Corporate Income Tax Rate and Foreign Direct Investment: A Cross-Country Empirical Study

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Corporate Income Tax Rate and Foreign Direct Investment: A Cross-Country Empirical Study

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Abstract

This study aims to explore the impact of Corporate Income Tax Rate (CITR) on Foreign Direct Investment (FDI), specified based on income levels of countries. Using an unbalanced fixed-effect method of 112 countries over the period of 2003–2017, our finding shows that CITR has no significant impact on FDI. Corporate Income Tax (CIT) is levied on all firms, and as CIT is generally more complex than other types of taxes, its influences on FDI are in question. Excluding tax havens from the sample, our findings show that CITR has a weak significance only in the lower-middle-income and low-income countries.

Keywords: Corporate Income Tax Rate (CITR); Foreign Direct Investment (FDI); the user cost of capital

JEL classifications: E62; F21; G11; H25; H32

1. Introduction

Countries in the world have introduced policies on tax administration advances and large-scale tax reform as a means of competing in investment (Junquera-Varela et al. 2017). A feature of tax reform that has been exercised by various countries in the world is the reduction in the corporate income tax rate (CITR). Reducing tax rate, including CITR, has several objectives, such as increasing compliance (Okpeyo, Musah & Gakpetor 2019; Wulan & Kresnawati 2019), expanding tax base (Akitoby 2018), and attracting investment (Ferede & Dahlby 2012; Ohrn 2018).

The government will attract net FDI inflows through the provision of adequate economic benefits for investment companies, and one way to do it is by offering a competitive tax climate (Mohs et al. 2016). CITR is one of the factors that affecting firms' de-

cision to invest. Other factors that influence firms' decision to invest is the location and the size of the investment. The plausible effect of the corporate tax rate on investment can be determined by how capital costs are influenced. Changes in tax structure will affect the level of risk and transaction costs associated with the investment (Edmiston, Mudd & Valev 2003). Suppose changes in tax rates cause a decrease in capital costs, it is assumed that it will increase investment (Van Parys & James 2010). The difference in tax rates will increase competition among various countries by offering tax incentives that can attract foreign investors (Kandpal & Kavidayal 2014).

The effectiveness of fiscal policy in the form of reducing CITR as one of the main factors in attracting FDI remains in question. There are studies that view CITR has a significant negative impact on FDI flows in a country (Wijeweera, Dollery & Clark 2007; Mudenda 2015; Saidu 2015; Eshghi, Eshghi & Li 2016). Other studies suggest that CITR has different impacts on net FDI inflows, depending on the estimation method used (Onyeiwu & Shrestha

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2004). Meanwhile, other studies show that CITR does not have a significant impact on FDI (Jensen 2012; Edmiston, Mudd & Valev 2003). In comparison to previous studies, our study uses a larger dataset from cross-regional countries in which observations are made at the global level of 112 countries over the period of 2003–2017. A large sample of countries may be needed to assess the relationship between CITR and net FDI inflows to provide better representation.

The firms' decision to invest in other countries, in terms of FDI, is influenced by economic and non-economic factors. One economic factor that is assumed to affect FDI is CITR. A decrease in CITR will reduce the firms' tax expenditures, which in turn will increase the firms' after-tax income. A decrease in CITR in the host country at a certain level will attract foreign investment. The firms will choose to invest their capital in countries with lower tax rates (Eshghi, Eshghi & Li 2016) as an increased profit is viewed to be plausible in a lower CITR. Other economic factors that may have an association with FDI are inflation, exchange rates, labor, country's openness, Gross Domestic Product (GDP), and crisis (Wijeweera, Dollery & Clark 2007; Kyereboah-Coleman & Agyire-Tettey 2008; MacDermott 2008; Akin 2009; Lai & Sarkar 2011; Mughal & Akram 2011; Omankhanlen 2011; Asmah & Andoh 2013; Dornean & Oanea 2015; Saidu 2015; Uwubanmwen & Eghosa 2015; Eshghi, Eshghi & Li 2016; Nasir 2016; Mason & Vracheva 2017; Djulius 2017; Rajneesh 2018). Meanwhile, non-economic factors that influence the decisions of FDI location include education and political stability (Khan & Akbar 2013; Usman 2014; Strat 2015; Rani & Batool 2016).

One of the main goals of countries in the world of reducing CITR is to create an investor-friendly environment to attract foreign investors to invest their capital. There may not be a uniform response across countries concerning FDI due to a variation of corporate income tax policies, in this regard is reflected by CITR. The question that then arises is whether the government can use CITR reduction as an instrument to attract FDI. The effectiveness of fiscal policy in the form of decreasing CITR as one of the main determinants in attracting FDI remains a big question mark. However, existing studies are limited and using only a small number of countries in their observations, i.e. Mudenda (2015) using 19 countries in the South Africa region, Saidu (2015) using a single country, and Eshghi, Eshghi & Li (2016) using 5 countries in the East and Central Europe region.

Furthermore, there are no studies examining the effect of CITR on FDI inflows in countries based on their income level. This study uses the larger dataset expected to provide a global picture of the effect of CITR on FDI inflows at each income level group. Therefore, we explore economic and non-economic variables as part of our attempt to examine CITR and net FDI inflows across 112 countries and differences in their effects on each country's income level (high-income, upper-middle-income, lower-middle-income, and low-income). The specification of estimation across countries' income level groups is common by considering institutional and economic-related sector development. It may have a stronger effect on middle-income countries rather than high-income countries (Rioja & Valev 2004; Beck et al. 2012).

2. Theoretical Framework

The neoclassical investment theory initiated by Jorgenson (1963) provides a basis for understanding whether investment may be affected by tax policy (Klemm & Van Parys 2012). This theory is the basis for the development of the theory of the user cost of capital, namely the total cost borne by firms from using an additional unit of capital at a given time.

Assuming that a firm seeks to continue to increase profits, the desired capital stock can be defined as the amount of capital that provides the greatest level of profit (Abel, Bernanke & Croushore 2008). Supposing the benefits obtained are greater than

the investment costs, then increasing the stock of capital will increase profits. Conversely, supposing the investment costs are greater than the profits obtained, then the decision to increase capital will not increase profits. In this case, a firm will tend to withdraw its investment. Prior to making an investment decision, a firm can compare the value of additional output with the user cost of capital. The user cost of capital is the total cost charged to a firm when using an additional unit of capital at a certain time. The user cost of capital is the sum of two elements, namely interest, and depreciation (Abel, Bernanke & Croushore 2008).

A tax on corporate profits will reduce after-tax profits (Kurniasih & Sari 2013). A firm's investment decisions are influenced by several things, including the tax rates that apply in a (host) country. Firms will prefer to invest their capital in countries with lower tariff levels to ensure maximum utility. A firm's profit estimation is the most influential factor in investment decision-making (Al-Tamimi 2004, in Christanti & Mahastanti 2011).

FDI is a type of investment considered as the main driver of the economic growth of a country, especially developing countries (Alzaidy, Naseem & Lacheheb 2017). FDI is a type of long-term investment that represents the long-term interest and control of foreign investors over other firms located in other countries (UNCTAD 2007). This definition shows that investors have long-lasting interests and significant influence (including voting rights) on the management of companies in other countries. This significant influence is defined by ownership of 10% or more of the voting rights of companies in other countries (UNCTAD 2007). These two characteristics are the differences between FDI and other types of investment, i.e. portfolio investment.

FDI creates links between countries, by stimulating technology transfer and know-how exchange that in turn will increase productivity and create a more competitive economy (European Union 2018). The spillover effect of foreign companies is not only limited to capital inflows, but also the exchange of technology, knowledge and managerial capabilities.

Since the middle of the 1980s, FDI has increased its importance by transferring technologies, establishing trade, and procuring network for foreign markets (Swenson 2004, in Osano & Koine 2016). FDI is considered one of the elements affecting other macroeconomic variables, such as employment, export, consumption, and saving (Koojaroenprasit 2012).

Differences in tax rates, including CITR, in various countries in the world, will cause differences in FDI response of a company. Lower-tax countries are expected to have larger inflows (and smaller outflows) of capital compared to higher-tax countries, ceteris paribus (Skeie 2017). Figure 1 illustrates the differences in FDI in countries with differences in CITR. At the price level P_0, there is no difference in tax rates in the two countries (any countries competing for a foreign fund). The difference in the tax imposed (i.e. the difference in tax rates) can be illustrated from the upward shift of the supply curve as much as the amount of the difference in the tax imposed (Figure 1a and 1b). In countries with high tax rates (left side), the costs incurred by companies in carrying out FDI increase from UC_0 to UC_1, leading to shifting of FDI demand from FDI_0 to FDI_1. Meanwhile, in countries with low tax rates (right side), the user cost of FDI is lower than the user cost of FDI in high tax rates (left side), thus FDI demand increases from FDI_0 to FDI_2. Even though there is an increase in FDI demand, firms may still incur additional costs due to tax changes (from UC_0 to UC_2).

A change in CITR will change the user cost of capital, which may then influence investment (i.e. FDI). For example, as presented in Figure 1, two similar countries will have a different user cost of capital supposing they have different corporate income tax rates. A country with higher CITR (1a) is illustrated as having a lower supply of FDI. Embedded in the tax policy is also the existence of a country risk that may also exacerbate squeezing investment in a country with higher statutory CITR (Jones 2011).

The tax rate is one of the sensitive determinants of aggregate capital stock. The decision of multina-

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tional firms on FDI is determined by the amount of the applicable tax rate (Devereux & Griffith 2002; Devereux, Lockwood & Redoano 2008). Multinationals will choose their firm's locations that provide high levels of profit after considering the tax burden that must be paid. Net FDI inflows in countries with low tax rates will tend to be greater than in countries with high tax rates (ceteris paribus). Figure 1 shows that countries with higher CITR will have a lower FDI as the user cost of capital increases, and vice versa for other countries that in effect have a lower user cost of capital, referring to lower-tax jurisdiction in Figure 1.

The important role of FDI in economic growth and productivity causes governments to use policy instruments to attract FDI (Abdioğlu, Biniş & Arslan 2016). A government will attract net FDI inflows through the provision of adequate economic benefits for investment companies, and one way is to offer a competitive tax climate (Mohs et al. 2016). Tax policy does not only have an impact on FDI inflows but also on increasing direct investment abroad that then increases a country's net domestic income (OECD 2008). Countries with lower tax rates will be preferred by investors, therefore many countries reduce their tax rates to attract investment. To an extent, the governments may constantly revise tax regulations to ensure multinationals are interested in investing in their countries. Policymakers are expected to make tax instruments as a means of increasing investment, such as changes in tax rates, changes in depreciation time, and offering tax incentives (Edmiston 2004).

3. Method

This study uses unbalanced panel data because of differences in the number of observations across countries (due to data availability). The use of panel data allows for flexibility in modeling differences in behavior between units of observation (Arrachman & Qibthiyyah 2018). By having more cross-section units, the use of panel data will minimize biased

results (Greene 2007, in Arrachman & Qibthiyyah 2018).

The best model used in panel data estimation is Fixed Effects (FE) because it can control the unobserved heterogeneity that is not visible in the model (Gormley & Matsa 2014). Furthermore, the FE estimators are considered consistent because they are equivalent to transforming both dependent and independent variables to remove the unobserved heterogeneity (Gormley & Matsa 2014). The unobserved heterogeneity has an important role that should be accounted for (Chawla 2019), such as the specificity of the country and a firm (Chung 2012).

Previous studies on the relationship between CITR and FDI inflows observed either single-country data or panel data in certain regional countries. Empirical studies related to the influence of CITR on FDI inflows were carried out mostly using panel data from several countries in a particular region (Wijeweera, Dollery & Clark 2007; Mudenda 2015, Eshghi, Eshghi & Li 2016). Thus, viewed from the perspective of cross-countries, we conducted estimations to each income level group: high-income, upper-middle-income, lower-middle-income, and low-income countries. The following is the estimation model:

$$
\begin{aligned}
\text{FDI}_{it} = {} & \beta_0 + \beta_1 \text{CITR}_{it} + \beta_2 \text{GDP}_{it} + \beta_3 \text{LABOR}_{it} \\
& + \beta_4 \text{EDU}_{it} + \beta_5 \text{OPEN}_{it} + \beta_6 \text{INF}_{it} \\
& + \beta_7 \text{EXCH}_{it} + \beta_8 \text{POLSTAB}_{it} \\
& + \beta_9 \text{i.CITR} * \text{POLSTAB}_{it} \\
& + \beta_{10} \text{Dummy GFC} + \beta_{11} \text{FDI Region}_{it} + \varepsilon_{it}
\end{aligned}
$$

$$(1)$$

where:

FDI : net FDI inflows (million USD);
CITR : statutory CITR (%);
GDP : total GDP (billion USD);
LABOR : average monthly wage (USD);
EDU : average length of education (years);
OPEN : export and import values to GDP (%);
INF : inflation deflator (%);
EXCH : currency exchange rates against USD (LCU);
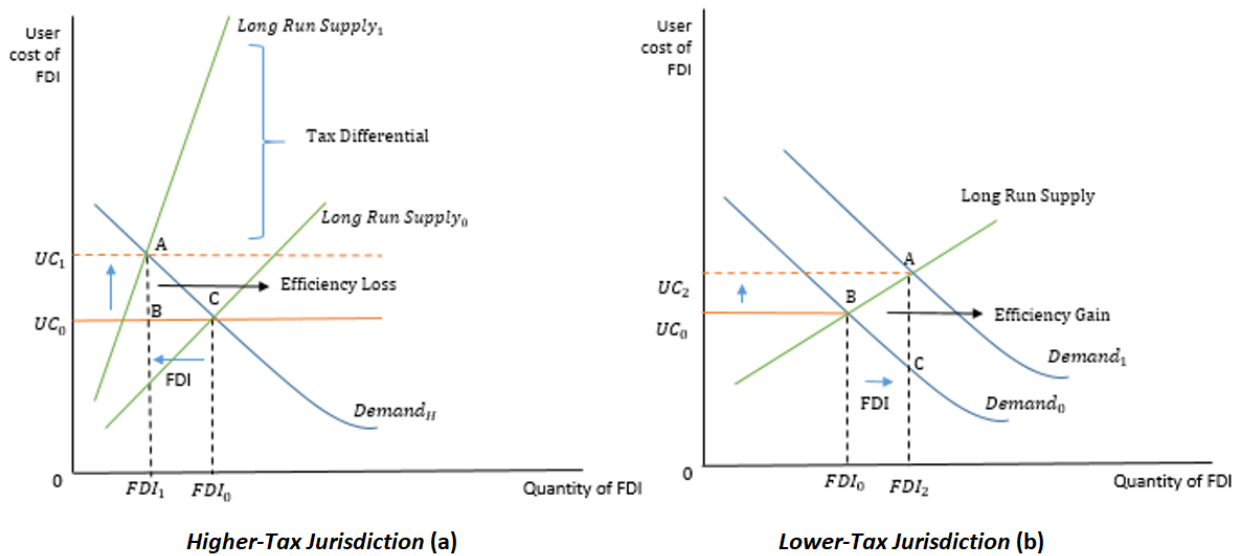
Figure 1. The Effect of CITR on FDI
Source: Fisher (2003), updated

POLSTAB : index of political stability and absence of violence/terror;

CITR * POLSTAB : CITR interaction with political stability indexes;

Dummy GFC : dummy period of the Global Financial Crisis;

FDI Region : the ratio of the country's net FDI inflows to total net FDI inflows in the region (%).

In the aforementioned estimation model, i represents the country, while t represents the year (Arrachman & Qibthiyyah 2018). The β_0 denotes the constant intercept of the parameter estimation, β_1 to β_{11} denotes the slope of parameter estimation on each explanatory variable, whereas ε_{it} denotes the error term (Arrachman & Qibthiyyah 2018).

The dependent variable in this study is FDI as indicated by the nominal net FDI inflows into a country. The use of nominal net FDI inflows as a proxy refers to researches by Onyeiwu & Shrestha (2004), Jensen (2012), Mudenda (2015), and Saidu (2015). Changes in CITR do not only affect the decisions of the firms that will invest but also the firms that have invested, whether they will continue or shift their investments to other countries that are more investment-friendly.

The CITR, as the main explanatory variable, is proxied using statutory tax rates. Wijeweera, Dollery & Clark (2007), Mudenda (2015), and Eshghi, Eshghi & Li (2016) show that statutory CITR has a significant negative effect on FDI inflows, while Jensen (2012) reveals that statutory CITR has no significant impact on FDI. Differences in tax rates between countries can cause shifting of profits across jurisdictions, more than just the movement of real economic activity (Devereux & Sørensen 2006).

The other explanatory variables are market size, labor wage, education, country's openness, inflation, exchange rate, and political stability. The first control variable used is market size, calculated from the value of GDP in billions of dollars. This variable uses the aggregate value of GDP because it is seen to better reflect market size in developing countries compared to GDP per capita (Akin 2009). Market size is considered as one of the determinants that affects FDI of a country (Mughal & Akram 2011; Akin 2009; Nasir 2016).

The second control variable is labor, proxied by the average wage of workers per month (Eshghi, Eshghi & Li 2016). An analysis of the impact of labor on FDI focuses on the impact of labor costs as

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part of the company's cost function. The use of this variable refers to the conditional input demand function, where the average wage is the input price of labor production factors (Ermansyah & Mahi 2018). Lai & Sarkar (2011) indicate that there is a negative influence of labor on FDI due to the maximization of the company's utility.

The third explanatory variable is education, proxied by the average length of education. Strat (2015) uses school attainment as a proxy in defining the variable. Educated and skilled labor is one determinant of FDI since low production costs are not only reflected in average wages (Carstensen & Toubal 2004, in Eshghi, Eshghi & Li 2016).

Meanwhile, the country's openness is indicated by the percentage value of exports and imports compared to total GDP. One of the objectives of FDI is to expand markets in other countries, hence the necessity of the host country's openness to international trade. Djulius (2017) and Rajneesh (2018) explain that country's openness has a significant positive effect on FDI in the long-run cointegration.

Inflation is measured using an inflation deflator. Saidu (2015), Uwubanmwen & Eghosa (2015), and Mason & Vracheva (2017) show a significant influence between inflation rates and FDI flows in the host country. This is contrary to the opinion of Omankhanlen (2011) and Alshamsi, bin Hussin & Azam (2015) that inflation does not have a significant impact on FDI. In terms of the exchange rate, exchange rate volatility is seen as a fundamental risk and uncertainty faced by investors in international transactions that can hamper the flow of foreign trade and investment (Kyereboah-Coleman & Agyire-Tettey 2008). Asmah & Andoh (2013) reveal that exchange rate volatility is one of the main determinants of FDI inflows. The use of the same currency between the host country and the home country will negate the exchange rate variable.

Political stability is viewed to represent political risks. Political risks, similar to economic and financial risks, will affect economic growth (Khan & Akbar 2013). Rani & Batool (2016) reveal that gov-

ernments must increase political stability to attract FDI inflows into their countries. In the context of economic risks, this study employed the Global Financial Crisis (GFC) dummy to capture the effects of the global crisis that occurred in the span of the sampling period. GFC refers to a period of extreme pressure on global financial markets and the banking system in 2007–2009 (Reserve Bank of Australia 2019). A value of 1 is provided to the year of the crisis (2007–2009), and a value of 0 to the year other than the crisis period. The financial crisis has a large impact on the flow of capital into a region, and the magnitude depends on the specific characteristics of the host country (Dornean & Oanea 2015).

Another control variable, the FDI region, is proxied by the percentage of FDI in the host country compared to the total net FDI inflows in a particular region. There is theoretical and empirical literature on the effect of regional integration between countries and FDI (Te Velde & Bezemer 2006). There appears to be a consensus that regional integration between countries leads to further FDI (Te Velde & Bezemer 2006). Furthermore, this variable also controls the substitutability and complementarity of FDI in a region. This study divides the countries in the sample into 4 (four) regions, namely Africa, America, Asia Pacific, and Europe.

The hypothesis developed in this study is:
H_0: there is no effect of CITR on net FDI inflows.
H_1: there is an effect of CITR on net FDI inflows.

Supposing there is a strong correlation between CITR and net FDI inflows at a minimum level of 90%, it can be concluded that CITR has a significant effect on net FDI inflows. To determine whether there is an effect of CITR on net FDI inflows, each different country's income level group is analyzed.

4. Data

This study uses a sample of 112 countries around the world in various income level categories over

the period of 2003–2017, with a total of 1,680 observations. The choice of the period considered the range of data up to the last accessible data. The determination of income level was based on the GNI per capita of each country (OECD 2019a,b).

The list of countries based on the income group sampled in this study is summarized in Table 1A Appendix. The classification of income group refers to GNI per capita with the following provisions: high-income countries have GNI per capita of above USD12,375, upper-middle-income countries have GNI per capita of USD3,996–12,735, lower-middle-income countries have GNI per capita of USD1,026–3,995, and low-income countries have GNI per capita of below USD1,025 (World Bank 2019a,b). Estimations for lower-middle-income and low-income groups are merged into one because of the poor data of the low-income countries. This merge also considers the same characteristics among these groups (developing countries). On the other hand, even though the high-income and upper-middle-income groups have the same characteristics as developed countries, these groups are not merged because the data are sufficient.

A country's income level category is considered unchanged during the study period with several exceptions. Researches in the field of economics grouping countries according to their income levels has been conducted by Rioja & Valev (2014) and Beck et al. (2012). Grouping countries based on income level can avoid subjective judgments in sample grouping (Rioja & Valev 2014).

Data on the main variable CITR were obtained from the publications of OECD, Klynveld Peat Marwick Goerdeler (KPMG)[1], and Deloitte. OECD and KPMG data sources were available for this study period, while Deloitte's publication data were compiled to fill the missing data of CITR since 2014 in countries previously collected from OECD and KPMG dataset. Furthermore, we also checked whether there were differences in data across the

three sources. Supposing there were, the selection of data used referred to the tax regulations that apply in a country, and if no legislation was found, we used OECD's publication data.

The global downward trend in CITR in the last fifteen years is presented in Figure 2. As shown in Figure 2, the declining trend in CITR is mostly carried out by developed countries (high-income and upper-middle-income categories). This raises the argument that the reduction in CITR reflects from domestic economic interests, rather than as a response to FDI competition between countries. Figure 2 shows the average CITR of countries in the high-income category that is lower compared to other income categories. Despite having the lowest CITR level, the high-income countries have a higher level of Personal Income Tax Rate (PITR) compared to other groups of countries (KPMG 2019a,b). Several high-income countries with the highest PITR rates include Austria (55%), Belgium (50%), Denmark (55.89%), Finland (53.75%), Japan (55.95%), Netherlands (51.75%), Slovenia (50%), and Sweden (57.19%) (KPMG 2019a,b). The striking difference between CITR and PITR in high-income countries is not as great as that in upper-middle-income, lower-middle-income, and low-income categories. In 2017, OECD countries have an average CITR of 23.38% and a PITR of 41.65%, while African countries have an average CITR of 28.24% and a PITR of 31.96% (KPMG 2019a,b).

From 2003 to 2017, high-income countries experience the highest average tax rate cuts (5.67%), followed by upper-middle-income countries (4.79%) and lower-middle-income countries (4.61%). CITR in low-income countries increases by 1.02% due to outliers in Afghanistan. The decline in CITR in the last 15 years has mostly occurred in high-income countries (especially following the Global Financial Crisis period).

Data on net FDI inflows and GDP were obtained from the publications of World Development Indicators (WDI) by the World Bank. As shown in Figure 3, in terms of FDI ratio to GDP, the patterns is quite different across income groups. To some

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[1]KPMG is a global network of independent firms offering audit, tax, and advisory services (Forbes 2020).
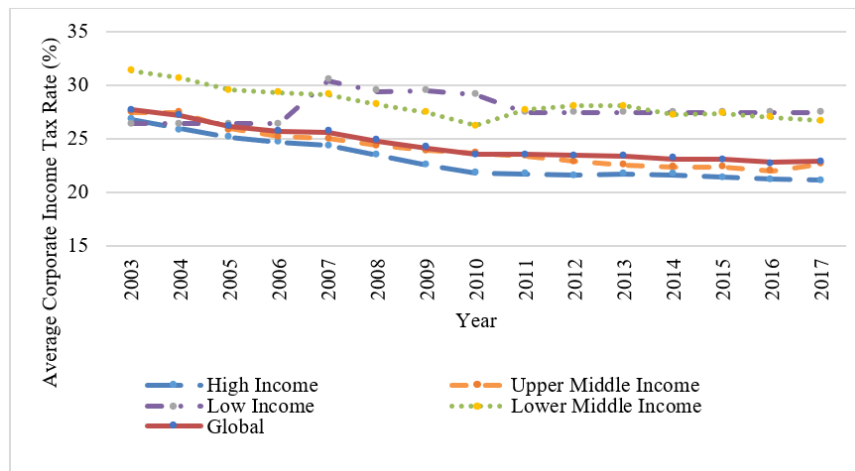
Figure 2. Average Corporate Income Tax Rate: Global and Across Countries Income Group
Source: OECD, KPMG (2019a,b), and Deloitte (2017), calculated by authors

extent, global FDI to GDP ratio matches the pattern of high-income countries. Meanwhile, even though FDI to GDP ratio of low-income countries is high, the trend is declining.

Data on labor cost were obtained from various sources, including OECD publications, relevant country data, tradingeconomics.com, and world-data.info. Taking into account the range of data that is not available annually, the labor cost variable was adjusted to consider the value of the annual inflation deflator. A control variable in the form of education was obtained from the Global Rise of Education published by ourworldindata.org.

Data on political stability applied secondary data from Worldwide Governance Indicator (WGI) by the World Bank. Data on tax havens referred to the Citizen by Investments (CBI) list, namely a list of countries offering citizenship through high investment published by OECD. The use of CBI as a tax haven proxy, considering the policy offering citizenship through high investment, frequently implies that they may provide different taxation model and rights (World Data 2019a,b). The GFC dummy employed the reference data from the Reserve Bank of Australia.

5. Results and Discussion

Observed from Table 1, it is known that the average value of net FDI inflows is USD16,645.77 million, while the average CITR is 24.43%. As shown in Figure 1, in the 2003–2017 timeframe, most countries cut their tax rates, in terms of corporate income tax policy change. Several countries have reduced CITR more than once. The United Kingdom, for example, has decreased CITR by 7 (seven) times in the last 15 years, i.e. the initial tariff of 30% in 2007 drops to 28% in 2008, then decreases every year to 26% (2011), 24% (2012), 23% (2013), 21% (2014), 20% (2015), and eventually decreases to 19% in 2017 (OECD 2019a,b).

Estimation results using fixed effects in Table 2 show that CITR has no significant effect on net FDI inflows, both globally and at each income level. The results show that a fiscal instrument in the form of CITR reduction is not responded sensitively by FDI.

From Table 2, it can be concluded that CITR, in general, does not have a significant impact on net FDI inflows. Market size variable proxied with significant GDP is significant at all income groups. Several explanatory variables are significant in particular income groups, such as country's openness and po-
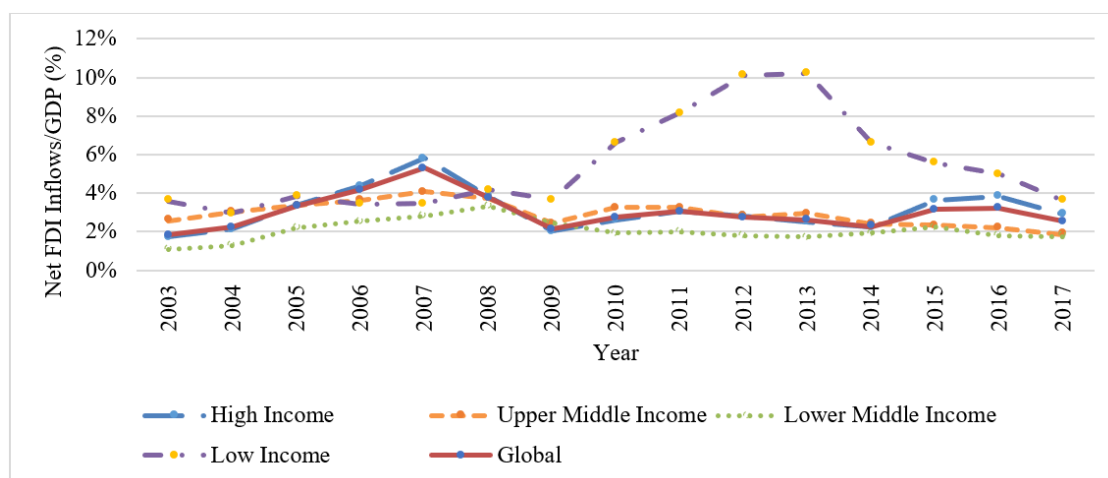
Figure 3. Average Ratio of FDI on GDP: Global and Across Countries Income Group
Source: World Development Indicator, World Bank (calculated by authors)

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	1,680	16,645.77	48,441.73	-39,482.28	734,010.31
CITR	1,658	24.43065	9.442237	0	55
GDP	1,677	555.39	1,748.78	0.31	19,485.39
LABOR	1,680	2,048.72	5,248.57	5.29	66,739.25
EDU	1,678	9.06907	2.792883	1.3	1.41
OPEN	1,671	94.52231	62.12625	19.1008	442.62
INF	1,677	5.465413	8.002332	-25.95842	95.40866
EXCH	1,670	463.5889	2,139.907	0.2051271	22,370.09
POLSTAB	1,677	0.10	0.95	-2.81	1.69
i.CITR*POLSTAB	1,680	0.83	25.31	-98.35	54.73
Dummy GFC	1,680	0.2	0.4001191	0	1
FDI Regional	1,680	3.571623	8.489152	-46.97031	75.82611

Source: calculated by authors

litical stability are significant in lower-middle-income and low-income countries, dummy GFC is significant in all income levels except the upper-middle-income countries, while FDI region is significant in the upper-middle-income, lower-middle-income, and low-income countries.

Statistically, the provision of tax incentives in the form of a reduction in CITR does not provide significant results to attract FDI. The decision of multinational companies to invest in FDI schemes is not influenced by corporate tax rates. Investors do not necessarily invest in the FDI scheme simply because the host country has a lower tax rate. Investors are more interested in investing in countries that have a broad market size as well as stable political and economic conditions.

This insignificant effect of CITR on FDI (Table 2) is due to the characteristics of Corporate Income Tax (CIT) that are binding on all business sectors (without exception) and are applied in almost all countries in the world. Changes in CITR will have an impact on after-tax income and are responded to by all companies without exception. The effects caused by changes in CITR are general and comprehensive. CIT is also a type of tax with a higher level of complexity compared to other types of taxes such as Value Added Tax (VAT) and Personal Income Tax (PIT). Also, the determination of CITR is influenced by many factors such as economic and political stability, domestic business, to the principle of fairness for taxpayers. This causes the sensitivity of FDI to changes in CITR to be reduced.

Table 2. Statistical Test Results Using Fixed Effect Model

Independent Variable	Dependent Variable: Foreign Direct Investment (FDI)					
	All sample	High-Income	Upper-Middle-Income		Lower-Middle and Low-Income	
	FEM1	FEM1	FEM1	FEM2	FEM1	FEM2
CITR	-51.09	-57.88	-97.19	-213.2	-238.0**	-123.4
	(-0.30)	(-0.14)	(-0.67)	(-1.66)	(-3.18)	(-1.88)
GDP	21.14***	33.07***	15.70***	15.36***	17.68***	17.58***
	(14.50)	(8.82)	(20.91)	(23.22)	(14.94)	(17.22)
LABOR	-0.222	-0.389	1.575	2.659	0.845	0.376
	(-0.37)	(-0.46)	(0.39)	(0.74)	(0.33)	(0.17)
EDU	1470.4	1157.1	533.9	29.00	336.6	272.4
	(1.12)	(0.40)	(0.49)	(0.03)	(0.64)	(0.60)
OPEN	63.89	91.42	32.31	32.19	20.75**	14.47*
	(1.57)	(1.07)	(0.74)	(0.84)	(2.63)	(2.12)
INF	145.9	358.5	68.82	34.15	24.11	1.088
	(1.39)	(1.34)	(0.96)	(0.54)	(1.20)	(0.06)
EXCH	0.0211	4.298	0.303	1.357	0.0847	0.145
	(0.01)	(0.07)	(0.09)	(0.46)	(0.42)	(0.84)
POLSTAB	749.6	-556.6	-750.7	-2117.2	4670.8***	3194.4**
	(0.18)	(-0.05)	(-0.19)	(-0.61)	(3.67)	(2.89)
i.CITR*	10.89	-29.15	42.76	-2.551	-112.6**	-60.71
POLSTAB	(0.08)	(-0.06)	(0.29)	(-0.02)	(-2.66)	(-1.64)
Dummy GFC	4922.8**	8405.9**	1612.2	998.2	1233.7**	1312.8***
	(3.13)	(2.61)	(1.40)	(0.99)	(3.23)	(3.98)
FDI Region				2288.6***		244.1***
				(11.91)		(10.30)
_cons	-14596.5	-23636.7	-1684.4	-1794	4426.6	1319
	(-1.07)	(-0.71)	(-0.16)	(-0.19)	(1.19)	(0.41)
N	1636	765	531	531	340	340
F	23.78	9.498	48.84	70.2	37.38	55.33
r2	0.136	0.119	0.502	0.615	0.551	0.667
r2_a	0.0667	0.0438	0.456	0.578	0.501	0.629
Number of groups	112	51	36	36	25	25

Note: t statistics in parentheses
      * $p<0.05$, ** $p<0.01$, *** $p<0.001$

The country's openness has a significant positive effect only on lower-middle-income and low-income countries. Trade openness provides various benefits for the countries involved because it increases mobility and reduces tariff and non-tariff barriers (Agiomirgianakis, Asteriou & Papathoma 2003; Anyanwu 2011; Asiedu 2002; Demirhan & Masca 2008). In contrast to developed countries where economic conditions and international trade are more stable, economic conditions and international trade in developing countries are still not good. Developing countries may struggle to compete on a global scale for many reasons, such as inefficient and inadequate systems, poor connectivity, complicated regulatory environment, and anticompetitive behavior (World Bank 2018a,b). This condition causes openness in developing countries to be more sensitive to FDI compared to other income level countries. Observed from the perspective of investors, trade openness means ease of export and import with business partners, suppliers, and buyers (Djulius 2017).

The results in Table 2 show that political stability has a significant influence on net FDI inflows in developing countries (lower-middle-income and lower-income). Several reasons that cause political stability to be one of the main considerations of foreign investors in investing in the lower-middle-income and low-income countries (in addition to market size, country's openness, and FDI region), are inadequate government institutions, low ease of doing business index and a high level of corruption. Table 2 shows that an increase by 1 point in political stability index in lower-middle-income and low-income countries will increase net FDI inflows by

USD3,194.4 million, or + 96.26% net FDI inflows[2]. The results of research in lower-middle-income and low-income countries are in line with those of the research by Rani & Batool (2016), arguing that political stability has a significant influence on FDI, both in the short-run and long-run. Furthermore, Khan & Akbar (2013) reveal that political risks negatively impact FDI. Political risk is the only important factor that inhibits capital flow. Even though many other factors influence capital flow, their existence is not dominant (Luke 1990, in Kim 2010).

The FDI region variable refers to aggregate FDI from countries within the same region. The result in Table 2 shows that there is a significant positive effect of FDI region on net FDI inflows in the upper-middle-income, lower-middle-income, and low-income countries. Before the inclusion of the FDI region, the effect of CITR on FDI in lower-middle-income and low-income countries shows significant results (FEM1 model). However, after controlling for FDI region that also illustrates economic stability, the effect of CITR is relatively insignificant (FEM2 model). This indicates that the economic stability of a host country and or regional economic stability determines multinational's FDI decisions.[3]

Meanwhile, excluding tax havens, estimation results show that CITR only has a weak significance (at the 10% level) in lower-middle-income and low-income countries. This shows that companies do not necessarily invest in FDI schemes only because the status of the host country is a tax haven (see Table 3), without considering other determinants, such as market size (both foreign and domestic), country's openness, political stability, and the financial crisis in 2007–2009.

Observed from Table 3, it can be concluded that the elimination of tax haven in the regression does not make a significant difference in the result of statistical tests. Countries in the regression in general CITR do not have a significant impact on net FDI inflows. The CITR variable has a weak significance on net FDI inflows in lower-middle-income and low-income countries. Other explanatory variables have similar significance when compared with previous statistical test results (without eliminating tax havens).

Globally and in the high-income group, identity as a tax haven increases the net FDI inflows into a country. This is possible because, in high-income groups, the institutions are well managed, political stability is maintained, an investment-friendly environment causes foreign companies to be more interested in investing their capital in a tax haven (even though tax rates are not the main factor determining FDI). Despite the weak significance[4], the utility of multinational firms will increase supposing they invest in tax havens that offer various tax facilities. It is proven by the change of the CITR coefficient from not significant (Table 2) to significant at the level of 0.1 (Table 3).

The results of this study are in line with a survey conducted by the World Bank (2018a,b) regarding the decisions of multinational companies to invest. The Global Investment Competitiveness Report 2017/2018 released by the World Bank (2018a) states that tax rates are not the main factor affecting multinational company investment. Foreign investors may view other factors as more important, such as political stability, enforceable laws and regulations, market size, macroeconomic and exchange rate stability, skilled labor, and infrastructure (World Bank 2018a, in Ermansyah & Mahi 2018). Our result is also in line with research conducted by Jensen (2012), revealing that there is no significant relationship between CITR and net FDI inflows. The assumption that tax will affect FDI comes from the asymmetric information between the company and the government (Jensen 2012). Firms have an incentive to bargain when investing in a country and

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[2]USD3,194.4 million divided by the average of net FDI inflows in the lower-middle-income and low-income group of USD3,318.46 – see Appendices Table 2A.

[3]However, observed from robustness check in Appendices Table 3A – Table 6A, as we include other variables to also represent economic stability, i.e. in terms of GDP volatility, this variable is not significant.

[4]significance at the level of 10%.

Table 3. Estimation Results Using Fixed Effect Model (Excluding Tax Havens)

Independent Variable	Dependent Variable: Foreign Direct Investment (FDI)					
	All sample	High-Income	Upper-Middle-Income		Lower-Middle and Low-Income	
	FEM1	FEM1	FEM1	FEM2	FEM1	FEM2
CITR	-25.99	-12.68	-104.9	-222.1	-258.8**	-138.8*
	(-0.13)	(-0.02)	(-0.71)	(-1.70)	(-3.31)	(-2.03)
GDP	21.08***	33.05***	15.72***	15.39***	17.75***	17.63***
	(13.87)	(8.17)	(20.65)	(22.93)	(14.80)	(17.03)
LABOR	1.947	0.844	1.951	3.048	0.384	0.0238
	(0.66)	(0.18)	(0.47)	(0.83)	(0.14)	(0.01)
EDU	1172.5	1008.1	321.9	-203.8	343.4	280.3
	(0.76)	(0.29)	(0.28)	(-0.20)	(0.65)	(0.61)
OPEN	80.08	126.1	47.72	48.09	20.99**	14.66*
	(1.78)	(1.27)	(0.98)	(1.12)	(2.63)	(2.12)
INF	144.7	459.7	61.04	27.18	24.24	1.353
	(1.26)	(1.32)	(0.83)	(0.42)	(1.19)	(0.08)
EXCH	0.0273	7.539	0.37	1.408	0.0752	0.138
	(0.02)	(0.11)	(0.11)	(0.48)	(0.37)	(0.79)
POLSTAB	537.7	191	-761.5	-2094.8	5086.7***	3498.6**
	(0.11)	(0.01)	(-0.19)	(-0.59)	(3.79)	(3.00)
i.CITR*POLSTAB	14.45	-100.9	46.71	1.012	-125.9**	-70.5
	(0.08)	(-0.15)	(0.31)	(0.99)	(-2.83)	(-1.82)
Dummy GFC	5284.8**	9463.8*	1701.3	2284.4***	1290.5**	1369.8***
	(3.10)	(2.54)	(1.44)	(11.73)	(3.27)	(4.02)
FDI Region				2284.4***		243.3***
				(11.73)		(10.13)
_cons	-17037.2	-31478.9	-912.4	-953.6	5538.8	2052.6
	(-1.13)	(-0.78)	(-0.08)	(-0.10)	(1.43)	(0.61)
N	1506	660	516	516	330	330
F	22.22	8.426	47.57	68.28	36.67	54.13
r2	0.138	0.122	0.502	0.615	0.553	0.669
r2_a	0.0682	0.0453	0.456	0.578	0.504	0.631
Number of groups	103	44	35	35	24	24

Note: t statistics in parentheses
     * $p<0.05$, ** $p<0.01$, *** $p<0.001$

threaten to withdraw their investment by arguing that high tax burdens are the main inhibiting factor in determining the location of their investments (Jensen 2012). The market size variable has a significant positive impact on all income levels. Market size is the most dominant factor to attract FDI in the long run (Mughal & Akram 2011). The large market potential allows investors to capture the benefits of production on a large scale. Investors tend to choose markets that grow faster and offer higher prospects (Culem 1988, in Akin 2009).

The government can use other types of tax incentives that are not captured in the model to attract investment, such as the implementation of tax holidays and tax allowances. Both types of fiscal incentives are only provided to companies that meet certain classifications (business sector, total equity participation, location) to ensure that the impact

is not felt nationally. The application of these two types of tax incentives that are not binding on all these firms is statistically expected to increase their sensitivity to FDI.

In the context of developed countries (high-income and upper-middle-income), the decrease in CITR is not responded significantly by net FDI inflows. The results of the coefficient of regression in high-income countries are lower than the coefficient in middle-income countries, showing that the higher the GNI obtained by the country, the lower the response of CITR to net FDI inflows (See Table 2 and 3). The decrease in CITR that has mostly been carried out in these two groups of countries in the past 15 years is not only aimed at attracting capital into the country.

The main consideration of investors in conducting FDI is market size instead of CITR. The broad mar-

ket size is the main reason for a firm to invest its capital through an FDI scheme. Even though developed countries have lower CITR, supposing that the market size is limited, it will not have an impact on increasing net FDI inflows. This result raises arguments that the policymaker in developed countries employs fiscal instruments in the form of CITR to improve the domestic economy, such as increasing the tax ratio and the tax base, and its main purpose is not for FDI competition between countries.

In the context of lower-middle-income and low-income countries, this study suggests the limitation of CITR instrument in attracting FDI. Even if it is adopted, this tax policy may as well need to be complemented with strengthening institutional factors as in the case of political stability. A reduction of CITR by 1% may increase to up to 138.8–258.8 million of net FDI inflows, reflecting less than 1–2% of existing net FDI inflows. In this case, supposing the country has high stability in politics, the CITR reduction may attract up to 2.5% of existing net FDI inflows. Meanwhile, as countries move to upper-middle-income countries, it is economic stability, reflected by a variable of FDI region, that highly influences net FDI inflows.

Investors need an investment-friendly environment, such as broad market size, strong institutions, adequate infrastructure, and stable political and economic conditions, commonly found in developed countries. In conducting FDI in developing countries, the firms' main benchmarks are market size, country's openness, and political stability. Even though developing countries have a lower CITR compared to developed countries, it will not have an impact on increasing net FDI inflows supposing all three other aspects are weak. Policymakers in developing countries can use fiscal instruments in the form of CITR reduction to attract net FDI inflows into their countries by providing guarantees of good political stability.

6. Conclusion

This study aims to identify whether there is an association between CITR and net FDI inflows, having been analyzed in previous studies yet with different results. This study explores the relationship between CITR and net FDI inflows, specifically whether changes in CITR may have a non-uniform response across countries' income groups (high-income, upper-middle-income, lower-middle-income, and low-income countries). This study was conducted using a macro-analysis unit of 112 countries over the period of 2003–2017. It was conducted using a more complete dataset than previous studies by accommodating economic and non-economic variables.

Estimation results indicate that based on all sampled countries, CITR has no significant negative effect on net FDI inflows. CITR policy is influenced by many factors, added to the complexity of CIT code compared to other types of taxes. Globally, investors are more interested in investing their capital in countries that have a broad market size. Countries with a higher GDP (both to meet domestic and export markets' demand) will be more attractive to foreign investors.

This research also explores whether tax havens play a role in the effectiveness of CITR policy in attracting net FDI inflows. Estimation results carried out by eliminating the group of tax havens shows that CITR only has a weak significance (at the 10% level) in lower-middle-income and low-income countries. This weak significant effect of CITR on net FDI inflows is not quite different from the results of the previous estimation (without eliminating the tax havens). This result means that the identity of the host country as a tax haven does not necessarily cause multinational firms to invest without considering other determinants.

The main consideration of companies in investing their capital through FDI schemes in developed countries (high-income and upper-middle-income countries) is market size instead of FDI. This result

explains that the financial instrument in the form of a reduction in CITR in developed countries is not intended for FDI competition between countries, but rather to improve the domestic economy, such as increasing the tax ratio and tax base.

Meanwhile, in developing countries (lower-middle-income and low-income countries), the main considerations of companies in carrying out FDI are market size, country's openness, and political freedom. Policymakers in developing countries can use a fiscal instrument in the form of a reduction in CITR to attract net FDI inflows into their countries provided that the government can guarantee good political stability. A 1-point increase in the political stability index in lower-middle-income and low-income countries will increase net FDI inflows by USD3,194.4 million, or + 96.26% of net FDI inflows.

This study has several limitations, such as the usage of an unbalanced panel dataset, the usage of statutory CITR as the main variable, and the endogeneity issues. This study uses unbalanced panel data due to differences in the number of samples in each country, hence a possibility that the results of the estimation have not produced the proper coefficient. This study uses statutory CITR as an independent variable, thus it is still limited to the tax rates contained in domestic law, and it has not been able to explain other aspects such as corporate tax revenue and the average effective tax rate (AETR). The model used in this study allows for endogeneity issues, where FDI may be one of the factors that influence the government in setting CITR.

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Appendices

Table A1. List of Sample Countries

Income Level	Country Name
High Income	Australia, Austria, Bahamas, Bahrain, Barbados, Belgium, Brunei Darussalam, Canada, Chile, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hongkong SAR China, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea Rep., Kuwait, Latvia, Lithuania, Luxembourg, Macao SAR China, Malta, New Zealand, Norway, Oman, Panama, Poland, Portugal, Qatar, Saudi Arabia, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, The Netherlands, The United Arab Emirates, The United Kingdom, The United States, Uruguay
Upper Middle Income	Albania, Argentina, Armenia, Belarus, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, China, Colombia, Costa Rica, Dominican Republic, Ecuador, Gabon, Guatemala, Jamaica, Jordan, Kazakhstan, Libya, Malaysia, Maldives, Mauritius, Mexico, Montenegro, Paraguay, Peru, Romania, Russian Federation, Samoa, Serbia, South Africa, Sri Lanka, St. Vincent and the Grenadines, Thailand, Turkey, Venezuela
Lower Middle Income	Angola, Bangladesh, Bolivia, Cambodia, Egypt, Honduras, India, Indonesia, Kenya, Nigeria, Pakistan, , Senegal, Sudan, The Philippines, Ukraine, Vanuatu, Vietnam, Zambia, Zimbabwe
Low Income	Afghanistan, Burkina Faso, Liberia, Mozambique, Tanzania, Uganda

Source: World Development Indicator, World Bank 2019 (compiled)

Table 2A. Descriptive Statistic of the Lower-Middle and Low-Income Countries

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	375	3,318.46	6,838.94	-7,397.30	44,458.57
CITR	355	28.0718	8.798808	0	47.92
GDP	375	155.40	345.57	0.31	2,652.55
LABOR	375	180.44	231.55	5.29	1,277.12
EDU	373	5.554692	2.17335	1.3	11.3
OPEN	372	73.92156	41.43695	19.1008	311.3541
INF	375	8.429097	9.720383	-16.76108	95.40866
EXCH	365	1,627.365	4,229.377	0.6982161	22,370.09
POLSTAB	375	-0.83	0.90	-2.81	1.38
CITR*POLSTAB	375	-24.22	25.81	-98.35	23.13
Dummy GFC	375	0.2	0.4005344	0	1
FDI Region	375	3.424048	7.615875	-46.97031	47.04273

Source: Author's calculation

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Table 3A. Robustness Check All Countries (Excluding Tax Haven Countries)

	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
CITR	97.83	-343.0	-31.90	-28.28	-25.99	91.25	90.62	-27.37
	(0.92)	(-1.82)	(-0.17)	(-0.14)	(-0.13)	(0.54)	(0.53)	(-0.14)
GDP	6.683***		21.05***	21.04***	21.08***	21.47***	21.47***	21.07***
	(10.48)		(13.84)	(13.80)	(13.87)	(16.32)	(16.30)	(13.85)
LABOR	3.129***		1.930	1.968	1.947	1.482	1.468	1.916
	(3.69)		(0.66)	(0.67)	(0.66)	(0.58)	(0.58)	(0.65)
EDU	644.5		496.9	500.7	1172.5	1014.5	1010.6	1163.9
	(1.50)		(0.32)	(0.33)	(0.76)	(0.76)	(0.76)	(0.75)
OPEN	70.75***		81.79	81.91	80.08	44.54	44.51	80.03
	(4.84)		(1.81)	(1.81)	(1.78)	(1.14)	(1.14)	(1.78)
INF	-138.7		142.8	142.9	144.7	-22.11	-21.25	146.6
	(-1.33)		(1.24)	(1.24)	(1.26)	(-0.22)	(-0.21)	(1.27)
EXCH	0.526		-0.0208	-0.0195	0.0273	-0.193	-0.199	0.0146
	(1.47)		(-0.01)	(-0.01)	(0.02)	(-0.13)	(-0.13)	(0.01)
POLSTAB	-2415.0		997.2	606.5	537.7	-1492.7	-1485.3	553.8
	(-0.82)		(0.40)	(0.12)	(0.11)	(-0.34)	(-0.34)	(0.11)
i.CITR*POLSTAB	67.79			15.03	14.45	50.10	49.71	13.61
	(0.66)			(0.09)	(0.08)	(0.34)	(0.34)	(0.08)
Dummy GFC	4551.6*				5284.8**	5170.1***	5170.1***	5284.9**
	(2.42)				(3.10)	(3.50)	(3.50)	(3.10)
FDI Region	3374.7***					3344.0***	3343.8***	
	(27.36)					(21.57)	(21.56)	

	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
GDP Volatility	-873.5***						-28.48	-62.87
	(-3.51)						(-0.14)	(-0.26)
Dummy HI	1937.9							
	(0.47)							
Dummy UMI	5124.5							
	(1.89)							
_cons	-18286.1***	26526.0***	-9811.8	-9974.4	-17037.2	-26621.2*	-26433.5*	-16623.8
	(-3.42)	(5.60)	(-0.66)	(-0.67)	(-1.13)	(-2.03)	(-2.01)	(-1.09)
N	1506	1523	1506	1506	1506	1506	1506	1506
F	223.8	3.314	26.43	23.48	22.22	69.24	63.43	20.19
r2	0.678	0.00233	0.132	0.132	0.138	0.354	0.354	0.138
r2_a	0.675	-0.0701	0.0632	0.0625	0.0682	0.301	0.301	0.0676
number of groups	103	103	103	103	103	103	103	103

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

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Table 4A. Robustness Check High-Income Countries (Excluding Tax Haven Countries)

	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
CITR	-447.1	-303.4	-52.80	-53.26	-12.68	-27.77	-35.47	-21.65
	(-1.32)	(-0.76)	(-0.12)	(-0.10)	(-0.02)	(-0.08)	(-0.10)	(-0.04)
GDP	-5.764***		33.20***	33.20***	33.05***	36.79***	36.50***	32.71***
	(-6.13)		(8.23)	(8.17)	(8.17)	(13.44)	(13.34)	(8.08)
LABOR	2.113*		0.910	0.911	0.844	-1.995	-2.876	-0.184
	(2.04)		(0.19)	(0.19)	(0.18)	(-0.63)	(-0.89)	(-0.04)
EDU	1398.0		244.4	244.4	1008.1	2171.1	1590.2	332.8
	(1.62)		(0.07)	(0.07)	(0.29)	(0.91)	(0.66)	(0.09)
OPEN	-18.46		113.4	113.4	126.1	88.73	84.48	121.1
	(-0.96)		(1.14)	(1.14)	(1.27)	(1.32)	(1.26)	(1.22)
INF	-40.96		490.5	490.5	459.7	235.5	210.5	430.4
	(-0.15)		(1.41)	(1.41)	(1.32)	(1.00)	(0.90)	(1.24)
EXCH	-3.931		-5.138	-5.143	7.539	20.83	22.70	9.728
	(-0.57)		(-0.08)	(-0.08)	(0.11)	(0.46)	(0.50)	(0.15)
POLSTAB	-21385.4*		-3322.6	-3346.4	191.0	2287.1	1859.4	-305.1
	(-2.08)		(-0.37)	(-0.18)	(0.01)	(0.18)	(0.15)	(-0.02)
i.CITR*POLSTAB	866.6*			1.014	-100.9	165.8	164.8	-101.8
	(2.24)			(0.00)	(-0.15)	(0.36)	(0.36)	(-0.15)
Dummy GFC	11949.1***				9463.8*	9395.2***	11039.0***	11377.7**
	(3.63)				(2.54)	(3.73)	(4.15)	(2.88)
FDI Region	6475.6***					7332.0***	7326.3***	
	(31.38)					(26.88)	(26.91)	
	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
GDP Volatility	-4164.3**						-2261.1	-2632.7
	(-3.22)						(-1.85)	(-1.46)
_cons	8291.5	37803.8***	-17555.4	-17543.4	-31478.9	-75539.0**	-58362.3*	-11518.9
	(0.58)	(4.04)	(-0.45)	(-0.44)	(-0.78)	(-2.76)	(-2.02)	(-0.27)
N	660	660	660	660	660	660	660	660
F	192.3	0.585	9.654	8.567	8.426	82.45	76.17	7.867
r2	0.781	0.000950	0.113	0.113	0.122	0.600	0.602	0.125
r2_a	0.777	-0.0705	0.0383	0.0367	0.0453	0.564	0.566	0.0470
number of groups	44	44	44	44	44	44	44	44

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.00

Table 5A. Robustness Check Upper-Middle-Income Countries (Excluding Tax Haven Countries)

	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
CITR	-86.36	-557.0**	-115.9	-106.6	-104.9	-222.1	-223.5	-104.9
	(-1.28)	(-3.19)	(-0.81)	(-0.72)	(-0.71)	(-1.70)	(-1.71)	(-0.71)
GDP	18.52***		15.72***	15.71***	15.72***	15.39***	15.38***	15.72***
	(31.98)		(20.67)	(20.61)	(20.65)	(22.93)	(22.88)	(20.62)
LABOR	0.747		1.833	1.739	1.951	3.048	3.054	1.951
	(0.66)		(0.44)	(0.42)	(0.47)	(0.83)	(0.83)	(0.47)
EDU	-30.76		105.0	119.9	321.9	-203.8	-210.7	321.9
	(-0.11)		(0.09)	(0.11)	(0.28)	(-0.20)	(-0.21)	(0.28)
OPEN	11.83		50.02	50.24	47.72	48.09	48.65	47.72
	(0.62)		(1.03)	(1.03)	(0.98)	(1.12)	(1.13)	(0.98)
INF	6.735		58.88	58.91	61.04	27.18	27.41	61.04
	(0.12)		(0.80)	(0.80)	(0.83)	(0.42)	(0.42)	(0.83)
EXCH	0.229		-0.228	-0.106	0.370	1.408	1.396	0.370
	(0.44)		(-0.07)	(-0.03)	(0.11)	(0.48)	(0.47)	(0.11)
POLSTAB	1646.9		442.1	-459.7	-761.5	-2094.8	-2056.6	-761.5
	(0.70)		(0.31)	(-0.11)	(-0.19)	(-0.59)	(-0.58)	(-0.19)
i.CITR*POLSTAB	-79.95			36.15	46.71	1.012	-0.926	46.71
	(-0.94)			(0.24)	(0.31)	(0.01)	(-0.01)	(0.31)
Dummy GFC	1310.6				1701.3	1026.6	1024.8	1701.3
	(1.14)				(1.44)	(0.99)	(0.98)	(1.44)
FDI Region	1642.7***					2284.4***	2284.9***	
	(14.42)					(11.73)	(11.72)	

	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
GDP Volatility	-448.0**						-28.55	-0.0589
	(-2.82)						(-0.18)	(-0.00)
_cons	1338.6	24619.4***	1669.2	1328.9	-912.4	-953.6	-797.6	-912.1
	(0.31)	(5.81)	(0.16)	(0.12)	(-0.08)	(-0.10)	(-0.08)	(-0.08)
N	516	523	516	516	516	516	516	516
F	431.6	10.20	59.18	52.50	47.57	68.28	62.46	43.15
r2	0.911	0.0205	0.500	0.500	0.502	0.615	0.615	0.502
r2_a	0.909	-0.0499	0.456	0.455	0.456	0.578	0.577	0.455
number of groups	35	35	35	35	35	35	35	35

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

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Table 6A. Robustness Check Lower-Middle and Low-Income Countries (Excluding Tax Haven Countries)

	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
CITR	-107.8*	-108.1	-71.68	-261.1**	-258.8**	-138.8*	-138.4*	-258.8**
	(-2.21)	(-1.87)	(-1.69)	(-3.29)	(-3.31)	(-2.03)	(-2.02)	(-3.31)
GDP	18.22***		17.12***	17.64***	17.75***	17.63***	17.64***	17.75***
	(38.02)		(14.05)	(14.48)	(14.80)	(17.03)	(17.01)	(14.77)
LABOR	-0.592		-0.459	-0.147	0.384	0.0238	0.00698	0.387
	(-0.51)		(-0.17)	(-0.05)	(0.14)	(0.01)	(0.00)	(0.14)
EDU	92.79		448.3	165.1	343.4	280.3	281.1	343.3
	(1.20)		(0.84)	(0.31)	(0.65)	(0.61)	(0.61)	(0.65)
OPEN	12.75***		21.94**	22.26**	20.99**	14.66*	14.66*	20.99**
	(3.34)		(2.68)	(2.75)	(2.63)	(2.12)	(2.11)	(2.62)
INF	2.788		26.35	22.68	24.24	1.353	0.831	24.31
	(0.17)		(1.26)	(1.09)	(1.19)	(0.08)	(0.05)	(1.18)
EXCH	0.112**		0.176	0.0867	0.0752	0.138	0.140	0.0749
	(2.92)		(0.86)	(0.42)	(0.37)	(0.79)	(0.80)	(0.37)
POLSTAB	1891.3*		1630.0***	5225.4***	5086.7***	3498.6**	3487.7**	5088.1***
	(2.37)		(3.41)	(3.84)	(3.79)	(3.00)	(2.98)	(3.78)
i.CITR*POLSTAB	-36.55			-127.4**	-125.9**	-70.50	-70.31	-125.9**
	(-1.35)			(-2.81)	(-2.83)	(-1.82)	(-1.81)	(-2.82)
Dummy GFC	1355.8***				1290.5**	1369.8***	1379.2***	1289.2**
	(3.74)				(3.27)	(4.02)	(4.01)	(3.23)
FDI Region	156.3***					243.3***	243.4***	
	(8.56)					(10.13)	(10.12)	
	OLS FDI	FEM1 FDI	FEM2 FDI	FEM3 FDI	FEM4 FDI	FEM5 FDI	FEM6 FDI	FEM7 FDI
GDP Volatility	-16.38						6.297	-0.845
	(-0.57)						(0.23)	(-0.03)
_cons	2163.6	6798.8***	-154.0	6908.6	5538.8	2052.6	1997.5	5545.9
	(1.34)	(3.97)	(-0.05)	(1.76)	(1.43)	(0.61)	(0.59)	(1.42)
N	330	340	330	330	330	330	330	330
F	195.2	3.479	41.16	38.31	36.67	54.13	49.46	33.22
r2	0.881	0.0109	0.525	0.537	0.553	0.669	0.669	0.553
r2_a	0.876	-0.0644	0.475	0.487	0.504	0.631	0.629	0.502
number of groups	24	24	24	24	24	24	24	24

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001