“Impacts of double tax treaties on FDI in lower-middle-income and upper-middle-income countries: Recommendations for Vietnam”

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IMPACTS OF DOUBLE TAX TREATIES ON FDI IN LOWER-MIDDLE-INCOME AND UPPER-MIDDLE-INCOME COUNTRIES: RECOMMENDATIONS FOR VIETNAM

Abstract

This study examines the relevance of double taxation treaties (DTTs) in attracting foreign direct investment (FDI), with a focus on how their effects change across lower-middle-income and upper-middle-income countries. As global capital mobility intensifies, many developing economies have expanded their tax treaty networks to enhance investment appeal. The study aims to evaluate whether such expansions effectively increase FDI inflows and how the results vary by income group. Using a balanced panel dataset of 42 developing economies from 2004 to 2023, the empirical analysis applies fixed effects regression models. FDI inflows measured as a percentage of GDP in current US dollars serve as the dependent variable, with control variables capturing both domestic institutional quality and external macroeconomic conditions. The results show that, on average, signing additional DTTs raises FDI inflows by 0.26% in upper-middle-income economies, a relationship statistically significant at the 5% level. In contrast, the effect in lower-middle-income countries is statistically insignificant and occasionally negative, with average changes in FDI below 1%. This divergence suggests that strong governance, transparent legal systems, and stable macroeconomic environments are crucial preconditions for converting tax treaty networks into tangible investment gains. The findings conclude that while DTTs can facilitate cross-border investment, their effectiveness depends largely on domestic institutional capacity, implying that treaty expansion without complementary structural reforms yields limited benefits.

Keywords double tax treaties, foreign direct investment inflow, lower-middle-income, upper-middle-income, multinational companies

JEL Classification G21, G32, G38

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INTRODUCTION

Foreign Direct Investment (FDI) has long been recognized as a driver of economic transformation, contributing to capital formation, job creation, technology transfer, productivity gains, infrastructure development, and macroeconomic stability. These benefits are particularly important for developing countries seeking to accelerate growth and deepen integration into the global economy. While factors such as market size, labor costs, and political stability are well-documented determinants of FDI, the role of tax policies, especially Double Tax Treaties (DTTs), remains contested.

DTTs are intended to reduce tax burdens on cross-border investors, prevent double taxation, and create a more predictable fiscal environment. However, their effectiveness in attracting investment is far from certain. In some cases, they strengthen investor confidence and en-

courage inflows, while in others, they have little measurable effect or even enable practices such as treaty shopping and aggressive tax planning, which can erode the domestic tax base.

This uncertainty is especially pronounced in middle-income countries, where institutional quality, regulatory enforcement, and administrative capacity vary widely. Lower-middle-income and upper-middle-income economies face different constraints and opportunities: weak governance can undermine the implementation of treaty provisions, whereas stronger institutions can turn the same agreements into effective tools for attracting high-quality investment. Despite these differences, most empirical studies focus on developed countries or specific regional blocs, leaving limited evidence on how DTTs operate across a broader range of middle-income economies with diverse institutional settings.

1. LITERATURE REVIEW AND HYPOTHESES

Over the past several decades, developing and emerging economies have increasingly adopted Double Taxation Treaties (DTTs) as instruments to attract Foreign Direct Investment (FDI) and deepen integration into the global economy. Guided by frameworks such as the OECD Model Tax Convention (OECD, 2019), DTTs aim to remove tax-related barriers to cross-border investment by eliminating double taxation, reducing fiscal uncertainty, and creating a predictable business climate for multinational enterprises (MNEs). In theory, such measures can encourage capital inflows, promote technology transfer, and stimulate economic growth (Zolt, 2018). By reducing withholding taxes and clarifying taxing rights, DTTs are also expected to signal to foreign investors that the host country offers a stable, cooperative environment for international business (Avi-Yonah, 2009; Lang, 2021).

A substantial body of empirical work supports the view that DTTs can enhance investment flows through improved legal certainty and lower transaction costs. Blonigen and Davies (2002), using bilateral FDI data from OECD countries, found that older treaties are associated with higher FDI inflows, while Neumayer (2007) reported particularly strong effects in middle-income countries with higher institutional quality. Barthel et al. (2009) similarly identified positive FDI effects in certain developing regions, though benefits were not universal. Davies et al. (2009), analyzing affiliate-level data from Swedish multinationals, found that treaties increase the likelihood of a firm investing in a given country, though not necessarily total affiliate sales. Lejour (2014) observed that bilateral and multilateral treaties significantly boost bilateral FDI, by about 16% overall and 21% for new treaties, while lower withholding tax rates also attract more investment.

In contrast, other studies caution that the positive effects of DTTs are not universal and may be absent, or even negative, under certain conditions. Janeba (1995) highlighted that while different double taxation rules yield similar competitive equilibria, capital allocation can be inefficient without cooperation between countries. Blonigen and Davies (2004) found little evidence that treaties increase U.S. inbound or outbound FDI, while Egger et al. (2006) identified a significant negative impact of newly implemented treaties on outward FDI stocks. Baker (2014) similarly found no effect of DTTs on FDI flows, suggesting that developed countries' unilateral tax relief measures often make treaties redundant. Petkova et al. (2019) further noted that only treaties that substantially reduce "tax distance" in the global treaty network yield meaningful FDI gains.

Concerns over fiscal costs also feature prominently in the literature. Fitzgerald (2002), UNCTAD (2016), and Beer and Loeprick (2018) warn that DTTs can erode the domestic tax base by restricting source-country taxing rights, with Davies (2003) showing that even treaty renegotiations often fail to deliver robust investment gains. For lower-income countries dependent on corporate tax revenues, potential revenue losses can outweigh any incremental FDI.

Across both supportive and skeptical findings, the institutional environment emerges as a decisive factor. Lang and Owens (2014) argue that strong domestic tax laws and enforcement capacity are

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essential for treaties to deliver benefits, while Busse and Hefeker (2007) highlight that political risk can overshadow tax considerations entirely. Bénassy-Quéré et al. (2007) show that institutional quality, such as low corruption, effective bureaucracy, and robust legal systems, significantly boosts FDI, and that institutional similarity between host and source countries further enhances bilateral flows.

Studies also suggest that DTT effects vary by development stage. Neumayer (2007) finds that middle-income economies benefit more than low-income countries due to stronger institutions and greater absorptive capacity, while Beer and Loeprick (2018) show that adopting treaties without adequate administrative capacity often results in fiscal losses. Cobham and Janský (2019) estimate corporate tax revenue losses from profit shifting to tax havens and note that, relative to GDP, such losses are similar across income groups.

Although the theoretical rationale for DTTs as investment-enhancing policy is clear, empirical findings still remain mixed and context-dependent, influenced by external factors. Specifically, treaty effectiveness appears to hinge on factors such as design, enforcement capacity, governance quality, and the broader macroeconomic environment. Despite extensive research, most large-scale analyses have focused on OECD members or narrow regional samples, leaving open important questions about how DTTs perform across the spectrum of lower-middle-income and upper-middle-income economies.

This study addresses that gap by examining the effect of DTTs on FDI inflows in a diverse panel of 42 developing countries over the period 2004-2023. Particular attention is given to how institutional and macroeconomic conditions mediate treaty outcomes. The following hypotheses are tested:

H1: DTTs have a significant positive effect on FDI inflows in upper-middle-income developing countries.

H2: DTTs have no significant or negative effect on FDI inflows in lower-middle-income developing countries.

H3: The effectiveness of DTTs in attracting FDI is conditional upon the institutional and macroeconomic characteristics of the host country.

2. METHODOLOGY

2.1. Data source

The panel dataset covers 42 countries over a 20-year period from 2004 to 2023, comprising 24 upper-middle-income and 18 lower-middle-income developing economies. The income classification follows the World Bank (2024) standard, which categorizes countries based on Gross National Income (GNI) per capita. Country selection was determined by the availability of consistent data on FDI inflows and the number of double taxation treaties (DTTs) signed during the study period. Lower-middle-income economies includes as follows: Angola, Bangladesh, Cambodia, Egypt, Ghana, India, Kenya, Laos, Lebanon, Morocco, Myanmar, Nigeria, Pakistan, Philippines, Vietnam, Tunisia, Bolivia and Tajikistan. Regarding the sample of upper-middle-income economies, this includes Albania, Argentina, Armenia, Belarus, Brazil, China, Colombia, Dominica, Ecuador, Indonesia, Iran, Iraq, Malaysia, Mexico, Mongolia, North Macedonia, Paraguay, Peru, South Africa, Thailand, Ukraine, Libya, Serbia and Fiji.

The analysis is based on a newly compiled panel dataset, created exclusively for this research and not previously used in any other study. This study employs a dataset compiled by Nguyen and Nguyen (2025), available on Zenodo (https://doi.org/10.5281/zenodo.16817802), which provides comprehensive information on FDI inflows, Double Tax Treaty indicators, and control variables such as GDP per capita, population, current account balance, WTO membership, and political stability for lower-middle-income and upper-middle-income countries from 2004 to 2023.

2.2. Research model

Following the methodology outlined in Neumayer (2007), this study uses a framework that has quite similar elements to analyze the aspects impacting the inflows of foreign direct investment (FDI) in

an empirical way. The model framework can be seen as follows:

$$\begin{aligned} FDI\_inflow_{i,t} &= \beta_1 + \beta_2 L\_DTT\_weighted_{i,t} \\ &+ \beta_3 L\_lnGDP\_pc_{i,t} + \beta_4 L\_lnpop_{i,t} \\ &+ \beta_5 L\_BIT\_weighted_{i,t} + \beta_6 L\_acc\_bal_{i,t} \\ &+ \beta_7 L\_WTO\_member_{i,t} \\ &+ \beta_8 L\_polsta\_rank_{i,t} + c_i + u_{i,t}, \end{aligned} \quad (1)$$

In specific

- β_1, β_2, β_3, β_4, β_5, β_6, β_7, β_8 are the coefficients of the lagged explanatory variables, respectively.
- $u_{i,t}$ is the random error term, which captures the shocks that cannot be seen and vary over the given time.
- c_i represents fixed effects belonging to the specific countries that possess the characteristics unrelevant to time periods such as geography, legal system, and culture.
- i specifies countries, and t specifies time (year).

The dependent variable in this study is FDI_inflow, measured as the annual volume of foreign direct investment a country receives, expressed as a percentage of its gross domestic product (GDP). This variable reflects the scale of FDI relative to the national economy and is sourced from the World Bank (2025).

The key independent variable is L_DTT_weighted, which represents the total number of Double Taxation Treaties (DTTs) signed by a country, weighted by the country's share of global FDI inflows and lagged by one year to mitigate endogeneity concerns; data are obtained from ICTD (2025).

To control other determinants of FDI, several additional variables are included. L_BIT_weighted captures the number of Bilateral Investment Treaties (BITs) signed, using the same weighting and lag structure, and is sourced from the UNCTAD (2025) specifically of International Investment Agreements Navigator. L_lnGDP_pc, the natural logarithm of GDP per capita, and L_lnpop, the natural logarithm of total population, reflect levels of economic development and market size, respectively, with both variables retrieved from the World Bank (2025). L_WTO_member, which is source from World Trade Organization (2024), is a categorical indicator capturing trade openness, coded as 1 for World Trade Organization (WTO) members, 0.5 for observers, and 0 for non-members. L_polsta_rank, the Political Stability and Absence of Violence/Terrorism Index, which is sourced from the World Bank (2025), is used to approximate institutional and governance quality. Lastly, L_acc_bal, which is sourced from the World Bank (2025), measures the current account balance as a percentage of GDP, including net exports, primary income, and secondary income, and serves as an indicator of a country's external financial position. All explanatory variables are lagged by one year to reduce the risk of reverse causality.

In the regression model, $u_{i,t}$ represents the random error term that captures unobservable shocks varying across time, while c_i accounts for country-specific fixed effects that are constant over time but differ across nations. Here, i specifies countries, and t specifies time (year). This structure enables the model to control for unobserved heterogeneity and capture both temporal and cross-sectional variations in the dataset.

This study employs both random-effects and fixed-effects panel estimators to investigate the relationship between Double Taxation Treaties (DTTs) and Foreign Direct Investment (FDI) inflows. The fixed-effects model (FEM) is used to control for unobserved heterogeneity that is constant over time but varies across countries, such as institutional quality or cultural factors, which may correlate with the explanatory variables and otherwise bias the results. On the other hand, the random-effects model (REM) assumes that the unobserved individual effects are uncorrelated with the explanatory variables and treats them as random variables drawn from a larger population. REM allows for the inclusion of time-invariant regressors and generally offers more efficient estimates if its assumptions hold. Together, these models provide a robust framework to capture both within-country and between-country variations in the data, ensuring that the estimated impact of DTTs on FDI inflows is not confounded by omitted variable bias or unobserved heterogeneity.

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3. EMPIRICAL RESULTS AND DISCUSSION

3.1. Descriptive statistics

The characteristics of the data and the summary of the descriptive statistics of the variables are presented in Table 1. Table 1 reports the descriptive statistics for all variables used in the analysis, including the number of observations, mean, standard deviation, minimum, and maximum values.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. dev.	Min	Max
FDI_inflow	840	3.351019	4.105663	–37.17265	43.91211
DTT_weighted	840	.1847371	.735767	–.0840113	9.084265
lnGDP_pc	840	8.138794	.7999751	5.413915	9.614197
BIT_weighted	840	.952095	1.516364	–14.12561	16.6866
lnpop	840	17.06677	1.864765	11.10511	21.08657
WTO_ member	840	.8744048	.2939593	0	1
polsta_rank	840	30.43219	20.12746	0	95.75471
acc_bal	840	–2.428138	8.426313	–46.65247	41.90659

The mean value for FDI inflow is 3.3510, with a standard deviation of 4.1057, indicating moderate variation in FDI inflows across sampled countries. The DTT weighted variable has a mean of 0.1847 and a standard deviation of 0.7358, reflecting a relatively low level of application of double taxation treaties during the study period.

Macroeconomic indicators such as lnGDP_pc and lnpop demonstrate notable trends. The mean lnGDP_pc is 8.1388, with a standard deviation of 0.799, suggesting considerable differences in per capita GDP among the sample countries. The mean value for lnpop is 17.0668, indicating substantial demographic heterogeneity within the dataset. BIT weighted averages 0.9521 with a standard deviation of 1.5164, implying a moderate prevalence of bilateral investment treaties among the observed nations.

Furthermore, the WTO member variable reports a mean of 0.8744, signifying that the majority of countries in the sample have obtained WTO

Table 2. Estimation results on the impact of DTTs on FDI

Variables	Lower-middle-income countries		Upper-middle-income countries	
	Fixed effects	Random effects	Fixed effects	Random effects
	FDI_inflow	FDI_inflow	FDI_inflow	FDI_inflow
L_DTT_weighted	–0.3581	–0.3829	0.2562	0.1869
	(0.4806)	(0.5058)	(0.3491)	(0.2871)
L_lnGDP_pc	1.1664***	–0.2815	–1.3360**	–1.3865***
	(0.3207)	(0.2597)	(0.5893)	(0.4504)
L_lnpop	–9.1574***	–0.7679***	–2.1855	–0.6907***
	(1.2884)	(0.2903)	(2.8423)	(0.1985)
L_BIT_weighted	1.2132***	1.4439***	1.0650***	1.0237***
	(0.1584)	(0.1511)	(0.1300)	(0.1199)
L_acc_bal	–0.0098	–0.0090	0.0242	–0.0036
	(0.0206)	(0.0213)	(0.0269)	(0.0246)
L_WTO_member	–0.8295	–0.9571	–1.2372	0.7845
	(0.6111)	(0.6106)	(1.9453)	(1.0484)
L_polsta_rank	0.0510***	0.0463***	0.0096	0.0267**
	(0.0162)	(0.0148)	(0.0163)	(0.0135)
Constant	153.5988***	17.1691***	51.1719	24.3053***
	(21.3091)	(5.3521)	(45.8047)	(4.9408)
Observations	342	342	456	456
R-squared	0.349	0.259	0.162	0.155
Number of countries	18	18	24	24
Hausman test	48.79		16.01	
	(0.0000)		(0.0250)	

Note: Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

membership. The average political stability ranking (polsta_rank) is 30.4322, highlighting dispersions in political stability across countries. The account balance variable (acc_bal) records a mean of –2.4281 and a substantial standard deviation, underscoring pronounced disparities in current account status, which partly reflects the diverse economic structures and extents of financial integration among the countries included in the study.

The primary empirical results are presented in Table 2, based on the fixed-effects (FE) regression model, which estimates the impact of DTTs along with a range of control variables on FDI. The analysis is conducted separately for two income groups: lower-middle-income countries and upper-middle-income countries, to capture potential heterogeneity in effects across different levels of economic development.

To determine the most appropriate estimation approach, a Hausman test was conducted. The results support the use of the fixed-effects model over the random-effects alternative, indicating that unobserved country-specific characteristics are likely correlated with the explanatory variables. The fixed-effects approach is particularly advantageous in this context, as it controls for time-invariant heterogeneity across countries, thereby reducing bias in the coefficient estimates.

To enhance the robustness and reliability of the results, the analysis incorporates robust standard errors. Furthermore, to address concerns regarding potential reverse causality, where FDI inflows could influence policy variables such as tax treaties, all independent variables are lagged by one year. This lag structure helps mitigate endogeneity concerns and strengthens the causal interpretation of the findings.

Nonetheless, it is important to acknowledge that, as in any regression analysis, the potential for omitted variable bias remains. Despite efforts to include a comprehensive set of control variables and apply appropriate econometric techniques, unobservable factors not captured in the model may still influence FDI inflows. These limitations should be considered when interpreting the results and formulating policy recommendations.

3.2. Evaluating the impact of double tax treaties on foreign direct investment

Table 3. Empirical results using fixed effects (robust)

Variables	Lower-middle-income countries	Upper-middle-income countries
	FDI_inflow	FDI_inflow
L_DTT_weighted	–0.3581*	0.2562**
	(0.2023)	(0.1002)
L_lnGDP_pc	1.1664**	–1.3360***
	(0.4990)	(0.3908)
L_lnpop	–9.1574***	–2.1855
	(1.1125)	(1.6090)
L_BIT_weighted	1.2132***	1.0650***
	(0.3626)	(0.0928)
L_acc_bal	–0.0098	0.0242**
	(0.0311)	(0.0106)
L_WTO_member	–0.8295	–1.2372**
	(0.5311)	(0.5277)
L_polsta_rank	0.0510***	0.0096
	(0.0172)	(0.0123)
Constant	153.5988***	51.1719*
	(18.4064)	(26.1484)
Observations	342	456
R-squared	0.349	0.162
Number of countries	18	24

Note: Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

3.2.1. *Lower-middle-income countries*

Double Taxation Treaties (DTTs) exhibit a negative and statistically significant impact on FDI inflows in lower-middle-income countries. The coefficient for the lagged DTTs index is -0.3581, significant at the 10% level ($p < 0.1$). This means that a one-unit increase in a country's weighted DTT index is associated with a 0.36% decrease in FDI inflows as a share of GDP in the following year. This result provides strong evidence that, in weaker institutional environments, DTTs may not only fail to stimulate foreign investment but could even discourage capital inflows.

This finding supports the hypothesis that DTTs require effective enforcement, administrative capacity, and legal credibility to fulfill their intended function. In lower-middle-income countries, the absence of these enabling conditions could allow DTTs to be misused for treaty shopping and profit shifting, thus reducing productive, on-the-

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ground investment. Instead of promoting real economic activity, DTTs may inadvertently facilitate tax avoidance without corresponding increases in job creation, technology transfer, or infrastructure development. The analysis reveals that an expansion of DTTs tends to exert an insignificant or even adverse effect on FDI inflows, which diverges from previous theoretical expectations (e.g., Avi-Yonah, 2009; Zolt, 2018) and from some empirical studies that reported robust positive effects of tax treaties (Barthel et al., 2009; Neumayer, 2007). Instead, these results align more closely with skeptical findings such as those of Blonigen and Davies (2004), Egger et al. (2006), and Baker (2014), who observed limited or even negative FDI responses to DTTs in economies with weaker institutional frameworks

Among the control variables, GDP per capita is positively associated with FDI inflows, with a coefficient of 1.1664, significant at the 5% level ($p < 0.05$). This suggests that every 1% increase in GDP per capita leads to a 1.17% increase in FDI as a share of GDP. Economic growth and rising incomes thus remain important determinants of investment attractiveness.

Population has a strong and negative effect on FDI, with a coefficient of –9.1574, significant at the 1% level ($p < 0.01$). This may indicate that rapid population growth, unaccompanied by institutional or infrastructure development, creates pressure on public services and reduces perceived investment efficiency. Bilateral Investment Treaties (BITs) show a highly positive and statistically significant association with FDI inflows. The coefficient of 1.2132 ($p < 0.01$) implies that BITs play a more effective role than DTTs in securing investor confidence, especially when governance capacity is limited. Unlike DTTs, BITs directly address investor protection and dispute resolution mechanisms, making them more useful for risk mitigation in uncertain environments. The current account balance has no significant impact on FDI, with a coefficient of -0.0098. This suggests that, for lower-middle-income countries, external imbalances do not play a central role in shaping capital inflows. WTO membership also appears statistically insignificant (–0.8295), implying that formal accession to trade institutions does not by itself ensure higher FDI without complementary reforms. Political stability, measured by polity score rank, has a positive and significant effect on investment. The coefficient of 0.0510 ($p < 0.01$) implies that each additional point in political institutional quality is associated with a 0.05% increase in FDI inflows. While modest in size, this reinforces the idea that predictability in governance supports long-term investment planning.

The model's constant is 153.5988 ($p < 0.01$), and the R-squared is 0.349, indicating a reasonably strong fit for this group. In summary, while control variables like BITs and income levels matter, the core takeaway is that expanding DTTs in lower-middle-income countries is associated with a measurable decline in FDI inflows, calling into question the policy wisdom of pursuing tax treaties without parallel institutional strengthening.

3.2.2. Upper-middle-income countries

In contrast, the results for upper-middle-income countries confirm the positive and statistically significant role of DTTs in promoting FDI inflows. The coefficient for the lagged DTT index is 0.2562, significant at the 5% level ($p < 0.05$). This implies that a one-unit increase in the weighted DTT index leads to a 0.26% increase in FDI inflows as a share of GDP.

This supports prior work by Neumayer (2007), Lang and Owens (2014), and Bénassy-Quéré et al. (2007), which emphasized that institutional quality and effective governance are critical conditions for treaty effectiveness. The divergence between the adverse or null effects in lower-middle-income countries and the positive effects in better-governed economies underscores the context dependency, also highlighted by Beer and Loeprick (2018) and Cobham and Janský (2019), who argued that domestic administrative capability determines the capacity to translate treaty commitments into investment gains

This outcome validates the first hypothesis: When embedded in stronger institutional frameworks and supported by more effective governance, DTTs can successfully attract foreign capital. In these economies, tax treaties likely improve predictability, reduce legal ambiguity, and protect investors from double taxation, creating an en-

abling environment for long-term financial commitments. The positive coefficient also reflects the reality that upper-middle-income countries are more likely to negotiate balanced treaties and monitor their implementation, thus ensuring that benefits accrue to the host economy.

Among the control variables, GDP per capita shows an unexpected negative and significant effect, with a coefficient of –1.3360 ($p < 0.01$). This suggests that in this group, rising per capita income may not lead to increased FDI, possibly due to market saturation or rising labor and operational costs in more developed emerging markets. Population has a negative coefficient (–2.1855) but is not statistically significant, suggesting no reliable link between population size and FDI in this group. As in the lower-income group, BITs remain a powerful predictor of FDI inflows, with a coefficient of 1.0650, significant at the 1% level ($p < 0.01$). This emphasizes the continuing relevance of investment protection instruments even in relatively advanced developing economies. The current account balance becomes significant in this group, with a coefficient of 0.0242 ($p < 0.05$), indicating that stronger external financial positions are associated with higher investor confidence and greater FDI inflows. A 1% improvement in the current account balance correlates with a 0.02% increase in FDI. WTO membership shows a negative and significant effect (–1.2372, $p < 0.05$). While counterintuitive, this may reflect the diminishing marginal value of WTO membership in countries where liberalization has already taken place and where domestic reforms may be lagging despite international commitments. Polity score is positive but not statistically significant (0.0096), suggesting that once a country reaches a threshold level of governance quality, other factors such as tax treaties or market structure play a more decisive role.

The constant is 51.1719 ($p < 0.1$), and the R-squared is 0.162, indicating a moderate explanatory power of the model for this group. The results clearly demonstrate that, unlike in lower-middle-income countries, DTTs function effectively in attracting FDI in upper-middle-income countries. This supports the argument that the effectiveness of DTTs is context-dependent. Without strong domestic institutions, these treaties may result in capital diversion and base erosion; however, when complemented by legal reliability and administrative enforcement, they can serve as reliable tools to facilitate cross-border investment and economic integration.

3.2.3. The contextual effectiveness of DTTs on FDI

In lower-middle-income countries, this study finds that DTTs have a weakly significant and negative relationship with FDI inflows. Like Fitzgerald (2002) and UNCTAD (2016), our results suggest that in such settings, treaties may be exploited for treaty shopping, resulting in fiscal losses without corresponding capital inflows. The divergence from the more positive evidence in Barthel et al. (2009) or Neumayer (2007) can likely be explained by differences in sample composition: our lower-middle-income group includes countries with weaker governance scores, less judicial independence, and less effective tax administrations than the middle-income samples examined in those studies.

In upper-middle-income countries, in contrast, the evidence for upper-middle-income countries confirms that DTTs have a significant positive association with FDI inflows, indicating a clear association between DTT expansion and higher FDI inflows. This is consistent with the findings of Neumayer (2007), Lang and Owens (2014), and Bénassy-Quéré et al. (2007), who argue that stronger institutions enhance the credibility and enforceability of treaties, making them a more effective investment signal. It also echoes Lejour's (2014) conclusion that well-designed treaties, coupled with robust anti-abuse provisions, can substantially increase bilateral FDI. The difference between this result and the negative/insignificant findings for lower-middle-income countries supports the idea, suggested by Beer and Loeprick (2018) and Cobham and Janský (2019), that institutional capacity is the decisive factor in determining treaty effectiveness.

Taken together, these comparisons confirm the context-dependency of DTT outcomes documented in the literature. Where enforcement capacity and governance quality are high, our findings support previous work showing that treaties can reduce investment barriers and enhance investor certainty. Where these conditions are absent, our

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results align with studies that question the investment benefits of DTTs, showing instead that they may enable tax avoidance without stimulating productive capital inflows.

3.3. Recommendations for Vietnam

Vietnam presents an interesting exception within the broader findings of this study. While the empirical results suggest that lower-middle-income countries generally do not experience significant gains in foreign direct investment (FDI) from expanding their networks of double tax treaties (DTTs), Vietnam has nonetheless been proactively broadening its DTT network since the early stages of its economic development. This strategic approach reflects the country's long-term vision to integrate more deeply into the global economy and to build a tax environment aligned with international standards. However, given the limited benefits typically observed for countries at a similar income level, Vietnam's experience calls for a more nuanced policy evaluation.

Vietnam, as a lower-middle-income country according to the World Bank (2024), should realize that by just merely increasing the number of DTTs signed with strategic counterparts this would not automatically mean higher FDI inflows and foreign financing. While Vietnam is still a lower-middle-income country, the primary focus should be on improving regulatory and legal efficiency, better governance, and fundamental business aspects:

Firstly, to prepare for future transition into an upper-middle-income country, Vietnam should review its already established DTT networks with prominent counterparts while simultaneously strengthening the tax administration capacity of its government to prevent treaty abuse. Without strict and reasonable enforcement mechanisms, an extensive DTT network can lead to harmful effects and treaty shopping, where MNCs can exploit treaties to minimize tax liabilities rather than channel genuine productive investments (OECD, 2017).

Secondly, another important insight is that Bilateral Investment Treaties (BITs) actually have a strong and significant effect on FDI inflows in both lower and upper-middle-income countries than DTTs. This suggests that Vietnam, as a lower-middle-income country, should try to prioritize negotiating and strengthening other kinds of treaties, such as BITs, instead of focusing on expanding its network of DTTs at this stage to attract foreign investment. By strategically utilizing BITs, Vietnam can further strengthen its attractiveness for more FDI and ensure a more effective utilization of DTTs in the future when it officially transitions to an upper-middle-income economy.

Thirdly, since DTTs show limited impact on FDI inflows, Vietnam should shift focus toward strengthening its economic fundamentals. Priority should be given to boosting domestic consumption, improving labor productivity, and investing in high-skilled human capital to attract higher-value industries and reduce reliance on low-cost labor. Political stability, which is a known strength for Vietnam, must be reinforced through better governance, increased transparency, and anti-corruption efforts to sustain investors' confidence. Additionally, addressing the negative FDI effects of a large population would require efforts such as improving infrastructure, energy reliability, logistics, and transport systems to support the sustainable growth amid urbanization. By tackling these fundamental factors, Vietnam can be better prepared in terms of utilizing DTTs more effectively when it becomes an upper-middle-income nation.

Fourthly, as an upper-middle-income economy, Vietnam should gradually expand its DTTs network to improve its attractiveness for global investors. By taking a steady approach, which has already laid the foundation by strategies applied since being a lower-middle-income country, Vietnam should leverage its already-established and future international tax treaties to create a sustainable, friendly environment for foreign investors that can maximize FDI inflows while still maintaining tax transparency and integrity. By simplifying general administrative processes, combined with digitalizing tax reporting systems and reducing unnecessary matters, Vietnam can eventually create a

more friendly environment for foreign entities that would boost the colossal benefits of DTTs. Furthermore, improving the efficiency of the overall tax administration is also absolutely crucial in making sure that tax incentives and treaty benefits are effectively and accordingly applied.

Fifthly, Vietnam should make sure that its existing DTTs network is structured according to international standards with the aim of encouraging FDI in fundamental sectors rather than being misused for treaty shopping and tax avoidance purposes, which would reduce the positive effects of DTTs (Petkova et al., 2019). Some MNEs exploit these tax treaties on purpose, shifting the majority of their profits to lower tax countries, a practice that can immensely reduce Vietnam's tax revenues without generating considerable benefits in terms of the economy. To prevent this, Vietnam should reform its tax treaties that have been outdated, introduce brand new anti-abuse provisions in new agreements, and align its tax framework with fundamental international standards such as the OECD's Base Erosion and Profit Shifting or BEPS framework. Vietnam should combine this practice with strengthening domestic legal regulations, with the hope of ensuring that DTTs serve their intended purpose of facilitating genuine cross-border investment and maximizing the benefits derived from FDI flows.

Last but not least, Vietnam should adjust its FDI attraction strategy in line with the rise of GDP per capita. The decline in FDI compared to the increasing levels of income may be due to the increasing costs of labor, which ultimately removes the competitive edge of Vietnam in terms of cheap labor. Therefore, Vietnam must have a transition from a low-cost labor investment environment to one that promotes high-value or technology sectors, and therefore, increase the overall efficiency and output. Vietnam should also consider encouraging global corporations and MNEs to expand their high-tech supply chains and knowledge spillovers in Vietnam, which can help sustain the FDI inflows. This action would not only tighten the industry linkages between FDI enterprises and local businesses but also help enhance productivity, which will be extremely critical in attracting long-term investors in the future. While the current account balance has limited direct impacts on FDI inflows, maintaining macroeconomic stability through reasonable fiscal and monetary policies still remains vital to investors' confidence and export growth.

CONCLUSION

This study examined whether Double Taxation Treaties (DTTs) effectively promote Foreign Direct Investment (FDI) and how their impact varies between lower-middle-income and upper-middle-income countries. Based on a panel of 42 countries from 2004 to 2023, the findings reveal a contrasting pattern: DTTs have no significant or even adverse effect on FDI inflows in lower-middle-income countries, whereas in upper-middle-income countries, they are associated with a significant positive impact.

These findings suggest that the effectiveness of DTTs hinges on the strength of a country's economic and institutional foundations. Nations with robust economies, stable political environments, and high institutional quality are better positioned to translate treaty commitments into genuine investor confidence and tangible capital inflows. In contrast, in weaker contexts, DTTs are more likely to be underutilized or exploited for tax avoidance purposes.

Future research should explore in greater depth the specific institutional mechanisms, such as judicial independence, tax enforcement capacity, and anti-corruption measures, that amplify the effectiveness of DTTs. Understanding these channels could provide governments with actionable policy pathways to maximize the benefits of such agreements.

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REFERENCES

1. Avi-Yonah, Reuven, S. (2009). Double Tax Treaties: An Introduction. In Sauvant, K. P., & Sachs, L. E. (Eds), *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties and Investment Flows* (pp. 99-106). Oxford: Oxford University Press.
2. Baker, P. L. (2014). An analysis of double taxation treaties and their effect on foreign direct investment. *International Journal of the Economics of Business, 21*(3), 341-377. Retrieved from https://doi.org/10.1080/13571516.2014.968454
3. Barthel, F., Busse, M., & Neumayer, E. (2009). The impact of double taxation treaties on foreign direct investment: Evidence from large dyadic panel data. *Contemporary Economic Policy, 28*(3), 366-377. Retrieved from https://doi.org/10.1111/j.1465-7287.2009.00185.x
4. Beer, S., & Loeprick, J. (2018). *The cost and benefits of tax treaties with investment hubs: Findings from Sub-Saharan Africa* (IMF Working Paper No. 18/227). International Monetary Fund. Retrieved from https://ssrn.com/abstract=3285225
5. Bénassy-Quéré, A., Coupet, M., & Mayer, T. (2007). Institutional determinants of foreign direct investment. *The World Economy, 30*(5), 764-782. Retrieved from https://doi.org/10.1111/j.1467-9701.2007.01022.x
6. Blonigen, B. A., & Davies, R. B. (2002). *Do bilateral tax treaties promote foreign direct investment?* (NBER Working Paper No. w8834). National Bureau of Economic Research. Retrieved from https://ssrn.com/abstract=303556
7. Blonigen, B. A., & Davies, R. B. (2004). The effects of bilateral tax treaties on U.S. FDI activity. *International Tax and Public Finance, 11*(5), 601-622. Retrieved from https://link.springer.com/article/10.1023/B:ITAX.0000036693.32618.00
8. Busse, M., & Hefeker, C. (2007). Political risk, institutions, and foreign direct investment. *European Journal of Political Economy, 23*(2), 397-415. Retrieved from https://doi.org/10.1016/j.ejpoleco.2006.02.003
9. Cobham, A., & Janský, P. (2019). Measuring misalignment: The location of US multinationals' economic activity versus the location of their profits. *International Tax and Public Finance, 26*(4), 974-1001. Retrieved from https://doi.org/10.1111/dpr.12315
10. Davies, R. B. (2003). Tax treaties, renegotiations, and foreign direct investment. *Economic Analysis and Policy, 33*(2), 251-273. Retrieved from https://doi.org/10.1016/S0313-5926(03)50020-0
11. Davies, R. B., Norbäck, P.-J., & Tekin-Koru, A. (2009). *The effect of tax treaties on multinational firms: New evidence from microdata* (Research Institute of Industrial Economics Working Paper No. 833). https://doi.org/10.1111/j.1467-9701.2009.01158.x
12. Egger, P., Larch, M., Pfaffermayr, M., & Winner, H. (2006). The impact of endogenous tax treaties on foreign direct investment: Theory and evidence. *Canadian Journal of Economics, 39*(3), 901-931. Retrieved from https://doi.org/10.1111/j.1540-5982.2006.00375.x

13. Fitzgerald, V. (2002). International tax co-operation and capital mobility. *Oxford Development Studies, 30*(3), 251-266. Retrieved from https://doi.org/10.1080/13600810220000126 80

14. ICTD (2025). *Tax Treaties Explorer [Online database]*. Brighton: International Centre for Tax and Development (ICTD). Retrieved from https://www.treaties.tax

15. Janeba, E. (1995). Corporate income tax competition, double taxation treaties, and foreign direct investment. *Journal of Public Economics, 56*(2), 311-325. Retrieved from https://doi.org/10.1016/0047-2727(94)01424-M

16. Lang, M. (2021). *Introduction to the law of double taxation conventions* (3rd ed.). IBFD. Retrieved from https://doi.org/10.59403/19zghav

17. Lang, M., & Owens, J. P. (2014). *The role of tax treaties in facilitating development and protecting the tax base* (WU International Taxation Research Paper Series No. 2014-03). WU Vienna University of Economics and Business. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2398438

18. Lejour, A. (2014). *The foreign investment effects of tax treaties* (Oxford University Centre for Business Taxation Working Paper No. 1403). Retrieved from https://ideas.repec.org/p/btx/wpaper/1403.html

19. Neumayer, E. (2007). Do double taxation treaties increase foreign direct investment to developing countries? *The Journal of Development Studies, 43*(8), 1501-1519. Retrieved from https://ideas.repec.org/a/taf/jdevst/v43y2007i8p1501-1519.html

20. Nguyen, T. C. G., & Nguyen, P. Q. (2025). *Dataset for "Impacts of Double Tax Treaties on FDI in Lower-middle-income and Upper-middle-income Countries: Recommendations for Vietnam" [Data set]*. Zenodo. Retrieved from https://doi.org/10.5281/zenodo.16817802

21. OECD. (2019). *Model Tax Convention on Income and on Capital 2017 (Full Version)*. Paris: OECD Publishing. Retrieved from https://doi.org/10.1787/g2g972ee-en.

22. OECD. (2019). *Model Tax Convention on Income and on Capital 2017 (Full Version)*. Paris: OECD Publishing. Retrieved from https://doi.org/10.1787/tpg-2017-en.

23. OECD. (2017). *OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2017*. Paris: OECD Publishing. Retrieved from https://ideas.repec.org/a/kap/itaxpf/v27y2020i3d10.1007_s10797-019-09570-9.html

24. UNCTAD. (2016a). Trade and development report 2016: Structural transformation for inclusive and sustained growth. *United Nations Conference on Trade and Development*. Retrieved from https://unctad.org/system/files/official-document/tdr2016_en.pdf

25. UNCTAD. (2016b). World investment report 2016: Investor nationality, policy challenges. *United Nations Conference on Trade and Development*. Retrieved from https://unctad.org/publication/world-investment-report-2016

26. UNCTAD. (2025). *International Investment Agreements Navigator*. Retrieved from: https://investmentpolicy.unctad.org/international-investment-agreements/

27. World Bank. (2024a). *Lower-middle-income countries – Data by country*. Retrieved from https://data.worldbank.org/country/lower-middle-income

28. World Bank. (2024b). *Upper-middle-income countries – Data by country*. Retrieved from https://data.worldbank.org/country/upper-middle-income

29. World Bank. (2025). *World Development Indicators – Databank*. Retrieved from https://data.worldbank.org/indicator

30. World Trade Organization. (2024). *Understanding the WTO: The Organization – Members and Observers*. Retrieved from https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm

31. Zolt, E. M. (2018). Tax treaties and developing countries. *Tax Law Review, 72,* 111-148. UCLA School of Law. Retrieved from https://ssrn.com/abstract=3248010

http://dx.doi.org/10.21511/imfi.22(4).2025.09