ARBITRASE: Journal of Economics and Accounting
ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

Analyzing Socio-Economic Determinants of Out-Migration in 5 ASEAN Countries

Ni'matim Mufarihah*, Annis Nurfitriana Nihayah

Faculty of Economics and Business, Development Economics, Universitas Negeri Semarang
Jl. Sekaran, Kec. Gunungpati, Kota Semarang, 50229, Indonesia
Email: [1]*nimatimmufarihah16@gmail.com, [2]annisnurfitriana@mail.unnes.ac.id
Correspondence Author Email: nimatimmufarihah16@gmail.com

Abstract−International migration has become an important phenomenon in the socio-economic dynamics of the ASEAN region, particularly in countries with negative net migration. This study aims to analyze the influence of socio-economic factors on out-migration rates in five ASEAN countries—Indonesia, Cambodia, Laos, Myanmar, and the Philippines—using a quantitative approach through panel data regression analysis. The independent variables used include wage levels, unemployment rates, labor force size, and the Human Development Index (HDI), with secondary data from 2000 to 2023. The model testing results indicate that the Fixed Effect Model (FEM) is the best model. The findings reveal that wages (coefficient = 0.041; p = 0.0019), unemployment (coefficient = 0.151; p = 0.0025), and HDI (coefficient = 19.91; p = 0.0000) have a significant positive effect on out-migration, while the labor force variable has a significant negative effect (coefficient = -3.456; p = 0.0000). This model explains 97.37% of the variation in emigration rates (R^2 = 0.9737), with a simultaneous model significance of 0.0000. The conclusion of this study is that migration decisions are not only driven by economic desperation but also by increased individual capabilities that enable cross-border mobility. The implications of this study suggest the need for policies that not only address the drivers of migration but also strengthen the domestic labor market and invest in human development, so that migration can become a safe and productive choice rather than a necessity.

Keywords: Emigration; Wage; Unemployment; Labor Force; HDI.

1. INTRODUCTION

International migration is a growing socio-economic phenomenon and an important issue in development studies. Population mobility between countries is no longer just a demographic issue, but also reflects social, economic and political dynamics in various regions of the world. In this era of globalization, international migration not only impacts the individuals who move, but also affects the countries of origin and destination in terms of economic development, employment, and demography. According to IOM (2022) in a report entitled World Migration Report 2022 published by the International Organization for Migration, the number of international migrants reached 281 million people or about 3.6% of the world's population in 2020 and is expected to continue to increase to more than 300 million in 2024. Although this percentage is relatively small, the migration trend has been consistently increasing since 1960. The Asian region is recorded as one of the largest contributors to international migrants, both as countries of origin and countries of destination.

One of the most common forms of international migration is labor migration, where individuals from developing countries move to other countries for a better livelihood. Migration is not only an individual solution to global inequality, but also has a major impact on economic development. Based on data from the World Bank as stated in a report issued by IOM (2024), remittances from migrant workers to low- and middle-income countries will reach US$ 831 billion by 2022. This shows that migration plays an important role in sustaining the economy of migrants' home countries. But despite these economic benefits, migration also poses serious challenges. Many developing countries experience "brain drain", which is the loss of skilled workers who migrate abroad. On the other hand, destination countries face pressures in social integration, labor regulation, and human rights protection.

According to the World Migration Report 2022 published by IOM (2022), Asia is the region with the highest number of overseas emigrants, reaching 6.09 million, higher than Latin America (3.02 million) and Africa (1.60 million). Southeast Asian countries are one of the main contributors to this figure. Several Association of Southeast Asian Nations (ASEAN) countries have experienced high out-migration flows, despite the region's relatively stable economic growth over the past two decades. This is reflected in negative net migration figures, indicating that more people are leaving their home countries than entering. This suggests that there is a domestic push for people to seek a better life abroad. Countries such as Indonesia, the Philippines, Myanmar and Vietnam are known as the main countries of origin for migrant workers seeking employment opportunities in Malaysia, Singapore, the Middle East and even OECD countries. According to IOM (2024), factors such as low domestic minimum wages, limited employment opportunities, the demographic burden of productive age, and vulnerability to natural disasters and climate change are the main drivers of out-migration from the region. On the other hand, the drive for better education and skilled work visa programs are also pull factors for migration from the region. This phenomenon indicates that some ASEAN countries are still facing structural challenges in the economic and social fields that have not been able to fully provide welfare for their residents. Nonetheless, each ASEAN country has different social, economic and political conditions, so the motives and patterns of out-migration also vary greatly.

ARBITRASE: Journal of Economics and Accounting
ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

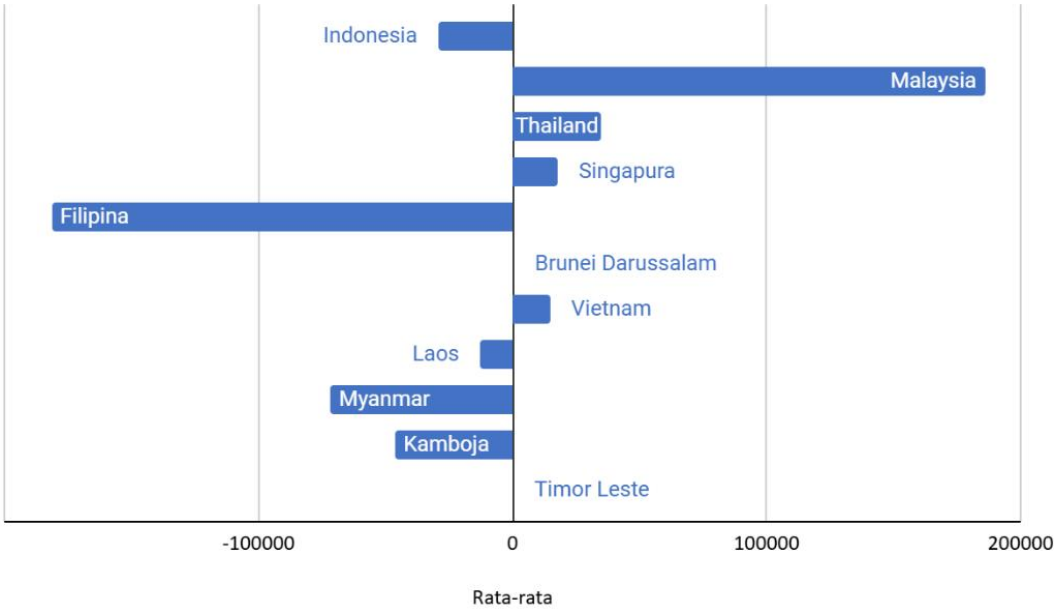

Figure 1. Average net migration of ASEAN countries from 2011 to 2024
Source: World Bank (data processed, 2025)

Based on annual net migration data from various ASEAN countries for the period 2011 to 2024 shown in figure 1, there is a significant imbalance in population mobility between ASEAN countries. Some countries, such as Malaysia and Singapore, consistently show positive net migration values, indicating that these countries are the main destinations for international migrants in Southeast Asia. Malaysia, for example, records an average of more than 186,000 in-migrants each year, while Singapore, although geographically small, remains a migration magnet due to its economic stability and high quality of life. In contrast, a number of ASEAN countries show a consistent pattern of out-migration, characterized by negative net migration values from year to year. Indonesia records an average of around 28,978 out-migrants per year, while the Philippines shows a much higher figure, with an average of more than 181 thousand out-migrants per year. Some ASEAN countries that have consistently experienced minus net migration in the past few years include Indonesia, Cambodia, Laos, Myanmar, and the Philippines. These countries face challenges such as high population growth and economies that are not yet fully developed, leading to a surplus of labor that cannot be absorbed by the domestic labor market. These countries are also known as major sources of migrant labor in the Southeast Asian region and even beyond the ASEAN region. This indicates that there are certain factors that encourage people from these countries to migrate abroad. Therefore, Indonesia, Cambodia, Laos, Myanmar, and the Philippines were selected as locations in this study.

In A Theory of Migration by Everett S. Lee (1996), the push and pull theory is described as the main framework in understanding individuals' motivation to migrate. Lee identified that any act of migration is influenced by a combination of four important elements: (1) factors related to the area of origin, (2) factors related to the area of destination, (3) intervening obstacles, and (4) personal or individual factors. Of these four components, Lee emphasizes that factors in the area of origin and destination can be categorized as push and pull. The first two components-factors in the origin and destination regions-can be further classified into two main categories: push factors and pull factors. Push factors are negative or unfavorable conditions in the place of origin that create an incentive to leave the region. Examples include prolonged poverty, high unemployment, lack of access to public services, armed conflict, social discrimination, natural disasters, and environmental degradation. In many cases, these push factors lead to inadequate living conditions, leaving individuals or groups with no other option but to move elsewhere. In contrast, pull factors refer to the positive conditions offered by the destination and which provide incentives for individuals to migrate to the region. These could be more promising economic prospects such as availability of jobs, higher wages, political stability and security, better quality of education, adequate health infrastructure, and a more modern or prosperous lifestyle (Niu, 2022). These attractions create the perception that life in a new place will provide better opportunities for the future. In addition to these two components, Lee also emphasized the importance of barriers between origin and destination. These barriers can be physical, such as long geographical distances, difficult natural conditions, or transportation limitations. They can also be administrative and social, such as strict immigration regulations, high travel costs, language and cultural differences, or discriminatory attitudes towards newcomers. These barriers often determine whether or not the intention to migrate can be realized. The last factor in Lee's theory is personal or individual factors. Each individual has different backgrounds, needs, aspirations and risk tolerance. These factors influence how an individual interprets conditions in the origin and destination regions and the extent to which barriers will influence his or her migration decision. For example, two people living under the same economic conditions in the origin region may make different decisions: one chooses to stay because of family attachment, while the other decides to migrate because of the urge to seek a better life.

ARBITRASE: Journal of Economics and Accounting
ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

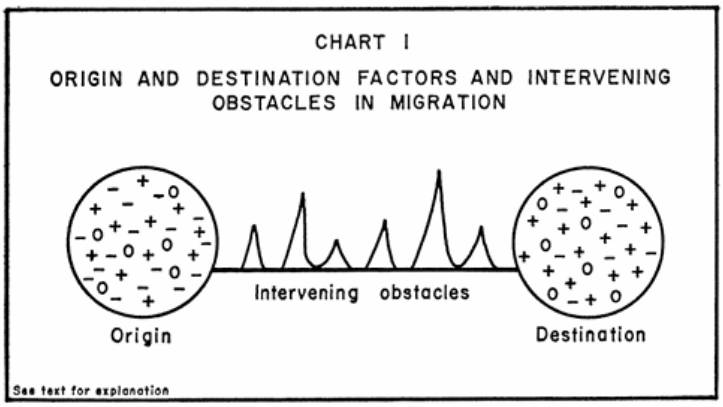

Figure 2. Push-Pull Theory Diagram
Source: Everett S. Lee (1996)

Figure 2 is a visual illustration of the migration theory developed by Everett S. Lee (1996) in A Theory of Migration. This figure serves as a conceptual representation that explains how an individual's decision to migrate is the result of a complex interaction between various factors in the place of origin, destination, and intervening obstacles. This theory does not only describe migration as a physical movement from one place to another, but as a process that is loaded with psychological, social, and structural considerations. On the left side of the figure, the circle labeled Origin represents where an individual comes from. Within this circle are "+", "-", and "O" symbols, each representing different factors. The "+" symbol refers to positive elements that might make a person feel at home in their place of origin, such as a sense of security, close family ties, a supportive community, or cultural ties. In contrast, the "-" symbol represents negative factors or drivers that encourage one to leave, such as poverty, unemployment, lack of education and health facilities, natural disasters, or political instability. The "O" symbol represents neutral factors, which are aspects that do not play a major role in influencing migration decisions because they are considered to have little direct impact or are ambiguous. On the right-hand side of the figure is a circle representing Destination, the area where migration takes place. The symbols within it have the same meaning, but this time they reflect potential migrants' perceptions of conditions in the destination. The "+" symbol in the destination reflects the attractions that might encourage someone to migrate there, such as better job opportunities, higher wages, quality education and healthcare systems, and better levels of security. On the other hand, the "-" symbol in the destination indicates potential challenges or drawbacks that might make one hesitate to move, such as discrimination against migrants, high cost of living, or cultural and linguistic alienation. The "O" symbol is again used to indicate aspects that are considered less significant or unknown to potential migrants. Between the two circles are illustrations of waves or obstacles called intervening obstacles. These obstacles describe any form of hindrance that can impede the migration process, whether physical, administrative, economic, social, or psychological. Examples include high transportation costs, complicated immigration permits, language and cultural barriers, or even fear of the unknown (Niu, 2022). The height of these barriers can determine whether or not a person will actually migrate, even if the push and pull factors are very strong.

In addition, Todaro's Theory (1969) emphasizes that migration decisions are based on individuals' rational calculations of income expectations, which consider wage levels and the possibility of obtaining employment in the destination area (Rahman & Rafiq, 2020). This theory highlights that migration is not only due to wage differentials, but also available economic opportunities (Todaro & Smith, 2020). The classic model of Harris & Todaro (1984) emphasizes the role of wage differentials and employment opportunities between origin and destination areas as the main drivers of migration, where migration occurs if income expectations in cities are higher than in villages, with urban unemployment rates as a balancing factor (Sancar & Akbaş, 2022). Wage differentials between countries are one of the main drivers of emigration. Migrants tend to move to countries with higher wage levels to improve their economic welfare. Empirical studies show that large wage differentials between home and destination countries significantly encourage labor migration flows.

In research conducted by Cookey & Ochuba (2024) states that when people do not get a job in their area of origin, they tend to look for job opportunities elsewhere, either within the country or abroad. This research shows that unemployment, especially total unemployment, female unemployment, and in urban areas, has a positive and significant impact on increasing out-migration rates, as individuals are encouraged to seek better livelihoods elsewhere. Thus, unemployment is one of the main factors that encourage individuals to out-migrate to improve their economic conditions. (Cookey & Ochuba, 2024). Meanwhile, Přívara et al. (2023) in their article argue that in the context of the effect of unemployment on migration, this article examines the effect in reverse, which is to see how migration affects the unemployment rate. The study used the unemployment rate as the dependent variable and found that migration lowers the unemployment rate (Přívara et al, 2023). Additionally, research by Sinaga (2020) analyzing international migration among residents of Java Island found that, to some extent, the minimum wage in the area of origin has a negative and significant impact on international migration, meaning that an increase in the minimum wage tends to reduce out-migration. However, other factors such as unemployment and poverty have a positive influence, encouraging migration.

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

Meanwhile, a study by Santoso & Artaningtyas (2024) using data on the placement of Indonesian migrant workers from 2017 to 2022 showed that the ratio of average hourly wages between foreign and domestic workers has a positive and significant impact on the international migration of Indonesian migrant workers, meaning that an increase in wages in the country of origin can increase the desire to migrate if the wage comparison abroad is more favorable. Research by Listanto (2025) using a panel data approach across nine Asian countries also found that per capita income in the country of origin has a significant negative impact on international labor migration from Indonesia, while wages in the destination country have a significant negative impact, highlighting the complexity of the relationship between wages and international migration. Another study by Sudibyo et al. (2022) confirms that low wages in the country of origin are one of the main drivers of Indonesian labor migration abroad, as economic pressures and the desire to improve living standards are strong motivations for international migration.

Research conducted by Veronese et al. (2021) states that a high level of labor force in a country, especially if it is not matched by the availability of adequate employment, encourages out-migration. Many individuals choose to migrate abroad in search of better jobs and income because competition in the domestic job market is getting tougher. Economic factors such as job search, the need to become a breadwinner, and poverty are the main drivers of out-migration, so an increase in the size of the labor force directly increases the potential for out-migration from the home country. Grebeniyk et al. (2021) also argue that the labor force has a direct relationship with migration flows, both in terms of quantity and quality. In their research they explain that in many developing countries, excess labor, especially those with low education, encourages migration as a solution to reduce domestic labor market pressures. In the short term, migration can have positive effects for the country of origin, such as reducing unemployment and pressure on the social welfare system. However, in the long run, the loss of skilled labor and professionals (brain drain) is detrimental to the home country as it lowers the quality of national human capital, stifles innovation, and weakens economic competitiveness. The Human Development Index (HDI) reflects the quality of life, education and health in a country. Countries with low HDI tend to be migrant origin countries, as their residents seek better life opportunities in countries with higher HDI. Out-migration from low HDI countries often aims to gain access to better education, health and employment. Research by (Chasanah, 2022) using panel data from six provinces in Java during the period 2013-2020 found that HDI has a significant negative effect on international labor migration. This means that the higher the HDI in the province of origin, the lower the tendency for people to migrate abroad. This study also confirms that other factors such as the number of poor people and the unemployment rate actually have a positive influence on international migration.

While various studies have addressed the factors that influence international migration, such as wage differentials, unemployment rates, and labor market pressures, most of them have focused on Europe, Africa, or the Middle East rather than Southeast Asia. In addition, most studies only analyze one or two variables in influencing migration, without looking at the interaction between wages, labor, and the Human Development Index (HDI) simultaneously. In fact, the ASEAN region has unique demographic and economic characteristics, such as a high amount of out-migration, a large working-age population and development inequality between countries. Therefore, this study is important because it explores the economic factors that drive out-migration from ASEAN countries, especially Indonesia, Cambodia, Laos, Myanmar and the Philippines more comprehensively. This research brings novelty to the study of international migration in the ASEAN region by specifically focusing the analysis on countries that experience negative net migration, namely Indonesia, Cambodia, Laos, Myanmar, and the Philippines. So far, most studies on migration have focused on migrant destination countries. This study offers a different perspective by examining migration dynamics from the perspective of countries of origin, which reflect various structural economic and social pressures within the country.

Against this background, research is needed that is able to identify and analyze the factors that drive out-migration, especially from an economic and social perspective, in order to form the basis for the formulation of better and sustainable migration policies in the ASEAN region, especially countries with negative net migration, namely Indonesia, Cambodia, Laos, Myanmar, and the Philippines. Therefore, this study aims to analyze the relationship between four main factors and out-migration rate (Y) in the region, namely wage rate (X1), unemployment rate (X2), labor force participation (X3), and Human Development Index or HDI (X4). The main objective of this study is to identify the social and economic factors that influence out-migration. Low wage levels are expected to be the main driver for individuals to seek better jobs and livelihoods abroad. Similarly, a low HDI indicates an inadequate quality of life, thus encouraging individuals to migrate for better access to education, health and general living standards. On the other hand, the higher the unemployment rate, the greater the economic pressure felt by people, which encourages them to migrate abroad. Similarly, when the number of workers is not matched by the availability of jobs, high competition in the domestic labor market will trigger an increase in out-migration flows.

Considering the complexity of economic and social factors influencing migration decisions, particularly in the ASEAN region with its distinctive demographic characteristics and development disparities, it is important to gain a more comprehensive understanding of out-migration dynamics. This study is expected not only to contribute theoretically to the development of international migration studies but also to provide a strong empirical foundation for the formulation of more adaptive and sustainable policies in countries with high out-migration rates. Through an analysis of variables such as wages, unemployment, labor force participation, and the Human Development Index (HDI), this study aims to uncover the interconnections between these factors in driving out-migration, as well as to explain the structural conditions that pose challenges for countries like Indonesia, Cambodia, Laos, Myanmar, and the Philippines in managing the migration dynamics occurring within their borders.

ARBITRASE: Journal of Economics and Accounting
ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

2. RESEARCH METHODS

2.1 Basic Research Framework

This study aims to determine the effect between the out-migration variable as the dependent variable and the wage, unemployment, labor force, and HDI variables as independent variables. The data used is secondary data in the form of panel data derived from various official data provider sites such as the World Bank, Migration Data Portal, UNDP, and Our World in Data. The data that has been collected is then processed and analyzed in depth using Eviews 12 software. This study uses a cross section of five countries with an average value of negative net migration, namely Indonesia, Cambodia, Laos, Myanmar, and the Philippines as research locations from 2000-2023. The research method uses a quantitative panel data approach.

Based on the problems and theories described in the introductory chapter, this study formulates a framework to describe the relationship between economic and social factors on out-migration rates. This framework is designed to explain the effect of wage level, unemployment, labor force participation, and HDI on an individual's decision to migrate out of the home country.

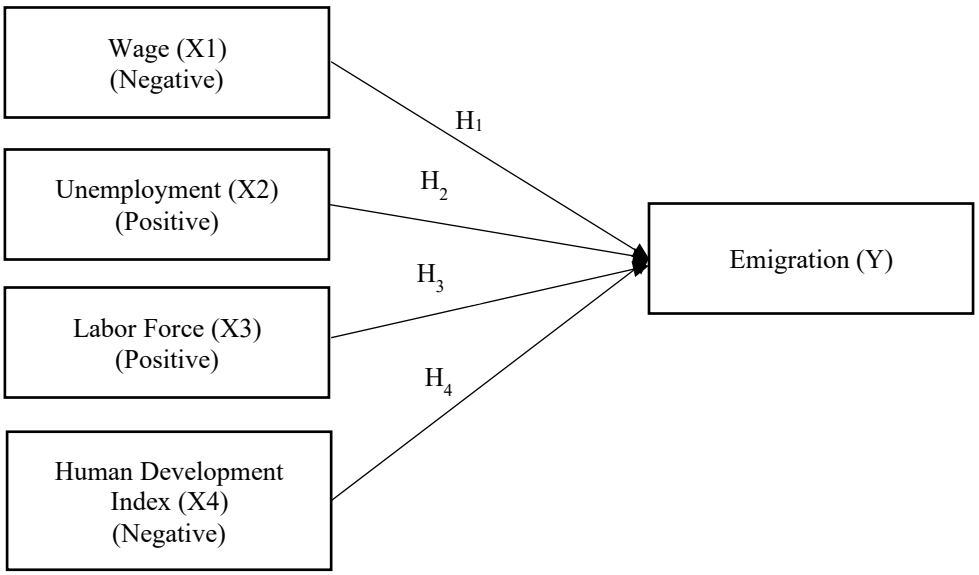

Figure 3. Framework

Figure 3 shows the framework used in this study. This framework is developed based on the theoretical foundations and empirical findings discussed previously, particularly Everett S. Lee's push and pull theory, as well as Todaro and Harris-Todaro's economic approach to migration. By using this framework, it is expected to systematically describe how independent variables such as wage level, unemployment, labor participation, and Human Development Index (HDI) affect the dependent variable, namely out-migration. This framework is also the basis for developing hypotheses and data analysis design in this study, namely: The hypotheses proposed in this study are as follows:
H1: Wage level negatively affects out-migration.
H2: Unemployment rate has a positive effect on out-migration.
H3: Labor participation rate has a positive effect on out-migration.
H4: Human Development Index (HDI) has a negative effect on out-migration.

2.2 Operational Dfinition of Variables

To ensure clarity in measurement and analysis, each variable in this study is operationally defined as follows:

a. Emigration (Y): The number of people who migrate out of their country of origin each year. The unit used is the number of individuals per year. This data is obtained from the Migration Data Portal and the World Bank, and reflects total annual emigration without taking immigration into account.
b. Wage (X1): Average income per capita (in US dollars based on Purchasing Power Parity) received by workers in each country per year. Data is obtained from the World Bank and Our World in Data.
c. Unemployment (X2): Percentage of the labor force that is not working but actively seeking employment for one year in each country. Data sources are from the World Bank and ILO.
d. Labor Force (X3): Labor force participation rate, which is the percentage of the working-age population (15 years and older) who are economically active (employed or seeking employment). Data obtained from the World Bank and ILO.
e. Human Development Index (HDI) (X4): A composite index measuring the quality of human development based on three dimensions: health (life expectancy), education (years of schooling and expected years of schooling), and decent living standards (GDP per capita). Data sources are from the UNDP.

ARBITRASE: Journal of Economics and Accounting
ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

2.3 Analysis Method

The analysis will be conducted by comparing three models namely CEM, FEM, and REM, and selecting the best model based on Chow Test, Hausman Test, Lagrange Multiplier Test, and Classical Assumption Test. The panel data regression equation can be written as follows:

$$Emigrationit = \beta 0 + \beta 1 Wageit + \beta 2 Unemploymentit + \beta 3 Laborit + \beta 4 HDIit + \mu it \quad (1)$$

The panel regression equation in this study was developed to analyze the influence of economic and social variables on the level of emigration (the outflow of migrants from a country). In this equation, Emigration (Y) is the dependent variable influenced by four independent variables, namely Wage (wage level), Unemployment (unemployment rate), Labor (labor force), and HDI or Human Development Index (Human Development Index). The symbol β_0 denotes the intercept or constant, while β_1 to β_4 represent the regression coefficients of each independent variable, indicating the direction and magnitude of their influence on emigration. The index i refers to cross-sectional data, while t indicates the time dimension (time-series), reflecting the characteristics of the panel data used. The symbol μ represents the error term or disturbance that includes other factors not explained by the model.

Panel data regression is an analytical method that combines data from various individuals (cross section) and time periods (time series) simultaneously. The advantage of this method is its ability to capture differences between individuals while observing changes over time (Baltagi, 2021). There are three main models in panel data regression, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The CEM or pooled OLS model is the simplest model, which assumes all objects have the same characteristics, so it does not consider differences between individuals. This model is simple, but tends to produce less accurate results if there are differences in characteristics between objects (Hsiao, 2022). In contrast, FEM is more flexible because it allows each object to have a different initial value (intercept). This model is used when the unobserved characteristics of each object are considered to affect the variable under study (Chairunnisa & Fauzan, 2023). Meanwhile, REM assumes that differences between objects are random and have no effect on the independent variables. REM is usually chosen when the data includes many objects and the sample is considered representative in general (Baltagi, 2021).

To determine the most appropriate panel regression model in a panel data analysis, a systematic and structured set of statistical tests is required. The first step usually starts with the Chow Test, which is used to compare between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). The Chow test tests the null hypothesis that all regression coefficients are the same across individuals or observation units, so the CEM model is sufficient. If the test results show that the null hypothesis is rejected, then the FEM is considered more appropriate because it is able to capture heterogeneity between panel units through individual fixed effects (Hsiao, 2022). The next step is the Hausman Test, which is used to determine whether the most appropriate model is the Fixed Effect Model (FEM) or the Random Effect Model (REM). The Hausman test checks whether the difference between the FEM and REM coefficient estimates is statistically significant. The null hypothesis in this test states that REM is more efficient and consistent because there is no correlation between individual effects and independent variables. If the null hypothesis is rejected, then FEM is chosen because it provides unbiased estimates although it is less efficient than REM (Le Gallo & Sénégas, 2023). In addition to these two tests, the Lagrange Multiplier (LM) test developed by Breausch T. S & Pagan A.R (1979) is used to compare the Common Effect Model (CEM) and Random Effect Model (REM). This test is conducted to determine whether the individual effects in the REM model are statistically significant (Baltagi, 2024). If the LM test results are significant, then the REM model is more appropriate to use compared to the CEM. This test is very useful when FEM cannot be used because the data does not have enough time dimension or the number of individuals observed is too large.

After the most appropriate model is selected based on the three tests above, the next step is to conduct a classical assumption test. This test is important to ensure that the model used produces BLUE (*Best Linear Unbiased Estimator*) parameter estimates. The classical assumptions tested include:

a. Multicollinearity: Tested to determine whether there is a high correlation between independent variables in the model. Multicollinearity can cause the estimate to be unstable and the standard error to increase. A commonly used test is the Variance Inflation Factor (VIF), with VIF values > 10 usually indicating serious multicollinearity (Hsiao, 2022).
b. Heteroscedasticity: Refers to the condition where the variance of residuals is not constant. When heteroscedasticity occurs, Ordinary Least Squares (OLS) estimation becomes inefficient. Commonly used tests include the Breusch-Pagan test and the White test (Chairunnisa & Fauzan, 2023).
c. Normality of Residuals: This assumption is especially important if the model is to be used for hypothesis testing or prediction. The Jarque-Bera test is usually used to assess whether the residual distribution is close to a normal distribution (Hsiao, 2022).
d. Autocorrelation: Autocorrelation occurs when residuals are correlated with each other, especially in panel data with time dimension. This leads to decreased model efficiency and inaccurate standard errors. Durbin-Watson test or Breusch-Godfrey test is often used to detect autocorrelation (Baltagi, 2021).

3. RESULTS AND DISCUSSION

In this study, the estimation of panel data regression models was carried out by considering three main approaches, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Each approach has

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

different assumptions and characteristics in capturing variations between individuals and time. To determine the most appropriate estimation model to use, a series of model selection tests are conducted. The first step in this process is to conduct the Chow Test, which aims to compare the Common Effect model with the Fixed Effect. If the test results show a probability value (p-value) of less than 0.05, it is concluded that the Fixed Effect Model (FEM) is more appropriate than the CEM because of significant differences between individuals. Conversely, if the probability value is more than 0.05, then the Common Effect Model (CEM) is considered sufficient and does not need to consider individual effects. Furthermore, if FEM is selected, it is necessary to conduct a Hausman Test to compare between FEM and REM to ensure the best model.

Table 1. Chow Test Results

	Statistic	df	Probability
Cross-section F	214.829820	(4,111)	0.0000
Cross-section Chi-square	260.171396	4	0.0000

Table 1 shows the result of the Chow test used to compare the Common Effect Model (CEM) with the Fixed Effect Model (FEM). The probability result of 0.0000 indicates that the FEM model is more appropriate than the CEM because the characteristics of each country are different and significant in explaining variations in emigration.

Table 2. Hausman Test Results

	Chi-Sq. Statistic	df	Probability
Cross-section random	859.319277	4	0.0000

The Hausman Test is used to choose between FEM and REM. As shown in Table 2, the probability of 0.0000 indicates that FEM is more appropriate than REM. This means that there is an influence between individual effects and independent variables, so the REM assumption is not met and the FEM model should be selected. As a further step after selecting the Fixed Effect Model (FEM) regression model, classical assumption testing is required to ensure the validity of the estimation results. This test is important to avoid bias and inaccuracy in model interpretation. According to Napitupulu et al. (2021)), the classical assumption tests used in panel data regression using the OLS method are only multicolineatity and heteroscedasticity. Since the best model chosen is FEM which uses the Ordinary Least Square (OLS) approach in its estimation technique, the normality and autopercussion tests do not need to be carried out. Normality test is basically not a BLUE (Best Linear Unbiased Estimator) requirement and some opinions do not require this requirement as something that some opinions do not require this requirement as something that must be fulfilled, while autopinfluence only occurs in time series data, testing autopinfluence on cross section or panel data does not need to be done (Napitupulu et al., 2021) .

Table 3. Multicollinearity Test Results

Variable	WAGE	UNEMPLOYMENT	LABOR	HDI
WAGE	1	0.355	0.678	0.776
UNEMPLOYMENT	0.355	1	0.659	0.607
LABOR	0.678	0.659	1	0.585
HDI	0.776	0.607	0.585	1

Source: Research Data, 2025

Table 3 shows the results of the multicollinearity test, which examines whether there is a relationship or correlation between the independent variables. No high influence (above 0.80) was found, so it can be concluded that there is no multicollinearity problem in the model. This means that each independent variable makes a unique and non-overlapping contribution in explaining variations in emigration.

Table 4. Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Probability
WAGE	-0.003160	0.007037	-0.449010	0.6543
UNEMPLOYMENT	-0.007861	0.026352	-0.298307	0.7660
LABOR	-0.299044	0.291985	-1.024178	0.3080
HDI	0.212632	0.905553	0.234809	0.8148
C	5.332408	4.625880	1.152734	0.2515

Table 4 shows the results of the heteroscedasticity test conducted using regression method on the absolute value of the residuals. All variables show a probability value (p-value) above 0.05, meaning there is no heteroscedasticity problem. Thus, the model is stated to fulfill the assumption that the residual variance is constant, and the coefficient estimation can be said to be efficient.

Based on the results of classical assumption testing, the data is declared suitable for further analysis. This is indicated by the fulfillment of the conditions for the absence of multicollinearity and heteroscedasticity in the model. Furthermore, through the results of the Chow Test and Hausman Test, it was decided that the Fixed Effect Model (FEM)

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

was the most appropriate approach to use in this study. Thus, panel regression analysis was conducted using the FEM model, and the estimation results are presented in the following section.

Table 5. Panel Data Regression Results (FEM)

Variable	Coefficient	Std. Error	t-Statistic	Probability
Wage	0.041484	0.013054	3.177958	0.0019
Unemployment	0.151166	0.048880	3.092584	0.0025
Labor	-3.455860	0.541612	-6.380697	0.0000
HDI	19.906560	1.679741	11.850970	0.0000
C (constant)	48.712940	8.580698	5.677037	0.0000
R-squared	0.973662			
Adj. R-squared	0.971763			
F-statistic	512.9228			
Prob(F-statistic)	0.0000			

Table 5 shows the results of panel data regression using the selected model that has been conducted with the Chow test and Hausman test. The best model selected is the Fixed Effect Model (FEM). The regression results show that all independent variables significantly affect the emigration rate with a significance level of 5%. The wage variable has a coefficient of 0.041 with a probability value of 0.0019, indicating that an increase in wages has an effect on increasing emigration. This indicates that people who receive higher incomes have the capability to migrate abroad. This can be explained by the phenomenon that despite the increase in wages, the attraction of working abroad, which offers higher wages, is still the main motivation for people to migrate. This finding supports the view that migration is not only a result of economic urgency, but also a rational strategy to maximize income. Unemployment also shows a positive and significant influence on emigration with a coefficient of 0.151 and a probability value of 0.0025. This means that increasing unemployment encourages people to look for work abroad. This is consistent with the economic theory of migration which states that domestic labor market instability is a major driving factor in migration decisions. In contrast, the labor force variable has a negative influence on emigration, indicated by a coefficient of -3.456 with a probability value of 0.0000. This means that the greater the amount of labor force available and optimally absorbed in the country, the lower the tendency to migrate. This shows that the existence of a strong labor market in the country is able to withstand the desire to move abroad. The HDI variable shows the most significant influence on emigration with a coefficient of 19.906 and a probability value of 0.0000. This indicates that improving the quality of life, education, and public health actually encourages people to migrate. This model has a coefficient of determination (R-squared) of 0.9737 and an adjusted R-squared of 0.9718, which means that about 97% of the variation in emigration can be explained by the four independent variables used in the model. The F-statistic value of 512.923 with a probability of 0.0000 indicates that the model is simultaneously significant and worth using for prediction and policy analysis purposes. The F-test is used to test whether all independent variables jointly influence the dependent variable. The F-statistic value of 512.923 with a p-value of 0.0000 indicates that the regression model used is simultaneously significant, and the independent variables collectively affect emigration.

3.1 Discussion

The regression results indicate that wages have a positive effect on out-migration. This is due to an increase in the cost of living that accompanies wage increases, prompting people to seek higher-paying job opportunities elsewhere. In line with the research conducted by Ramadhany (2020), it was found that real wage increases have a significant and positive effect on the out-migration rate of the local population, meaning that the higher the real wages, the greater the tendency for people to migrate. This finding is supported by the aspiration-capability framework, which states that an increase in income or wages does not always reduce migration but can increase migration opportunities because individuals have more resources to finance the migration process. In other words, wage increases provide sufficient financial capital for people to cover migration costs and pursue economic opportunities outside their home regions. This is explained by the fact that even though wages have increased, there are still structural factors in the area of origin, such as limited job opportunities, industrial constraints, and regional development disparities, which encourage people to seek better opportunities outside the area. In this context, wage increases strengthen the financial capacity of people to finance the migration process, making migration more likely when income rises. International migration decisions are not only influenced by wage differences between the country of origin and the destination country but also by structural factors that affect individuals' ability to migrate. One important factor is the level of income or wages in the country of origin. In this context, higher wages in the country of origin can enhance the ability of individuals or households to finance the out-migration process, which often requires significant initial costs, such as travel documents, visas, transportation, and initial living expenses in the destination country. This suggests that individuals from more prosperous countries of origin tend to come from more economically advantaged backgrounds, thereby having greater access to migration opportunities. Thus, higher wages in the country of origin can be a facilitating factor in encouraging out-migration, especially for formal, legal, and high-cost migration. Additionally, the self-selection model in migration explains that potential migrants from middle-income groups are more likely to migrate than those from extremely poor groups, who, despite having high economic motivation, are often hindered by financial constraints. Large and educated diaspora communities from middle-

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

income countries reinforce this trend, as the costs of migration information and networks also become more accessible. This finding is consistent with the work of Czaika & Reinprecht (2023) , who assert that rising incomes in developing countries tend to increase emigration, because they increase the financial capability of individuals to migrate, not because they are forced to do so. In this framework, rising incomes do not foreclose migration aspirations, but rather enable their realization. People with higher incomes have access to migration information, transportation costs, paperwork, and international networks that facilitate the process. In addition, a study by Bah et al. (2020) shows that in the context of Asian countries, rising domestic wages in the informal or low-mobility sectors are not able to offset the attractiveness of global wages, particularly in migration destinations such as Middle Eastern, East Asian, or European countries. In other words, even if wages increase nominally in the home country, the wage differential (the difference between domestic and international wages) remains the main incentive for migration. Furthermore, Manchin (2025) in Global Evidence on the Relative Importance of Nonfinancial Drivers of International Migration Intentions found that prospective international migrants have higher relative household income than those who do not intend to migrate, indicating that individuals with higher household income are more likely to have intentions to migrate abroad than those from low-income groups. This means that it is not only poor people who want to migrate. Rather, higher income provides the financial capacity to cover migration costs (such as transportation, documents, or initial capital in the destination country). In this context, income in the country of origin as a proxy for wages has a positive effect on out-migration, as it opens up access to international mobility. This study explicitly supports the concept of "income-enabled migration," which posits that migration occurs not out of necessity due to extreme poverty, but rather because of increased resources that enable mobility. Indonesia has seen an increase in its minimum wage, but this has been matched by the desire of its people to leave the country. This is reflected in the #KaburAjaDulu hashtag, where some are increasingly encouraged to leave the country due to dissatisfaction with the country's welfare and political upheaval. Sectors such as fisheries, agriculture, and manufacturing experience low wage pressures, and despite minimum wage increases, encourage workers to seek international wage pools through PMI programs, such as to Malaysia or Taiwan. Increases in domestic wages help workers prepare for migration costs, confirming that migration is not simply a result of low wages but also of increases that provide the initial capital for migration. It can be concluded that an increase in wage levels does not guarantee that all sectors experience wage increases as well, in addition to political turmoil factors can also increase the desire to migrate even if wages in the home country increase.

The unemployment variable also has a positive influence on out-migration, which supports the *push-pull* theory of migration by Everett S. Lee (1996), where high unemployment acts as a major push factor for international migration. This is reinforced by data from ILO (2023) which shows that high unemployment in Southeast Asia is one of the triggers for the high number of migrant workers from the region. The report highlights that many ASEAN member states face hidden levels of unemployment, especially among young people, informal workers, and rural residents. The unavailability of decent jobs, the high percentage of informal workers (up to 69.3% in some countries), as well as the high number of out-of-work, out-of-school, and out-of-training (*NEET*) youth signify weak domestic labor market conditions, which encourage individuals to seek opportunities abroad. This suggests that unemployment and underemployment in the home country act as "*push factors*" in out-migration. Furthermore, the report notes that while international and intra-regional migration is an important phenomenon within ASEAN, most of it occurs through informal or irregular channels, which is often the only option for individuals driven by the inability to secure employment domestically. In addition, the imbalance between the skills of the workforce and the needs of the market also reinforces the migration drive. This finding is supported by the results of a study conducted by Aftrisixsilia & Irsad (2025) in Indonesia, which found that unemployment and poverty simultaneously have a significant effect on people's decision to migrate. Although in the partial model the effect of unemployment appears negative, in the simultaneous model the effect remains positively significant as a driver of labor migration. At the international level, Fabo et al. (2021) in their analysis of the Central Africa and Caucasus regions found that rising unemployment, particularly among low-skilled workers, has a consistent relationship with surging emigration rates. Furthermore, a panel study by Tatsiramos & Zimmermann (2023) in Germany strengthens the argument by showing that layoffs significantly increase the probability of interregional labor mobility, and in the long run increase the probability of international migration, especially for individuals who are not immediately reabsorbed in the domestic labor market. This suggests that job loss not only causes economic stress, but also triggers structural mobility.

The International Labour Organization (2024) notes that youth unemployment rates (15-24 years) in Southeast Asia remain at high levels post-pandemic, especially in rural areas and middle-educated groups. This group is often the main contributor to emigration as they have educational capital but face limited access to suitable jobs in their home countries. According to IOM's (2023) , although the official unemployment rate in Cambodia is relatively low, there is high hidden unemployment and job insecurity in informal sectors such as agriculture and petty trade. The pressure from the lack of formal opportunities has led to migration to Thailand and Malaysia, where people seek more stable sources of income. Similarly, a report from IOM Asia-Pacific Regional Data Hub (2020) that high unemployment, particularly among youth and those in the informal sector, is driving migration to neighboring countries such as Malaysia and the Middle East. Specifically, the report explains that Southeast Asian countries including Cambodia, Indonesia, Laos, Myanmar and the Philippines, which have a larger number of emigrants than immigrants, are the main countries of origin for international labor migration. Most of the out-migration undertaken by these countries is economic in nature, mainly to seek employment due to the lack of job opportunities and high unemployment rate in the country. In Myanmar itself, according to World Bank (2024) , the pressure from the political-economic crisis and weak job creation forced migration

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

mainly to Thailand and Malaysia. that many Myanmar migrants initially experienced unemployment or non-formal employment before choosing to leave the country, according to the Harris-Todaro pattern that income expectations abroad exceed domestic opportunities. In the Philippine Jobs Report by the World Bank (2023) confirms that high unemployment in the Philippines, particularly among the youth and the skills mismatch, drives many people especially young women to seek employment opportunities as Overseas Filipino Workers (OFW). Philippine policy reports even note that migration is often used as a domestic coping strategy for unemployment, supporting the regression conclusion that unemployment spurs out-migration. Thus, in detail, it can be concluded that there is a clear link between high unemployment (or lack of decent work) at home and out-migration rates, where the unavailability of meaningful domestic employment creates strong socio-economic pressures for individuals to migrate in order to survive and improve their living standards. This reinforces the notion that domestic unemployment is an important determinant of out-migration dynamics in the ASEAN region.

The labor variable has a negative influence with out-migration, which means that the higher the level of labor participation of a region, the lower the tendency of its population to out-migrate. This effect can be explained through various theoretical and empirical approaches. Within the framework of classical migration theory, especially the push-pull model, domestic labor market conditions become one of the main determinants of migration decisions. When the labor participation rate is high and balanced with the availability of decent and productive jobs, individuals will have sufficient economic incentives to stay and work in the country. Conversely, a low participation rate may signal a lack of engagement of the working-age population in economic activity, which could be due to high hidden unemployment, limited employment opportunities, or low confidence in the ability of the domestic labor market to provide decent opportunities. One of the main driving factors of international labor migration is the mismatch between labor availability and labor market absorption in the country of origin. When labor participation is high and absorbed in employment, migration pressure will decrease because economic needs have been met locally. Conversely, when labor force participation is low, and many working-age people are not engaged in the labor force or do not have access to stable employment, the pressure to migrate increases. In addition, a report from the International Labour Organization (2022) also confirms that the post-pandemic global labor participation rate shows an uneven recovery especially in developing countries, and regions with low labor participation are facing higher socio-economic pressures, which magnifies migration pressures due to the inability of the domestic economy to provide enough jobs for the productive age population. The decrease in migration that comes with increased labor participation also reflects the confidence in the domestic market. When more people choose to join the local labor force, it reflects that they see real opportunities for work within the country. High participation can also indicate the success of workforce training programs, vocational education, or strengthening the informal sector that contribute to wider employment.

In the Cambodia Migration Profile by IOM (2023) shows Cambodia's labor force participation rate reaches about 76% at the age of 15 and above, but most work in the informal sector such as agriculture and MSMEs without social protection. The relatively high participation rate indicates that many people have been absorbed into the domestic labor market, so the opportunity for migration decreases. In Indonesia, the World Bank's (2020) shows that although Indonesia is experiencing labor force growth, many workers are absorbed into informal and low-quality jobs and only 40% of workers have formal status. The high labor participation rate, although mostly informal, suggests that there is ample access to local jobs. When labor participation increases and jobs are adequate, out-migration slows down, as local economic needs are met domestically. In addition, according to analysis from the OECD (2024) , labor participation is an important indicator of microeconomic stability. Countries with high participation rates show better economic resilience in the face of global crises, which in turn strengthens domestic socio-economic ties and lowers migration intentions. High participation rates also narrow the "intention gap", the difference between the desire and ability to migrate. As more individuals gain income or economic opportunities domestically, emigration becomes less of a necessity and more of an alternative.

The Human Development Index (HDI) shows an influence with *pull* factors, as it reflects the capacity and capability of individuals to migrate, such as access to education, health, and economic opportunities. This pattern is also consistent with the *mobility transition* theory proposed by Zelinsky, which states that the process of industrialization and modernization in the early stages tends to encourage increased mobility, both on a domestic and international scale. Increase in human development does not necessarily reduce out-migration, but rather encourages increased migration, especially in the short to medium term. He challenges the common assumption that absolute poverty is the main cause of migration. Instead, he argues that migration is a selective process. Those who migrate tend to have better economic resources, education and social networks than the poorest population. In this case, the higher the HDI of a region, the greater the capabilities and aspirations of its population to undertake international migration. This is referred to as a *migration hump*, which is a phenomenon where an increase in a country's economic and social development (including a rising HDI) will actually increase the level of out-migration, until at a certain point, migration begins to decline as the economy converges and the demographic structure matures. In other words, countries with medium HDI tend to be the main source of out-migration, not the poorest countries. De Haas also emphasizes that human development promotes increased access to education, information, and global networks, which in turn raises life aspirations and broadens individual mobility horizons. People become more aware of economic opportunities abroad and have the ability to pursue them. According to Baumann (2021) , people with better levels of education and health have greater access to information, stronger social networks, and skills better suited to the global labor market, so they are better equipped to undertake international migration. People from countries with rising HDI, especially from developing countries, are more

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

encouraged to migrate to countries with established infrastructure and quality of life, as part of their quest for higher and sustainable welfare. On the other hand, countries with low HDI face structural limitations that may hamper the ability of their people to migrate, even though the urge to do so is strong. Research conducted by Narayan Paudel (2025) entitled "The Influence of Domestic Socioeconomic Development on Migration Decisions in Low- and Middle-Income Countries" found that an increase in HDI in the country of origin has a significant positive effect on emigration. This finding supports the migration transition theory, which explains that in the early stages of development, improvements in education, health, and income provide individuals with new opportunities to migrate. In this context, an increase in HDI not only reflects improved well-being but also enhances financial capacity, access to information, and individual aspirations for global mobility. Thus, socioeconomic development in the country of origin actually encourages emigration because individuals have greater capacity and desire to seek better opportunities abroad. However, this study also shows that when a country reaches a higher stage of development, with an HDI above 0.9, the relationship between HDI and migration begins to decline or is no longer significant. This suggests that at very high levels of development, domestic social and economic conditions are attractive enough to reduce the appeal of migration. These findings illustrate an inverted curve or migration hump, where migration increases in the early stages of development and declines after development reaches maturity. This study provides strong evidence that increases in HDI in the country of origin can encourage out-migration, particularly during the early transitional phase of development, and is highly relevant to countries like Indonesia, which are still classified as having a medium HDI.

Migration Governance Indicator in Cambodia by IOM (2021) , Cambodia has recorded improvements in human development indicators such as access to education and health, but along with that, the number of migrants has increased. People's increasing capabilities in terms of literacy, information, and financial mobility play a major role in migration decisions. Increased HDI gives individuals and households the capacity to prepare for and finance international migration. This suggests that development growth also opens up opportunities and awareness for out-migration. KNOMAD (World Bank) in Working Paper 51 written by Köppen et al. (2023) mentioned that countries with an increase in HDI, including Indonesia, experienced an increase in out-migration. This is because human development expands individuals' horizons and networks, making it easier to plan and access migration. The report shows that more educated and healthy Indonesians tend to be more prepared to take the risk of migration and see it as an opportunity for social and economic mobility. IOM's World Migration Report (2024) notes that in Laos, the increase in HDI in recent years has resulted in an increasing number of people migrating to neighboring countries such as Thailand and Vietnam. This is explained by the *migration hump* theory, where when a country is in an intermediate stage of development, its people have enough resources and aspirations to migrate. In the context of Laos, improvements in the quality of education and public information allow more people to make migration decisions. The latest data analysis from Myanmar Strategy Support Program (2024) shows that increased access to education and health services, which directly improve the HDI in urban areas, is closely related to outward migration trends, particularly to Thailand and Malaysia. A study based on household surveys in Myanmar found that between December 2021 and June 2023, most migrants who moved abroad did so in search of better jobs. Better access to education and health services in urban areas enables individuals to develop the financial and informational capabilities necessary to plan international migration. Among these migrants, the majority are people from large cities with higher levels of education and access to resources, enabling them to cover travel costs, documentation, and initial capital in their destination countries. Most migration from Myanmar is directed toward Thailand and Malaysia, countries that are geographically and economically more accessible and offer significant employment opportunities in the informal or manufacturing sectors. In other words, despite Myanmar's unstable political context, improvements in the Human Development Index (HDI) in urban areas through advancements in education and healthcare have created the necessary capabilities for migration. This challenges the notion that migration occurs solely as a response to pressure or conflict. Instead, better access to basic services reflects individuals' readiness to migrate for economic reasons. This phenomenon aligns with the income-enabled and aspiration-capability framework, where migration becomes a strategic choice rather than merely an escape from hardship. A World Bank report (2023) shows that the majority of Filipino migrant workers come from secondary to tertiary education backgrounds and have access to job information and training. This suggests that an increase in HDI magnifies migration opportunities as people have the skills, information and networks that support the process. The World Bank also notes that the Philippines' education and job training policies contribute directly to labor migration readiness. Therefore, a rise in HDI directly or indirectly contributes to an increase in out-migration, especially when the level of development is not yet high enough to create local economic opportunities comparable to the destination country.

Social factors reflected in the Human Development Index (HDI), namely education and health, play an important role in encouraging and facilitating out-migration from a country. Education serves as social and cognitive capital that allows individuals to access information regarding job opportunities, visas, and legal systems abroad. Educated individuals have the ability to plan migration legally and strategically. They are also more likely to obtain formal employment abroad because they are qualified in the skills and communication required. Access to healthcare also plays an important role. Physically healthy and productive individuals are better able to meet the requirements of working abroad, especially for sectors such as construction, aged care or manufacturing. Health also impacts migrants' psychological resilience and adaptability to new environments. Countries with improved health systems tend to have productive-age populations that are physically and mentally prepared to take the risk of migration. This is confirmed in the World Migration Report 2024 by IOM (2024) which shows that social development, including health, contributes to increased international mobility. In general, an increase in a country's HDI reflects the population's social capacity,

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

literacy and readiness to take advantage of global opportunities. This is in line with the "migration hump" theory which states that international migration tends to increase in the middle phase of development, when people have enough resources to migrate but still face limited domestic opportunities. Thus, social factors in HDI not only reduce migration pressure, but also create aspirations and impetus for individuals to leave in search of better living conditions.

4. CONCLUSION

This study aims to analyze the influence of socio-economic factors on out-migration rates in five ASEAN countries with negative net migration, namely Indonesia, Cambodia, Laos, Myanmar, and the Philippines, using a panel data regression approach and the Fixed Effect Model (FEM). The results of the analysis indicate that wage levels, unemployment rates, labor force size, and the Human Development Index (HDI) significantly influence out-migration rates. Specifically, higher wages and HDI levels have a positive impact on out-migration, suggesting that migration is not solely driven by economic desperation but also by increased individual capacity to migrate. High unemployment also drives individuals to migrate in search of better job opportunities abroad, while high labor force participation within the country tends to deter out-migration. Thus, all alternative hypotheses in this study can be accepted, and the research objectives have been achieved, namely to identify the main socio-economic factors influencing out-migration decisions from the country of origin in the ASEAN region. However, this study has several limitations that need to be noted. First, the limited scope of the study, which only covers five ASEAN countries, means that the results cannot be generalized to the entire Southeast Asian region. Second, the variables used only cover economic aspects and human development indicators, without including political, socio-cultural, and migration policy factors that could significantly influence migration behavior. Third, the limitations of time-series data from some countries, as well as the exclusion of explicit analysis of extraordinary events such as the COVID-19 pandemic, may affect the temporal interpretation of migration trends. Therefore, further research is recommended to expand the scope of analysis to include more countries with diverse economic and demographic characteristics, as well as additional variables such as institutional quality, crime rates, security, social conflict, and applicable visa or immigration policies. A mixed-methods approach is also recommended to combine the strengths of quantitative analysis and qualitative insights for a more comprehensive understanding. From a practical perspective, governments of migrant-sending countries need to develop evidence-based policies focused on improving labor quality, strengthening domestic labor markets, and facilitating safe and legal migration, so that population mobility can support sustainable development without causing significant loss of productive human resources.

REFERENCES

(IOM), I. O. for M. (2023). *Migration in the Kingdom of Cambodia A COUNTRY PROFILE 2023*.

Aftrisixsilia, C., & Irsad. (2025). *The Impact of Unemployment and Poverty on Indonesia ' s Foreign Labor Migration In North Sumatera TALENTA Conference Series The Impact of Unemployment and Poverty on Indonesia ' s Foreign Labor Migration In North Sumatera*. *8*(2). https://doi.org/10.32734/lwsa.v8i1.2372

Bah, T. L., Kone, Z. L., & Murray, S. (2020). Migration decisions in low- and middle-income countries: A review of recent evidence. In *World Bank Policy Research Working Paper No. 9415*. The World Bank. Retrieved from The World Bank website: https://documents.worldbank.org

Baltagi, B. H. (2021). Econometric analysis of Panel Data Sixth Edition. In *Springer Texts Business and Economics*.

Baltagi, B. H. (2024). Hausman's Specification Test for Panel Data: Practical Tips. In C. F. Parmeter, M. G. Tsionas, & H.-J. Wang (Eds.), *Essays in Honor of Subal Kumbhakar* (pp. 13–24). Emerald Publishing Limited. https://doi.org/10.1108/S0731-905320240000046002

Baumann, F. (2021). The Next Frontier—Human Development and the Anthropocene: UNDP Human Development Report 2020. *Environment*, *63*(3), 34–40. https://doi.org/10.1080/00139157.2021.1898908

Chasanah, S. N. (2022). *Analisis Faktor-Faktor Yang Mempengaruhi Migrasi Tenaga Kerja Indonesia (TKI) Ke Luar Negeri (Studi Kasus Provinsi di Pulau Jawa Tahun 2013-2020)*. Repositori Universitas Tidar

Cookey, D. I. F., & Ochuba, O. I. (2024). *Unemployment and Migration in Nigeria, An Empirical Investigation*. *VIII*(1), 223–235. https://doi.org/10.47772/IJRISS

Czaika, M., & Reinprecht, C. (2023). The drivers of global migration: Evidence from long-term panel data. *International Migration Review*. https://doi.org/10.1177/01979183221126840

Dewi Anggraeni Chairunnisa, A., & Fauzan, A. (2023). Implementation of Panel Data Regression in the Analysis of Factors Affecting Poverty Levels in Bengkulu Province in 2017-2020. *EKSAKTA: Journal of Sciences and Data Analysis*, *4*(February), 40–45. https://doi.org/10.20885/eksakta.vol4.iss1.art5

Fabo, B., Vancova, K., & Broz, V. (2021). Joblessness and Migration: Evidence from the Caucasus and Central Africa. *International Labour Review*, *160*(3), 415–438. https://doi.org/10.1111/ilr.12216

Grebeniyk, A., Aleshkovski, I., & Maksimova, A. (2021). The Impact of Labor Migration on Human Capital Development. *Migraciones Internacionales*, *12*, 1–21. Retrieved from https://doi.org/10.33679/rmi.v1i1.2190

Hsiao, C. (2022). Analysis of Panel Data Fourth Edition. In *Analysis of Panel Data*. Cambridge University Press. https://doi.org/10.1017/cbo9781139839327

ILO. (2023). Employment challenges and policies in ASEAN. In *ILO Brief*.

International Labour Organization. (2022). World Employment and Social Outlook Trends 2022. In *World Employment & Social Outlook (WESO)*. Retrieved from https://labour.gov.tt/resources/articles/world-employment-and-social-outlook-2022-trends-report

International Labour Organization. (2024). *Global Employment Trends for Youth 2024: Navigating Labour Markets Post-COVID*. ILO.

ISSN 2722-841X (Media Online)
Vol 6, No 1, July 2025, Page 64-76
DOI: 10.47065/arbitrase.v6i1.2516
https://djournals.com/arbitrase

Retrieved from ILO website: https://www.ilo.org/global/publications
IOM. (2021). *Migration Governance Indicators*.
IOM. (2022). *World Migration Report 2022*. International Organization for Migration.
IOM. (2024). *World Migration Report 2024*. https://doi.org/doi:
IOM Asia-Pacific Regional Data Hub. (2020). *Asia – Pacific Migration Data Report 2020 Migration Data Report 2020*.
Köppen, B., Muenz, R., & Buettner, T. (2023). *Review of global flow estimates and the identification of major migration corridors*.
Le Gallo, J., & Sénégas, M. A. (2023). On the Proper Computation of the Hausman Test Statistic in Standard Linear Panel Data Models: Some Clarifications and New Results. *Econometrics*, *11*(4). https://doi.org/10.3390/econometrics11040025
Listanto, A. (2025). *Analisis Migrasi Internasional Tenaga Kerja Indonesia : Pendekatan Panel Analisis*. Repositori Universitas Sriwijaya
Manchin, M. (2025). Global Evidence on the Relative Importance of Nonfinancial Drivers of International Migration Intentions. *International Migration Review*, *59*(1), 165–204. https://doi.org/10.1177/01979183231162627
Myanmar Strategy Support Program. (2024). Those who leave and those who stay: Individual migration in Myanmar during a time of crisis. In *International Food Policy Research Institute*.
Naimur Rahman, & Rafiq, F. (2020). Migration Pattern and Urban Informal Sector of Bangladesh The Applicability of the Harris Todaro Migration Model in the Presence of COVID 19 Outbreak. *International Journal of Trend in Scientific Research and Development*, *4*(6), 1367–1368.
Napitupulu, R. B., Simanjuntak, T. P., Hutabarat, L., Damanik, H., Harianja, H., Sirait, R. T. M., & Tobing, C. E. R. L. (2021). *Penelitian Bisnis, Teknik dan Analisa dengan SPSS-STATA-Eviews*.
Narayan Paudel, S. (2025). The Influence of Domestic Socio-Economic Development on Migration Decisions in Low and Middle-Income Countries: A Migration Capabilities Perspective. *Journal of Asian Development Studies*, *14*(1), 1–27. https://doi.org/10.62345/jads.2025.14.1.1
Niu, F. (2022). A push-pull model for inter-city migration simulation. *Cities*, *131*(March), 104005. https://doi.org/10.1016/j.cities.2022.104005
OECD. (2024). Labor Migration in Asia. In *International Migration Review* (Vol. 25). OECD. https://doi.org/10.1787/9b45c5c4-en
Přívara, A., Masárová, T., & Tupá, M. (2023). Migration and Labour Market Competitiveness: The Case of EU. *Journal of Competitiveness*, *15*(1). https://doi.org/10.7441/joc.2023.01.08
Ramadhany, M. N. (2020). Analisis Faktor-Faktor yang Mempengaruhi Tingkat Migrasi Keluar Masyarakat Kab/Kota Madura. *Brawijaya Knowledge Garden*, 1–109.
Sancar, C., & Akbaş, Y. E. (2022). The Effect of Unemployment and Urbanization on Migration in Turkey: An Evaluation in terms of the Harris-Todaro Model. *Sosyoekonomi*, *30*(51), 215–239. https://doi.org/10.17233/sosyoekonomi.2022.01.11
Santoso, B. M., & Artaningtyas, W. D. (2024). Determinan Migrasi Internasional Pekerja Migran Indonesia Tahun 2017-2022. *Jurnal Ekonomi Regional*, *16*(1), 29–38.
Sinaga, J. P. (2020). *Determinan Migrasi Internasional Penduduk Pulau Jawa*.
Sudibyo, T., Satris, R., & Amrullah, Y. A. (2022). Kajian Faktor Migrasi Internasional Terhadap Tenaga Kerja Indonesia Di Kabupaten Kulon Progo, Yogyakarta, Indonesia. *Dauliyah Journal of Islamic and International Affairs*, *7*(1), 130. https://doi.org/10.21111/dauliyah.v7i1.7616
Tatsiramos, K., & Zimmermann, K. F. (2023). Unemployment and Labour Mobility: Panel Evidence from Germany. In *IZA Discussion Paper No. 16104*. IZA. Retrieved from IZA website: https://www.iza.org/publications/dp/16104
Todaro, M. P., & Smith, S. C. (2020). Economic Development. Thirteenth Edition. In *Pearson*. Retrieved from https://www.mkm.ee/en/objectives-activities/economic-development
Veronese, G., Pepe, A., & Vigliaroni, M. (2021). An exploratory multi-site mixed-method study with migrants at Niger transit centers: The push factors underpinning outward and return migration. *International Social Work*, *64*(4), 539–555. https://doi.org/10.1177/0020872818819736
World Bank. (2020). *Indonesia's Occupational Employment Outlook Indonesia's Occupational Employment Outlook*.
World Bank. (2023). *Philippine Jobs Report*.
World Bank. (2024). *Compounding Crises Special Focus : International Migration from Myanmar December 2024*.