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Country risks and foreign direct investments in 7 ASEAN countries

Thi Lam Anh Nguyen[1+]
Duc Khoi Nguyen Bach[2]
Minh Tuan LE[3]

[1,2,3]*Banking Academy of Vietnam, 12 Chua Boc, Dong Da, Hanoi, Vietnam.*
[1]*Email: nguyenlamanh@hvnh.edu.vn*
[2]*Email: nguyenbdk@hvnh.edu.vn*
[3]*Email: Tuanlm01@hvnh.edu.vn*

(+ Corresponding author)

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ABSTRACT

This study investigates the influence of country risk on foreign direct investment (FDI) inflows in ASEAN nations over the period 1998–2022, focusing on political, economic, and financial risk components. Employing the Fixed Effects Model (FEM), this study analyzes panel data across ASEAN countries to assess how different aspects of country risk affect FDI attraction. The findings reveal that while no significant overall connection exists between country risk and FDI inflows across the entire sample, country-specific characteristics play a crucial role. Specifically, negative impacts are observed in developing nations, nations with lower FDI inflows, and those with relatively low-risk profiles. Political risks significantly discourage foreign investments, especially in developing economies, economies with difficulty attracting foreign capital, and those considered high-risk. By contrast, financial and economic risks generally exhibit no significant influence on FDI. Nonetheless, reducing economic risk emerges as an important factor for enhancing FDI in countries with low levels of FDI attraction, whereas mitigating financial risk is critical for countries that attract higher volumes of FDI. Country risk impacts FDI inflows in a nuanced, country-specific manner, with political risk being the most significant deterrent for developing and high-risk ASEAN nations. Based on this finding, we are able to provide recommendations to address distinct dimensions of country risk and foster a more favorable investment environment across ASEAN member states.

Contribution/ Originality: This study offers a comprehensive assessment of how political, economic, and financial risks affect FDI in ASEAN. It fills a gap in regional literature and provides new insights through subgroup analysis, emphasizing the importance of country-specific, risk-based strategies for enhancing investment inflows in the region.

1. INTRODUCTION

FDI serves as a key driver of economic expansion in emerging nations, which often face significant constraints in investment capital (World Bank, 2000). The movement of FDI into and out of an economy is inherently volatile and shaped by various elements, such as political stability, economic conditions, openness to trade, financial market maturity, domestic growth outlook, local resources, and the competitiveness of domestic industries (Asih, 2020). These determinants are often encapsulated within the concept of country risk.

The Asian financial crisis of 1997, triggered by the Thai baht's depreciation, led to severe balance of payments crises across Asia, Russia, and Latin America, highlighting the multifaceted nature of international risk (Berg, 1999).

In the aftermath of the crisis, international lenders began to acknowledge the significance of national risks—events that reduced a borrowing country's repayment capacity or even posed the threat of default. These risks, rooted in macroeconomic developments beyond the lender's control, extend beyond the traditional credit risks reflected in national credit ratings to encompass political, economic, and financial risks. Thus, country risk is anticipated to significantly deter FDI inflows (Truong, Friday, & Pham, 2024). Instability at the national level amplifies the unpredictability in the economic landscape, thereby diminishing foreign investors' confidence in the recipient nation.

Although many empirical studies have examined the determinants of FDI, only a limited number have directly assessed how country-specific risks shape FDI behavior in developing regions like ASEAN. One primary challenge lies in quantifying country risk and obtaining comprehensive data to measure it. Existing research predominantly focuses on the individual aspects of country risk, such as corruption, internal conflict, bureaucratic inefficiencies, and other political risks (Busse & Hefeker, 2007; Gastanaga, Nugent, & Pashamova, 1998; Khan & Akbar, 2013; Kolstad & Tøndel, 2002) labor force quality, trade openness, market size, and other economic risks (Carstensen & Toubal, 2004) and financial risks (Hayakawa, Kimura, & Lee, 2013; Kariuki, 2015). Studies that comprehensively analyze all three dimensions of country risk in relation to FDI remain scarce, with notable exceptions, including Kariuki (2015) and Salehnia, Alavijeh, and Shadmehri (2019) on African countries, Topal and Gül (2016) on 49 developing nations, and Pertiwi, Ratnawati, and Aisjah (2020) on ASEAN countries. The literature presents inconsistent conclusions; some studies identify the adverse effect of country risks on FDI (Busse & Hefeker, 2007; Gastanaga et al., 1998; Salehnia et al., 2019) while others report positive or insignificant effects (Asiedu, 2006; Jiménez, 2011; Kariuki, 2015).

Country risk, as an integrated measure encompassing political, economic, and financial dimensions, requires a multidimensional approach for accurate analysis. Examining a single dimension is insufficient to fully capture its relationship with the economy's attractiveness to international investors, including FDI. To bridge this research gap, this study evaluates how different country risk factors shape FDI inflows into ASEAN nations from 1998 to 2022, utilizing comprehensive risk data provided by the PRS Group.

The ASEAN region was selected due to its shared economic, social, and political challenges, alongside its lower living standards compared to other global regions. Understanding the factors driving FDI inflows into these countries is crucial for policymakers and investors, especially given their critical contribution to the ASEAN economies. This becomes more important regarding the region's aspirations to deepen economic integration and strengthen the ASEAN Economic Community (AEC) within the global economic landscape. Using the fixed effects model (FEM) to estimate these impacts, the study reported an overall insignificant negative influence of country risks on FDI in ASEAN countries. However, further analysis revealed significant impacts contingent on the national characteristics. Specifically, positive effects of country risks on FDI were observed for developing nations, those with lower FDI attraction levels, and nations with higher overall risks. Among the risk components, economic risk positively influenced FDI in countries with low FDI inflows, whereas financial risk had a positive effect on nations with higher levels of FDI attraction. In contrast, political risks exhibited a negative influence across the entire sample and subgroups, including developing nations, countries with lower FDI levels, and higher risk.

This study contributes to the current literature in three key aspects: (i) employing a comprehensive measure of country risks to assess their impact on FDI, offering a more holistic approach to understanding investment risk factors; (ii) expanding the limited empirical findings on how country risk affects FDI flows, filling an important gap in regional investment studies; and (iii) conducting subgroup analyses based on economic conditions, FDI levels, and risk profiles, to provide actionable recommendations for ASEAN policymakers. Our study highlights the need for targeted risk management strategies based on a country's economic and risk profile, particularly for developing nations, nations with lower FDI inflow levels, and higher risk profiles.

The structure of the paper is as follows: Section 2 explores theoretical frameworks and prior empirical studies on country risk and foreign direct investment (FDI); Section 3 presents methods and data; Section 4 reports the empirical analysis and discusses the findings; and Section 5 concludes the paper.

2. LITERATURE

2.1. Theoretical Framework

Broadly, country risk refers to the uncertainties inherent in a nation's governance, financial systems, and institutional structures (Hassan, 2022; Topal & Gül, 2016). Hassan (2022) and Hoti and McAleer (2002) classify country risk into three primary dimensions: political, financial, and economic risk. White and Fan (2006), however, propose a broader categorization by incorporating cultural risks into the framework of country risk analysis.

Economic risk signifies unexpected fluctuations in a country's overall economic framework, which may require investors to reassess their strategies (Topal & Gül, 2016). The economic strengths and weaknesses of the host nation are key indicators of shifts in economic risk, often measured using metrics such as GDP growth, per capita GDP, and the GDP of neighboring countries. These indicators are particularly relevant because foreign direct investment (FDI) often targets large and developing markets, where mass production can yield higher returns (Anyanwu, 2012; Hassan, 2022). As noted by UNCTAD (1998), understanding the motivations of investors, broadly categorized as efficiency-seeking, resource-seeking, and market-seeking, is critical for analyzing economic factors. This highlights the importance of host countries in recognizing the objectives of potential investors and understanding their strategic approaches. Political risk has been evaluated extensively in relation to FDI within emerging economies. Haendel (1979) characterizes political risk as "the possibility or likelihood of a certain political event occurring, which could alter the outlook for the likelihood of a particular investment." Building on this definition, key political risk indicators affecting FDI include the host government's propensity to implement fundamental changes, instances of unpredictable or inconsistent regulations, the ease or difficulty foreign investors face in repatriating profits, and the degree of fairness and equality in how the host government treats investors (Eng, Lees, & Mauer, 1998; Hassan, 2022). The strategic application of policies to attract or direct FDI constitutes the "inner ring" of the FDI policy framework, which differs among nations and undergoes transformation within a single country over time (UNCTAD, 1998). Collectively, these factors serve as critical determinants in attracting FDI inflows.

Financial risk refers to the possibility of adverse economic conditions impacting a country's financial stability. White and Fan (2006) described it as the diminished capacity of a nation to meet its financial commitments to other nations' entities. A potential financial crisis in a country is indicated by a high degree of financial uncertainty. A number of variables are taken into consideration when evaluating this risk, such as the amount of global loans, the consistency of currency rates, the deficit in the current account, and foreign exchange profits (Hassan, 2022; Topal & Gül, 2016). As a result, one could contend that financial risk significantly contributes to nations' inability to attract sufficient FDI. FDI investors frequently approach nations with caution if they have high and increasing external debt stock. Such debt can impede economic expansion and worsen the current account deficit (Dey & Tareque, 2020). Furthermore, unstable exchange rates increase uncertainty, reduce the predictability of investment returns, and make it challenging to produce reliable investment projections. Consequently, from the standpoint of FDI financiers, inadequate foreign exchange profits could heighten financial risk (Hassan, 2022; Lee & Naknoi, 2015).

2.2. Empirical Evidences

A wide range of studies has attempted to examine how country risk influences FDI; however, the findings across studies remain inconsistent and inconclusive.

On the one hand, some studies have demonstrated that country risk can negatively affect FDI inflows. Gastanaga et al. (1998) discovered that a reduced level of country risk and stricter contract enforcement increase FDI flows in 22 emerging nations. Similarly, Wei (2000) confirmed that corruption negatively influences FDI. Kolstad and Tøndel (2002) concluded that racial tension, domestic disputes, and political freedom significantly influence FDI, while other factors like government stability, external conflict, or regulation do not. Carstensen and Toubal (2004) found that a decrease in country risk specific to the transition period positively impacts FDI for Central and Eastern European nations. Sekkat and Veganzones-Varoudakis (2007) discovered a direct link between FDI inflows and a reduction in

political and economic risk. In the research on eighty-three emerging economies, Busse and Hefeker (2007) reported that FDI flows are influenced by several critical factors, including political stability, domestic and foreign disputes, immorality, racial tension, regulation, the openness of the authorities, and the level of administration. Ali (2010) identified ownership stability as the primary driver of FDI. Khan and Akbar (2013) found that FDI exhibits an adverse correlation with the majority of political risk indicators in every socioeconomic bracket, with a stronger effect observed in upper-middle-income countries. Salehnia et al. (2019) found similar results for 10 Middle Eastern and North African nations. Hassan (2022) reported that economic and political instability negatively impact FDI in V4 nations, while trading accessibility, facilities, and sales volume positively affect it.

On the other hand, some empirical studies present a positive or negligible link between country risk levels and FDI. Wheeler and Mody (1992) found little evidence of the substantial effect of the host nation's unethical behavior on FDI in the United States. Similarly, Noorbakhsh, Paloni, and Youssef (2001) and Asiedu (2002) indicated that political uncertainty does not significantly influence FDI.

Hayakawa et al. (2013) discovered a strong correlation between several aspects of political risk and FDI inflow, but only currency stability positively impacted FDI among the financial risk components. Jiménez (2011) proposed that a significant level of political risk can attract foreign investments. Sanjo (2012) asserted that market size is the most important consideration for international corporations' financial decisions. Kariuki (2015) revealed that financial and political risks had no appreciable influence on FDI in African Union nations.

3. METHODOLOGY AND DATA

3.1. Data

The data used to analyze the influence of country risk on foreign investments in ASEAN nations was collected from 1998 to 2022 in seven countries: Brunei, Indonesia, Singapore, the Philippines, Malaysia, Thailand, and Vietnam. The country risk dataset employed in the regression analysis is sourced from PRS Group (2024), including a composite country risk index and three component indexes: economic, financial, and political risks. Data on FDI and control variables are collected from the World Bank website.

We choose our sample period from 1998 to 2022 for the following reasons. First, the period captures significant regional and global economic downturns, including the 1997-1998 Asian Financial Crisis, 2008 Global Financial Crisis, and the COVID-19 pandemic. These crises profoundly affected a nation's risk levels, which consequently influenced its FDI inflows. Second, ASEAN countries have undergone substantial economic transformation over the sample period, particularly with the establishment of the ASEAN Economic Community (AEC) in 2015. This period witnessed various national-level policy reforms aimed at improving the investment environment and reducing country risk in order to foster investments and economic growth. Third, this period also encompasses significant shifts in governance, regulatory frameworks, and political stability in the ASEAN regions. Some countries - e.g. Indonesia in 1998, Myanmar in 2021, and Malaysia in 2018 and 2020 - experienced political crises, leader transitions, or changes in institutional quality, all of which contribute to higher political risk and its subsequent impacts on FDI.

3.2. Methodology

To evaluate how country risk influences FDI attraction in ASEAN nations, the authors conducted a survey of previous studies related to the relationship between country risk and FDI, as well as studies of factors affecting FDI attraction in countries around the world. Based on the research of Topal and Gül (2016), Salehnia et al. (2019), and Pertiwi et al. (2020), we propose the following models:

$$FDI_{it} = \beta_1 CR_{it} + \beta_2 CONTROL_{it} + \theta_i + \gamma_i + \varepsilon_{it} \quad (1)$$

$$FDI_{it} = \beta_2 ECOR_{it} + \beta_3 FINR_{it} + \beta_4 POLR_{it} + \beta_5 CONTROL_{it} + \theta_i + \gamma_i + \varepsilon_{it} \quad (2)$$

In which:

FDI_{it} is the inflow of foreign direct investment into country i at time t; CR_{it}, $ECOR_{it}$, $FINR_{it}$, and $POLR_{it}$ are the composite country, economic, financial, and political risk scores of country i at time t, respectively. θ_i represents country-specific factors that cannot be observed and quantified at the time of research and do not change over time; γ_i represents random effects; ε_{it} represents country-specific factors that are unobservable and change over time. $CONTROL_{it}$ are other country-specific factors affecting FDI (Rafat & Farahani, 2019; Topal & Gül, 2016). Details relating our variables are in Table 1.

Table 1. Variable definitions.

Variable	Variable name	Description
FDI	Inflows of foreign direct investment	Percentage of FDI inflow over GDP
CR	Country risk	Composite index, measured by 0.5 x (ECOR + FINR + POLR)
FINR	Financial risk	Score from 0 – 50, where a higher score indicates lower financial risk
POLR	Political risk	Score from 0 – 100, where a higher score indicates lower political risk
ECOR	Economic risk	Score from 0 – 50, where a higher score indicates lower economic risk
GDPCAP	GDP per capita	Natural logarithm of GDP per capita (Measured in current US$)
POP	Population	Annual growth rate of the total population (%)
TRADE	Trade openness	Ratio of import and export value to GDP (%)
RESOURCE	Natural resources	Total natural resources rent of GDP (%)
INFRAS	Infrastructure	Natural logarithm of energy production per capita
LABOUR	Labour force	Natural logarithm of total labour force
TAX	Corporate income tax	Statutory corporate income tax rate

Regarding the control variables, *GDPCAP* represents GDP per capita, which positively impacts FDI attraction by signaling foreign investors about market size and economic development (Wang, Yang, Li, & Wang, 2023). Similarly, a country with a large *population* often translates into a larger consumer base, which is considered attractive to foreign investors (Balasubramanyam, Salisu, & Sapsford, 1999). However, Batten and Vo (2009) state that the quality of human capital, rather than quantity, is an essential factor for FDI. Ullah and Khan (2017) argue that a country's *labor force* has a positive influence on FDI inflows; however, the relationship may be context-dependent and affected by regional factors. *Trade openness* generally promotes FDI by creating a more favorable investment environment and lowering barriers for international companies, which aligns with market-seeking, efficiency, and resource-seeking theories (Hao, 2023; Le, Pham, Pham, & Duong, 2023).

Wang et al. (2023) state that when trade openness reaches a certain threshold, its promotional effect on economic growth increases, which subsequently affects FDI. *Natural resources* typically have a positive effect on attracting FDI, particularly in developing countries, as foreign investors may seek access to valuable commodities such as oil, minerals, and forests (Asiedu, 2006). Nevertheless, Lu, Kasimov, Karimov, and Abdullaev (2020) argue that when a country becomes overly dependent on natural resources, its economy can become less diversified, and institutional quality can be reduced, which is unfavorable for foreign investments. *Infrastructure* development, particularly in electricity and transportation, helps reduce production costs for international companies, which increases their presence in a country (Kaur, Khatua, & Yadav, 2016). A country's *tax* incentives, particularly its corporate income tax, generally discourage FDI over the long term, which aligns with the Electric Paradigm that fiscal incentives can drive FDI inflows (Abille, Mpuure, Wuni, & Dadzie, 2020). However, Francis, Zheng, and Mukherji (2009) argue that the effects of taxation on FDI vary depending on the nature and timing of the investment. Egger, Loretz, Pfaffermayr, and Winner (2009) emphasize that the link between taxation and FDI is multifaceted, influenced by the tax systems of both the host and the investor's home country.

We estimate the model using panel regression methods, including OLS, FEM, REM, and GLS. We then perform relevant tests to choose the method that produces the most reliable results, which is FEM (Table 2). To address potential endogeneity, we apply the GMM estimation method and find only weak evidence of its presence (Appendix B).

Table 2. Selection of suitable panel regression methods.

Tests	-1	-2
	CR	ECOR, FINR, POLR
FEM: F-test		
Value	49.92	70.72
p-value	0.0000	0.0000
REM: Bruesch and Pagan Lagrangian multiplier test		
Value		
p-value	0.00	0.00
	1.0000	1.000
Hausman test		
Value	103.07	113.09
p-value	0.0000	0.0000
Conclusion	FEM	FEM

4. RESULTS AND DISCUSSIONS

4.1. Descriptive Statistics

Table 3 summarizes the key descriptive statistics related to the variables included in the model. The data indicate that FDI inflows in ASEAN nations between 1998 and 2022 averaged 5.41% of GDP, but there was strong fluctuation, demonstrating the level of diversity in FDI attraction in the region. The region's average national risk score is 74.44, in the range of 70-79.9, and is considered to have a low-risk level according to the PRS's assessment. ECOR and FINR scores also show that ASEAN countries have low levels of economic and financial risks. However, the region's average political risk was assessed at a higher level than the other two components. The statistics of the control variables demonstrate the diversity of the socioeconomic contexts of the countries in the region. For further analysis, we performed a descriptive analysis for each country in the region.

Table 3. Summary statistics.

Variable description	Variable	Obs.	Mean	Std. dev.	Min	Max
FDI inflows	FDI	175	5.41	6.96	-2.76	32.69
Country risk	CR	175	74.44	8.76	44.98	90.75
Economic risk	ECOR	175	38.76	5.08	20.20	48.54
Financial risk	FINR	175	41.68	4.39	22.00	50.00
Political risk	POLR	175	68.44	10.24	43.83	89.13
GDP per capita	GDPCAP	175	8.64	1.37	5.87	11.32
Population	POP	175	0.22	0.57	-2.42	1.67
Trade openness	TRADE	175	0.04	0.06	0.00	0.28
Natural resources	RESOURCE	175	7.15	8.57	0.00	37.41
Infrastructure	INFRAS	175	17.43	2.06	13.82	21.68
Labour force	LABOUR	175	16.36	2.05	11.85	18.74
Corporate income tax	TAX	175	25.48	4.96	17.00	35.00

Note: Obs. denotes the number of observations. Std. Dev denotes the standard deviation. Variable definitions are in Table 1.

Table 4 summarizes the mean values of variables across ASEAN countries. Singapore attracts the most FDI, while Indonesia and the Philippines attract the least. Singapore and Brunei have the lowest composite country risk scores. Indonesia faces the highest political risk, and Vietnam and Indonesia have the highest economic and financial risks.

Table 4. Summary statistics by nation.

Variable description	Variable	Brunei	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Foreign direct investment inflows	FDI	3.66	1.16	3.29	1.78	20.23	2.80	4.92
Country risk	CR	84.64	63.80	76.20	70.63	86.95	69.96	68.89
Economic risk	ECOR	43.28	34.67	39.47	37.00	44.96	37.46	34.50
Financial risk	FINR	47.51	37.75	41.11	40.39	45.13	41.46	38.41
Political risk	POLR	78.49	55.19	71.83	63.86	83.81	61.01	64.87
GDP per capita	GDPCAP	10.22	7.64	8.90	7.59	10.64	8.33	7.19
Population	POP	0.32	0.15	0.59	0.61	0.47	-0.57	0.01
Trade openness	TRADE	0.00	0.04	0.03	0.04	0.01	0.03	0.13
Natural resources	RESOURCE	24.39	6.55	9.17	1.12	0.03	2.11	6.68
Infrastructure	INFRAS	21.39	17.64	18.69	14.97	15.26	17.19	16.89
Labour force	LABOUR	12.14	18.57	16.35	17.44	14.85	17.47	17.69
Corporate income tax	TAX	24.26	26.88	25.92	30.36	19.56	25.72	25.64
Observations		25	25	25	25	25	25	25

Note: The table reports the average value of each variable.

Table 5. Correlation matrix.

Variable description	FDI	CR	ECOR	FINR	POLR	GDPCAP	POP	TRADE	RESOURCE	INFRAS	LABOUR	TAX
FDI	1.00											
CR	0.56*	1.00										
ECOR	0.44*	0.88*	1.00									
FINR	0.33*	0.79*	0.70*	1.00								
POLR	0.60*	0.93*	0.71*	.57*	1.00							
GDPCAP	0.04*	-.11*	-.09*	-.12*	0.11*	1.00						
POP	0.09*	0.27*	0.23*	-.04	0.37*	0.04	1.00					
TRADE	-.16*	-.45*	-.46*	-.66*	-.26*	-.71*	-.003	1.00				
RESOURCE	-.24*	0.32*	0.27*	.33*	0.27*	0.22*	.17*	-0.05	1.00			
INFRAS	-.29*	.22*	0.16*	.36*	0.13	0.32*	-.08	-.23*	0.84*	1.00		
LABOUR	-.31*	-.81*	-.64*	-.68*	-.78*	-.75*	-.22*	0.35*	-.63*	-.55*	1.00	
TAX	-.47*	-.36*	-.23*	-.46*	-.30*	-.68*	.31*	0.44*	0.14	-.10	0.28*	1.00

Note: * denotes 5% significant level.

Singapore and Brunei have higher incomes per capita; Malaysia and the Philippines have the fastest population growth rates. Vietnam leads in trade openness, and Brunei has abundant natural resources. The infrastructure levels are quite similar, with Brunei having the highest. Corporate Income Tax (CIT) rates range from 19.56% to 30.36%, with Singapore imposing the lowest and the Philippines imposing the highest statutory rate.

Table 5 displays the correlation results among the variables incorporated in the analysis. The initial findings suggest a positive association between the country risk indicators and FDI inflows.

4.2. Baseline Results

To assess the suitability of the dataset and the reliability of the results, we conducted a cross-sectional correlation test (CD test), which is followed by a unit root test. These two tests help determine the stationarity of the data series used in our models. If the series is found to be non-stationary at level 0, we take the first difference and repeat the test. The results obtained from the Pesaran cross-correlation test (Table 6) show that country risk (CR), economic risk (ECOR), financial risk (FINR), and political risk (POLR) have no correlation.

Table 6. Pesaran CD test for cross-sectional dependence.

H0: No cross-sectional dependence *H1: Presence of cross-sectional dependence*				
Variable	**Country risk**	**Economic risk**	**Financial risk**	**Political risk**
Test results	0.817	0.209	-0.221	1.093
P-value	0.4140	0.8348	0.8251	0.2745

Following the cross-correlation test results, a first-generation unit root test was applied to examine the stationarity of the regression model variables. Table 7 indicates that the majority of variables are stationary, except for political risk (RRCT), GDP per capita (GDPCAP), population (POP), natural resource endowments (RESOURCES), infrastructure (INFRAS), and corporate taxes (TAX). However, when tested at the first difference, all variables achieved stationarity. Therefore, the first difference was used to perform the regression model with the above variables.

Table 7. Panel unit root test.

H0: All Panel contain unit roots (Non-stationary) *H1: Some panels are stationary*				
Variable	**Level**		**First difference**	
	Z(t)-stat.	**p-values**	**Z(t)-stat.**	**p-values**
FDI	-4.1531	0.000		
CR	-2.5536	0.0053		
ECOR	-3.5428	0.0002		
FINR	-5.1202	0.0000	-5.7095	0.0000
POLR	-0.5794	0.2812	-5.7153	0.0000
GDPCAP	0.0827	0.5330		
POP	6.8197	1.0000	-2.7308	0.0032
TRADE	-1.7064	0.0440		
RESOURCE	0.5803	0.7191	-7.2600	0.0000
INFRAS	-0.3689	0.3561	-5.2263	0.0000
LABOUR	-1.6929	0.0452		
TAX	3.3212	0.9996	-5.0940	0.0000

Next, we used panel data regression methods (OLS, FEM, REM) to estimate models (1) and (2); and we used tests to choose the estimation method that provides the most reliable results, which is the FEM method.

Table 8 reports the baseline regression results, assessing how country risk and its various components influence FDI attraction in ASEAN nations. The regression results indicate that political risk, natural resources, and infrastructure positively contribute to FDI inflows, whereas population-related factors exhibit a negative influence on FDI.

Table 8. The effect of country risk on FDI in ASEAN nations (1998-2022).

Variable description	Variables	Dependent variable: FDI inflows	
		(1)	(2)
Country risk	CR	0.0922 (1.84)	
Economic risk	ECOR		0.0534 (0.86)
Financial risk	FINR		0.123 (1.07)
Political risk	D.POLR		-0.210** (-3.44)
GDP per capita	D.GDPCAP	3.019 (0.9)	3.280 (1.05)
Population	D.POP	-0.612*** (-7.04)	-0.531*** (-4.03)
Trade openness	TRADE	0.779 (0.09)	3.288 (0.43)
Natural resources	D.RESOURCE	0.160** (3.35)	0.154*** (3.50)
Infrastructure	D.INFRAS	1.657* (2.08)	2.475* (2.25)
Labour force	LABOUR	3.702 (0.84)	3.362 (0.73)
Corporate income tax	D.TAX	0.163 (0.66)	0.158 (0.63)
Observations		163	163
R-squared		0.097	0.115

Note: Statistical significance is denoted by ***, **, and * at the 1%, 5%, and 10% levels, respectively. 'D' represents the first-difference transformation of variables.

Regarding the effect of country risk on FDI attraction, besides political risk, other risk variables show no significant influence on foreign capital flows. This result differs from the findings of Sekkat and Veganzones-Varoudakis (2007); Gast and Herrmann (2008) and Salehnia et al. (2019), but is consistent with the research of Noorbakhsh et al. (2001) and Asiedu (2002).

The political risk variable (D. POLR) is the only risk-related factor that demonstrates statistical significance at the 5% threshold in Model (2). This result highlights a contradiction between political risk and foreign investment capital flows. Our result aligns with those of Janeba (2002) and Jiménez (2011). Janeba (2002) argues that some countries with high political risk, low reputation, and a long-term commitment to investors can still attract capital in some cases, as production costs in these countries are often low and the governments of these countries may offer short-term fiscal incentives such as initial subsidies or tax havens (upfront subsidies or tax holidays).

However, it should be noted that the political risk variable (D. POLR) in the model is measured by the level of change over the years due to the non-stationary characteristics of the data. Therefore, the results on the inverse relationship of D. POLR with FDI should be understood as indicating that when a country's level of political risk changes in an increasing direction, the level of FDI attraction will increase. This result does not imply that countries with higher political risks attract more FDI capital. Instead, the absolute risk scores of each country in the dataset must be carefully analyzed to reach an accurate conclusion. Figure 1 shows that although the level of volatility in the direction of political instability has increased, it does not indicate that increased political instability will bring higher

foreign direct investment capital. Specifically, when we look at the trend in detail, countries with low and medium political risk still attract higher foreign direct investment than countries with high political risk, such as Indonesia.

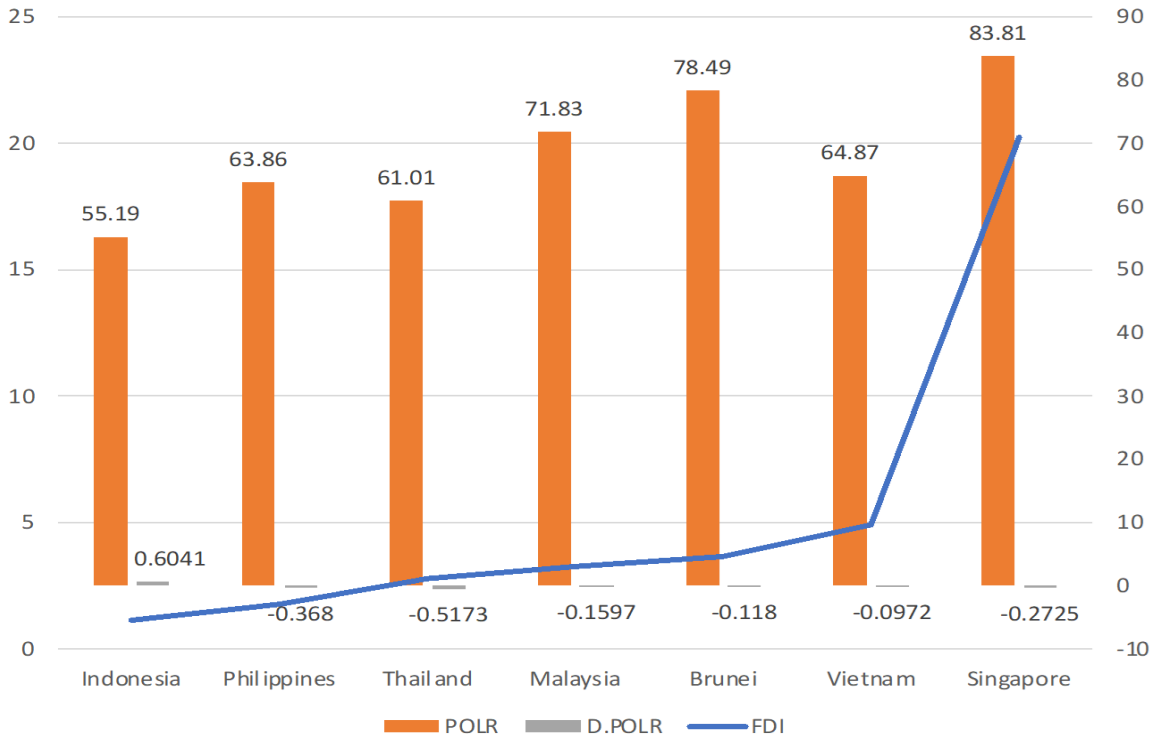

Figure 1. POLR, POLR changes, and FDI inflows in ASEAN countries (1998-2022).

Source: PRS Group (2024) and World Bank (2024).

We also found additional significant results for control variables. First, we found that countries that experience lower population growth rates attract a higher level of FDI investment capital, supporting the findings of Dang and Nguyen (2021). This can be explained by considering the current growth rate of the population of Southeast Asian countries; rapid growth can give rise to social problems such as income gaps and inequality and create financial pressure for middle- to low-income households. This causes social risks at the national level, affecting labor quality, efficiency, and productivity.

Second, the natural resources variable shows a strong positive correlation with FDI in both models, consistent with research conducted by Asiedu (2006) and Zhang (2001). From the perspective of foreign investors, looking for markets with greater potential, resources, and favorable policies is reasonable due to their expertise, technology, and financial resources. Southeast Asia has long been famous as a region rich in scarce resources, which are important for high-tech industries.

Third, the infrastructure variable shows a positive relationship with FDI in both models, supporting the findings of Hassan (2022). Elements such as transportation networks, communication systems, and specialized economic zones are particularly appealing to foreign investors due to improved efficiency and reduced costs.

Based on the baseline regression results, we conducted further analysis to develop a broader understanding of the country risk and FDI relationship. Specifically, considering the diversity of characteristics of Southeast Asian countries, we further analyze the issue based on factors, including the levels of economic development, the situation of FDI attraction, and the characteristics of country risk.

4.3. Results Based on Economic Development Levels

The authors divided the research sample into two groups according to the levels of economic development. The more developed group includes Brunei and Singapore, with a per capita income higher than $22,000 per year; the

group of less developed countries includes Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. Regression results for each group are presented in Table 9.

Table 9. The influence of country risk on FDI in ASEAN nations (1998-2022) – economic development levels.

Variable description	Variables	Dependent: FDI inflows			
		More developed countries		Less developed countries	
		(1)	(2)	(1)	(2)
Country risk	CR	-0.17 (-1.43)		0.149** (3.28)	
Economic risk	ECOR		0.284 (0.86)		0.0171 (0.18)
Financial risk	FINR		-0.246 (-0.31)		0.0949 (0.76)
Political risk	D.POLR		-0.547 (-0.89)		-0.152** (-4.16)
Controls		YES	YES	YES	YES
Observations		43	43	120	120
R-squared		0.282	0.803	0.214	0.164

Note: Statistical significance is denoted by ** at the 5% levels, respectively. 'D' represents the first-difference transformation of variables.

For more developed countries, the findings generally align with the baseline regression results, except for the insignificant effects of POLR on FDI, which can be attributed to the fact that this group of countries has low political risk levels in particular and country risk in general; therefore, the determinants of FDI lie in the remaining factors.

For less developed countries, in addition to similar results on how ECOR, FINR, and POLR impact FDI found in the baseline regressions, we find a negative impact of the overall country risk level on FDI inflows. In other words, for developing economies in ASEAN, lower-risk countries can attract more FDI. This conclusion aligns with previous research from Topal and Gül (2016), supporting the view that low country risk plays a crucial role in attracting foreign investment. Countries with low levels of risk, such as political stability, favorable legal frameworks, and reliable legal systems, will strengthen foreign investors' confidence. Such an environment provides security for investments and minimizes the uncertainty associated with conducting business in a particular country.

4.4. Results based on FDI Inflow Levels

The authors divided the research sample into two distinct groups according to the FDI attraction levels. Based on the average FDI value, we separate the sample into one group with a higher level of FDI and another group with lower FDI attraction levels. The results are presented in Table 10.

Table 10. The influence of country risk on FDI in ASEAN nations (1998-2022) – FDI inflow levels.

Variable description	Variables	Dependent: FDI inflows			
		Higher FDI inflow countries		Lower FDI inflow countries	
		(1)	(2)	(3)	(4)
Country risk	CR	0.178 (0.32)		0.141*** (5.86)	
Economic risk	ECOR		0.400 (0.94)		0.0814** (5.87)
Financial risk	FINR		1.588* (7.04)		0.0953 (1.06)
Political risk	D.POLR		0.150 (0.37)		-0.159*** (-3.64)
Controls		YES	YES	YES	YES
Observations		24	24	132	132
R-squared		0.559	0.592	0.241	0.230

Note: Statistical significance is denoted by ***, **, and * at the 1%, 5%, and 10% levels, respectively. 'D' represents the first-difference transformation of variables.

For higher FDI inflows, the findings indicate that financial risk (FINR) and corporate income tax positively influence FDI, consistent with the study by Topal and Gül (2016) and reinforce the crucial role of financial stability in attracting FDI. A strong and stable financial system is characterized by minimal risk and uncertainty. Such conditions foster favorable investment environments for foreign investors, increasing their confidence in the safety and profitability of their investments. Countries with strong financial systems provide a safer environment for capital allocation and are less likely to experience financial crises or disruptions.

For countries with lower FDI inflows, our results show the positive impact of overall country risk (CR) and economic risk (ECOR), whereas political risk (POLR) exerts a negative effect on foreign investments. Furthermore, the positive impact of overall country risk on the FDI of this subgroup emphasizes the key role of national stability in foreign investors' investment decisions. Economic risks also show a significant positive influence on FDI, which is consistent with previous findings (Dang & Nguyen, 2021; Topal & Gül, 2016) and highlights the importance of low economic risk in ensuring national economic development. The adverse effects of political risks on FDI for lower FDI-attracting nations need to be interpreted prudently. The Southeast Asian region includes diverse political, governmental, and religious systems, and these characteristics are deeply embedded in the cultures of the countries. The transition from monarchy to the current state of government has shaped their business environment. To attract more FDI, these countries may need to adopt business-friendly policies, reduce state ownership, and cultivate more favorable conditions for foreign investors.

4.5. Results Based on Country Risk Levels

The study sample is classified into 2 groups according to the country risk levels. Based on the mean value of the POLR variable, observations are separated into one group with a higher level of country risk and another group with a lower level of country risk. The regression results are displayed in Table 11.

Table 11. The impact of country risk on FDI in ASEAN countries (1999-2022) – country risk levels.

Variable description	Variables	Dependent: FDI inflows			
		Higher risk countries		Lower risk country	
		(1)	(2)	(3)	(4)
Country risk	CR	0.172***		-0.0662	
		(5.23)		(-0.20)	
Economic risk	ECOR		-0.0228		0.184
			(-0.34)		(1.51)
Financial risk	FINR		0.135		0.0671
			(0.99)		(0.18)
Political risk	D.POLR		-0.151**		-0.525
			(-3.15)		(-2.25)
Controls		YES	YES	YES	YES
Observations		93	93	60	60
R-squared		0.224	0.182	0.166	0.199

Note: Statistical significance is denoted by *** and ** at the 1%, and 5% levels, respectively. 'D' represents the first-difference transformation of variables.

For higher-risk countries, country risks negatively affect FDI, while political risks positively impact FDI inflows. This conclusion aligns with the results of Topal and Gül (2016), further strengthening the relationship between country risk and foreign investment. Hence, it becomes clear that for countries with high-risk profiles, minimizing country risk is crucial for attracting foreign capital.

For lower-risk countries, we found no significant impact of country risks and other country risk components on FDI. This shows that these countries have achieved a reasonable level of stability, particularly due to their strong economic conditions and well-developed financial systems. The lack of statistical significance suggests that these factors are not the key determinants of foreign investment flows in these low-risk nations.

5. CONCLUSION

In this paper, we have evaluated the effects of country risk and its components on FDI inflows in ASEAN countries. We used the FEM method to estimate the impacts in the regions from 1998-2022, along with rigorous tests to validate the robustness of our findings. Additionally, we explore the relationship based on the economic development characteristics, FDI attraction levels, and overall country risk levels. The regression results demonstrate stability across analyses and provide the following notable results and policy implications.

First, overall country risk exhibits a positive yet statistically insignificant effect on FDI attraction in Southeast Asian nations. However, further analysis reveals a negative correlation between country risk and FDI within developing economies, nations with lower FDI inflows, and those with reduced country risk levels. These important results suggest that countries with these characteristics should focus on minimizing national risks to increase FDI attraction.

Second, the economic risk component (ECOR) has almost no influence on FDI attraction across the region. However, it becomes notably relevant for countries that experience lower levels of foreign investment. In these cases, ECOR demonstrates a positive association with FDI, suggesting that as economic risk decreases, FDI attraction increases within this subgroup.

Third, the financial risk component (FINR) shows a positive yet statistically insignificant relationship with FDI across the general sample. However, the impact is significant for nations with higher FDI inflows in the study sample. Specifically, lower financial risk correlates with increased FDI inflows into these countries.

Fourth, the political risk component (measured by changes in political stability) shows a negative influence on FDI inflows across the entire dataset, the group of developing nations, nations with limited FDI, and those classified as politically high-risk. The findings underscore a rising trend of political risk in the ASEAN region, but the level of increase is not significant and does not change the risk classification in these countries. Furthermore, this result also suggests that attracting FDI capital to ASEAN countries, besides political risks, also depends on other factors.

Finally, the authors discovered a notable impact of dependent variables on FDI attraction in the region. Specifically, population growth negatively affects FDI inflows across the entire dataset, including developed nations and those with higher FDI attraction, implying that ASEAN countries need to consider developing high-quality human resources instead of depending on the abundance of labor quantity. The natural resource factor has a positive effect on FDI attraction in the entire research sample, emphasizing that natural resources are still a key factor in increasing FDI inflows into ASEAN nations. In addition, infrastructure and the labor force also positively impact FDI attraction in the ASEAN region. Due to data availability, this study only investigated the impact of country risk on FDI inflows in seven out of 11 ASEAN countries. Hence, our results might not be representative of the entire region, particularly when countries are placed into smaller groups for further analysis. In the future, we would like to examine the other four countries and analyze the possible impact channels of country risks on FDIs for a deeper understanding and more practical recommendations.

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APPENDIX

Appendix A presents the country risk classification by PRS Group (2024). Table 11 presents the classification that applies to the composite country risk scores.

Appendix A. Country risks classifications.

Table 11. Country risk classification (ICRG).

No.	Classification	Scores
1	Very high risk	0.00 – 49.9 points
2	High risk	50.00 – 59.9 points
3	Moderate risk	60.00 – 69.9 points
4	Low risk	70.00 – 79.9 points
5	Very low risk	80.00 – 100 points

Source: PRS Group (2024).

Appendix B. The possible endogeneity issues.

According to Topal and Gül (2016), there may be an endogeneity problem between country risk and the past value of FDI, implying that past FDI can impact a country's level of risk in the future. Additionally, when assessing the impact of country risk on FDI, although the authors have included other control variables based on a survey of related studies, the possibility of missing variables may arise, leading to the presence of unobservable effects in the model. To mitigate this issue, the GMM estimation method can be employed.

However, the suitability of the GMM estimation method depends on the existence of endogeneity. The validity of the assumptions is tested using the AR (1) and AR (2) tests developed by Arellano and Bond (1991) to check whether the errors are autocorrelated. The hypothesis of the AR (1) test is "no first-order autocorrelation," and the hypothesis of the AR (2) test is "no second-order autocorrelation." The expected result of these two tests is that AR (1) will be negative and statistically significant, while AR (2) is not statistically significant at the 5% significance level.

The assumption of the existence of an endogeneity problem is made by the Sargan-Hansen J-test and the Frank-Hansen test.

We perform GMM estimation for the following models:

$$FDI_{it} = \beta_0 FDI_{it-1} + \beta_1 CR_{it} + \beta_2 CONTROL_{it} + \theta_i + \gamma_i + \varepsilon_{it} \quad (3)$$

$$FDI_{it} = \beta_0 FDI_{it-1} + \beta_2 ECOR_{it} + \beta_3 FINR_{it} + \beta_4 POLR_{it} + \beta_5 CONTROL_{it} + \theta_i + \gamma_i + \varepsilon_{it} \quad (4)$$

However, Table 12 reports the results of the AR(1) and AR(2) tests, showing that the model has no level 1 and no level 2 autocorrelation, contrary to expectations. Therefore, the GMM is considered unsuitable for estimating the given models.

Table 12. The impact of country risk on FDI in ASEAN countries (1999-2022) – GMM estimations.

Variable description	Variables	Dependent variable: FDI inflows	
		(1)	(2)
L.FDI	L.FDI	0.0735	0.0258
		(1.02)	(0.23)
Country risk	CR	-0.925	
		(-1.65)	
Economic risk	ECOR		0.0894
			-0.93
Financial risk	FINR		-0.265
			(-0.99)
Political risk	D.POLR		-0.136
			(-1.12)
GDP per capita	D.GDPCAP	3.148	3.569
		(0.98)	(1.07)
Population	D.POP	-1.131**	-1.026**
		(-3.34)	(-3.12)
Trade openness	TRADE	7.647	-1.999
		(0.33)	(-0.09)
Natural resources	D.RESOURCE	0.0876**	0.0892*
		(2.68)	(2.23)
Infrastructure	D.INFRAS	1.295*	1.344*
		(2.1)	(2.26)
Labour force	LABOUR	-5.457	-4.758
		(-0.83)	(-0.75)
Corporate income tax	D.TAX	0.29	0.298
		(0.65)	(0.68)
Arellano-Bond test for AR(1) (p-value)		0.112	0.108
Arellano-Bond test for AR(1) (p-value)		0.277	0.271
Sargan test of overid. restrictions (p-value)		0.000	0.000
Hansen test of overid. restrictions (p-value)		1.000	1.000
Observations		155	155

Note: The variables are defined in Table 1. **, and * represent significance at the 5%, and 10% levels, respectively. 'D' denotes the first difference of the variables.

In addition, we performed GMM estimation for Equation 5, to test whether FDI has an impact on country risk.

$$CR_{it} = CR_{it-1} + FDI_{it} \quad (5)$$

The regression results in Table 13 show that FDI does not have a statistically significant impact on country risks. Therefore, there is not enough evidence regarding the existence of an endogeneity problem in the model.

Table 13. Estimating the impact of FDI on country risks.

Description	Variable	Country risks
CR (t-1)	L. CR	0.643***
		(0.129)
FDI	FDI	0.002
		0.034
Arellano-Bond test for AR(1) (p-value)		0.067
Arellano-Bond test for AR(2) (p-value)		0.071
Sargan test of overid. restrictions (p-value)		0.000
Hansen test of overid. restrictions (p-value)		1.000
Observations		161