

**THE EFFECT OF FOREIGN WORKER MIGRATION ON EMPLOYMENT IN  
THREE COUNTRIES (INDONESIA, MALAYSIA, PHILIPPINES)**

**An Undergraduate Research Proposal**



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## **ABSTRACT**

This study aims to analyze the effect of foreign worker migration on employment in the Indonesian labor market. The increasing number of foreign workers has raised concerns regarding its impact on domestic labor opportunities, particularly in developing countries such as Indonesia. While foreign labor can contribute to economic growth through technology transfer and knowledge exchange, it may also increase competition in the labor market.

This research uses a quantitative method with panel data from three Southeast Asian countries: Indonesia, Malaysia, and the Philippines during the period of 2014–2024. The variables used include employment as the dependent variable, while Gross Domestic Product (GDP), unemployment, labor force, and migration are used as independent variables. The data were analyzed using panel data regression with EViews 12 software. Based on the Chow Test, the Common Effect Model (CEM) was selected as the most appropriate model.

The results show that migration has a negative and statistically significant effect on employment. This indicates that the increase in foreign worker migration may reduce employment opportunities for domestic workers due to increased competition in the labor market. Therefore, appropriate government policies are needed to balance the benefits of foreign labor with the protection of domestic employment.

**Keywords:** foreign workers, migration, employment, labor market

## ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh migrasi tenaga kerja asing terhadap tingkat penyerapan tenaga kerja di pasar tenaga kerja Indonesia. Peningkatan jumlah tenaga kerja asing menimbulkan berbagai perdebatan mengenai dampaknya terhadap kesempatan kerja bagi tenaga kerja domestik, khususnya di negara berkembang seperti Indonesia. Di satu sisi, tenaga kerja asing dapat memberikan kontribusi terhadap pertumbuhan ekonomi melalui transfer teknologi dan pengetahuan, namun di sisi lain dapat meningkatkan persaingan dalam pasar tenaga kerja.

Penelitian ini menggunakan metode kuantitatif dengan data panel dari tiga negara Asia Tenggara yaitu Indonesia, Malaysia, dan Filipina selama periode 2014–2024. Variabel yang digunakan meliputi employment sebagai variabel dependen, serta Gross Domestic Product (GDP), unemployment, labor force, dan migration sebagai variabel independen. Analisis data dilakukan menggunakan regresi data panel dengan bantuan perangkat lunak EViews 12. Berdasarkan hasil Chow Test, model yang paling sesuai digunakan adalah Common Effect Model (CEM).

Hasil penelitian menunjukkan bahwa migrasi memiliki pengaruh negatif dan signifikan terhadap employment. Hal ini menunjukkan bahwa peningkatan migrasi tenaga kerja asing berpotensi mengurangi kesempatan kerja bagi tenaga kerja domestik akibat meningkatnya persaingan dalam pasar tenaga kerja. Oleh karena itu, diperlukan kebijakan pemerintah yang tepat untuk menyeimbangkan manfaat tenaga kerja asing dengan perlindungan terhadap tenaga kerja domestik.

**Kata kunci:** tenaga kerja asing, migrasi, employment, pasar tenaga kerja

# **CHAPTER I INTRODUCTION**

## **1.1 Background**

The discussion and issues surrounding employment and foreign labor, often referred to as Foreign Workers (or TKA, Tenaga Kerja Asing), are common phenomena in public discourse. The topic of foreign labor is frequently misconstrued as a political issue and is seen as neglecting the abundant local workforce available in Indonesia. As discussions about foreign labor are frequently held, there is a need to provide the public with a deeper understanding of what foreign labor is and why it plays a significant role in the economic development and progress, particularly in Indonesia. In terms of definition, foreign labor can be described as foreign nationals who hold the appropriate visas and intend to work in Indonesia, in accordance with the regulations outlined in the Minister of Manpower Regulation No. 10/2018 concerning the Procedures for the Utilization of Foreign Workers (TKA) (Permenaker No. 10/2018). Foreign labor plays a vital role in Indonesia's economic growth, as mentioned earlier, and their presence cannot be simply disregarded. TKA fulfills several roles, serving as a platform for knowledge exchange and a channel for the transfer of technology. These exchanges occur due to the direct involvement of Indonesian labor (TKI) and TKA in the same field, as well as the technology transfer processes that enhance the skills and quality of the local workforce through exposure to foreign technological advancements and cultural influences.

A comprehensive understanding of foreign labor requires careful

consideration of their crucial role in the economic development of Indonesia. However, it is essential to recognize that domestic local labor cannot be disregarded in the context of the phenomenon of the rapid influx of foreign labor into the country, as these two factors are interrelated. This can be observed through various factors influencing domestic employment, including Indonesia's geographical factors, population size and density, and the intense competition for available job opportunities, which do not align proportionately with Indonesia's population. Additionally, external factors, such as the entry of foreign labor into Indonesia, contribute to this dynamic. The arrival and utilization of Foreign Workers (TKA) can pose a threat if not properly controlled. Conversely, they can also provide benefits if the government effectively seizes the opportunity to collaborate with TKA within the country (Abduh, 2020). In this regard, supervision of TKA utilization is crucial and should be carried out to its fullest extent to maximize the potential for optimal outcomes. Foreign labor entering and working within Indonesian territory must adhere to rigorous mechanisms and procedures, starting from the selection process to implementation and oversight. The issue of foreign labor was initially addressed and regulated in the Republic of Indonesia Law No. 3 of 1958 on Foreign Labor in Indonesia, and subsequently underwent changes with the enactment of the Republic of Indonesia Law No. 13 of 2003 on Labor.

The issue of competition for employment opportunities in Indonesia is exacerbated by the state of its human resources, which, for the most part, are

considered subpar, and even very deficient when compared to international standards, including those within the ASEAN region. This deficiency reduces the competitive edge among the workforce due to perceived inadequacies in their abilities and qualifications. The ASEAN Economic Community (AEC) plays a pivotal role in affecting the flow of trade and labor, extending competition in the job market on an international scale. Nations with a well-qualified workforce benefit more and gain additional advantages, meaning that the Indonesian labor market is also contested by neighboring ASEAN countries. This is a significant contributing factor to why Indonesian workers face difficulties competing domestically. According to research conducted by the Institute for Management Development (IMD), it is evident that the competitiveness of the Indonesian workforce lags behind other ASEAN countries such as Singapore, Malaysia, and Thailand. Globally, Indonesia ranks 47th out of 63 nations. This decline in competitiveness among domestic workers continues to worsen. Data from the Ministry of Manpower and Transmigration highlights several challenges still faced in Indonesia, including low educational levels among the workforce and a lack of alignment between education and employment (mismatch).

In accordance with the Minister of Manpower Regulation No. 16 of 2015 regarding the Procedures for the Utilization of Foreign Workers (TKA), Article 3, paragraphs 1 and 2, concerning the provisions for employing foreign workers in companies, it is stipulated that companies must prioritize Indonesian labor over foreign labor. Regulations pertaining to the

utilization and procedures for employing foreign labor are frequently encountered, but in practice, these laws and regulations often remain confined to paper, with incomplete implementation in the workplace. It is well-known that the number of Foreign Workers (TKA) has been increasing every year, concurrently with the continuous growth of the labor force in Indonesia. This situation has led to a rise in unemployment rates and an increase in informal sector employment in certain fields. Meanwhile, some segments of the workforce with surplus capital choose to migrate abroad for employment, even in sporadic or temporary positions.



Source: World Bank

*Figure 1.1 Total of Foreign Force in Indonesia*

Based on the data obtained from the chart above, it can be substantiated that the number of foreign labor force arrivals in Indonesia has consistently remained above 100,000 workers per year in 2019. However, there was a decline in the years 2020 to 2021. Subsequently, there was a resurgence in the

numbers, surpassing the levels seen in 2019, although only slightly. This data illustrates the increasingly fierce competition for employment opportunities within the country, which intensifies year by year. To delve further into this matter, it is important to acknowledge that Foreign Workers (TKA) face limitations in terms of job opportunities, both in terms of positions and the number of positions available to them. In essence, the purpose of importing foreign labor is to fill specific job vacancies that cannot be filled by domestic labor in Indonesia. This aligns with Article 27, paragraph 2 of the 1945 Constitution, which states, "Every citizen is entitled to a decent job and livelihood for humanity." This implies that the interests and rights of Indonesian workers should take precedence over foreign labor, which is also in line with the regulations stipulated in the Minister of Manpower Regulation No. 16 of 2015, as mentioned earlier.

In a previous study authored by Rachmad Abduh (2020), titled "The Social Impact of Foreign Labor in Indonesia," it is once again emphasized that the government firmly believes that the placement of foreign labor is primarily aimed at eliminating colonial elements in our country's economic structure, particularly in vital sectors for the national economy. To meet the needs of the domestic labor market, especially in addressing skill and competency gaps in specific fields that cannot be fulfilled by the Indonesian workforce, foreign labor in Indonesia may be employed within specific job positions and for a specified duration. The employment of foreign labor can be undertaken by any party, subject to the stipulated regulations, with the exception of individual employers.

With the increasing influx of foreign labor into Indonesia each year, it can be affirmed that the available job opportunities in Indonesia are gradually

diminishing. As previously mentioned, the primary reason for the challenges faced by the labor force in Indonesia in securing employment is the deficiency in the quality of education possessed by the workforce. Consequently, they are gradually marginalized and only manage to secure a small portion of the job opportunities that become available. This issue also presents a significant challenge for the government, leading to the provision of alternative options for employment abroad, such as becoming Indonesian Migrant Workers (Tenaga Kerja Indonesia or TKI).



Source: World Bank  
<https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=ID>

*Figure 1.2 Total of Indonesian Labor Force*

According to data reported by World Bank, the number of Indonesian migrant workers in 2022, this figure reflects a 5.59% increase compared to the previous year when the total was 3.25 million. Although this year's count has increased from the preceding two years, it still falls considerably below the numbers from 2019. This decline can be attributed to the impacts of the

COVID-19 pandemic, which disrupted migration in 2020. Many migrant workers were compelled to return to their home country, while others were unable to continue working abroad. Bank Indonesia's data on Indonesian Migrant Workers (PMI) categorized by destination countries reveals that Malaysia holds the top position with a total of 1.67 million individuals. This is followed by Saudi Arabia with 837,000 migrant workers, Hong Kong with 339,000, Taiwan with 331,000, Singapore and Jordan with equal numbers of 95,000 each, and the United Arab Emirates (UAE) with 39,000 migrant workers. Nevertheless, it is undeniable that a significant portion of Indonesia's labor force, whether working domestically or as migrants, comprises low-skilled workers. Even when they secure employment abroad, the roles they typically perform are mundane and do not require unique or hard-to-find skills. These jobs usually involve positions such as security personnel (office, building, and others), janitors, domestic helpers, light technicians, car wash attendants, and various similar roles.

Hariyadi B. Sukamdani, the Chairman of the Indonesian Employers' Association (APINDO), highlighted the prevalence of low-skilled workers in Indonesia during a seminar on Internships and Public Lectures conducted in collaboration with APINDO and GAPKI. He emphasized the critical need for skills enhancement efforts, including the establishment of a conducive skill development environment. This includes initiatives like the development of National Work Competency Standards (SKKNI) in priority sectors, internships, vocational training, and the revitalization of vocational training centers (BLK). Collaboration between the industrial sector and higher education institutions is also emphasized as an essential step. In line with this phenomenon, the empirical analysis conducted in this study provides

further evidence on how foreign labor affects Indonesia's employment condition. Recent empirical findings, including the EViews analysis conducted in this study, reveal that foreign labor has a statistically significant impact on employment in Indonesia. This finding aligns with previous international and national studies that emphasize how the inflow of foreign workers influences the domestic labor market, especially in sectors requiring advanced technical expertise (World Bank, 2020).

The presence of highly skilled foreign workers can indeed contribute positively through productivity enhancement and knowledge transfer; however, it may also reduce employment opportunities for local workers, particularly those with lower skill levels (International Labour Organization [ILO], 2019). In the Indonesian context, Fitriani (2020) and Suryadi (2019) highlight that the imbalance between labor supply and the availability of decent jobs has been exacerbated by the increasing competition from foreign workers. This phenomenon reflects the dual impact of globalization: while it fosters economic growth through investment and labor mobility, it simultaneously challenges local workers to improve their competitiveness through skills development and innovation (Kusnadi, 2021; Organisation for Economic Co-operation and Development [OECD], 2021). Therefore, the significant relationship revealed by the quantitative analysis strengthens the argument that foreign labor dynamics directly affect employment levels and labor market performance in Indonesia, underscoring the need for adaptive labor policies and sustainable human capital development strategies.

Hence, it can be concluded that Indonesia indeed requires foreign labor to contribute to the stability and sustainability of its economic growth

system. However, this necessity also leads to an increase in the level of competition for job opportunities, as the local workforce falls short in terms of skills but is sufficient in terms of quantity. Consequently, in light of the rapid influx of foreign labor from abroad, Indonesia's local workforce finds itself in a challenging situation. To address this issue, there must be reinforced policies and robust oversight. The impact of foreign labor on the local workforce in Indonesia has resulted in an annual increase in unemployment rates and a shift in the economic focus from local to foreign labor, which could lead to over-dependence on foreign labor if not given adequate attention and a serious response.

## **1.2 Problem Formulation**

Based on the background of the problem above, the main problems in this research are formulated as follows:

- Does the influx of foreign labor have an impact on employment of domestic workers?

## **1.3 Research Objectives**

Based on the formulation of the problem that has been stated, the objectives of this study are:

- To analyze the effect of foreign worker migration on employment of Indonesian workers

## **1.4 Research Benefits**

This research provides some benefits:

- a. By theoretically, this research can be a contribution and input in

the economic and employment sector, especially in Indonesia in the field that discusses labor, employment and influences involving labor. Then this research can also be used as reference or reference material in creating new research in the future.

b. By Community, through this research, it is hoped that the community can obtain more complete and accurate information regarding the impact of the increase in foreign labor force on the Indonesian economy. In addition, this research can also raise awareness among the public about the importance of preserving and conserving the potential of Indonesian labor force, so the Indonesian labor force can maximize their quality for themselves and it can be sustainable and provide long-term benefits for local and national community

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Theoretical Basis of Research**

##### **2.1.1 Foreign Workers**

Foreign labor, as defined by various studies, is examined from different perspectives. A key factor is its contribution to the region through levies, influencing legal status and agreement forms. It refers to individuals, not Indonesian citizens, performing tasks, whether in or outside employment, to produce goods or services for societal needs. The absorption of foreign workers is often carried out on a large scale without specific proportions of companies for certain categories. The company will continue to absorb foreign workers exploitatively if no regulations govern the frequency or quantity that must be absorbed compared to domestic workers. Foreign workers perceived and considered to have more ability, expertise, and high work experience always get job recruitment because the quality of their human resources follows the company's requirements. Now, work efficiency is highly demanded in the world of work as the initial goal of returning to the company's operational activities is to produce a product following the target. (Banjaransari,2022)

The growing number of foreign workers in Indonesia creates challenges. It emphasizes the importance of consistent application of laws and regulations, along with more effective supervision. This increase has led to more immigration violations, impacting the legal system. Additionally, it

highlights the need for comprehensive legislation to protect both foreign and local workers, ensuring fair treatment and compensation. Moreover, the rising number of foreign workers poses challenges in their supervision. The insufficient and less skilled foreign labor inspectors call for recruitment, training, and development programs to enhance their professionalism and effectiveness. According to a previous research journal, amid the challenges related to legal misuse or violations of existing laws, the presence of foreign labor can intensify competition foremployment, potentially leading to unemployment or underemployment among the local workforce. Furthermore, the influx of foreign workers can impact wage levels, as the increased availability of labor may decrease

wages for both foreign and local workers. (Hamid A, 2020)

a. Increased Competition for Job Opportunities:

The presence of incoming foreign workers can increase competition and struggle to get jobs so that there is a high inequality between the lack of types of work available and the number of workers which continues to increase every year.

b. Influence on Wage Levels:

With the increasing influx of foreign workers, the wages paid every month will always decrease and this will not only have an impact on local workers, but also on foreign workers.

c. **Impact on Local Economy:**

The local economy can be affected by the influx of foreign workers into the country, which can start from different levels of consumption, but this impact on the economy can also be positive.

d. **Open Opportunities to Exchange Thoughts and Skills:** This is a positive impact on the aspect of the entry of foreign workers into the country (Indonesia) where the availability of places and platforms for the two countries through which workers can exchange abilities and skills and are able to develop technology or take examples of culture and skills from abroad.

### **2.1.2 .Employment**

The employment sector is one of the most significantly affected areas by the influx of foreign workers. The presence of foreign labor produces dual effects on the national labor market. On one hand, foreign workers help fill labor shortages in sectors that are less attractive to local workers and contribute to national economic growth (Suryadi, 2019). On the other hand, the increasing number of foreign workers can exert pressure on local employment opportunities, particularly in labor-intensive and low-wage sectors (Fitriani, 2020). Therefore, the entry of foreign labor should be viewed as both an economic and social phenomenon that requires strict regulation to prevent imbalances in the domestic labor market.

The influx of foreign workers can alter the structure of the domestic labor market. Many companies prefer to hire foreign workers, as they are often perceived to be more skilled or willing to accept lower wages compared to local workers. This condition can create inequality and weaken the bargaining power of domestic labor (Wibowo & Santoso, 2018). In the long run, such dynamics may lead to rising unemployment and broader social disparities (Kusnadi, 2021). As Dwiastuti (2020) points out, the growing presence of foreign labor often generates an “unequal competition” in the job market, where local workers must compete with foreigners who possess international qualifications or superior technical expertise.

Government intervention plays a crucial role in regulating and monitoring the entry of foreign workers to ensure that their presence complements, rather than substitutes, domestic labor. According to the Ministry of Manpower (Kemnaker, 2022), continuous supervision of foreign work permits is necessary to guarantee compliance with employment laws and to maintain the balance of labor market demand. In addition, labor policies must focus on improving local workers’ skills through vocational training and certification programs, enabling them to compete effectively in the global labor market (Puslitbang Ketenagakerjaan, 2021). Clear, transparent, and industry- oriented regulations are key to maintaining equilibrium between attracting foreign investment and protecting domestic employment.

In conclusion, the employment sector remains one of the most vulnerable areas affected by the influx of foreign labor. Although foreign workers can

promote economic development and facilitate knowledge transfer, their impact on local employment opportunities cannot be overlooked. As Suryadi (2019) emphasizes, “the opening of access for foreign labor must be balanced with efforts to enhance the competence of local workers so that national competitiveness does not decline.” Therefore, this study focuses on examining how the presence of foreign workers influences Indonesia’s employment structure and opportunities, as well as how government policies can effectively mitigate the potential negative impacts arising from this phenomenon.

### **2.1.3. Domestic Labor Market**

One of the impacts of the increasing number of foreign workers is the emergence of a trend of migrant workers related to this issue. This trend has become a common choice for many people due to the limited job opportunities available. In particular, there is a trend of increasing numbers of migrant workers driven by the global market, causing disruption to the domestic labor market and generating demand for foreign workers to fill vacant positions. This phenomenon is influenced by demographic changes in migrants' countries of origin, which force them to seek improved living conditions in their destination countries. While this migration trend can bring benefits to the domestic job market by facilitating knowledge transfer, it also poses challenges for domestic employers, particularly regarding wage disparities with the local business cycle. The reasons why migrants from Indonesia take the

opportunity to work abroad include seeking better life conditions, responding to external shocks such as the global economic crisis, and demographic dividends in their home countries. Additionally, the strict language policy in Australian immigration may also play a role in influencing the decision of migrants to engage in society and workplaces gradually. (Jati, 2023)

- a. The influx of foreign workers into the country is one of the contributing factors to the narrowing of job opportunities for domestic workers. Although it is not the main cause of the growing trend of migrant workers in Indonesia.

According to the journal written by Turnip (2023), titled “Pengaruh Penggunaan Tenaga Kerja Asing Terhadap Pekerja Indonesia Berdasarkan Undang-Undang Ketenagakerjaan Nomor 13 Tahun 2003” that already assumed While the utilization of foreign workers in Indonesia has the potential to positively contribute to national development, it also introduces challenges related to local employment opportunities and the general well-being of the workforce. Consequently, it is crucial to establish stringent mechanisms and procedures to govern the deployment of foreign workers, ensuring the protection and equitable treatment of both local and foreign workers.

Other fact is that Indonesian workers are less competitive in the field of quality but more so in the field of quantity which has been

explained in the previous section, so it does not rule out the possibility and possibility that they will continue to experience narrowing job opportunities in the world which will continue to be filled by workers from outside. future. In an article written by E Pramana, (2022) in the electronic newspaper JawaPos.com, the Minister of Manpower (Menaker) Ida Fauziyah highlighted the level of quality and productivity of the workforce in Indonesia. The level of quality and productivity of the workforce in Indonesia is still low, one of the reasons being that the majority of the workforce are mostly junior high school graduates or below.

The empirical results of this study, derived from the EViews analysis, further reinforce the theoretical perspectives discussed in this chapter concerning the influence of foreign labor on Indonesia's employment conditions. The findings demonstrate that the influx of foreign workers has a statistically significant effect on the domestic labor market, confirming that foreign labor plays a dual role — as both a driver of productivity and a source of competition for local workers. This aligns with earlier studies by the International Labour Organization (ILO, 2019) and the World Bank (2020), which revealed that foreign labor mobility influences local labor absorption and wage adjustments. Similarly, national studies by Fitriani (2020) and Suryadi (2019) indicate that although foreign workers support skill transfer and economic growth, they also contribute to employment pressure and inequality

within Indonesia's labor structure. Therefore, these empirical findings substantiate the theoretical argument that foreign labor significantly shapes Indonesia's labor market dynamics, underscoring the need for strategic policy interventions to balance openness with domestic employment protection.

#### **2.1.4 Government Policies**

In Article 27, paragraph (2) of the 1945 Constitution of the Republic of Indonesia, it is affirmed that "every citizen has the right to work and a decent life for humanity." In the context of labor issues, this is elaborated in Law Number 13 of 2003 concerning Manpower, which states, "Every worker has an equal opportunity without discrimination to obtain employment" (JDIH Kemnaker, 2014). Government policies have a significant impact on domestic workers in Indonesia, particularly regarding the use of foreign labor. Regulations related to the use of foreign labor, specifically issued to maintain the balance of the population and the stability of the workforce in Indonesia, also govern the rights of both local and foreign workers. One such regulation is Government Regulation Number 78 of 2015 concerning the Placement of Indonesian Manpower Abroad, which outlines procedures for placing Indonesian workers abroad and safeguards their rights and well-being. The government policy during President Joko Widodo's administration addressing labor issues includes the issuance of deregulation. According

to Wikipedia, deregulation is the process of withdrawing or reducing state regulations, typically those related to the economic sphere. Deregulation is deemed necessary with the aim of reducing the level of competition among workers within a country. However, this deregulation is anticipated to have negative consequences as it may lead to a decline in the quality of social security guarantees for workers (Saragih et al., 2021). Theoretically, a country undertaking deregulation aims to allocate its resources more efficiently, thereby enhancing competition in the international market, ultimately leading to the production of more and higher-quality output (Nuryasman, Wiweko, 2001).

Deregulation in the policy governing the use of Foreign Workers (TKA) during President Joko Widodo's administration has raised concerns among local workers in Indonesia. The significant impact of this deregulation on the demands and rights of local workers includes the neglect of local workers' demands to reject foreign workers in labor-intensive jobs, the revocation of Presidential Regulation No. 20 of 2018, which eliminated the Work Permit (IMTA) requirement for foreign workers, and the emergence of issues related to violations by foreign workers without IMTA. In the context of foreign labor policies, this deregulation has also led to the neglect of labor demands related to the rejection of foreign workers, potentially harming opportunities for labor-intensive employment. This indicates that the deregulation of foreign

labor policies has a negative impact on local workers, particularly from a policy perspective. A thorough evaluation of the implications of this policy is crucial to ensure an optimal balance between enhancing economic competitiveness and safeguarding the rights of local workers.

Government policies aimed at improving the labor system in Indonesia are intricately tied to several considerations that contribute to the formulation of such policies. According to Wahyu Hidayah (2016) in his journal titled " Faktor-faktor Yang Mempengaruhi Tenaga kerja Dan Produk Domestik Regional Bruto Di Kota Samarinda," the factors influencing the workforce are as follows:

a. Investment

Investment, or capital investment, is the act of deploying capital, either directly or indirectly. Investment has a significant impact on both foreign and local labor because it influences the economic structure, creates or reduces employment opportunities, and affects labor policies.

b. Infrastructure

Infrastructure development is believed to stimulate the real sector, absorb labor, enhance public and government consumption, and trigger production activities (Daroedono, 2004).

c. Wages

Wages play a crucial role in the labor market, serving as one

of the factors influencing the absorption of labor from the perspective of labor supply.

## **2.2 Previous Literature**

In this research, the author finds and employs several literatures as a foundation for understanding and developing the written research. To mitigate the risk of plagiarism from previous research, journals, articles, and or reading materials utilized as references in this study are duly acknowledged. Therefore, it is imperative to conduct a review of several previous case studies. In the following section, the author presents descriptions and related studies:

Research written by Abduh, R (2020) titled “Dampak Sosial Tenaga Kerja Asing (TKA) Di Indonesia” This article discusses and examine the social impact of the placement of foreign workers in Indonesia. The placement of foreign workers in Indonesia has brought both positive and negative impacts, including competition with local workers, social conflicts, and unemployment. The article also discusses the objectives of placing foreign workers in Indonesia and the requirements that must be met by these workers Research written by Yuliastuti, A (2018) titled “Dampak Investasi Dan Tenaga Kerja Asing Terhadap Kesempatan Kerja Tenaga Kerja Asal Indonesia”. This paper discusses the impact of foreign investment and foreign labor on employment opportunities for Indonesian workers. It explores the positive and negative effects that foreign investment and foreign labor

can have on the local workforce. The data used in the analysis comes from various government institutions, and the research is conducted through qualitative descriptive analysis. The research aims to identify the impact of foreign investment on the utilization of labor and employment opportunities for Indonesian workers. The research methods include a literature review on investment, foreign direct investment, and the dependent theory and the impact of FDI in the host country.

Research article written by Banjaransari (2022) with title “Regulation of The Use of Foreign Workers in Indonesia After The Job Creation Act: Problems and Solutions” this paper discuss about challenges within the labor law sector in Indonesia, primarily stemming from the escalating presence of foreign workers. This perennial issue is exacerbated by the influx of foreign investment, leading to an annual recurrence of disputes between foreign and domestic workers. The paper contextualizes the problem against the backdrop of Indonesia's substantial population, which, despite its size, contends with a dearth of employment opportunities, resulting in unemployment and regional economic disparities. The focus of the paper revolves around the implications of the Law of the Republic of Indonesia Number 11 of 2020 concerning Job Creation, along with its implementing regulations, on the matter of foreign workers. Employing a normative legal research method and drawing from secondary legal materials, the study adopts a

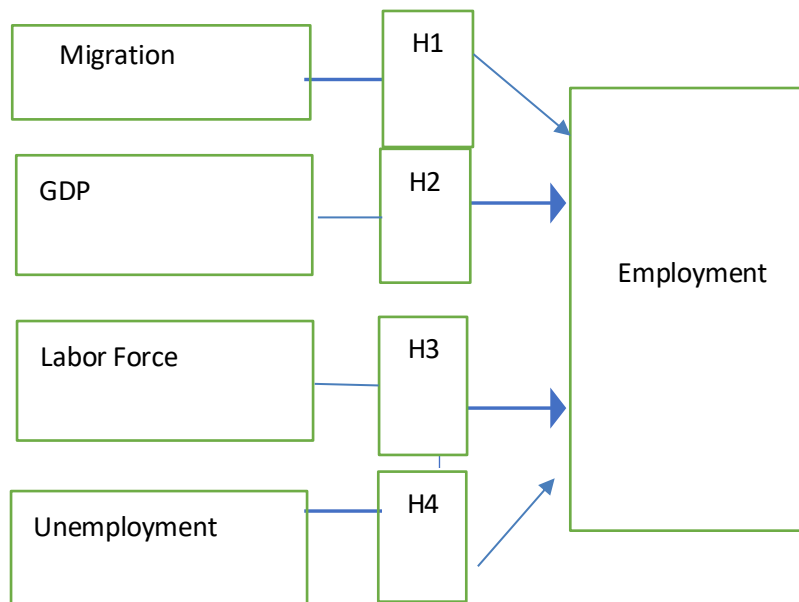
legal and conceptual approach. It elucidates the challenges arising from the new regulations on foreign workers post the enactment of the Job Creation Law and proposes solutions to address these issues in Indonesia. Research written by Hamid A (2020) titled “Anticipating The Escalation of Foreign Workers After The Enactment of The Job Creation Law: Indonesia Legal Perspective”. This research examines about the presence of foreign workers in Indonesia and the impact of their influx on the country. It reviews the laws and regulations regarding foreign workers in Indonesia before and after the adoption of the Job Creation Law. The study aims to increase the quantity and quality of foreign labor inspectors in Indonesia. The findings highlight the need for comprehensive legislation to protect foreign workers and local workers, as well as the importance of recruitment, training, and development programs to improve the professionalism and performance of foreign labor inspectors. The research method used is a qualitative approach and is descriptive analysis, doctrinal legal research with regard to the existence of foreign workers in a legal perspective through library research by emphasizing secondary data sources.

Research written by Jati (2023) with the title “The Effect of Migration of The Domestic Job Market: Evidence From Australia” This paper examines the relationship between foreign workers and the domestic job market in Australia, focusing on the impact of migration

on employment, the influence of employment policy changes, and the effect of wage and labor cost on migration. The study utilizes quantitative methods and regression analysis to explore the correlation between net migration and wage, as well as net migration and labor cost index. The findings indicate that both wage and labor cost have a significant influence on net migration in Australia. Article by Turnip, Paseki, Gerungan (2023) titled “Pengaruh Penggunaan Tenaga Kerja Asing Terhadap Pekerja Indonesia Berdasarkan Undang-Undang Ketenagakerjaan Nomor 13 Tahun 2003” This paper discusses the regulation and impact of using foreign workers in Indonesia, as well as the procedures and requirements that employers must fulfill to hire foreign workers. It also mentions the hierarchy of legislation that affects the regulation of foreign labor. Research written by Martias (2022) with title “Dampak Kebijakan Tenaga Kerja Asing Era pemerintahan Joko Widodo (2014-2019) Terhadap Tenaga Kerja Lokal Di Indonesia”. The paper discusses the impact of the foreign labor policy during the Joko Widodo administration on local labor in Indonesia. The policy aimed to attract foreign investment and boost economic growth but had negative effects on local labor. The article analyzes the political impact of the policy using Theodore Lowi's policy theory and classifies it as a regulatory policy. The article also discusses the history of foreign labor policy in Indonesia and the implications of deregulation. It concludes that

deregulation can have negative effects on developing countries like Indonesia. Research written by Hidayah, Militina, Ulfah (2016) with title “Faktor-faktor Yang Mempengaruhi Tenaga Kerja Dan Produk Domestik Regional Bruto Di Kota Samarinda”. The paper discusses the factors influencing labor and Gross Regional Domestic Product (PDRB) in Samarinda City. The study uses secondary data from 2005-2014 and employs path analysis as the analytical tool. The results show that investment, infrastructure, and wage levels have both direct and indirect effects on labor and PDRB. Increasing PDRB can be influenced by investment, infrastructure, and labor, while wage levels also affect the available labor force.

### 2.3 Hypothesis



**Graph 1.1 Research Framework**

**H1: Migration of foreign worker reduce the domestic employment.**

This hypothesis assumes that the growing presence of foreign labor generates competitive pressure in the labor market, which may displace local workers, particularly in sectors with low to medium skill requirements.

**H2: Gross Domestic Product (GDP) has a significant positive effect on employment.**

This hypothesis is based on Okun's Law, suggesting that economic growth should lead to an increase in production output, which in turn creates a higher demand for labor and increases employment absorption.

**H3: Labor Force has a significant positive effect on employment.**

Theoretically, an increase in the labor force represents an increase in the supply of individuals willing and able to work. This growth in human capital is expected to contribute positively to the total number of employed persons.

**H4: Unemployment has a significant negative effect on employment.**

Unemployment represents the portion of the labor force that is not utilized. A higher unemployment rate indicates friction or a lack of demand in the labor market, which directly correlates with lower employment levels.

## **CHAPTER III RESEARCH METHODOLOGY**

### **3.1 Type and Sources of Data**

This study uses data obtained from several domestic and international statistical research centres. The data obtained came from DMW Philippines (Department of Migrant Workers), DataIndonesia, and the World bank. The types of data referred to previously are as follows:

1. Total data of Labor force in Indonesia, Malaysia, and Philippines for the last 10 years(2014-2024)
2. Total data of GDP in Indonesia, Malaysia, Philippines for the last 10 years (2014-2024)
3. Total data of Employment in Indonesia, Malaysia, and Philippines for the last 10 years (2014-2024).
4. Total data of Unemployment in Indonesia, Malaysia, and Philippines for the last 10 years (2014-2024).
5. Total data of Migration in Indonesia, Malaysia, and Philippines for the last 10 years (2014- 2024).

### **3.2 Data Analysis Method**

This study was conducted using quantitative methods collected through secondary data sources. Secondary data analysis is the process of analyzing data that has been previously collected by others for new research purposes, in the sense that it does not collect data directly from the first source (respondents, field observations, experiments, etc.), but uses existing data, for example: government

agencies, national surveys, research journals, organization reports, or public databases. As stated by Johnston (2014) Secondary data analysis is the analysis of data that was collected by someone else for another primary purpose.

Analysis is an important stage in managing research data that aims to transform raw data into information that can be understood more easily. According to Encyclopedia Britannica (2024), data analysis is a systematic process of collecting, cleaning, transforming, modelling, and interpreting data using statistical techniques. This is in line with the opinion of DataCamp (2023) which states that data analysis includes comprehensive methods for examining, cleaning, transforming, and modelling data to find useful information, draw conclusions, and support decision making.

### **3.2.1 Panel Data Analytical Frame Work**

This study employs panel data, which integrates both cross-sectional and time-series dimensions to provide a more comprehensive understanding of the phenomena under study. According to Baltagi (2021), panel data consist of “observations on multiple entities (individuals, firms, countries, etc.) over several time periods,” allowing researchers to account for both individual heterogeneity and temporal dynamics. Similarly, Wooldridge (2019) explains that panel data enable the analysis of changes over time within entities while also comparing differences across entities at a given point in time. In this context, time-series data refer to observations collected sequentially over time for a single unit, whereas cross-sectional data represent observations collected from multiple units at one

specific point in time. The use of panel data thus enhances the robustness of statistical inference by combining the strengths of both data types and controlling for unobserved individual effects.

In this research entitled **THE EFFECT OF FOREIGN WORKER MIGRATION ON EMPLOYMENT IN THREE COUTRIES**, This study aims to

analyse and evaluate the possibility and impact of the government's policy on the distribution of foreign workers in Indonesia. The main focus of this study is to examine the extent to which the policy affects domestic employment conditions, both in the form of direct impacts felt by the Indonesian labour force and indirect impacts that arise gradually on other economic factors. Thus, this study is expected to provide a comprehensive picture of the linkages between foreign employment policies and national economic dynamics in the Southeast Asian region, particularly in Indonesia.

The data used in this research is secondary data, which is data obtained indirectly through various official and trusted sources. All data has been verified to ensure the validity and reliability of the analysis. The time span of the study covers a ten-year period, from 2014 to 2024, allowing for longitudinal observations of trends and changes.

This study involves three countries as objects of comparison, namely Indonesia, Malaysia and the Philippines, to provide a broader perspective on regional conditions and cross-country labour policies. The variables analyzed include Gross Domestic Product (GDP), foreign labour, employment rate, unemployment rate, and migration rate. All data were processed and analyzed

using E Views 12 software, which allows for more accurate and efficient panel data analysis.

Panel data is a data set consisting of observations of several entities (such as individuals, companies, or countries) over a period of time. This type of data combines two types, namely cross-section (between entities at one particular time) and time-series (changes in an entity over time). By combining these two dimensions, panel data analysis can make it possible to study variations between entities as well as changes that occur within each entity over time. As explained by Baltagi (2021) Panel data methodology allows researchers to analyse data sets that combine time dimensions and across individuals, resulting in data that is more informative, has greater variability, lower collinearity between variables, and higher degrees of freedom.

### **3.2.2 Common-Effects Model (CEM)**

The Common-Effects Model (CEM) or often called Pooled Ordinary Least Squares (Pooled OLS) is the most basic approach in panel data analysis. This model combines all data across individuals (cross-section) and time (time-series) into a single data set without distinguishing effects between individuals or between time periods. In other words, this model assumes that all observation units have the same characteristics, both in terms of intercept values and regression coefficients.

This model is often used as a baseline model in panel data analysis before further testing is conducted to determine whether the more

appropriate model is the Fixed-Effects Model (FEM) or Random-Effects Model (REM). In general, this model is used when it is assumed that the relationship between the dependent and independent variables is homogeneous across observation units and over time and does not consider any special differences between individuals.

$$Y_{it} = \beta_0 + \beta_1 \ln \ln X_{1it} + \beta_2 \ln \ln X_{2it} + \beta_3 \ln \ln X_{3it} + \beta_4 \ln \ln X_{4it} + \beta_5 \ln \ln X_{5it} + \epsilon_{it}$$

Where:

$Y_{it}$  = Employment

$\beta_0$  = Intercept

$\beta_1 \beta_2 \beta_3 \beta_4$  = Coefficient regression of X1, X2, X3, X4, X5

$\ln \ln X_{1it}$  = Log of labor forces in Indonesia, Malaysia, and

Philippines

$\ln \ln X_{2it}$  = Log of Total data of GDP in Indonesia, Malaysia,

Philippines

$\ln \ln X_{3it}$  = Log of Total data of Employment in Indonesia, Malaysia, and Philippines

$\ln \ln X_{4it}$  = Log of Total data of Unemployment in Indonesia,

Malaysia, and Philippines

$\ln \ln X_{5it}$  = Log of Total data of Migration in Indonesia, Malaysia,  
and Philippines

$i$  = Cross-section

$t$  = Time Series (2014-2024)

$\epsilon_{it}$  = error term or residual

### 3.2.3 Fixed-Effects Model (FEM)

The Fixed Effects Model (FEM) is one of the main approaches in panel data analysis used to estimate relationships between variables while accounting for unique, time-invariant characteristics of each individual or entity. The model assumes that each observation unit has its own constant individual effect that may systematically influence the dependent variable. In practice, these individual effects are often represented through dummy variables, which assign a value of 1 to indicate the presence of a specific entity and 0 otherwise. This allows the model to capture distinct intercepts for each entity and control for unobserved, time-invariant factors that could bias the estimation results.

$$Y_{it} = \beta_0 + \beta_1 \ln \ln X_{1it} + \beta_2 \ln \ln X_{2it} + \beta_3 \ln \ln X_{3it} + \beta_4 \ln \ln X_{4it} + \beta_5 \ln \ln X_{5it} + \alpha_1 \ln \ln D_{1it} + \dots + \alpha_{30} \ln \ln D_{30it} + \epsilon_{it}$$

$Y_{it}$  = Domestic Worker and the Labor Market

$\beta_0$	= Intercept
$\beta_1 \beta_2 \beta_3 \beta_4 \beta_5$	= Coefficient regression of X1, X2, X3, X4, X5
$\ln \ln X_{1it}$	= Log of Total data of foreign workers in Indonesia, Malaysia, and Philippines
$\ln \ln X_{2it}$	= Log of Total data of GDP in Indonesia, Malaysia, Philippines
$\ln \ln X_{3it}$	= Log of Total data of Employment in Indonesia, Malaysia, and Philippines
$\ln \ln X_{4it}$	= Log of Total data of Unemployment in Indonesia, Malaysia, and Philippines
$\ln \ln X_{5it}$	= Log of Total data of Migration in Indonesia, Malaysia, and Philippines
$\beta_5 \beta_6 \beta_n$	= Intercept Dummy
$D_{1, \dots, D_{30}}$	= Dummy variables
$i$	= Cross-section
$t$	= Time Series (2014-2024)
$e_{it}$	= error term or residual

### 3.2.4 Random-Effects Model (REM)

Random Effects-Model (REM) is one of the approaches in panel

data analysis used when differences in characteristics between individuals or between observation units are considered random and uncorrelated with the independent variables used in the model. In contrast to the Fixed- Effects Model (FEM), which assumes the existence of individual effects that are fixed and unique to each unit of observation, REM assumes that the variation is part of a random component that can be included in the error term model.

Conceptually, this model assumes that each unit of observation has a different intercept, but the difference appears randomly and comes from the same distribution. In other words, REM assumes that the specific characteristics of each entity do not systematically affect the relationship between the independent variable and the dependent variable.

$$Y_{it} = \beta_0 + \beta_1 \ln \ln X_{1it} + \beta_2 \ln \ln X_{2it} + \beta_3 \ln \ln X_{3it} + \beta_4 \ln \ln X_{4it} + \beta_5 \ln \ln X_{5it} + \alpha_1 \ln \ln D_{1it} + \dots + \alpha_{30} \ln \ln D_{30it} + \varepsilon_{it}$$

$Y_{it}$  = Domestic Worker and the Labor Market

$\beta_0$  = Intercept

$\beta_1 \beta_2 \beta_3 \beta_4 \beta_5$  = Coefficient regression of X1, X2, X3, X4, X5

$\ln \ln X_{1it}$  = Log of Total data of foreign workers in Indonesia, Malaysia, and Philippines

$\ln \ln X_{2it}$  = Log of Total data of GDP in Indonesia, Malaysia, Philippines

$\ln \ln X_{3it}$  = Log of Total data of Employment in Indonesia, Malaysia, and Philippines

$\ln \ln X_{4it}$  = Log of Total data of Unemployment in Indonesia, Malaysia, and Philippines

$\ln \ln X_{5it}$  = Log of Total data of Migration in Indonesia, Malaysia, and Philippines

$\beta_5 \beta_6 \beta_n$  = Intercept Dummy

$D_{1, \dots, D_{30}}$  = Dummy variables

$i$  = Cross-section

$t$  = Time Series (2014-2024)

$eit$  = error term or residual

### 3.3 Model Selection For Estimation

The process of analysing panel data regression can go through 3 main approaches as mentioned earlier, namely through CEM (Common- Effects Model), FEM (Fixed-Effects Model), and REM (Random-Effects Model). This selection process is carried out by considering the characteristics of the data and the assumptions underlying each model.

Generally, the model selection steps in panel data estimation include:

#### 1. Chow Test

Chow Test → To determine whether the Fixed Effects Model (FEM) is more appropriate than the Common Effects Model (CEM). The

hypotheses tested as follows:

1.  $H_0$ : The Common-Effects Model (CEM) = appropriate
2.  $H_1$ : The Fixed-Effects Model (FEM) = appropriate

## **2. Hausman Test**

The Hausman Test → is used to choose between the Fixed Effects Model (FEM) and the Random Effects Model (REM) by looking at whether the individual effects are correlated with the independent variables. In its implementation, the Hausman test is carried out by comparing the FEM and REM estimation results using a statistical formula that produces a Chi-Square ( $\chi^2$ ) value. This value is used to assess whether the difference between the two models is statistically significant. The hypothesis tested is as follows:

1.  $H_0$ : Random Effects Model (REM) = more appropriate because there is no correlation between the individual effects and the independent variables.
2.  $H_1$ : Fixed Effects Model (FEM) = more appropriate because there is a correlation between the individual effects and the independent variables.

If the p-value  $< 0.05$ , the null hypothesis is rejected, which means that FEM is more appropriate. Conversely, if the p-value  $> 0.05$ , the null hypothesis is accepted and REM is considered more appropriate.

## **3. Lagrange Multiplier Test (LM Test)**

The main purpose of the LM Test is to identify whether there is significant cross-sectional or time-series variation in the data. If such variation exists, then the Random Effects (REM) model is considered more appropriate than the Common Effects Model (CEM) which assumes that there are no differences between individuals or between time periods. the hypothesis tested in the LM Test is as follows:

1.  $H_0$ : Common Effects model (CEM) = more appropriate.
2.  $H_1$ : Random Effects (REM) = more appropriate.

If the calculation results show that the p-value  $< 0.05$ , then the null hypothesis is rejected, which means that REM is more appropriate because there is significant variation between units or between time. Conversely, if the p-value  $> 0.05$ , then CEM is considered more appropriate because there is insufficient evidence of random effects.

### **3.4 Statistical Testing**

The primary objective of statistical testing in this research is to analyze and confirm the validity of the regression results. Several statistical tests are applied to achieve this, including the coefficient of determination ( $R^2$ ) to measure the model, the simultaneous F-test, and the partial T-test.

### 3.4.1 Coefficient of Determination ( $R^2$ )

The coefficient of determination ( $R^2$ ) indicates the extent to which variations in the dependent variable can be explained by the independent variables included in the model. The remaining unexplained variation is attributed to external factors or variables not captured in the analysis. The  $R^2$  formula is used to calculate the proportion of variance explained by the model:

$$R^2 = 1 - \frac{RSS}{TSS}$$

$R^2$  = The Coefficient of Determination

TSS = Total Sum of Squares

RSS = Residual Sum of Squares

the adjusted R-squared value, the CAP  $R^2$  ranges between zero and one ( $0 < R^2 < 1$ ). The nearer the  $R^2$  value is to one, the higher the percentage of variation in the dependent variable that can be explained by the independent variables in the model.

### 3.4.2 F-Test (Simultaneous Test)

The F-test aims to assess whether all independent variables jointly have a meaningful impact on the dependent variable. The procedure involves comparing the obtained F-statistic with the critical F-value, which is taken from the F-distribution table based on the specified significance level ( $\alpha$ ) and the corresponding degrees of freedom (df).

The hypotheses for the F-test are as follows:

$H_0$  :All regression coefficients of the independent variables are

equal to zero ( $\beta_1 = \beta_2 = \beta_3 = \dots = 0$ ).

→ That is, there is no simultaneous influence between the independent variables on the dependent variable.

$H_1$  : At least one regression coefficient of the independent variable is not equal to zero ( $\beta_i \neq 0$  for at least one  $i$ ).

→ That is, there is a simultaneous influence between the independent variables on the dependent variable.

Testing criteria:

If F-count  $>$  F-table or p-value  $<$   $\alpha$  (usually 0.05) → Reject  $H_0$ , the regression model is simultaneously significant.

If F-count  $\leq$  F-table or p-value  $\geq$   $\alpha$  → Fail to reject  $H_0$ , the model is not simultaneously significant.

### 3.4.3 T-Test (Partial Test)

The t-test is used to determine the effect of each independent variable (X) individually (partially) on the dependent variable (Y) in the regression model. In other words, this test assesses whether one independent variable significantly affects the dependent variable, while other variables are held constant.

$H_0$ : independent variable  $X_i$  has no significant effect on the dependent variable (Y). → There is no significant relationship between  $X_i$  and Y.

$H_1$  : the independent variable  $X_i$  has a significant influence on the dependent variable (Y). → There is a meaningful relationship

between  $X_i$  and  $Y$ .

There are two common ways to make decisions:

a. Based on the t-count and t-table values

If  $|t\text{-count}| > t\text{-table}$ , then  $H_0$  is rejected  $\rightarrow$  the independent variable has a significant effect on  $Y$ . If

$|t\text{-count}| \leq t\text{-table}$ , then  $H_0$  is accepted  $\rightarrow$  the independent variable has no significant effect on  $Y$ .

b. Based on Significance Value (p-value)

If  $p\text{-value} < \alpha$  (usually 0.05)  $\rightarrow H_0$  is rejected  $\rightarrow$  the independent variable has a significant effect on the dependent variable. If  $p\text{-value} \geq \alpha \rightarrow H_0$  is accepted  $\rightarrow$  the independent variable has no significant effect.

## **CHAPTER IV DATA ANALYSIS AND DISCUSSION**

### **4.1 Data Description**

This study analyzes the data and discusses the influence of foreign worker migration on employment conditions in Indonesia. The research utilizes secondary data covering the period from 2014 to 2024, as previously described in Chapter III. All data were obtained from official sources such as the World Bank, DataIndonesia.id, and the Ministry of Manpower (Kemnaker), and are used to examine the relationship between foreign labor inflows and the indicators of the labor market in Indonesia.

The variables used in this study comprise the total data from three countries—Indonesia, Malaysia, and the Philippines—covering the following aspects: total labor force, total GDP, total unemployment, total migration ( $X$ ), and total employment as the dependent variable ( $Y$ ). These variables were organized in an annual time-series format to align with the panel analysis framework employed in this research. The data analysis was conducted using the EViews 12 software. The regression analysis was carried out using two approaches, namely the Common-Effects Model (CEM) and the Fixed-Effects Model (FEM). The selection of the most appropriate model was then determined through the Chow Test. This procedure was implemented to ensure that the selected model could accurately capture the characteristics of the data and generate reliable estimations.

In this study, the Random Effects Model (REM) and the Hausman Test could not be performed due to the data structure not meeting the minimum requirements for estimating a random-effects model. The limited number of

observations in the annual time-series data caused the covariance matrix to be non-estimable, preventing EViews from processing REM estimations or conducting the Hausman Test. Such limitations are common in studies utilizing short-panel datasets. Therefore, the most appropriate and feasible model for this research is the Common-Effects Model (CEM).

The regression results presented in this chapter aim to provide empirical insight into how the migration of foreign workers influences the level of employment in Indonesia.

## 4.2 Regression Results

### 4.2.1 Common Effect Model (CEM)

The regression analysis using the Common-Effects Model (CEM) was conducted to examine the effect of GDP, unemployment, labor force, and migration on employment levels in Indonesia, Malaysia, and the Philippines over the period 2015–2024. Based on the EViews output, the CEM estimation produced statistically strong and stable results as presented in table 4.1

*Table 1.1 Common Effect Model (CEM) Test Result*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.328466	0.032057	-10.24646	0.0000
LOG_GDP	0.005216	0.004140	1.259841	0.2194
LOG_UNEMPLOYMENT	-0.063340	0.002637	-24.01801	0.0000
LOG_LABORFORCE	1.062191	0.004990	212.8537	0.0000

MIGRATION	-1.72E-08	7.47E-09	-2.297228	0.0303
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R-squared	0.999992
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F-statistic	753198.2
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Prob(F-statistic)	0.000000
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Data source: Data processed using EViews 12

#### 4.1.1 Fixed Effect Model (FEM)

The Fixed-Effects Model (FEM) was employed to examine whether cross-sectional differences across Indonesia, Malaysia, and the Philippines contribute significantly to the variation in employment levels. The FEM estimation captures country-specific characteristics that remain constant over time, allowing the model to isolate the within-country effects of GDP, unemployment, labor force, and migration on employment that shown in the table 4.2

*Table 1.2 Fixed Effect Model (FEM) Test Results*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.025002	0.219765	-0.113766	0.9104
LOG_GDP	0.009467	0.010451	0.905816	0.3744
LOG_UNEMPLOYMEN				
T	-0.064790	0.003063	-21.15040	0.0000
LOG_LABORFORCE	1.041354	0.021625	48.15431	0.0000
MIGRATION	-2.41E-08	7.92E-09	-3.041113	0.0058
R-squared	0.999993			

F-statistic	546265.7
Prob(F-statistic)	0.000000

Data source: Data processed using EViews 12

#### **4.1.2 Random Effect Model (REM)**

In this study, the Random Effects Model (REM) could not be performed due to technical limitations inherent in the structure of the dataset. The data consist of annual time-series observations with a relatively small number of years (2014–2024) and only three cross-sections—Indonesia, Malaysia, and the Philippines. This limited structure causes the covariance matrix required for REM estimation to become singular or non-invertible, preventing EViews from generating the necessary calculations. Furthermore, the cross-sectional variation in the dataset is insufficient to meet the minimum requirements for estimating a random-effects model. As a result, EViews is unable to compute the random error components or produce REM estimates. Technically, the REM requires a richer panel structure both in terms of the number of observations and the diversity of data to allow the variance components to be properly estimated. When these requirements are not met, the estimation process fails, and the software automatically terminates the procedure.

#### **4.2 Estimation Model Selection**

In the context of panel data analysis, the selection of an appropriate estimation model is essential to ensure the accuracy and reliability of the regression results. The three principal estimation approaches—Common Effect Model, Fixed

Effect Model, and Random Effect Model—offer different underlying assumptions regarding the structure of the data. Therefore, a series of diagnostic tests was conducted to determine the model that best aligns with the characteristics of the dataset employed in this study.

The model selection process was carried out through the following procedures:

1. The Chow Test was utilized to evaluate whether the Fixed Effect Model offers a significantly better fit than the Common Effect Model. This test determines if allowing individual intercepts for each cross-section yields a meaningful improvement.
2. The Hausman Test is normally applied to compare the Fixed Effect Model with the Random Effect Model, it could not be implemented in this research. The dataset's limited time span and the small number of cross-sections hindered EViews from constructing the covariance matrix required for Random Effect estimation.
3. The Lagrange Multiplier (LM) Test typically used to assess whether the Random Effect Model yields superior performance compared to the Common Effect Model. However, the LM Test could not be conducted because the Random Effect Model itself could not be estimated.

#### **4.2.1 Chow-Test**

The Chow Test is a statistical procedure used to determine whether a panel data regression model requires the inclusion of individual fixed effects. In the context of this study, the Chow Test is employed to assess whether the Fixed Effect Model (FEM) provides a significantly better fit than the Common Effect Model (CEM) when analyzing the relationship between foreign worker migration and

employment across Indonesia, Malaysia, and the Philippines.

Model selection in this test is based on the p-value generated from the Chow Test, with the following decision criteria:

1. If the p-value falls below the 10% significance threshold ( $p < 0.10$ ), the Fixed Effect Model is preferred, indicating that differences across cross-sectional units are statistically meaningful and should be incorporated into the model.
2. If the p-value exceeds 0.10, the test suggests no significant cross-sectional variation, and the Common Effect Model is considered adequate for representing the data.

In case where the p-value is extremely small (e.g., below 1%), the Fixed Effect Model is typically strongly favored. However, when the p-value is well above standard significance levels, the Common Effect Model becomes the more appropriate choice because it implies the absence of substantial fixed effects in the panel data structure.

The test result of the Chow-Test are presented in the table including the F-statistic and the associated p-value to guide model determination.

***Table 1.3 Chow-Test Result***

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

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Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.098636	(2,23)	0.1455
Cross-section Chi-square	5.028675	2	0.0809

Data sourced: Data processed using EViews 12

the Chow Test results showed that both the Cross-section F and the Cross-section Chi-square statistics yielded p-values greater than the selected significance levels. This indicates that the addition of fixed effects does not enhance the explanatory power of the model. Consequently, the Common Effect Model (CEM) is deemed more suitable for the subsequent analysis conducted in this study.

#### **4.2.2 Hausman Test**

In panel data analysis, the Hausman Test serves as an essential procedure for determining the most appropriate model between the Fixed Effect Model (FEM) and the Random Effect Model (REM). Methodologically, this test evaluates the consistency of the estimators derived from both models. When a significant difference is detected between the FEM and REM estimations, the FEM is considered more appropriate; conversely, when no significant difference exists, the REM is deemed more efficient and preferable. However, the Hausman Test could not be executed due to several structural limitations inherent in the

dataset. The dataset consists of annual panel data from three countries over the period 2013–2024, thereby categorizing it as a short panel, with a limited number of cross-sections and relatively short time observations. This type of data structure presents several technical constraints:

1. The estimation of the Random Effect Model could not be generated by EViews 12, as the variance–covariance matrix required to compute the REM parameters failed to form. This issue commonly occurs due to matrix singularity or an insufficient number of observations to support the REM estimation.
2. The absence of REM estimation results makes the Hausman Test infeasible, since the test requires two sets of estimators—those from FEM and REM—to calculate the difference in variances. Without REM parameters, the Hausman test statistic cannot be computed.
3. The EViews system automatically aborts the procedure (estimation aborted) because it is unable to identify adequate residual variance needed to perform the comparison of estimators.

The determination of the most appropriate regression model relies entirely on the results of the Chow Test, which indicates that the Common Effect Model (CEM) is the most appropriate model for analyzing the effect of foreign labor migration on employment in Indonesia.

#### 4. **Lagrange Multiplier Test**

The Lagrange Multiplier (LM) Test, also known as the Breusch–Pagan

LM Test, is typically employed to determine whether the Random Effect Model (REM) is more appropriate than the Common Effect Model (CEM) in panel data analysis. Conceptually, the LM Test assesses whether the variance across cross-sectional units is sufficiently significant to justify the use of a random-effects specification. If the LM statistic is significant, the REM is preferred; otherwise, the CEM is considered more suitable. In this study the LM Test could not be performed, and this limitation arises from the same technical constraints that prevented the Random Effect Model and the Hausman Test from being estimated.

#### 4.4 Regression Analysis

As previewed in Table 4.3, the Common Effect Model is identified as the most suitable regression model for analyzing the The Effect of Foreign Worker Migration on Indonesia Labor Market. The estimation results of the Common Effect Model are detailed in Table below.

***Table 1.4 Result of Panel Regression Using Common Effect Model (CEM)***

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.328466	0.032057	-10.24646	0.0000
LOG_GDP	0.005216	0.004140	1.259841	0.2194
LOG_UNEMPLOYMEN				
T	-0.063340	0.002637	-24.01801	0.0000

LOG_LABORFORCE	1.062191	0.004990	212.8537	0.0000
MIGRATION	-1.72E-08	7.47E-09	-2.297228	0.0303
R-squared	0.999992			
F-statistic	753198.2			
Prob(F-statistic)	0.000000			

Data source: Data processed using EViews 12

Based on the EViews output, the CEM estimation produced statistically strong and stable results, with an R-squared value of 0.999992, this indicating that 99,9% of the variation in employment is explained by the independent variables included in the model.

### 4.3 F-Test

The F-test is a statistical procedure used to assess the overall significance of a regression model by determining whether all independent variables, when considered simultaneously, exert a meaningful influence on the dependent variable. In panel data analysis, the F-test evaluates whether the collective variation explained by the model is greater than would be expected by chance. If the probability value associated with the F-statistic is below the chosen significance level, the model is considered statistically significant, indicating that

the explanatory variables jointly contribute to explaining changes in the dependent variable.

In this study, the F-test was applied to the Common Effect Model (CEM) to examine whether the independent variables—GDP, Unemployment, Labor force, and Migration—jointly influence Employment across Indonesia, Malaysia, and the Philippines. Based on the EViews output, the CEM produced an F- statistic of 753198.2 with a corresponding Prob(F-statistic) of 0.000000. This probability value is far below the conventional significance thresholds of 5% ( $\alpha = 0.05$ ) and 1% ( $\alpha = 0.01$ ), indicating that the regression model is statistically significant as a whole.

These results lead to the conclusion that the null hypothesis, which states that the independent variables collectively have no significant effect on Employment, must be rejected. Instead, the alternative hypothesis is accepted, confirming that the independent variables do in fact jointly contribute to explaining variations in employment within the three countries during the study period. The remarkably large F-statistic value, alongside the p-value approaching zero, demonstrates the strong explanatory power of the model. This is further supported by the extremely high R-squared value of 0.999992, showing that nearly all variations in Employment can be attributed to the independent variables included in the model. Therefore, the F-test results affirm that the Common Effect Model is statistically valid, and its variables collectively provide a significant explanation of employment dynamics over time.

#### 4.4 T-Test

The results of the t-test provide an examination of the individual significance of each independent variable—GDP, unemployment, labor force, and migration—toward the dependent variable, employment. The significance of each variable is evaluated using its probability value (p-value), where a threshold of  $\alpha = 5\%$  (0.05) is applied. Variables with p-values below 0.05 are considered statistically significant in influencing employment.

*Table 1.5 T-Tet Test Reults (Significant Test)*

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Description
GDP	0.005216	0.004140	1.259841	0.2194	Inignificant
UNEMPLOYME					
NT	-0.063340	0.002637	-24.01801	0.0000	Significant
LABORFORCE	1.062191	0.004990	212.8537	0.0000	Significant
MIGRATION	-1.72E-08	7.47E-09	-2.297228	0.0303	Significant

Data Source: Data processed using EViews 12

1. The t-test results for the GDP variable indicate that its influence on employment is statistically insignificant within the model. The coefficient value of 0.005216 suggests that GDP has a positive direction, implying that increases in economic output may correspond with

higher employment levels. However, the t-statistic of 1.259841 and the relatively high p-value of 0.2194 demonstrate that this relationship is not statistically supported at the 5% significance level. This means the variation in GDP during the 2013–2024 period does not provide a strong enough explanatory contribution to changes in employment across Indonesia, Malaysia, and the Philippines as reflected in the panel dataset. Consequently, the effect of GDP on employment is considered statistically insignificant, leading to the rejection of the hypothesis stating that GDP has a meaningful impact on employment. Although the coefficient direction remains positive, GDP does not display a reliable or measurable effect within the context of this study.

2. The unemployment variable demonstrates a strong and statistically significant negative effect on employment. The coefficient of  $-0.063340$  indicates that increases in the unemployment rate are associated with declines in the level of employment, which aligns with established labor economic theory. The significance of this relationship is reinforced by the extremely high magnitude of the t-statistic ( $-24.01801$ ) and the p-value of 0.0000, which is far below the 5% significance threshold. These results confirm that the unemployment rate is a highly influential factor in determining employment outcomes across the panel data. The negative coefficient also implies that labor market conditions in the three countries are highly sensitive to fluctu-

ations in unemployment, where even modest increases in unemployment correspond with substantial decreases in employment opportunities. Given the extremely significant p-value, the hypothesis stating that unemployment significantly affects employment is accepted.

3. The labor force variable emerges as the strongest predictor of employment in the model. With a coefficient value of 1.062191, the results suggest that increases in the labor force are directly associated with increases in employment, reflecting a highly elastic response between labor supply and labor absorption. This relationship is strongly supported by the exceptionally large t-statistic of 212.8537 and a p-value of 0.0000, indicating overwhelming statistical significance. This implies not only that the labor force plays a crucial role in determining employment outcomes, but also that the dataset displays a very stable and consistent relationship between labor force size and employment growth across Indonesia, Malaysia, and the Philippines over the study period. Labor market expansion—through population growth, rising participation rates, or demographic shifts—translates directly into increased employment levels. Therefore, the hypothesis stating that the labor force significantly affects employment is fully accepted, supported by both theoretical expectations and the strong empirical evidence reflected in the model.

4. The migration variable, which captures the inflow of foreign workers, shows a negative coefficient of  $-1.72E-08$ , suggesting that an in-

crease in foreign labor migration is associated with a small but meaningful decrease in domestic employment. Despite the small magnitude of the coefficient—expected due to the scale of migration data—the t-statistic of  $-2.297228$  and the p-value of  $0.0303$  confirm that the effect is statistically significant at the 5% level. This indicates that foreign worker inflows exert a measurable impact on employment, supporting concerns that competition for job opportunities may intensify as foreign labor increases, particularly in sectors reliant on low-skill or semi-skilled labor. The significance of the p-value implies that even minor fluctuations in migration flows are sufficient to affect employment levels in the panel data. As a result, the hypothesis stating that migration has a significant effect on employment is accepted, reinforcing the empirical finding that foreign labor migration plays an important role in shaping domestic labor market outcomes in the three observed countries.

## **4.5 Discussion**

### **4.6.1 Analyze of the Effect of Foreign Worker Migration on Employment of Indonesian Workers**

The research objective stated in Chapter I was to analyze the effect of foreign worker migration on the employment of Indonesian workers. Based on the regression results using the Common Effect Model (CEM), this objective has been successfully achieved. The t-test results show that the migration variable has a negative coefficient of  $-1.72E-08$  with a p-

value of 0.0303, indicating a statistically significant negative effect on employment at the 5% significance level. This means that increases in the number of foreign workers are associated with a decline in domestic employment. Although the magnitude is relatively small due to the scale of migration data, its significance demonstrates a real and measurable effect.

These findings are supported by established labor market theories. According to Borjas (2013), the entry of foreign labor can intensify competition in the domestic labor market, particularly when migrant workers and local workers have similar skill levels. Borjas and Katz (2007) further explain that foreign workers may create a substitution effect, where the growing supply of labor reduces opportunities for local workers in certain sectors. This aligns with the ILO (2019) report, which notes that migrant labor inflows can exert pressure on employment prospects in host countries when not balanced by adequate labor protections and skills upgrading. In the Indonesian context, Fitriani (2020) found that increases in foreign worker presence may reduce employment absorption in labor-intensive industries.

#### **4.7.2. Discussion of the Gross Domestic Product (GDP) Variable**

Based on the statistical analysis, the Gross Domestic Product (GDP) variable shows a probability value of **0.2194**. This value is greater than the significance level of **0.05** ( $\alpha = 5\%$ ), indicating that GDP has a positive but insignificant effect on employment in the studied countries during the research period. This result indicates that economic growth has not yet become a primary driver for substantial employment absorption. Theoretically, this condition reflects the phenomenon of "**jobless growth**," where economic expansion is not

accompanied by a proportional creation of job opportunities. This occurs when economic growth is predominantly driven by **capital-intensive** sectors or technology-based productivity improvements that minimize the need for human labor input.

Furthermore, the insignificance of GDP suggests the presence of structural barriers in the transmission process from economic growth to the labor market, such as a **skill mismatch** between the requirements of emerging industries and the qualifications of the available labor force. Consequently, although the GDP figures increase, the impact on increasing the number of employed individuals remains statistically insignificant within this research model.

#### **4.7.3 Weakness of The Model (Technical Discussion on Model Identity)**

One of the primary limitations of this research model is the inclusion of variables that share a mathematical identity. In labor economics, the relationship between employment ( $E$ ), labor force ( $LF$ ), and unemployment ( $U$ ) is defined by the identity:

$$E = LF - U$$

Since the dependent variable (Employment) is derived directly from the subtraction of Unemployment from the Labor Force, including both as independent variables may introduce several technical weaknesses:

1. **High Risk of Multicollinearity:** Because these variables are mathematically linked, they tend to move together in a predictable pattern. This can lead to high multicollinearity, which may inflate the standard errors and potentially make some variables—such as GDP—appear statistically insignificant even if they have a

theoretical impact.

2. **Model Redundancy:** Using all components of the identity within the same linear model can sometimes result in a "near-perfect" fit that explains the variance through mathematical definition rather than economic behavior. This may limit the model's ability to capture the influence of external macroeconomic shocks or other independent factors.
3. **Coefficient Sensitivity:** The coefficients for *Labor Force* and *Unemployment* in this model are highly sensitive to one another. A change in the measurement or data quality of one will almost certainly bias the estimation of the other due to their inherent accounting relationship.

Despite these limitations, this model was maintained to observe how external factors like **Migration** and **GDP** interact within the existing labor structure, while acknowledging that the statistical strength of the labor variables is partly driven by this fundamental identity.

## **CHAPTER V CONCLUSION**

### **5.1 Conclusion**

Based on the results of the empirical analysis conducted in this study, several conclusions can be drawn regarding the relationship between foreign labor migration and employment conditions in Indonesia, Malaysia, and the Philippines over the period 2014–2024. Using annual panel data obtained from the World Bank, DataIndonesia.id, and the Ministry of Manpower (Kemnaker), this research examined four independent variables—Gross Domestic Product (GDP), unemployment rate, labor force size, and migration inflows—and their influence on employment as the dependent variable.

The regression analysis was carried out using the Common Effect Model (CEM), which was selected as the most appropriate model after the Chow Test and due to the technical limitations that prevented the estimation of the Random Effect Model and the execution of the Hausman and Lagrange Multiplier tests. The results of the hypothesis testing, including the F-test and t-test, serve as the basis for drawing conclusions about the significance and direction of influence of each variable toward employment outcomes.

1. The GDP variable has a positive coefficient (0.005216), but it is statistically insignificant, with a probability value of 0.2194, which is higher than the 5% significance level. This indicates that changes in GDP do not significantly influence employment within the context of this study. Although economic theory suggests that higher GDP should generate more job opportunities, the empirical findings do not

provide sufficient evidence to support this relationship during the observed period. Therefore, GDP is not a determining factor for employment, and the hypothesis stating that GDP significantly affects employment is rejected.

2. The unemployment variable shows a negative coefficient ( $-0.063340$ ) and is highly significant, with a p-value of 0.0000. This means that increases in the unemployment rate directly lead to a decrease in employment levels, which aligns strongly with labor market theory. The significant negative effect indicates that the Indonesian labor market is highly sensitive to rising unemployment, as higher unemployment reflects weakened job absorption and declining economic productivity. Therefore, unemployment has a significant and negative effect on employment, and the related hypothesis is accepted.
3. The labor force variable is the most dominant predictor in the model, showing a large positive coefficient ( $1.062191$ ) and a p-value of 0.0000. This confirms that increases in the labor force significantly and positively contribute to employment growth. The strong statistical significance indicates that the availability of a larger workforce directly enhances job absorption, consistent with economic expectations regarding labor supply and employment capacity. Thus, the labor force has a significant and positive impact on employment, and the hypothesis for this variable is accepted.

4. The migration variable has a negative coefficient ( $-1.72E-08$ ) and is statistically significant at the 5% level, with a p-value of 0.0303. Despite the small magnitude—due to the large scale of migration data—the negative sign indicates that increases in foreign worker migration reduce domestic employment levels. This reflects a labor substitution effect, whereby foreign workers may compete with domestic workers for similar job positions, particularly in sectors requiring comparable skills. The results show that migration plays a meaningful role in shaping labor market outcomes. Therefore, migration has a significant negative effect on employment, and the corresponding hypothesis is accepted.

The regression model employed in this study also demonstrates strong statistical robustness. This is evidenced by the F-test probability value of 0.0000, indicating that all independent variables collectively exert a significant influence on employment. Furthermore, the R-squared value of 0.9995 suggests that nearly all variations in employment over the study period can be explained by the independent variables included in the model. These findings align with the labor substitution theory and labor market competition theory, both of which argue that the inflow of foreign workers may intensify competition and reduce employment opportunities for local workers, particularly in sectors where skill levels overlap.

## **5.2 Suggestions**

Based on the findings and conclusions of *The Effect of Foreign Worker Migration on Indonesia Labor Market*, using the data from 3 countries (Indonesia,

Malaysia, Philippines) conducting GDP, Unemployment, Labor Force, and Migration. several suggestions can be proposed for policymakers, future researchers, and relevant stakeholders:

1. Considering that migration was found to have a statistically significant impact on employment, governments in Indonesia, Malaysia, and the Philippines are encouraged to strengthen labor regulations that ensure the effective integration of foreign workers into the domestic labor market. Policymakers should aim to maintain a balanced inflow of foreign labor by aligning migration policies with national labor demands, sectoral shortages, and long-term economic development goals.
2. The significant influence of labor force size on employment underscores the need for improving the skills and productivity of domestic workers. Governments should increase investment in education, training, and vocational programs to enhance workforce competitiveness, enabling local workers to adapt to technological changes and industry needs, thereby reducing dependency on foreign labor.
3. Given the importance of accurate and consistent data for analyzing labor dynamics, national statistical agencies should improve the quality, frequency, and transparency of labor migration and employment datasets. More detailed data—such as migration by sector, skill level, or country of origin—may support more comprehensive and targeted policy assessment.

4. The impact of foreign workers may vary between industries, further analysis at the sectoral level is recommended. Governments should identify sectors where foreign labor contributes positively to productivity and sectors where it may create displacement risks, enabling the design of more nuanced, evidence-based policies.
5. Future studies/researches are encouraged to employ alternative econometric models or incorporate additional variables—such as wage levels, education quality, industrial productivity, or technological adoption—to gain a deeper understanding of factors influencing employment. Expanding the timeframe or including more ASEAN countries could also provide broader regional insights. Researchers may also consider using panel data with higher frequency (quarterly or monthly) to overcome limitations related to short annual panels, which affected the application of several diagnostic tests in this research.

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## APPENDICES

### *Appendix 1: Result of Common Model Test (CEM)*

Dependent Variable: LOG\_EMPLOYMENT

Method: Panel Least Squares

Date: 10/22/25 Time: 17:44

Sample: 2015 2024

Periods included: 10

Cross-sections included: 3

Total panel (balanced) observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.328466	0.032057	-10.24646	0.0000
LOG_GDP	0.005216	0.004140	1.259841	0.2194
LOG_UNEMPLOYMENT				
MENT	-0.063340	0.002637	-24.01801	0.0000
LOG_LABORFOR				
CE	1.062191	0.004990	212.8537	0.0000

MIGRATION      -1.72E-08    7.47E-09    -2.297228    0.0303

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Root MSE	0.002542	R-squared	0.999992
Mean dependent var	17.59464	Adjusted R-squared	0.999990
S.D. dependent var	0.897424	S.E. of regression	0.002784
Akaike info criterion	-8.778654	Sum squared resid	0.000194
Schwarz criterion	-8.545121	Log likelihood	136.6798
Hannan-Quinn criter.	-8.703945	F-statistic	753198.2
Durbin-Watson stat	1.552613	Prob(F-statistic)	0.000000

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***Appendix 2 :Result of Fixed Model Test (FEM)***

Dependent Variable: LOG\_EMPLOYMENT

Method: Panel Least Squares

Date: 10/22/25 Time: 17:44

Sample: 2015 2024

Periods included: 10

Cross-sections included: 3

Total panel (balanced) observations: 30

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.025002	0.219765	-0.113766	0.9104
LOG_GDP	0.009467	0.010451	0.905816	0.3744
LOG_UNEMPLOYM ENT	-0.064790	0.003063	-21.15040	0.0000
LOG_LABORFORCE	1.041354	0.021625	48.15431	0.0000
MIGRATION	-2.41E-08	7.92E-09	-3.041113	0.0058

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Effects Specification

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Cross-section fixed (dummy variables)

Root MSE	0.002337	R-squared	0.999993
Mean dependent var	17.59464	Adjusted R-squared	0.999991
S.D. dependent var	0.897424	S.E. of regression	0.002669
Akaike info criterion	-8.812943	Sum squared resid	0.000164
Schwarz criterion	-8.485997	Log likelihood	139.1942
Hannan-Quinn criter.	-8.708351	F-statistic	546265.7
Durbin-Watson stat	1.724002	Prob(F-statistic)	0.000000

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***Appendix 3: Result of Chow Test***

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

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Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.098636	(2,23)	0.1455
Cross-section Chi-square	5.028675	2	0.0809

#### *Appendix 4: Data Tabulation*

Country	Year	GDP	EMPLOY- MENT	UNEMPLOY- MENT	MIGRA- TION
INDONESIA	2015	\$860,850,000.00	114800000	7.600.000	-28487
INDONESIA	2016	\$931,880,000.00	120647700	7.000.000	-28991
INDONESIA	2017	\$1,020,000,000.00	124540000	7.000.000	-29467
INDONESIA	2018	\$1,040,000,000.00	126282186	7.073.385	-29911
INDONESIA	2019	\$1,120,000,000.00	128755271	7.104.424	-30421
INDONESIA	2020	\$1,060,000,000.00	128454184	9.767.754	-18743
INDONESIA	2021	\$1,190,000,000.00	131050523	9.102.052	-11248
INDONESIA	2022	\$1,320,000,000.00	135610000	8.400.000	-37501
INDONESIA	2023	\$1,370,000,000.00	138632511	7.860.000	-37501
INDONESIA	2024	\$1,400,000,000.00	144642000	7.470.000	-38469
PHILIP- PINES	2015	\$306,450,000.00	39,800,000	2,345,000	-390702
PHILIP- PINES	2016	\$318,630,000.00	41,000,000	2,400,000	-309251
PHILIP- PINES	2017	\$328,480,000.00	42,000,000	2,400,000	-263593

PHILIP-PINES	2018	\$346,840,000.00	43,000,000	2,279,000	-163602
PHILIP-PINES	2019	\$376,820,000.00	42,400,000	2,100,000	-6208
PHILIP-PINES	2020	\$361,750,000.00	39,400,000	4,500,000	-47014
PHILIP-PINES	2021	\$394,090,000.00	40,600,000	3,700,000	-85185
PHILIP-PINES	2022	\$404,350,000.00	47,110,000	2,600,000	-221754
PHILIP-PINES	2023	\$437,060,000.00	50,520,000	2,190,000	-164284
PHILIP-PINES	2024	\$461,620,000.00	50,190,000	1,940,000	-160373
MALAYSIA	2015	\$301,360,000.00	14067700	450300	187663
MALAYSIA	2016	\$301,260,000.00	14163700	504100	222141
MALAYSIA	2017	\$319,110,000.00	14476800	503300	227677
MALAYSIA	2018	\$358,790,000.00	14776000	504300	221965
MALAYSIA	2019	\$365,180,000.00	15073400	508200	203284
MALAYSIA	2020	\$337,460,000.00	14719400	686600	101907
MALAYSIA	2021	\$373,780,000.00	14825200	707600	188506
MALAYSIA	2022	\$407,610,000.00	15155200	614500	188154
MALAYSIA	2023	\$399,710,000.00	15813400	553400	181071
MALAYSIA	2024	\$421,970,000.00	16780000	544300	174770