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Analysis of Determinants of Foreign Direct Investment in E[illegible] ASEAN Countries

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ABSTRACT

This research aims to analyze the influence of economic growth, labor, regulatory quality, political stability, and carbon emissions on foreign direct investment (FDI) in eight member countries of the Association of Southeast Asian Nations (ASEAN). Using the Seemingly Unrelated Regression (SUR) method and secondary data from the World Bank, this study combines cross-sectional and time-series data to provide a comprehensive overview. The research findings indicate that variables such as labor, regulatory quality, political stability, and carbon emissions have a significant impact on foreign direct investment in ASEAN countries. These findings underscore the importance of these factors in determining the direction and volume of foreign investment. This study contributes significantly to understanding the dynamics of foreign investment in the ASEAN region and highlights the importance of efforts to improve political stability, regulatory quality, and manage carbon emissions to drive economic growth through foreign capital inflows. The implications of these findings can serve as a policy foundation for governments and stakeholders in ASEAN to enhance the attractiveness of foreign investment.

1. Introduction

The Association of Southeast Asian Nations (ASEAN) is a cooperative initiative among countries in the Southeast Asian region, consisting of ten member states formed with the intention of promoting economic growth, developing the culture of its member countries, maintaining stability and peace, and providing opportunities for its members to resolve differences peacefully. To drive economic growth and progress, developing countries require an increase in financial resources, particularly through capital inflows, especially from foreign investments. (Kumari & Sharma, 2017).

Foreign Direct Investment (FDI) holds a pivotal role in shaping the economic landscape of a nation. Fresh capital from foreign investments can be utilized for various purposes, including public infrastructure development, establishing new businesses, or expanding existing ones. To enhance the domestic economy, every country will continually strive to create economic conditions that stimulate investment activities. (Kambono & Marpaung, 2020). Foreign Direct Investment (FDI) encompasses investments made by foreign entities, be they individuals or governments, into the economy of another country. The primary objective is to establish enduring interests and control over companies or businesses within the host country (Aprianto et al., 2020). Foreign Direct Investment (FDI), particularly, can serve as a strategy to address economic crises. The presence of FDI can stimulate technological advancement, productivity, and economic growth

(Thanh et al., 2019). When foreign companies invest in a country, they often initiate the establishment of new businesses or the expansion of existing operations. This, in turn, results in the generation of new employment opportunities, contributing to a reduction in unemployment rates and offering a source of income for the local population (Astuty et al., 2018).

The fluctuations in foreign direct investment (FDI) in a country are shaped by a range of economic and non-economic factors. The notable economic growth experienced in the Southeast Asian region (ASEAN) has played a pivotal role in fostering an increase in foreign direct investment in the area. If a country experiences stable and convincing economic growth, it enhances investor interest in making investments (Pasara & Garidzirai, 2020). Furthermore, robust economic growth can also create new job opportunities and increase overall income for the population. This, in turn, can enhance the purchasing power of the community and contribute positively to domestic consumption (Jayachandran & Seilan, 2019). Therefore, positive economic growth not only opens opportunities for business and investment but also provides benefits for the overall well-being of the society.

Furthermore, the workforce in a country is crucial in attracting investors. Mantra (2000) emphasizes that having a skilled workforce can bring about diverse business opportunities and lead to increased productivity. Investors often consider the availability of labor when deciding to invest their capital. The ability to access a large workforce not only creates a dynamic business environment but can also serve as an incentive for investors to engage in investments (Ullah & Khan, 2017). According to Fatihudin (2019), although investors may not always require high-quality labor, a skilled workforce can have a positive impact on investment.

The quality of regulations in the host country is crucial for every investor (Paul & Jadhav, 2020). Governments in developing countries formulate market-friendly and appropriate policies to foster the private sector and encourage foreign investors to invest (Saha et al., 2022). The quality of a country's regulations is reflected in the number of policies and the public's response to them. The importance of this factor can be identified through three main aspects. First, the efficiency of state institutions in creating a robust regulatory framework can enhance local production and attract investments. Second, poor regulations can result in inefficient governance and increase the risk of corruption. Third, risks and uncertainties in FDI can harm the economy and reduce the interest of foreign investors to invest (Nizam & Hassan, 2018).

Additionally, political stability plays a key role in influencing investment fluctuations (Paul & Jadhav, 2020). Changes in political stability can lead to a decline in investment in a country (Jayachandran & Seilan, 2019). Foreign investors, being sensitive to political factors, may potentially avoid investing in a country that does not offer a comfortable political situation. Awareness of risks and uncertainties in the political environment makes investors more likely to choose a country with guaranteed political stability. Therefore, creating a comfortable situation for investors involves not only political stability but also policies that support economic and legal stability.

In connection with economic growth in the perspective of sustainable development, environmental factors are considered to influence Foreign Direct Investment (FDI) through carbon emissions. Carbon dioxide emissions refer to the release of carbon gases into the atmosphere. High levels of these gases in the atmosphere cause several problems (Zheng et al., 2020). In this context, countries with high carbon emissions are criticized by various individuals and institutions (Pompermayer Sesso et al., 2020). This loss of image poses several problems for countries. High carbon emissions in a country tend to lower investor confidence as it is considered a negative signal that can impact investor reluctance to invest (Yuksel et al., 2020). Thus, understanding the determinants of FDI provides valuable insights for further research.

2. Literature Review

2.1. Investasi Asing Langsung

According to Todaro (2011), investment refers to the utilization of resources with the goal of increasing future income and consumption. Meanwhile, according to UNCTAD, Foreign Direct Investment (FDI) is when investors from one economy directly and sustainably invest their capital in companies in another economy (foreign affiliates). FDI is a type of long-term investment that is more stable, not debt-oriented, and not sensitive to economic fluctuations (Kurniati et al., 2007).

Similarly, Jhingan (1996), states that Foreign Direct Investment can be explained as the steps taken by a company from the home country, either factually or in accordance with legal provisions, to oversee the assets invested in the host country. The implementation of foreign direct investment has various methods, such as establishing branches or subsidiaries in the target country, forming a company where the majority of shares are owned by the parent company from the home country, establishing a company abroad with full financing from the parent company, or placing real assets by the parent company in the destination country.

Companies have three main objectives in foreign direct investment: resource orientation to seek high-quality raw materials at low costs, market orientation to expand market share and reduce production costs, and efficiency orientation to leverage traditional low-cost factors. Foreign investment in developing countries is generally associated with labor-intensive activities and natural resources (Dunning et al., 2008).

The Eclectic Paradigm or OLI framework by Dunning (2005) explains three aspects that companies need to consider before engaging in foreign direct investment or FDI. Firstly, ownership (O) is related to exclusive assets such as monopolies over natural resources, trademarks, reputation, technology, knowledge, or innovation. Secondly, internalization (I) indicates that companies seek profit by combining ownership through FDI and internalizing it to prevent replication by competitors. Finally, location advantage (L) refers to specific advantages of the host country that form the basis of FDI, involving economic aspects (labor costs, transportation, and telecommunications, market size), political aspects (government policy and politics), and social aspects (social proximity, cultural similarity, attitudes towards foreigners).

The Investment Development Path (IDP) theory proposed by Dunning provides insights into the relationship between Foreign Direct Investment (FDI) and the economic development of a country, especially in developing countries. IDP outlines five stages of economic development and shows how the dynamics of FDI outflow and inflow change over time. In Stage 1, marked by low capital accumulation, low per capita income, limited markets, minimal infrastructure, and limited skills of the workforce, the economy is not involved in international investment. While in Stage 2, with increased capital accumulation, industrialization development, and improved infrastructure, the attractiveness of FDI increases with the rising skills of the workforce. In Stage 3, FDI shifts from utilizing low wages to utilizing large markets with increased skills and technology. Stage 4 is characterized by an increase in FDI outflow by domestic companies as the economic conditions and development of the country improve, allowing domestic companies to maximize their ownership profits. Stage 5 indicates that the country is advancing in knowledge and technology, with highly skilled labor and high operational efficiency. The IDP theory highlights the tendency of developing countries to receive significant FDI inflows in the early stages of economic development, while this structure changes with the economic and technological progress of the country (Moudatsou & Kyrkilis, 2011).

Two main factors in determining capital flow, as outlined by (Agénor, 1998), are divided into internal factors (pull factors) and external factors (push factors). Internal factors involve domestic policies such as high productivity levels, stable economic growth, a strong macroeconomic foundation, macroeconomic stability, and structural reforms. Increasing rankings often become positive indicators for foreign investors. On the other hand, external factors involve global interest rates, especially in the United States and other developed countries, which can lead to a decrease in risk premiums. Additionally, a recession or decline in economic growth in developed countries can encourage the shift of capital from developed countries to developing markets. Overall, the combination of these factors forms a complex landscape that affects capital flows and requires careful analysis to understand changes in global investment.

2.2. Economic Growth

As per Arsyad's explanation, economic growth is characterized by a rise in either Gross Domestic Product (GDP) or Gross National Income, irrespective of whether this increase surpasses or falls short of the population growth rate. Additionally, changes in the economic structure may not necessarily be equivalent to development. Robust and high economic growth has a significant impact on various aspects within an economy. As economic growth increases, it tends to stimulate the demand for various goods, products, and services. This surge in demand can have positive effects on the business and industrial sectors, boosting sales and production for companies. The rise

in production and sales can subsequently lead to increased profits for companies operating in a rapidly growing economic environment.

2.3. Labor Force

The workforce encompasses individuals within the working age range. In accordance with the provisions of Law Number 13 of 2003 concerning manpower, the definition of the workforce includes every individual capable of performing work tasks with the aim of producing goods and/or services, either to meet personal or societal needs. According to Djojohadikusumo (1994), the workforce includes all individuals who are willing and able, and this category encompasses those who work independently, family members who do not receive payment, and those who work for wages or salaries. The availability of the workforce is a critical element that can contribute to the competitiveness of a country or region. High productivity levels can act as a magnet for investors, presenting promising investment opportunities.

2.4. Regulator Quality

A government capable of effectively regulating its economic activities will reduce transaction and production costs, thereby increasing the potential profits for foreign investments (Samputra & Munandar, 2019). According to the World Bank, Regulatory Quality is an indicator that reflects the government's or regulatory institution's capacity to design, implement, and enforce quality and effective regulations. Its primary objectives are to achieve sustainable economic growth, safeguard the interests of the public, and minimize the potential for market failure. The success of a country in achieving good regulatory quality is crucial in shaping a stable business environment, which, in turn, will stimulate investment growth (Suryadarma, 2011). Regulations not only serve as control instruments but also act as guarantors of justice. This aims to prevent abuse by companies investing in a country, as explained by (Silalahi, 2020).

2.5. Political Stability

Political stability reflects the perception of security and order within a country. It can be indicated by the likelihood of power changes or coups carried out through means contrary to the constitution or involving violence, including threats from politically violent activities and terrorism. Furthermore, political stability can also be assessed based on the potential for demonstrations and riots, except when these demonstrations are related to labor issues. These activities can lead to damage to assets and the arrest of individuals, particularly if they disrupt public life and business operations. Another factor to consider is the intensity of conflicts involving ethnic, religious, and interregional tensions, all of which are part of measuring the variable of political stability. Political stability and the distribution of power in a country are determining factors for political risk (Abdella, 2018). Key factors influencing decisions when allocating capital in a country include a stable political environment and a robust legal enforcement system. An unclear or unstable political situation can pose a serious obstacle to investors, especially because foreign investors tend to be highly sensitive to such issues. The stability in the political arena allows the government to minimize risks when acquiring private property for public purposes and redistributing their resources to facilitate entry into financial markets, leading to internalization advantages through heightened Foreign Direct Investment (FDI) inflows (Sharmin & Khandaker, 2015).

2.6. Carbon Emissions

Carbon dioxide (CO2) is one of the significant air pollutants, with the concentration of carbon dioxide (CO2) continuously increasing in the atmosphere. Human activities, such as industrial operations, motor vehicle use, power plants, fuel-powered machinery, aviation, forest fires, and maritime activities, can contribute to the rise in carbon dioxide levels (Haryanto, 2018).

Carbon dioxide emissions involve the release of carbon gas into the atmosphere, and elevated levels of this gas can give rise to various issues (Zheng et al., 2020). The most significant consequence associated with this scenario is environmental pollution. Carbon emissions contribute to air and water pollution, causing a rise in health problems within the affected areas. Furthermore, a critical aspect of this process pertains to financial considerations. International financial institutions may exhibit reluctance in providing loans to companies operating in nations with high carbon emissions (Franco-Luesma et al., 2020). This reluctance can lead to a substantial reduction in investments within these countries. Essentially, foreign investors might be hesitant to engage in countries grappling with emission-related challenges, resulting in a decrease in overall investments

(Gong et al., 2019). This decline in investment levels contributes to job losses and heightened healthcare expenses, ultimately negatively impacting the country's economy.

3. Method

The research methodology adopted in this study is the quantitative method, specifically employing panel data analysis. Panel data represents a combination of cross-sectional and time-series data. The variables considered in this research encompass both cross-sectional and time-series dimensions, include Y: Foreign Direct Investment, X1: Economic Growth, X2: Labor Force, X3: Regulatory Quality, X4: Political Stability, and X5: Carbon Emissions over a 20-year period (2003-2022) from 8 ASEAN countries. The research data is secondary data obtained from World Bank.

3.1 Panel Data Analysis

The research employs a panel data regression model to examine the independent variables, namely economic growth, labor force, regulatory quality, political stability, and carbon emissions, concerning the dependent variable, foreign direct investment, in eight ASEAN countries. The fundamental equation of the model is as follows:

$$\boldsymbol{LNFDI_{it} = \alpha + \beta_1(EG)_{it} + \beta_2(LNLF)_{it} + \beta_3(RQ)_{it} + \beta_4(PS)_{it} + \beta_5(CE)_{it} + et}$$

Keterangan:

FDI : Foreign Direct Investment

EG : Economic Growth

LF : Labor Force

RQ : Regulator Quality

PS : Political Stability

CE : Carbon Emission

LN : Transforming variables into natural logarithm form

β12345 : Coefficient values of Variables 1, 2, 3, 4, and 5

α : Constant

i : 8 ASEAN Countries (Brunei Darussalam, Indonesia, Cambodia, Malaysia, Philippines, Singapore, Thailand, and Vietnam)

t : Time period (2003-2022)

e : Error Term

3.2. Static Panel Data Regression

In the process of estimating a regression model using panel data, there are three approaches that can be applied, as explained by Baltagi (2005).

a. Common Effect Model
This model is a straightforward method in the panel data model approach, where time series and cross-sectional data are combined without considering time or individual dimensions. The assumption is that the behavior of the companies remains the same over time.

b. Fixed Effect Model
This model posits that variations among individuals can be accounted for by disparities in their intercepts. To assess the fixed effects panel data model, a dummy variable technique is utilized to capture the divergences in intercepts across companies. These differences may be caused by factors such as work culture, managerial aspects, and incentives, but their tendencies are considered to be the same across companies.

c. Random Effect Model
This model is employed to estimate panel data where disturbance variables can exhibit correlations both over time and across individuals. In the Random Effects model, the variances

in intercepts are accounted for by error terms that signify the distinctive characteristics of each company.

The measurement and assessment of variables in the panel data estimation model are used to select the most suitable one from three models that have more efficient estimates. Several methods can be employed to determine panel data parameters. First, the Chow test is used to choose between CEM or FEM. Second, the Hausman test is utilized to select between FEM or REM. A more detailed explanation is provided as follows:

a. The Chow Test is a diagnostic method employed to assess the appropriateness of either the Common Effect Model (CEM) or Fixed Effect Model (FEM) for estimating panel data. This test relies on the p-value, wherein a probability less than 5% leads to the rejection of the null hypothesis, signifying that the preferred model for panel data regression is FEM. Conversely, if the probability value exceeds 5%, the null hypothesis is accepted, indicating that CEM is a more fitting model for panel data regression.
b. The Hausman test is a statistical examination employed to assess the suitability of the Fixed Effect or Random Effect model in panel data analysis. Rejection of the null hypothesis occurs if the p-value is less than 5%, suggesting that the Fixed Effect Model is more appropriate for panel data regression. Conversely, acceptance of the null hypothesis happens if the probability is greater than 5%, indicating that the Random Effect Model is a more fitting model for panel data.

3.3. Panel Data Seemingly Unrelated Regression (SUR)

In the analysis of panel data regression, several assumptions such as heteroskedasticity and multicollinearity are often not met. As a solution to address these issues, the Seemingly Unrelated Regression (SUR) method is commonly applied. Discovered by Zellner in 1962, the SUR model is a type of multivariate regression integrated into the structure of linear regression. This model consists of several equations systems that are not directly connected, with correlation between errors from different systems. The use of SUR allows handling unmet assumptions and enhances the validity of regression analysis on panel data.

In the presence of violations of the heteroskedasticity assumption, a suitable estimation method is Feasible Generalized Least Squares (FGLS). This method is applied when the variance-covariance matrix structure of the residuals is assumed to be heteroskedastic, and there is cross-sectional correlation. Thus, the implementation of FGLS can be an effective approach to address the non-compliance with these assumptions, as explained by Greene (2018).

The formulation of the development can be expressed as follows:

$$\gamma j = xj\beta j + \mu j$$

Where the vectors γj and μj are of dimension n, the parameter vector βj, and the covariate matrix χj is of size n x pj. Thus, when m is used collectively, the model can be described as follows:

$$\begin{bmatrix}\gamma_1\\ \gamma_2\\ \vdots\\ \gamma_m\end{bmatrix} = \begin{bmatrix}\chi_1 0\cdots 0\\ \vdots \quad \ddots \quad \vdots\\ 0 \quad \cdots \chi_m\end{bmatrix}\begin{bmatrix}\beta_1\\ \beta_2\\ \vdots\\ \beta_m\end{bmatrix} + \begin{bmatrix}\mu_1\\ \mu_2\\ \vdots\\ \mu_m\end{bmatrix}$$

The term "error term value" is assumed to have a mean value of 0 and be independent of individual components, as well as homoscedastic. Also, μ; has assumptions, namely the mean of the error term: E(μj |χ) = 0 The variance value of the error term in equation j is E(μjμ'j |χ) = σjj|N, the covariance values of the error term for each individual from equation j and j' are E(μjμ'j |χ) where j≠j', and the total covariance-variance matrix is expressed as Ω = E(uu') = Σ⊗IN. Overall, in the context of linear regression equations, there are consistent estimates for the parameters β that can be enhanced to:

$$\beta_{GLS} = \{\chi^1(\Sigma^{-1} \otimes I_N)\}^{-1}\{\chi'(\Sigma^{-1} \otimes I_N\gamma)\}$$

The use of data in this research, including economic growth, labor force, regulatory quality, political stability, and carbon emissions, may result in correlations in the disturbance term values,

impacting the efficiency of the estimators. In this regard, one of the applied analytical models is the Panel Seemingly Unrelated Regression (SUR). Thus, the disturbance term values for country i in a specific period may correlate with the disturbance term values for the same country in a different period because the data on these independent variables are interrelated between the years t and t-1. The panel SUR method is known to generate efficient estimators even in the presence of correlation among disturbance terms in an equation, as stated by Zellner (1962).

4. Results and Discussion

4.1. Descriptive Analysis of Variable Data

Table 1. Descriptive Statistics

Variable	n	Mean	Maximum	Minimum	St. Deviation
FDI	160	1.39e+10	1.41e+11	-4.95e+09	2.34e+10
EG	160	4.546.338	1.451.975	-9.518.295	3.494.524
LF	160	3.45e+07	1.37e+08	166039	3.78e+07
RQ	160	5.836.348	100	1.945.946	2.239.229
PS	160	4.756.597	9.904.762	3.015.075	3.009.092
CE	160	5.583.875	23.95	0.18	5.669.475

Source: Data Processing (2024)

Based on the data presented in Table 1, it can be concluded that this research involves 160 sample observations. The average Foreign Direct Investment (FDI) to the eight ASEAN countries during the period 2003-2022 reached $13.9 billion per year. The peak FDI occurred in Singapore in 2022, reaching $141 billion, while the lowest value was recorded in Thailand in 2020 with a total of $-4.95. The average economic growth rate in these eight countries is 4.5%, with the lowest growth rate in the Philippines in 2020 (-9.5%) and the highest in Singapore in 2010 (14.5%). The Labor variable shows an average of 34.5 million individuals. The lowest number of labor was recorded in Brunei Darussalam in 2003 (166 thousand individuals), while the highest number occurred in Indonesia in 2022 with a value of 137 million individuals. The Regulatory Quality Index has an annual average of 58, with Singapore reaching the highest index (100) in 2012-2022 and Indonesia recording the lowest value (19) in 2003. The Political Stability Index has an average of 48, with Singapore achieving the highest value (99) in 2008, and Indonesia has the lowest value (3) in 2003. The average annual carbon emissions are 5.58 tons per capita, with Brunei Darussalam recording the highest emissions in 2022 (23.95 tons per capita), and Cambodia recording the lowest emissions in 2003 (0.18 tons per capita)..

4.1. Model Regresi Data Panel

In this research, three approaches are employed to determine the regression estimation method: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).

Table 2. Model Estimasi Regresi

Variable	CEM		FEM		REM	
	Coefficient	Probability	Coefficient	Probability	Coefficient	Probability
EG	0.0179	0.403	0.046715	0.008	0.020067	0.309
LF	1.00515	0.000	4.500162	0.000	1.34861	0.000
RQ	0.05087	0.000	0.0161244	0.127	0.038133	0.000
PS	0.38223	0.000	0.0122431	1.141	0.0343859	0.000

CE	-0.08545	0.004	0.1157731	0.066	0.0851419	0.076

Source: Data Processing (2024)

Based on Table 2 it is evident that each regression method approach yields different results. From a statistical perspective, the results of the Common Effect Model (CEM) testing indicate that, in general, the independent variables (X) have an impact on the dependent variable (Y), where Labor Force (LF), Regulatory Quality (RQ), Political Stability (PS), and Carbon Emission (CE) significantly influence the FDI variable. Meanwhile, the Fixed Effect Model (FEM) testing shows that only two variables (EG and LF) significantly affect FDI. Additionally, the Random Effect Model (REM) testing reveals that three independent variables (LF, RQ, PS) significantly influence FDI.

4.2. Selection of the Best Model

Table 3. The Chow Test

F (7,143) = 16.37
Prob > F = 0.000

Source: Data Processing (2024)

From the results of the Chow test presented above, it is evident that the generated probability value is 0.000, which is less than the significance level of 0.05. Therefore, the null hypothesis H0 is rejected, indicating that the appropriate model for panel data regression is the Fixed Effect Model (FEM).

Table 4. The Hausman Test

Chi2 (5) = 99.97
Prob > Chi2 = 0.000

Source: Data Processing (2024)

Based on the results of the Hausman test presented above, it can be concluded that the generated probability value is 0.000, which is less than the significance level of 0.05. Therefore, the null hypothesis H0 is rejected, suggesting that the appropriate model for panel data regression is the Fixed Effect Model (FEM).

4.3. Panel SUR Test

This research requires a Seemingly Unrelated Regression (SUR) panel test because in the static panel test, it is known that there are coefficient values and standard errors that are less efficient. Therefore, a dynamic panel test is needed to transform coefficient values and standard errors to be more efficient and free from bias in the research variables. The advantage of the SUR panel test is its efficiency in estimating parameters by considering all regression equations and contemporaneous errors in the estimation process.

Table 5. Panel SUR Test

Variable	Coefficient	Standar Error	Z	P>|Z|
C	1.502063	1.258238	1.19	0.233
Pertumbuhan Ekonomi	0.0179	0.209283	0.86	0.392
Tenaga Kerja	1.00515	0.69252	14.51	0.000

Kualitas Regulasi	0.0508728	0.0043758	11.63	0.000
Stabilitas Politik	0.038223	0.0037692	10.14	0.000
Emisi Karbon	-0.0854526	0.0286851	-2.98	0.003

Source: Data Processing (2024)

Dynamic panel testing in (Tabel 5) indicates that, in terms of probability values, there are several independent variables influencing the dependent variable, as evidenced by probability values less than alpha (0.05). These influential independent variables include labor force, regulatory quality, political stability with a probability value of 0.000, and finally, the carbon emission variable with a probability value of 0.003. On the other hand, one of the independent variables exhibits a probability value higher than alpha (0.05), indicating that this variable does not exert a significant impact on the dependent variable. This independent variable is the economic growth variable with a probability value of 0.329.

4.4. Discussion of Research Findings

The results of the dynamic panel regression estimation using the SUR method reveal that the economic growth variable does not exhibit a significant impact on Foreign Direct Investment (FDI) in ASEAN+8. The coefficient for this variable is 0.0179 with a probability of 0.392, which is smaller than the critical Z-table value (1.97). The conclusion from accepting H0 does not support the first hypothesis and contradicts previous research by Jayachandran & Seilan (2019), which stated a positive and significant impact of economic growth on FDI. The main contributing factor is primarily identified as the severe impact of the Covid-19 pandemic in 2020.. This pandemic not only affected global health but also significantly impacted the world economy, with many countries experiencing negative economic growth and entering a recession. The decline in economic activities and disruptions in the supply and production chains led to a significant decrease in consumption. Investors became more cautious in allocating their investments amid global uncertainty, in line with push and pull factor theory.

From the results of dynamic panel regression estimation using the SUR method, the Labor Force variable shows a positive and significant impact on Foreign Direct Investment (FDI) in ASEAN+8. The calculated Z-value is 14.51, exceeding the critical Z-table value (1.97), with a coefficient for the variable of 1.00515 and a probability of 0.000. Rejecting the null hypothesis (H0) indicates that labor force has a positive and significant impact on FDI in ASEAN+8. This finding aligns with previous research by Ullah & Khan (2017) , stating that the labor force has a significantly positive impact on FDI in ASEAN+8. The Investment Development Path (IDP) concept also supports this result, indicating that developing countries with a high labor force, such as ASEAN, tend to experience growth in FDI inflow. The availability of an adequate workforce opens up diverse business opportunities and enhances overall productivity. High productivity can reduce per-unit costs and increase business competitiveness in the global market. Therefore, labor force availability is an important consideration for investors in allocating capital, with a sufficient labor force likely to encourage investment due to an abundance of human resources.

The results of dynamic panel regression estimation using the SUR method show that the Regulatory Quality variable has a positive and significant impact on Foreign Direct Investment (FDI) in ASEAN+8. The calculated Z-value is 11.63, exceeding the critical Z-table value (1.97), with a coefficient for the variable of 0.0508728 and a probability of 0.000. Rejecting the null hypothesis (H0) indicates that the regulatory quality variable has a positive and significant impact on FDI in ASEAN+8. This finding supports the second hypothesis of the study and is consistent with previous research by Ullah & Khan (2017), which stated that regulatory quality has a significantly positive impact on FDI in ASEAN+8. The concept or theory of the Investment Development Path (IDP) also proves relevant, where developing countries with a high labor force, such as ASEAN, tend to experience growth in FDI inflow. The availability of an adequate workforce opens up diverse business opportunities and enhances overall productivity, thus

increasing business competitiveness in the global market. The research findings also support Good Regulatory Practices (GRP), where the implementation of GRP in the business environment can create stability that supports investment, business, and trade activities. Awareness of the importance of GRP in creating a stable business environment is crucial for enhancing the potential for economic growth and global competitiveness. On the contrary, complex regulations can be a burden for multinational companies and hinder investment.

From the results of dynamic panel regression estimation using the SUR method, the political stability variable shows a positive and significant impact on Foreign Direct Investment (FDI) in ASEAN+8. The calculated Z-value is 10.14, exceeding the critical Z-table value (1.97), with a coefficient for the variable of 0.038223 and a probability of 0.000. Rejecting the null hypothesis (H0) indicates that political stability has a positive and significant impact on FDI in ASEAN+8. This research finding supports the fourth hypothesis and aligns with the studies by Paul & Jadhav (2020) and Jayachandran & Seilan (2019), stating that political stability has a positive and significant impact on FDI in the ASEAN+8 region. This finding is also in line with the Electric Paradigm theory, which emphasizes that key factors influencing investor decisions to invest involve stable political conditions and a robust legal enforcement system. Political stability is considered a crucial element that positively impacts the flow of Foreign Direct Investment (FDI). Unclear or unstable political conditions can be a serious obstacle for investors, as foreign investors are highly sensitive to such issues. Awareness of risks and uncertainties in the political environment makes investors prefer countries with guaranteed political stability. Therefore, creating a comfortable situation for investors not only involves political stability but also requires policies that support economic and legal stability.

From the results of dynamic panel regression estimation using the SUR method, the carbon emissions variable shows a negative and significant impact on Foreign Direct Investment (FDI) in ASEAN+8. The calculated Z-value is 2.98, exceeding the critical Z-table value (1.97), with a coefficient for the variable of -0.0854526 and a probability of 0.003. Rejecting the null hypothesis (H0) indicates that the carbon emissions variable has a negative and significant impact on FDI in ASEAN+8. The findings from this research consistently support the fifth hypothesis and align with the studies by Yuksel et al., (2020) and Opoku (2022), which also show that carbon emissions have a negative and significant impact on FDI in the ASEAN+8 region. This illustrates that countries with low environmental quality, especially those marked by high carbon emissions, may reduce investor interest in making investments in those countries. This study aligns with the theory suggesting that nations with high carbon emissions face criticism and encounter social and economic challenges. Foreign investors, taking various factors into account when entering a country's market, consider issues related to high carbon emissions. Consequently, investors might be hesitant to invest in countries grappling with carbon emission problems, resulting in diminished investments, elevated unemployment rates, and a downturn in economic growth in those nations.

5. Conclusion

Based on the analysis conducted in this research, it can be concluded that economic growth does not have a significant impact on Foreign Direct Investment (FDI) in the ASEAN+8 region. The causes can be attributed to internal factors influencing the decisions of foreign investors. When the investing country faces the impacts of a global crisis, this condition can be a barrier to allocating their investments amid global uncertainty. Labor force has a positive and significant impact on Foreign Direct Investment (FDI) in the ASEAN+8 region. This factor indicates that the presence of an adequate workforce can be an incentive for investors to invest their capital, considering the abundance of human resources.

Regulatory quality has a positive and significant impact on Foreign Direct Investment (FDI) in the ASEAN+8 region. This suggests that a country's ability to provide good regulations can enhance market stability and attract Foreign Direct Investment (FDI) into the country. Political stability has a positive and significant influence on Foreign Direct Investment in the ASEAN+8 region. This indicates that political stability is considered a crucial factor that can positively

contribute to increased Foreign Direct Investment. However, carbon emissions have a significant negative impact on Foreign Direct Investment (FDI) in the ASEAN+8 region. This suggests that countries with high carbon emissions, signaling low environmental quality, are likely to reduce investor interest in making investments in that region.

5.1 Recommendations

With the finding that the workforce has a significant impact on Foreign Direct Investment (FDI) in the ASEAN+8 region, the government should consider strategies that encourage the development and enhancement of workforce qualifications. Steps may involve providing training and education tailored to industry needs and improving educational and training infrastructure to support the development of skills required by foreign investors. The government can also establish partnerships with the private sector and educational institutions to create programs responsive to global market demands and ensure the availability of a qualified workforce.

Considering that regulatory quality significantly affects Foreign Direct Investment (FDI) in the ASEAN+8 region, the government should contemplate efforts to enhance the sustainability and effectiveness of regulations. A thorough evaluation of existing regulations and bureaucratic processes, with a focus on simplification and policy updates supporting a more investor-friendly climate, can be undertaken. Increasing transparency and legal certainty can also be a positive step, instilling confidence in foreign investors. Collaborating with the private sector and international institutions to gather additional input and perspectives in regulatory reforms can be an effective strategy. With these measures, it is expected to create a more attractive business environment and strengthen FDI appeal in ASEAN countries.

Given that political stability has a significant influence on Foreign Direct Investment (FDI) in the ASEAN+8 region, the government should prioritize efforts to maintain and enhance political stability. This can be achieved by involving the government in strengthening institutions, enforcing the rule of law, and transparently managing internal conflicts. Strengthening collaboration between the government, private sector, and civil society can play a crucial role in creating a stable and trustworthy political climate for foreign investors. Additionally, a commitment to democratic principles, public participation, and good governance can enhance investor confidence in the political stability of the country. By prioritizing political stability, it is expected to enhance the attractiveness of ASEAN countries in receiving foreign direct investment.

With the finding that high carbon emissions negatively impact Foreign Direct Investment (FDI) in the ASEAN+8 region, the government should prioritize policies and initiatives to reduce carbon emissions and enhance environmental sustainability. This may involve investments in green technology, promotion of renewable energy, and the development of stricter environmental policies. The government can design incentives and regulations that support environmentally friendly business practices, encourage the use of clean energy, and limit negative environmental impacts. Collaboration with the private sector and academic communities in developing sustainable solutions and promoting environmentally friendly business practices can also be an effective step. Involving civil society in decision-making processes and providing education on the importance of sustainability can create broader support. With policies focused on reducing carbon emissions, it is expected to create a more sustainable environment and increase FDI attractiveness in ASEAN countries.

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