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Determinants of International Migration: A Panel Data Evidence from Indonesia

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ABSTRACT

Research Originality: This research is original in integrating education, unemployment, minimum wages, and poverty into a panel-data framework to analyze international labor migration across Indonesian provinces.

Research Objectives: This study aims to investigate the impact of average educational attainment, the open unemployment rate, provincial minimum wage, and poverty rate on international migration of Indonesian workers.

Research Methods: This study uses panel data from 32 provinces in Indonesia for the period 2010 to 2025 and applies a panel regression approach with a Fixed Effects Model.

Empirical Results: The findings indicate significant influences from both dependent and independent variables. Average years of education, open unemployment rate, provincial minimum wage, and poverty are shown to have a negative and significant influence on the international migration patterns of Indonesian migrant workers.

Implications: Policymakers should focus on affordable migration financing schemes to address poverty constraints, vocational training relevant to the international labor market, and strengthening the migration ecosystem in areas with high unemployment rates.

Keywords:
international migration; education; unemployment; minimum wage; poverty

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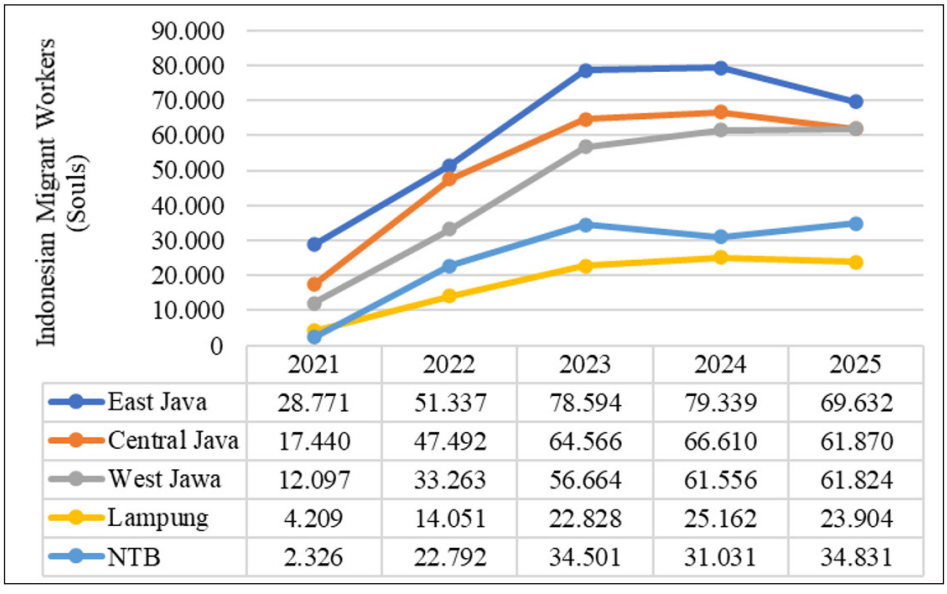
INTRODUCTION

Advances in transportation, communication, and information flows have reduced the costs of migration and expanded mobility in almost all regions of the world (Al-Dalahmeh et al., 2021; Liu et al., 2025; Tolesh & Biloshchytska, 2024). The number of international migrants worldwide increased from 275 million in 2020 to 304 million in 2024, a 10.5 percent increase (United Nations, 2024). Migration is generally undertaken by workers seeking employment abroad to earn higher incomes and support their families through remittances (Atiyatna et al., 2024; Baite & Panda, 2025; Khan et al., 2023). Therefore, international labor migration is understood as cross-border mobility in search of employment that generates economic benefits for migrants, their countries of origin, and the economies of their destination countries (Mitterbacher et al., 2024).

In this global context, Indonesia is one of the largest labor-sending countries in Southeast Asia. Data from the Indonesian Migrant Workers Protection Agency (BP2MI) shows that the number of Indonesian migrant workers increased by 27.6 percent, from 233,029 in 2010 to 296,948 in 2025 (KP2MI/BP2MI, 2026). Figure 1 shows that the highest migration originated from East Java, Central Java, West Java, Lampung, and West Nusa Tenggara. East Java is recorded as the largest contributor, with a sharp increase from 28,771 people in 2021 to 79,339 people in 2024, before declining to 69,632 people in 2025. Migrant workers contributed approximately USD 15.7 billion in remittances to the Indonesian economy throughout 2024 (KP2MI/BP2MI, 2026).

Figure 1. Migration trends based on the five provinces with the highest number of migrant workers during 2021-2025



	2021	2022	2023	2024	2025
East Java	28.771	51.337	78.594	79.339	69.632
Central Java	17.440	47.492	64.566	66.610	61.870
West Jawa	12.097	33.263	56.664	61.556	61.824
Lampung	4.209	14.051	22.828	25.162	23.904
NTB	2.326	22.792	34.501	31.031	34.831

Source: KP2MI/BP2MI (2026)

Most Indonesian migrants work in the informal sector and low-skilled jobs, such as domestic work, agriculture, and nursing, because these sectors offer higher wages than in Indonesia, even for those without specialized skills (Shahiri et al., 2021). This

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migration flow primarily originates in low- and middle-income countries and flows to developed countries (Schäfer & Henn, 2023). The dominance of Indonesian migrants in unskilled jobs reflects the state of the national education system. Despite showing gradual improvement, the Indonesian education system has not yet achieved the target of twelve years of compulsory education.

According to the Central Statistics Agency (BPS), in 2025, the average national education level will be only nine years, with significant variations between provinces, ranging from 8.07 years in West Kalimantan to 11.59 years in DKI Jakarta. BPS data for 2025 shows socio-economic differences between regions reflected in open unemployment rates varying from 1.49 percent in Bali to 6.77 percent in West Java, provincial minimum wages that vary significantly from Rp 2,036,947 in Central Java to Rp 5,067,381 in DKI Jakarta, and poverty rates ranging from 3.72 percent in Bali to 19.16 percent in East Nusa Tenggara. These conditions indicate that provincial socio-economic characteristics can systematically influence migration decisions. However, the interaction between average years of schooling, open unemployment rates, provincial minimum wages, and poverty in shaping migration patterns over time remains inadequately understood.

The existing literature identifies education, unemployment, minimum wages, and poverty as key determinants of international migration, yet empirical findings remain inconsistent. Education exhibits a nonlinear relationship with migration: higher education increases permanent migration among skilled workers, while lower education is associated with temporary labor migration (Popescu & Pudelko, 2024). Park et al. (2024) show that higher education increases the propensity to migrate, while Fenoll & Kuehn (2017) found that increasing primary education actually reduces the likelihood of migration because higher education creates better domestic job opportunities. Conversely, Atiyatna et al. (2024) and Puspitasari (2017) found no significant effect of education levels on labor migration in Indonesia.

Unemployment also shows varying effects in various empirical studies. Unemployment occurs when the number of job seekers exceeds the number of available job vacancies and can hinder a country's economic progress (Grecu et al., 2024). Komariyah & Sutantio (2020) and Muslihatinningsih et al. (2020) found that higher unemployment rates positively affect migration flows in Indonesia, consistent with evidence from Europe, Mihi-Ramírez et al. (2014), which shows that increasing unemployment is positively associated with emigration, and Dritsaki & Dritsaki (2024), which found that rising unemployment correlates with higher immigration rates. The growing number of immigrant workers helps fill labor shortages in certain sectors, thereby reducing unemployment rates in the destination countries (Lakshmanasamy, 2021; Tomohara, 2022).

Regarding wages, findings indicate that significant wage differences between the home and host countries are a major factor driving migration. (Lakshmanasamy, 2021; Martin & Termos, 2015; Shahiri et al., 2021). According to neoclassical theory (Massey et al., 1993; Park et al., 2024). Research from Indonesia by Atiyatna et al. (2024) and Muslihatinningsih et al. (2020) found that increasing domestic wages reduces the

propensity to migrate. However, the minimum wage policy in Indonesia applies only to permanent formal-sector workers, leaving most informal-sector workers with wages below the minimum standard (Siregar, 2022). This structural inequality can encourage workers to migrate internationally in search of higher incomes and better job protection.

The relationship between poverty and migration is among the most theoretically debated. The New Economic Labor Migration (NELM) approach views migration as a household strategy for income diversification and risk management (Massey et al., 1993; Stark & Bloom, 1985), supported by Muslihatinningsih et al. (2020), who found that poverty was positively associated with international migration from Java. However, Hagen-Zanker et al. (2025), based on a survey of 13,000 young respondents in 10 countries using multilevel mixed logistic regression, confirm that extreme poverty tends to reduce the desire and ability to migrate due to limited resources, social networks, and access. These findings suggest a nonlinear relationship between poverty and migration, where moderate poverty may encourage migration. In contrast, extreme poverty may actually constrain it, a dynamic that has not been fully explored in studies in Indonesia, especially given the large variation in poverty levels across regions.

This study differs from previous research in terms of data coverage, time span, and methodology. Atiyatna et al. (2024) focused on 10 provinces in Sumatra during 2017-2021, while Muslihatinningsih et al. (2020) analyzed six provinces in Java during 2010-2019. In contrast, this study uses a national panel dataset covering 32 provinces in Indonesia over a longer period, 2010-2025, allowing for a more comprehensive analysis of regional and temporal dynamics. Furthermore, unlike Komariyah & Sutantio (2020), who use time-series data with an OLS approach, this study employs panel-data regression, which better captures cross-sectoral and temporal variations in the determinants of labor migration.

Although research on international labor migration in Indonesia continues to grow, significant gaps remain in the literature. Existing studies are generally limited to specific regions, use national aggregate data, or analyze the determinants of migration separately over relatively short periods, thus failing to capture interprovincial heterogeneity and the simultaneous interaction of key socio-economic factors. No study has systematically analyzed the combined and long-term effects of average years of education, open unemployment rates, provincial minimum wages, and poverty across all provinces in Indonesia. This study fills this gap by presenting a comprehensive panel analysis of international labor migration across 32 provinces from 2010 to 2025. It analyzes the individual and combined effects of education, unemployment, minimum wages, and poverty on outbound migration flows from provinces. It evaluates variations in their impacts across regions and changes over time. Thus, the outcomes of this research are expected to serve as an evidence-based policy foundation for provincial and national governments in designing more targeted interventions, while also supporting the formulation of national strategies for migrant worker protection, international labor cooperation, and remittance management to support regional and national economic development.

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METHODS

This study uses secondary panel data that combines time-series observations with cross-sectional information. The cross-sectional component comprises 32 provinces in Indonesia, and the time dimension spans 2010-2025. The selection of the research period is based on the availability and consistency of data that are relatively more complete and reliable across all provinces since 2010, thereby supporting the validity of the panel data regression analysis. The total sample size in this study is 480 observations, deemed sufficient to support strong statistical inferences while maintaining data quality and comparability across provinces. It should be noted that although Indonesia currently has 38 provinces, this study covers only 32 of them. The other six provinces are excluded due to limited data availability on several research variables during the observation period.

This study positions international labor migration as the dependent variable, operationalized through the total number of Indonesian Migrant Workers (PMI). The independent variables include average length of schooling (RLS), unemployment rate (TPT), provincial minimum wage (UMP), and poverty rate (KE). Data collection was conducted by searching for, gathering, and downloading information from official websites (Syafitri et al., 2025), namely the Central Statistics Agency (BPS), the Indonesian Migrant Workers Protection Agency (BP2MI), and the Ministry of Manpower's One Data portal (Kemnaker). All data were obtained from the official websites of these institutions to ensure authenticity and accuracy. The description of the variables used in this analysis is presented in Table 1.

Table 1. Definition of Variables

Variables	Definitions	Symbol	Sources	References
Indonesian migrant workers (People)	Every Indonesian citizen who works or has worked and received wages outside the territory of the Republic of Indonesia.	PMI	KP2MI/ BP2MI	(Muslihatinningsih et al., 2020)
average length of schooling (Years)	The mean duration of formal schooling attained by the population aged 25 years and older.	RLS	BPS	(Puspitasari, 2017)
Open unemployment rate (%)	The ratio of the number of unemployed people to the total labor force in a particular region and period of time.	TPT	BPS	(Amri et al., 2025)
Provincial minimum wage (IDR)	The minimum wage applicable to workers in all districts/cities within a province.	UMP	Library DPR RI	(Atiyatna et al., 2024; Muslihatinningsih et al., 2020)
Poverty rate (%)	The percentage of the population with a mean monthly per capita expenditure below the poverty threshold is measured.	KE	BAPPENAS	(Amri et al., 2022)

Source: Author calculation

Data analysis was performed using panel data regression, as this method captures cross-sectional and time-series variation simultaneously, controls for unobserved heterogeneity across provinces, and produces more efficient and consistent estimates compared to pure time-series or cross-sectional approaches (Amri et al., 2022). The panel data regression method is used to analyze the relationship between these independent variables and international migration in 32 provinces in Indonesia from 2010 to 2025. This model is specified based on neoclassical migration theory (Massey et al., 1993) and the New Economics of Labor Migration (Stark & Bloom, 1985), which state that differences in wages, job opportunities, and household economic conditions influence migration decisions. The econometric model employed in this study can be articulated as such:

$$LPMI_{it} = \beta_0 + \beta_1 LRLS_{it} + \beta_2\ LTPT_{it} + \beta_3\ LUMP_{it} + \beta_4 LKE_{it} + \varepsilon_{it} \qquad (1)$$

Where $LPMI_{it}$ is the logarithm logarithm of the number of Indonesian migrant workers from province *i* during period *t*. $LRLS_{it}$ is the logarithm of the average length of schooling in province *i* in period *t*. $LTPT_{it}$ is the logarithm of the open unemployment rate in province *i* in period *t*. $LUMP_{it}$ is the logarithm of the provincial minimum wage in province *i* in period *t*. LKE_{it} is the logarithm of the poverty rate in province *i* in period *t*. Furthermore, β_0 is a constant, while β_1-β_4 are the estimated coefficients for the independent variables LRLS, LTPT, LUMP, and LKE. The index *i* indicates the province unit (1, 2, …, 32) and *t* indicates the observation period (2010, 2011, …, 2025). Lastly, ε is the error term in the model.

In the context of panel data regression, the analysis begins with data preparation, including data cleaning, checking for missing values, handling outliers, and transforming all variables to logarithms. All research variables are transformed to natural logarithms to standardize the data scale, reduce potential heteroskedasticity, and facilitate the interpretation of regression coefficients as elasticities, thereby making the estimation results more statistically stable and economically relevant. Next, descriptive statistical analysis is conducted to characterize the research variables (Amri et al., 2022).

In panel data regression, there are three main approaches, namely the Joint Effects Model, the Fixed Effects Model, and the Random Effects Model (Amri, 2020). Selecting the right regression model is crucial for obtaining accurate estimates of the relationships between the variables under study. Therefore, to determine the most appropriate panel regression model, model specification tests are performed, namely the Chow test and the Hausman test (Amri, 2020). The Chow test is used to select between CEM and FEM; a p-value > 0.05 indicates CEM, while a p-value < 0.05 indicates FEM. Next, the Hausman test is performed to determine whether the fixed-effects or random-effects model should be used; if the p-value is> 0.05, this supports the random-effects model. Conversely, if the p-value < 0.05, this indicates that the fixed-effects model is appropriate.

After determining the most appropriate panel regression model, classical assumption tests are performed. In panel data regression, classical assumption tests include tests

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for multicollinearity and heteroscedasticity, where the multicollinearity test assesses the correlation among independent variables. The multicollinearity test used in panel data regression is the Pairwise Correlation method, with a correlation coefficient value < 0.85. Next, a heteroscedasticity test is conducted to examine the consistency of the residual variance. Then, panel data regression is estimated using the selected model, and statistical conclusions are drawn from the interpretation of regression coefficients and hypothesis testing at $\alpha = 0.05$.

RESULTS AND DISCUSSION

Table 2 presents descriptive statistics for the research variables based on panel data from 32 provinces in Indonesia during 2010-2025, yielding a total of 512 observations. Indonesian migrant workers (PMI) number a maximum of 149,936 in West Java Province (2011), a minimum of 1 in North Maluku Province (2020-2021), and an average of 9,911. The substantial standard deviation of 23,332 indicates significant regional disparities in population movements. Average Years of Schooling (RLS) ranges from 5.59 years in Papua Province (2010) to 11.59 years in DKI Jakarta Province (2024), with an average of 8.37 years, suggesting uneven educational attainment across regions. The Open Unemployment Rate (TPT) ranges from 1.40 percent in Bali Province (2018) to 13.74 percent in Banten Province (2011), averaging 5.29 percent, reflecting diverse labor market conditions across regions. Provincial Minimum Wage (UMP) demonstrates considerable variation, ranging from IDR 630,000 in East Java Province (2010) to IDR 5,396,761 in DKI Jakarta Province (2025), with an average of IDR 2,071,588. Finally, Poverty (KE) ranges from 3.47 percent in DKI Jakarta (2019) to 34.10 percent in Papua (2010), with an average of 10.86 percent during the 2010-2025 period, indicating considerable variation across provinces over the study period.

Table 2. Summary Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Indonesian migrant workers (PMI)	512	9,911	23,332	1	149,936
average length of schooling (RLS)	512	8.37	1.07	5.59	11.59
Open unemployment rate (TPT)	512	5.29	2.05	1.40	13.74
Provincial minimum wage (UMP)	512	2,071,588	872,496	630,000	5,396,761
Poverty rate (KE)	512	10.86	5.52	3.47	34.10

Source: The author's calculations using Eviews, 2026

Before estimating a panel data regression, we first selected the best model among the Common Effects Model, Fixed Effects Model, and Random Effects Model using the Chow and Hausman Tests. The test results are presented in Table 3 below. Based on the Chow Test results, a probability value of 0.00 (< 0.05) was obtained, indicating that the Fixed Effect Model is more appropriate. Furthermore, the Hausman test showed a p-value of 0.00 (< 0.05), indicating that the Fixed Effects Model was more appropriate

than the Random Effects Model. Therefore, it was decided to use the Fixed Effects Model in this study.

Table 3. Chow and Hausman Test Results

Effect Test	Chi-Squared	df	P-Value
Chow	1,091	31	0.00
Hausman	24.53	4	0.00

Source: The author's calculations using Eviews, 2026

We conducted multicollinearity tests for the selected model, with the results shown in Table 4. From Table 4, the results of the multicollinearity test using the Pairwise Correlation method indicate that all correlation coefficients between independent variables are less than 0.85. This indicates that there is no multicollinearity in the panel data regression specification used.

Table 4. Multicollinearity Test Results: Pair Wise Correlation

Variable	LRLS	LTPT	LUMP	LKE
LRLS	1			
LTPT	0.32	1		
LUMP	0.55	-0.08	1	
LKE	-0.48	-0.16	-0.30	1

Source: The author's calculations using Eviews, 2026

Furthermore, a heteroscedasticity test was conducted to examine the consistency of residual variance. Figure 2 shows the LPMI residual plot, where the residuals are randomly scattered around zero and have relatively constant variance across all observations. The absence of systematic patterns or funnel shapes indicates that the model satisfies the homoscedasticity assumption. From the residual plot (blue), it can be observed that the values remain within the bounds (500 and -500), indicating that the residual variance is constant. Therefore, it can be concluded that this study does not exhibit heteroscedasticity or passes the heteroscedasticity test, and is worthy of estimation.

The regression model used meets the classical assumptions because it passes the heteroscedasticity and multicollinearity tests; thus, the estimation results are statistically valid and reliable (Table 5). The results of the fixed-effects panel-data estimation across 32 provinces for 2010-2025 showed an adjusted R-squared of 0.89. This indicates that 89 percent of the variation in international migration of Indonesian workers is explained by the independent variables included in the model, while the remaining 11 percent is explained by other factors outside the model. The Prob value (F-statistic) of 0.00 indicates that the model is jointly significant.

The coefficient of average years of education (LRLS) is -1.56 with a p-value of 0.22. This means that a 1 percentage point increase in the growth rate of average years

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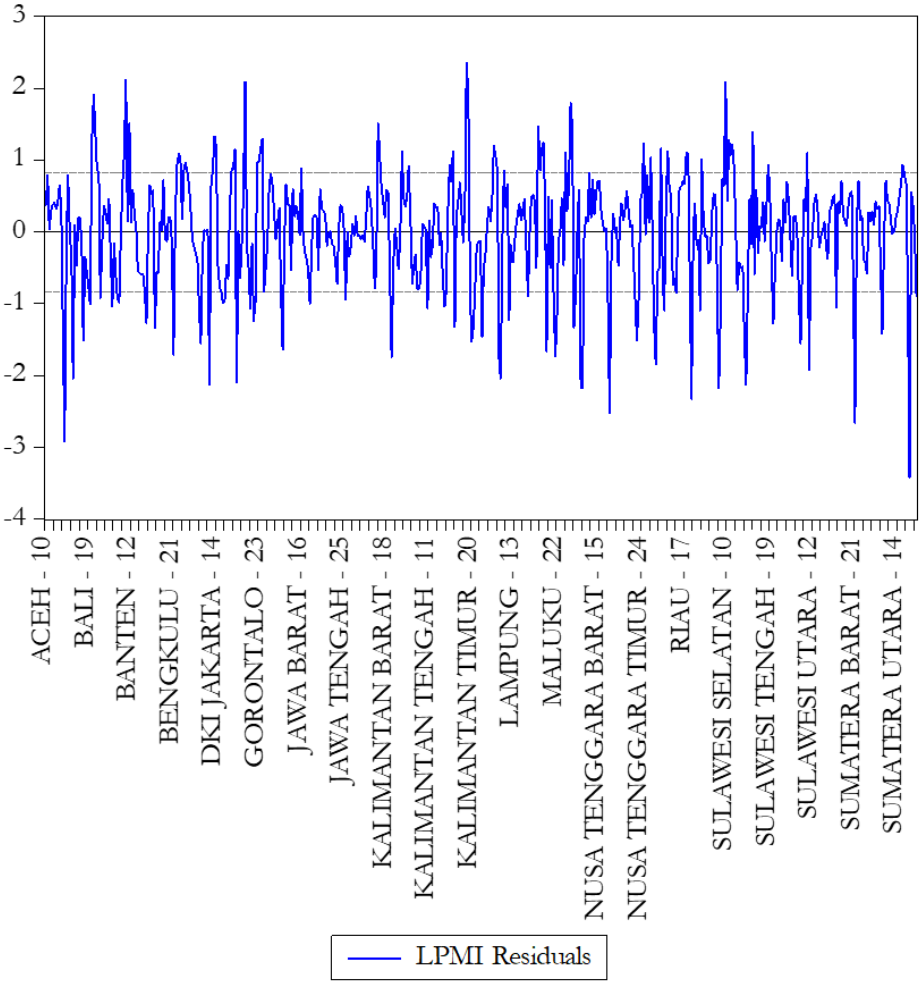
Figure 2. Residual Heteroscedasticity Test



Source: The author's calculations using Eviews, 2026

of education tends to reduce the number of Indonesian migrant workers by approximately 1.56 percentage points, ceteris paribus. However, because the p-value (0.22) is greater than the significance levels (1%, 5%, and 10%), this effect is not statistically significant. The coefficient of the log of the open unemployment rate (LTPT) is -0.71 with a p-value of 0.00. This means that if the unemployment growth rate increases by 1 percentage point, it will reduce the number of Indonesian migrant workers by approximately 0.71 percentage points, ceteris paribus. The coefficient of the logarithmic provincial minimum wage (LUMP) is -1.57 with a p-value of 0.00. This means that every 1 percent increase in the provincial minimum wage will reduce the number of Indonesian migrant workers by approximately 1.57 percent, ceteris paribus. Finally, the log coefficient of the poverty rate (LKE) is -3.14 with a p-value of 0.00. This means that if the poverty rate growth rate increases by 1 percent, it will reduce the number of Indonesian migrant workers by 3.14 percent, ceteris paribus.

Table 5. Panel Regression Estimation Results

Variables	Coefficient	t-Statistic	Prob.
C	40.94	12.67	0.00***
LRLS	-1.56	-1.23	0.22
LTPT	-0.71	-3.42	0.00***
LUMP	-1.57	-7.89	0.00***
LKE	-3.14	-5.73	0.00***
R-square	0.90		
Adjusted R-squared	0.89		
F-statistic	120.79		
Prob(F-statistic)	0.00		
Durbin-Watson Stat	1.10		

Note:*** significant at 1%, ** significant at 5%, * significant at 10%

Source: The author's calculations using Eviews, 2026

Table 3 shows that the panel regression model between education, unemployment rate, provincial minimum wage, poverty rate, and international labor migration in 32 Indonesian provinces from 2010 to 2025 can be expressed in the following equation:

$$LPMI_{it} = 40.94_{it} - 1.56LRLS_{it} - 0.71LTPT_{it} - 1.57LUMP_{it} - 3.14LKE_{it} + \varepsilon_{it} \quad (2)$$

The average length of schooling does not have a significant effect on international labor migration in Indonesia. This finding is consistent with research by Atiyatna et al. (2024) and Puspitasari (2017), which also shows that education level does not significantly influence labor migration decisions in Indonesia. The structure of Indonesia's international labor migration explains this insignificance. According to BP2MI (2025) data, of the 296,948 Indonesian migrant workers placed in 2025, 52.3 percent, or 155,302, worked in the informal sector, with domestic workers being the largest category. Informal sector jobs, such as domestic work, care work, and manual labor, do not require higher education. Furthermore, there are no provisions regarding the minimum education level for prospective Indonesian workers placed abroad (Puspitasari, 2017), provided they have the basic reading and writing skills necessary to follow the pre-departure briefing process (Puspitasari, 2017). Employers in destination countries place greater emphasis on work experience and job readiness than on formal educational qualifications. Therefore, increasing the average length of schooling, for example, from elementary school to junior high school or from junior high school to senior high school, does not improve migrant workers' competitiveness in these types of jobs.

In addition, structural barriers in destination countries, such as diploma recognition, administrative costs, and language requirements, limit the utilization of basic educational qualifications (Fenoll & Kuehn, 2017). This finding does not fully support the human capital theory (Park et al., 2024; Popescu & Pudelko, 2024), which found a positive relationship between education and migration. However, this theory generally applies when education represents upper secondary or higher qualifications for skilled jobs in

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the formal sector. Nevertheless, education remains important for integration into the domestic labor market, but it is not a primary factor in international migration because job opportunities abroad are still dominated by the informal sector.

The unemployment rate shows a negative impact on international migration, contrary to the push-pull migration theory and several previous studies. This finding is in contrast to Komariyah & Sutantio (2020), Mihi-Ramírez et al. (2014), and Muslihatinningsih et al. (2020), who found a positive correlation between unemployment and emigration. However, our results do not completely contradict Atiyatna et al. (2024), who found that unemployment does not significantly drive migration when other economic factors dominate. Empirical evidence from Indonesia provides strong support for this counterintuitive relationship. BP2MI (2025) data shows that East Java, with an unemployment rate of 3.88 percent, sent 69,632 migrant workers abroad, while Banten Province, with a higher unemployment rate of 6.69 percent, sent only 3,609. The pattern suggests that provinces with lower unemployment rates have stronger economic capacity, better institutional support systems, and more established migration networks to facilitate large-scale international migration.

This study contributes to the development of migration theory by highlighting the importance of liquidity constraints. International migration requires substantial initial investments in administrative costs, training, transportation, and documentation. Unemployed individuals generally lack sufficient financial resources to cover these costs (Liu et al., 2025). Therefore, our findings extend dual labor market theory and world-systems theory by showing that unemployment pressure alone is insufficient to drive migration without minimal economic capacity and regional-level institutional structures.

The provincial minimum wage (UMP) also negatively affected international labor migration. This result strongly supports the research Atiyatna et al. (2024) and Muslihatinningsih et al. (2020), and is consistent with neoclassical economic theory, which views migration as a response to wage differences (Massey et al., 1993). Therefore, this study strengthens the wage differential hypothesis in the Indonesian context. In Indonesia, where minimum wage policies primarily apply to the formal sector (Siregar, 2022). Rising wages signal increased well-being and income stability in the domestic labor market. As domestic wages rise, international migration becomes less attractive, especially considering job insecurity, cultural adjustment challenges, and family separation in the destination country.

Building on the findings of Sy & Hosoe (2023), this study shows that minimum wage increases do not completely stop migration, but rather make it more selective. Workers with specialized skills or strong migration networks continue to migrate, while others choose to remain in the domestic labor market. This explains why migration flows continue despite wage increases, albeit at lower levels. This selectivity effect is an important contribution to understanding the relationship between wages and migration in developing countries.

Finally, the poverty level shows a negative effect on international labor migration. This result is in line with research by Hagen-Zanker et al. (2025), which states that extreme poverty hinders households' ability to migrate because when all income is allocated to basic needs, households lack the financial resources to cover the significant initial costs of migration (Liu et al., 2025). Empirical evidence from Indonesia strongly supports this relationship. BP2MI (2025) reports that West Nusa Tenggara (NTB), with a poverty rate of 11.78 percent, sent 34,831 migrant workers abroad, while East Nusa Tenggara (NTT), with a poverty rate of 18.60 percent, sent only 4,128. East Java, with a lower poverty rate of 9.50 percent, sent more migrants, a total of 69,632 people. Communities with relatively better economic conditions have a greater capacity to finance international labor migration.

However, our findings differ from those of Muslihatinningsih et al. (2020), which found a positive relationship between poverty and migration. This difference is theoretically significant because it demonstrates a threshold effect. Moderate levels of poverty may increase motivation to migrate, but at severe levels, it creates binding financial constraints that prevent migration. Migration is not a rational choice for the poorest households, but rather a strategy available only to groups with minimal economic capacity (Massey et al., 1993). Furthermore, this study reexamines the dominant narrative regarding remittances as a poverty-reduction mechanism. Although remittances are often considered an effective tool for poverty reduction, migration does not always guarantee improved household welfare. Vulnerabilities arising from pre-migration debt, labor exploitation in the destination country, and high living costs abroad can actually create new conditions of poverty for migrant workers and their families (Ghimire & Neupane, 2025; Hornung et al., 2025). Therefore, our research contributes to reconceptualizing poverty not as the primary driver of migration, but as a structural barrier that hinders access to international migration opportunities.

CONCLUSION

This study aims to analyze the influence of education, the open unemployment rate, provincial minimum wage, and poverty on international migration of Indonesian workers across 32 provinces during 2010-2025 using a Fixed Effects Model. The results indicate that regional economic conditions play a significant role in determining migration. Average years of education do not have a significant effect, indicating that primary and secondary education are not yet relevant to migration patterns dominated by the informal sector. In contrast, the unemployment rate and provincial minimum wage have a negative impact, as financial constraints stemming from unemployment and increased domestic welfare reduce the incentive to migrate. The poverty rate also has a negative impact and is the most dominant factor, strengthening the poverty trap hypothesis because poor households cannot afford the initial costs of migration. Overall, migration requires minimal economic capacity and is not simply a response to economic pressure.

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Based on the study's findings, the central government, regional governments, and the Indonesian Migrant Workers Association (BP2MI) need to design a more integrated migration policy. This effort includes strengthening vocational training and skills certification to prevent migration from being concentrated solely in the informal sector. In provinces with high unemployment rates but low migration rates, strengthening the migration ecosystem through training and credible placement agencies is crucial to expanding access to international employment. Furthermore, the government needs to provide affordable migration financing schemes, such as subsidies for administrative and transportation costs, to assist poor households who wish to migrate but are constrained by costs. Furthermore, the government and BP2MI need to ensure legal protection and access to decent work for migrant workers so that migration effectively reduces poverty and unemployment and improves the welfare of the Indonesian people. For future research, we recommend using individual microdata and analyzing by occupation and destination country to gain a more comprehensive understanding of the factors influencing Indonesia's international labor migration.

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