 885-904. [https://doi.org/10.1016/0014-2921\(88\)90051-7](https://doi.org/10.1016/0014-2921(88)90051-7)

Does Income Tax Competition Remain Relevant In Attracting FDI? The Case of ASEAN Countries

- 18) Demirhan, E. & Masca, M. (2008) Determinants of foreign direct investment flows to developing countries: A cross-sectional analysis, *Prague Economic Papers*, 17(4), 356-369. <https://doi.org/10.18267/j.pap.337>.
- 19) Devereux, M. P., Lockwood, B., & Redoano, M. (2008). Do countries compete over corporate tax rates?. *Journal of Public Economics*, 92(5-6), 1210-1235. <https://doi.org/10.1016/j.jpubeco.2007.09.005>
- 20) Du, J., Lu, Y., Tao, Z., & Yu, L. (2012). Do domestic and foreign exporters differ in learning by exporting? Evidence from China. *China Economic Review*, 23(2), 296–315. <https://doi.org/10.1016/j.chieco.2011.12.003>
- 21) Dunning, J. H. (1979). Explaining changing patterns of international production: In defence of the eclectic theory. *Oxford Bulletin of Economics and Statistics*, 41(4), 269–295. <https://doi.org/10.1111/j.1468-0084.1979.mp41004003.x>
- 22) Edwards, S. (2001) Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries. *Capital Flows in the World Economy*, 255-281. <https://doi.org/10.3386/w3497>
- 23) Economou, F., Hassapis, C., Philippas, N., & Tsionas, M. (2017). Foreign direct investment determinants in OECD and developing countries. *Review of Development Economics*, 21, 527–542. <https://doi.org/10.1111/rode.12269>
- 24) Edo, O. C., Okafor, A., & Akihibodemhe, E. J. (2020). Corporate Taxes and Foreign Direct Investments: An Impact Analysis. *Public Policy and Administration Research*, 10(9). <https://doi.org/10.7176/PPAR/10-9-07>
- 25) Eshghi, G., Eshghi, A. & Li, R. (2016) Corporate income tax as a determinant of foreign direct investment in Central and Eastern Europe, *European Journal of Business and Social Sciences*, 4(11), 111-123.
- 26) Esteller-Moré, A., Rizzo, L., & Secomandi, R. (2020). The heterogenous impact of taxation on FDI: A note on Djankov et al. (2010). *Economics Letters*, 186, 108775. <https://doi.org/10.1016/j.econlet.2019.108775>
- 27) Edwards, S. (2001) Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries. *Capital Flows in the World Economy*, 255-281. <https://doi.org/10.3386/w3497>
- 28) Flamm, (1984). The Volatility of Offshore Investment, *Journal of Development Economics*, 16, 231– 248. [https://doi.org/10.1016/0304-3878\(84\)90076-2](https://doi.org/10.1016/0304-3878(84)90076-2)
- 29) Gasparėnienė, L., Klietėtik, T., Šivickienė, R., Remeikienė, R., & Endrijaitis, M. (2022). Impact of foreign direct investment on tax revenue: The case of the European Union. *Journal of Competitiveness*, 14(1), 43-60. <https://doi.org/10.7441/joc.2022.01.03>
- 30) Gastanaga, V. M., Nugent, J. B., & Pashamova, B. (1998). Host country reforms and FDI inflows: How much difference do they make? *World Development*, 26(7), 1299–1314. [https://doi.org/10.1016/S0305-750X\(98\)00049-7](https://doi.org/10.1016/S0305-750X(98)00049-7)
- 31) Ghemawat, P. (2003). Semiglobalization and international business strategy. *Journal of International Business Studies*, 34, 138-152. <https://doi.org/10.1057/palgrave.jibs.8400013>
- 32) Hans-Rimbert, H., & Nguyen, T. P. H. (2002) Contribution of foreign direct investment to poverty reduction: the case of Vietnam in 1990s. *Univ. Giesen*. <https://hdl.handle.net/10419/45824>
- 33) Hajkova, D., Nicoletti, G., Vartia, L. & Yoo, K., (2007). Taxation and Business Environment as drivers of Foreign Direct Investment in OECD countries. *OECD Economic Studies*, Vol 2006/2. https://doi.org/10.1787/eco_studies-v2006-art8-en
- 34) Hartman, D. G. (1984). Tax policy and foreign direct investment in the United States. *National tax Journal*, 37(4), 475–487. <https://doi.org/10.1086/NTJ41791979>
- 35) Hines Jr, J. R. (1993). Altered states: Taxes and the location of foreign direct investment in America. NBER Working Paper Series (WP # 4397), National Bureau of Economic Research, Cambridge, MA
- 36) Hoang, H. & Bui, D. (2015) Determinants of foreign direct investment in ASEAN: a panel approach, *Management Science Letters*, 5(2), 213-222. <https://doi.org/10.5267/j.msl.2014.12.015>
- 37) Hunady, J., & Orviska, M. (2014). Determinants of foreign direct investment in EU countries—do corporate taxes really matter? *Procedia Economics and Finance*, 12, 243–250. [https://doi.org/10.1016/S2212-5671\(14\)00341-4](https://doi.org/10.1016/S2212-5671(14)00341-4)
- 38) IMF (2023) World Economic Outlook Database. Retrieved March 5, 2024, from <https://www.imf.org/en/Publications/WEO/weo-database/2023/April/weo-report?c=516,522,536,544,548,518,566,576,578,582,&s=NGDPD,PPPGDP,NGDPDPC,PPPPC,LP,&sy=2021&ey=2028&ssm=0&scsm=1&ssc=0&ssd=1&ssc=0&sic=0&sort=country&ds=.&br=1>
- 39) IMF, OECD, UNCTAD & World Bank 2015, Options for low-income countries effective and efficient use of tax incentives for investment, International Monetary Fund; OECD; United Nations; World Bank.
- 40) Jaspersen, S., Aylward, A. & Knox, A. (2000). The Effects of Risks on Private Investment: Africa Compared with Other Developing Areas. In P. Collier and C. Pattillo (Eds.), *Investments and Risks in Africa*, pp 71-95. New York. St. Martin's Press.
- 41) Jensen, N. M. (2012). Fiscal policy and the firm: do low corporate tax rates attract multinational corporations?. *Comparative Political Studies*, 45(8), 1004-1026. <https://doi.org/10.1177/0010414011428594>

Does Income Tax Competition Remain Relevant In Attracting FDI? The Case of ASEAN Countries

- 42) Jorgenson, D. (1963). Capital theory and investment behavior. *The American Economic Review*, 247–259. <https://www.jstor.org/stable/1823868>
- 43) Kinda, T. (2016). The quest for non-resource-based FDI: Do taxes matter? *Macroeconomics and Finance in Emerging Market Economies*, 11(1), 1–18. <https://doi.org/10.1080/17520843.2016.1244095>
- 44) Klemm, A. & Van Parys, S. (2012). Empirical evidence on the effects of tax incentives. *International Tax and Public Finance*, May, 393–423. <https://doi.org/10.1007/s10797-011-9194-8>
- 45) Kunst, R. M. (2016) *Econometric Methods for Panel Data*. Retrieved March 5, 2024, from <https://homepage.univie.ac.at/robert.kunst/panpres7.pdf>
- 46) Kurecic, P., & Kokotovic, F. (2017). The relevance of political stability on FDI: A VAR analysis and ARDL models for selected small, developed, and instability threatened economies. *Economies*, 5(3), 22. <https://doi.org/10.3390/economies5030022>
- 47) Le, A. N. N., Pham, H., Pham, D. T. N., & Duong, K. D. (2023). Political stability and foreign direct investment inflows in 25 Asia-Pacific countries: the moderating role of trade openness. *Humanities and Social Sciences Communications*, 10(1), 1–9. <https://doi.org/10.1057/s41599-023-02075-1>
- 48) Lessard, D. R. (1979). 'Transfer Prices, Taxes and Financial Markets', in Hawkins, R. (ed.) *The Economic Effects of Multinational Corporations*, Greenwich (Connecticut): JAI Press.
- 49) Le Viet Anh, "FDI-growth nexus in Vietnam", Mimeo, Graduate School of International Development, Nagoya University, 2002.
- 50) Li, Q. (2006). Democracy, autocracy, and tax incentives to foreign direct investors: A cross-national analysis. *The Journal of Politics*, 68(1), 62–74. <https://doi.org/10.1177/0010414009331723>
- 51) Masron, T. A. & Nor, E. (2013). FDI in ASEAN-8: Does institutional quality matter? *Applied Economics Letters*, 20(2), 186–189. <https://doi.org/10.1080/13504851.2012.687090>
- 52) McManus, J. F. (1972). 'The Theory of the Multinational Firm', in Paquet G. (ed.) *The Multinational Firm and the National State*, Toronto: Collier-Macmillan.
- 53) Meyer, K. E., & Nguyen, H. V. (2005). Foreign Investment Strategies and Sub-national Institutions in Emerging Markets: Evidence from Vietnam. *Journal of Management Studies*, 42(1), 63–93. <https://doi.org/10.4337/9781788978927.00011>
- 54) Mistura, F., & Roulet, C. (2019). The determinants of Foreign Direct Investment: Do statutory restrictions matter? *OECD Working Papers on International Investment 1009/01*: <https://doi.org/10.1787/641507ce-en>
- 55) MOF (2023) Issuing resolution on global minimum tax to proactive international integration. Retrieved March 5, 2024, from https://www.mof.gov.vn/webcenter/portal/vclvcstcen/pages_r/l/detailnews?dDocName=MOFUCM296473
- 56) Morisset, J., & Pirnia, N. (2000). *How tax policy and incentives affect foreign direct investment. New directions for research in FDI*, Routledge.
- 57) Mudenda, L. D. (2015). Corporate income tax rate and foreign direct investment: The case of Southern African economies. Retrieved March 5, 2024, from <https://www.diva-portal.org/smash/get/diva2:845659/FULLTEXT01.pdf>
- 58) Nazir, M. S., Hafeez, Q., & U-Din, S. (2022). Did reduction in corporate tax rate attract FDI in Pakistan?. *International Journal of Finance & Economics*, 27(2), 2256–2267. <https://doi.org/10.1002/ijfe.2271>
- 59) Nguyen Quoc Viet, Chu Thi Nhung, Tran Thi Giang Quynh, & Pham Thi Hien (2014) Đánh giá tác động của chất lượng thể chế cấp tỉnh tới khả năng thu hút FDI vào các địa phương tại Việt Nam, *Tạp chí Khoa học ĐHQGHN, Kinh tế và Kinh doanh*, Tập 30, số 1, 53–62
- 60) ODI (1997) *Foreign direct investment flows to low-income countries: A review of the evidence*. Retrieved March 5, 2024, from <https://cdn.odi.org/media/documents/2626.pdf>
- 61) Piggott, J., & Cook, M. (1999). *International Business Economics: A European Perspective*, (2nd Ed.) Harlow, Essex, UK: Addison Wesley
- 62) RBA (n.d.) *The Global Financial Crisis*. Retrieved March 5, 2024, from <https://www.rba.gov.au/education/resources/explainers/the-global-financial-crisis.html>
- 63) Romer, D. (1996). *Advanced Macroeconomics*. McGraw-Hill advanced series in economics ed. New York: McGraw-Hill Companies Inc.
- 64) Saleh, E. A. (2023). The effects of economic and financial crises on FDI: A literature review. *Journal of Business Research*, 161, 113830. <https://doi.org/10.1016/j.jbusres.2023.113830>
- 65) Saidu, A. S. (2015). Corporate taxation and foreign direct investment in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 3(8), 17–24.

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- 66) Saunders, 1982. "The Determinants of Foreign Direct Investment", *Canadian Journal of Economics*, 15, 77-84. <https://doi.org/10.2307/134670>
- 67) Shan, S., Lin, Z., Li, Y., & Zeng, Y. (2018). Attracting Chinese FDI in Africa: The role of natural resources, market size and institutional quality. *Critical perspectives on international business*, 14(2/3), 139-153. <https://doi.org/10.1108/cpoib-11-2016-0055>
- 68) Siregar, M. A., Nurdayadi, N., & Salem, S. (2020). The Effect of Corporate Income Tax Rate On foreign Direct Investment: Empirical Evidence of ASEAN Countries From 1994-2018 (Doctoral dissertation, Swiss German University).
- 69) Stata (2024) Panel-data cointegration test. Retrieved March 5, 2024, from <https://www.stata.com/features/overview/panel-data-cointegration-tests/>
- 70) Sujarwati, A. I., & Qibthiyah, R. M. (2020). Corporate income tax rate and foreign direct investment: A Cross-country empirical study. *Economics and Finance in Indonesia*, 66(1), 25-46. <https://doi.org/10.47291/efi.v66i1.679>
- 71) Tsai, P.L. (1994) Determinants of Foreign Direct Investment and Its Impact on Economic Growth. *Journal of Economic Development*, 19, 1994.
- 72) UNCTAD (2022a) The impact of a Global Minimum Tax on FDI. Retrieved March 5, 2024, from https://unctad.org/system/files/official-document/wir2022_ch03_en.pdf
- 73) UNCTAD (2022b) ASEAN Investment Report 2022. Retrieved March 5, 2024, from <https://unctad.org/publication/asean-investment-report-2022#:~:text=ASEAN%20remained%20a%20top%20recipient,per%20cent%20in%202020%E2%80%932021>
- 74) Van Parys, S. & James, S. (2010). The effectiveness of tax incentives in attracting investment: panel data evidence from the CFA Franc zone. *International Tax and Public Finance*, 17(4), 400- 429. <https://doi.org/10.1007/s10797-010-9140-1>
- 75) Wijeweera, A., Dollery, B., & Clark, D. (2007). Corporate tax rates and foreign direct investment in the United States. *Applied Economics*, 39(1), 109-117. <https://doi.org/10.1080/00036840500447872>
- 76) World Bank (2018) Global Investment Competitiveness Report 2017/2028: Foreign Investor Perspectives and Policy Implications. Retrieved March 5, 2024, from <https://hdl.handle.net/10986/28493>
- 77) Xaypanya, P., Rangkakulnuwat, P., & Paweenawat, S. W. (2015). The determinants of foreign direct investment in ASEAN: The first differencing panel data analysis. *International Journal of Social Economics*, 42(3), 239-250. <https://doi.org/10.1108/IJSE-10-2013-0238>
- 78) Xu, C., & Wu, A. M. (2021). International tax competition and foreign direct investment in the Asia–Pacific region: a panel data analysis. *Journal of Public Budgeting, Accounting & Financial Management*, 33(2), 157-176. <https://doi.org/10.1108/JPBAFM-04-2020-0054>
- 79) Zagler, M. (2023). Foreign direct investment, legal uncertainty and corporate income taxation. *International Economics*, 173, 19-28. <https://doi.org/10.1016/j.inteco.2022.11.005>



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