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## Economic Determinants and Foreign Labour Force: Evidence from Malaysia

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### Abstract

Malaysia is facing a critical shortfall of labour in several sectors such as construction, manufacturing and services. In particular, the 3D's jobs, namely 'dirty, dangerous and difficult' jobs, are not well filled by local workers due to employers' unwillingness to raise wages and improve working conditions to minimize firms' cost. Instead, the firms tend to employ foreign labours to fill the shortfall and meet the market demand. Hence, this study aims to examine the relationship between economic determinants and foreign labour force in Malaysia. The four selected economic determinants are unemployment rate (UNEMP), gross domestic product (GDP), foreign exchange rate (FOREX) and labour productivity (LPY). The secondary data covering 18 years from 2001 to 2018 is tested and analyzed using descriptive, correlation and multiple linear regression analyses. The findings reveal that the GDP and FOREX have positive relationship with Malaysia's foreign labour force whilst the UNEMP and LPY pose negative relationship with the foreign labour force. However, only GDP and LPY are found to have significant relationship with foreign labour force in Malaysia. The findings have implications on and are beneficial to the policy makers and business firms in coming up with any measures pertaining foreign labour in Malaysia. The findings will also add more knowledge and references to the existing literature.

**Keywords:** Economic Determinants, Foreign Labour, Regression, Malaysia.

### Introduction

This study is carried out to examine the economic determinants of the foreign labour force in Malaysia. Dependence on the foreign labour force in economic development is common, especially to a developing country like Malaysia. This situation is usually influenced by several economic factors such as unemployment rate, Gross Domestic Product (GDP), exchange rate, and country's labour productivity. These factors will also be analyzed on how significant its influence is towards foreign labour force in Malaysia.

Foreign labours work abroad due to several factors such as higher foreign exchange rates, economic and political stability in foreign countries. Foreign labour can be divided into

two categories, namely skilled and unskilled labours. This can be distinguished through their specific skills, training, knowledge and abilities to perform their tasks. Numerous studies show that skilled foreign labour can contribute positively to the expansion of national production output. Unskilled foreign labours are using more energy and less intellectual skills. Jobs such as packers, collectors, apprentices, or farmers do not require formal education and high skills. Usually, such jobs require unskilled labour in the workplace and are exposed to dangerous, dirty and difficult (3D) conditions.

Malaysia is among the countries that have been long dependent on foreign labour to boost its economic development. The country's labour shortage began in the 1980s in specific critical sectors such as construction, manufacturing, and services. This situation occurs due to the people of this country, who are not interested in dirty, dangerous and difficult jobs. Another factor is the low wage rate that is only willing to be accepted by foreign labour. The availability and readiness of foreign labour are high. They are willing to work for long hours including during peak hours and public holidays. This situation is, of course, favourable by most employers in Malaysia. Foreign labour also helps to ensure the continuity and growth of production in the country's manufacturing, plantation, and livestock sectors. They also ensure the stability of the development of the real estate and retail sectors.

Nonetheless, every advantage must come with its disadvantages. Due to the absence of minimum wage requirement in previous time and the later implementation of too low minimum wage had caused foreign labour to continue dominating the country's workforce and brought about local workers to lose their job opportunities. This scenario has encouraged local workers to move to other developing countries to earn higher wages (Wells, 1996). Excessive reliance on foreign labours will also lead to currency outflows, declining productivity performance, and disrupting the social and economic balance.

A significant number of foreign labours also bring other concerns such as community safety associated with increased levels of crime and infectious diseases (Kanapathy, 2008). This is clear based on the rising cases in criminal offences in some countries contributed by these groups. They are also the cause of the spread of disease. There are some cases where the infection is brought from the country of origin of foreign labours due to the local authorities' lack of screening procedures when these foreigners cross the country's border. Moreover, infected foreign labours rarely consult a doctor because consultation fees can be expensive, and they do not have the health care benefits and compensation provided by their employers (Devadason, 2013).

### **Research Background**

According to the International Organization of Migration, between 2010 and 2017, the number of documented foreign labour in Malaysia increased from 1.7 million to 2.2 million. Furthermore, there are an estimated 2 to 4 million additional undocumented migrant workers in Malaysia according to the same sources. Concerning that, the Department of Statistics Malaysia (DOSM) estimated that foreign labour has been hovering around 15 percent of the total labour force over the years. Most migrant workers are in the manufacturing sector and followed by the construction sector, farming, services, agriculture and domestic servants. The percentage of foreign labour in Malaysia by sectors can be summarized as table 1 below.

**Table 1. Percentage of Foreign Labour in Malaysia by Sectors**

Sector	Percentage
Manufacturing	35.60%
Construction	19.80%
Farming	14.70%
Services	13.60%
Agriculture	9.10%
Domestic servant	7.20%

Sources: Ministry of Human Resources, 2018

Due to the geographical advantage and cultural proximity, Malaysia has become an attraction of foreign labour from neighbouring lower-income countries such as Indonesia, Bangladesh, Pakistan, Myanmar, India, the Philippines, Nepal and Vietnam, owing to fast and steady economic progress and a higher old-age dependency ratio.

For the purpose of this study, the researchers wish to examine whether the foreign labour growth in Malaysia has direct relationship with economic determinants. The issue of foreign labour is one of the most discussed topics in Malaysia when the ban on the recruitment of new foreign labour is being enforced and the increase in foreign labour levies implemented at the beginning of 2016. Since the Malaysian government has agreed to suspend the import of other foreign labours into the nation; this could have a few consequences, for instance, the nation is already seriously short-staffed in a few major sectors of the country. Consequently, this leads to productivity inefficiency and firms cannot meet the demands of consumers in the sectors concerned. Looking at this situation, this will be one of the obstacles to achieve Malaysia's aspiration to transform from a middle-income to an upper-middle-income country and become a developed nation. Therefore, it is utmost important to study the relationship between foreign labour force with the economic determinants in Malaysia. The remainder of this paper is arranged as follows; review of literature, data and methodology, empirical results and discussion, and conclusion.

### **Review of Literature**

The foreign labour's inflow into Malaysia is not a new and recent phenomenon. Even before Malaysia's independence, this labour movement into the country to seek employment opportunities or a better living standard had already taken place. It is undeniably true that there are endless complaints regarding the ever-increasing number of foreigners, especially in Malaysia's unskilled foreign labours. Salleh et al. (2014) stated that many factors influence the increase of foreign labours in Malaysia's construction sites, such as weak enforcement, authority's unethical practice, and no limit for visitors in tourism policies. According to Noor et al. (2011), compared to local labour, foreign labour is exceptionally productive, compliant and economical. The market for foreign labour is, therefore, more in competition with local labour (Jajri & Ismail, 2006).

Malaysia is an attractive country because of performance and better job perspectives. The unemployment is considered as a macroeconomic issue for any country. According to

Forte and Portes (2017), fluctuations in the unemployment rate pose impact on decision to migrate. The study specifically stated that every increase in the unemployment rate in the country of origin would increase international migration to the United Kingdom. On the other hand, Dobson (2009) said that foreign immigration decreases when unemployment increases. This implies that unemployment and foreign labour force have a negative relationship. Djafar and Hassan (2012) found that Malaysia has higher income than Indonesia and lower unemployment rate than its neighbour. Thus, this encourages the influx of migrant workers from Indonesia to Malaysia. Rios-Avila and Canavire-Bacarreza (2016) suggested that foreign labours do not affect the local-born workers finding a job. Furthermore, only young and less educated local workers were most likely affected by foreign labours' presence. Kim (2010) proposed that unemployment rate in a destination country does not cause foreign labour's return movement as in the case of Germany.

High GDP per capita indicates the excellent economic performance of a country. According to Shrestha (2017), growth in the domestic product will give higher expected income from migration. Higher wages and better job opportunities will make migration more desirable for the foreign labour force. The statement is supported by Aqeel (2015), who studied the determinants of migration in Pakistan. Wickramasinghe and Wimalaratana (2016) claimed that economic growth may not be the only factor driving international migration, but there are also factors relating to social, legal, political and cultural phenomena. Even so, the positive impact of GDP per capita on foreign labour force still can be concluded. However, the fact is that the economic downturn is likely to have negative impacts on migrants and nationals. Nevertheless, these impacts will differ according to country, region, and employment sector (Beets & Willekens, 2009).

Bodvarsson and Berg (2013) noted that when foreign labours opt a destination country, their primary purpose is to maximize utility by choosing the highest net income, namely the high exchange rate and low migration cost. Similar reason was found by Djafar and Hassan (2012), who reported that as Malaysian ringgit is stronger to Indonesian rupiah; Indonesian migrants will continue entering Malaysia for better job prospects. However, Nekoei (2013) had different finding that the exchange rate gives a negative impact on the earnings of immigrants. The study showed that 10 percent US dollar appreciation would give 0.92 percent of the impact on an immigrant's earnings. On the other hand, Forte and Portes (2017) found that exchange rates do not significantly impact foreign labour despite its positive coefficient.

Rienzo (2013) showed a positive and significant relationship between labour productivity growth and migrant workers. Immigrants increase labour productivity with multiple reasons; immigrants have specific skills, abilities and aptitudes and transmit them to the native labours. Also, immigrants bring knowledge and connexions to their home countries' markets, populations and economies. When immigrants complement some groups of natives, by boosting competition, they might increase the incentive for native labours to acquire specific skills. Migrant workers positively impact economic growth particularly in the construction sector (Hanoomanjee et al., 2017). In contrast, Del Carpio et al. (2013) indicated the impact of foreign labours on productivity differs by sectors, with ICT services and accommodation sectors experiencing no statistically significant impact whilst productivity in construction and plantation is lowered. Theng and Ng (2018) added that the change in foreign labours intensity had no statistically significant impact on either the change in native worker employment or overall labour productivity. Similarly, sectors that have seen an increase in



foreign labour intensity growth did not experience any statistically significant change in overall productivity growth.

### Data and Methodology

Foreign labour is one of Malaysia's crucial macroeconomic issues and commonly discussed because foreign labour conveys various advantages and disadvantages. In this research, the foreign labour dataset as the dependent variable is collected from the Statista Logo. The unemployment rate, GDP per capita, exchange rate, and labour productivity for the independent variables are sourced from the various websites such as Statista Logo, The World Bank and Quandl. The dataset used in this study is from the year 2001 to the year 2018. The summary of data is presented in the Table 2.

Descriptive analysis will be the first analysis used to describe the basic features of this study's data. It provides simple summaries about the sample and the measures. The test for non-stationarity or unit root is based on the Augmented Dickey-Fuller (ADF) test. Unit roots can cause unpredictable results in time series analysis and a necessary test to be performed. Next, the correlation test is also conducted to examine the correlation among the variables studied. Lastly, multiple regression analysis provides a means of objectively assessing the degree and the character of the relationship between the independent variables and the dependent variable. The regression coefficient indicates each independent variable's relative importance in predicting the dependent variable (Sekaran and Bougie, 2013). The multiple regression model used in this study to find the relationship between variables is as follows:

$$FL_i = \alpha + \beta_1 UNEMP_i + \beta_2 GDP_i + \beta_3 FOREX_i + \beta_4 LPY_i + \varepsilon_i$$

**Table 2. Summary of Variables and Data Sources**

Variables	Type	Abbreviation	Unit Measurement	Data Sources
Foreign Labour Force	Dependent Variable	FL	% of total labour in Malaysia	Statista Logo
Unemployment Rate	Independent Variables	UNEMP	Number of unemployed persons	World Bank
Gross Domestic Product		GDP	Per capita (Current LCU)	
Foreign Exchange Rate		FOREX	Official exchange rate	
Labour Productivity		LPY	% in growth	Quandl

The study employed the following hypotheses:

$H_0$ : There is no significant relationship between independent variables (unemployment rate, gross domestic product, foreign exchange rate and labour productivity) with foreign labour force in Malaysia.

$H_A$ : There is a significant relationship between independent variables (unemployment rate, gross domestic product, exchange rate and labour productivity) with foreign labour force in Malaysia.

## Empirical Results and Discussion

### Descriptive Statistics Analysis

**Table 3. Results of Descriptive Statistics**

	FL	UNEMP	GDP	FOREX	LPY
Mean	65.25556	3.327778	10.22350	3.618678	1.380648
Maximum	68.3	3.69	10.73405	4.300441	1.745138
Minimum	62.6	2.88	9.607170	3.060003	0.851396
Std. Dev.	2.02113	0.224435	0.355059	0.373722	0.287628
Skewness	0.293184	-0.30513	-0.28891	0.035833	-0.49081
Kurtosis	1.555677	2.154223	1.912009	1.940212	1.86641
Jarque-Bera	1.822423	0.815811	1.138341	0.846215	1.686464

Table 3 shows the results of the descriptive statistics. The table summarizes the mean, maximum, minimum data including the standard deviation, skewness and kurtosis of each variable tested for the period from 2001 to 2018. Foreign labour growth indicates the highest percentage followed by the GDP whilst the labour productivity shows the least. In term of dispersion of data, foreign labour growth also shows the highest value followed by the foreign exchange rate and GDP.

From the skewness results, foreign exchange rate data is the most normally distributed than foreign labour growth, which slighted skewed to the right. The other three variables, namely GDP, unemployment rate and labour productivity data, are slightly skewed to the left. The kurtosis values for all variables are positive that ranging between 1.55 and 2.15. Each variable has data with a heavier tail, which is known as leptokurtic distribution. Jarque-Bera showed low values, and close to zero indicated that each variable's data is normally distributed.

### Correlation Analysis

Table 4 presents the results of the Pearson correlation. Foreign labour growth is negatively correlated with the unemployment rate despite the relatively weak correlation between the two. Meanwhile, foreign labour growth has positive correlations with the GDP, foreign exchange rate and labour productivity, respectively, where the correlation is seen quite strong with the GDP but relatively weak with the other two, namely foreign exchange rate and labour productivity. Out of the four economic determinants, only the GDP is significant and contributes to Malaysia's foreign labour growth.

**Table 4. Results of Pearson's Correlation Test**

Correlation t-Statistics Probability	FL	UNEMP	GDP	FOREX	LPY
FL	1.000000 ----- -----				
UNEMP	-0.358011 -1.533704 0.1446	1.000000 ----- -----			
GDP	0.744002 4.453918 0.0004	-0.508779 -2.36395 0.0311	1.000000 ----- -----		
FOREX	0.374386 1.614998 0.1259	0.576804 2.824419 0.0122	0.123686 0.498571 0.6249	1.000000 ----- -----	
LPY	0.384722 1.66721 0.1149	-0.485815 -2.223255 0.0410	0.838934 6.165983 0.0000	-0.145403 -0.587858 0.5648	1.000000 ----- -----

On the correlation between the economic determinants, we note that the unemployment rate has a moderate correlation with the other three economic determinants, where the value is around 0.5000. The correlational signs make sense as the better the country's GDP and labour productivity, the lower the unemployment rate will be. Whereas, the depreciation of currency will contribute towards higher unemployment rate and vice versa. The results also suggest that the higher labour productivity, the higher GDP of the country will be. However, labour productivity is negatively correlated with the foreign exchange rate, which indicates that the country's currency has depreciated, and labour productivity will decline. In another way around, we could state that when labour productivity falls, the country's currency will fall in value.

### Multiple Regression Analysis

**Table 5. Results of Multiple Regressions**

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	67.4233	5.4269	12.4239	0.0000
UNEMP	-2.8541	2.1948	-1.3004	0.2160
GDP	0.0002	7.38E-05	2.8800	0.0129
FOREX	1.8697	1.2786	1.4622	0.1674
LPY	-4.0806	2.0236	-2.0164	0.0649

Table 5 summarizes the results from the multiple regression analysis. Looking at the coefficient values, we could note that the unemployment rate and labour productivity negatively impact Malaysia's foreign labour growth. Meanwhile, the GDP per capita and the foreign exchange rate has positively affected foreign labour growth. Nonetheless, out of the



four economic determinants, only the GDP and labour productivity significantly impact Malaysia's foreign labour growth.

The result implies that the higher the GDP of Malaysia, the higher the foreign labour coming into Malaysia, and vice versa. This finding makes real sense as the higher GDP portrays the remarkable economic activities or performance in this country. Through economic growth, the country's prosperity will attract more foreign labour to work in the country, particularly to fill in the sectors that are not really favoured by local labours such as construction, manufacturing, and farming. Firms or businesses that tend to minimize operating costs will employ more foreign labours to meet the demand from the market since the foreign labour from less developing countries such as Myanmar, Nepal and Bangladesh are willing to work for lower wages, in the less convenient workplace and even with lower fringe benefits.

On the other hand, labour productivity growth is found to affect foreign labour negatively. This result could be interpreted that the higher productivity generated by the existing labour, either local or foreign, will impede more foreign labour into the Malaysian market. This relates to the capability and efficiency of the existing labour in the production process. The higher or larger quantity of production for a certain period; the larger productivity achieved. Hence, less labour, specifically foreign labour is required for the market's production.

## Conclusion

This study examines the four economic determinants, namely the GDP per capita, foreign exchange rate, unemployment rate, and labour productivity related to Malaysia's foreign labour growth based on annual data from the year 2001 to 2018. The empirical results suggest that the GDP per capita, proxy for economic growth, plays a significant role in attracting foreign labour to work in Malaysia. This finding supports Jennisen (2004), who noted the GDP per capita positively affects the foreign labour force in the Western Europe. The positive result on the GDP per capita is also consistent with Shrestha (2017), who revealed that the higher GDP would attract more foreign labour into a country as it has higher possible income, better economic conditions and more job opportunities.

In contrast, labour productivity is significantly and adversely affecting the number of foreign labour in Malaysia. This finding is contrary to Rienzo (2013), and Keller and Jungnickel (2003), who evidenced a significant but positive relationship between labour productivity and foreign labour growth. Meanwhile, despite its insignificant result, depreciation in the country's currency can potentially attract more foreign labour to work in Malaysia. Likewise, in spite of its insignificant result, the unemployment rate has a negative impact on Malaysia's foreign labour growth. This implies that the higher the unemployment rate, the lower foreign labour entering Malaysia due to fewer job opportunities. This finding makes real sense since the government will protect the local or home country labour by preventing the influx of foreign labour, specifically in the period of job undersupply. Our finding is consistent with Dobson et al. (2009) and Beets and Willekens (2009).

The findings have significant contributions and policy implications. The Malaysian government, through its National Economic Action Council (MTEN) and Economic Planning Unit (EPU), has to come up with strategic actions to further strengthen the economic activities that ultimately contribute towards a rise in the GDP per capita and a fall in the unemployment rate. This, in turn, will create more job opportunities to the home country workers and attract more foreign labours to occupy the critically short-handed sectors, namely constructions,

manufacturing and services. Meanwhile, the Malaysia Productivity Corporation (MPC), a government-related agency, needs to strategize how to enhance the home country labour productivity by improving their skills, efficiency, quality and competitiveness in the production process through appropriate trainings, courses and whatnot. This is utmost important in order to avoid over dependence or reliance on foreign labours and reduce their influx into the country in the future.

The business or private sectors must as well work hand-in-hand with the government agencies or policy makers to ensure the achievement of the above objectives. The private sectors must be willing to invest more in helping the government to create more job opportunities especially to the home country workers. The revised minimum wage policy, which is introduced by the government in February 2020, needs to be fully supported by the private sectors. This is crucial to attract more home country workers to occupy the 3D's job sectors besides encountering the rise in cost of living. In addition, the private sectors must ensure a better enhanced well-being of the workers in terms of accommodation and other fringe benefits so that the critical sectors are favored and willingly appropriated by the local labours, particularly.

This study merely focused on four economic determinants. In the future, we suggest researchers to test on other or combine economic and non-economic variables such as foreign direct investments (FDIs), industrial production index (IPI), inflation rate, government policies and levies on foreign labour, political stability, corruption index, crime index and happiness index. A further study could also test the variables using other methods as robustness check such as Johansen co-integration, Granger causality and Logit regression using the sample data divided into several sub-periods such as pre and post financial crises. Comparative study among developing or developed countries could also be conducted to better explain the results.

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