

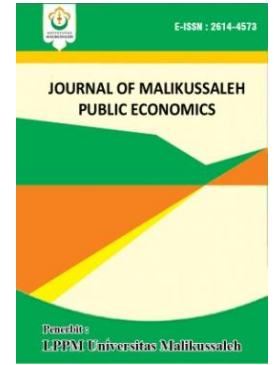
## The Influence of the Amount of Migran Workers to The Growth of Foreign Exchange Reserve in Indonesia

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### ARTICLE INFORMATION

### ABSTRACT

#### Keywords:

**Labour Migrant, Growth of Foreign Exchange**

*This study aims to determine the effect of the number of Migrant Labour abroad to the growth of foreign exchange reserve in Indonesia. This study uses the number of sending workers abroad and foreign exchange reserve in the year 1999-2017. The study utilizes simple regression method. The results of the study indicated that the number of Indonesian Workers had no effect on the foreign exchange reserve from 1999-2017.*

## 1. INTRODUCTION

The Central Statistics Bureau (BPS) said that until 2016, the Open Unemployment Rate (PTP) in Indonesia reached 5.33 percent or 7.01 million. The high numbers of unemployment need for a solution to overcome, one of which is to send Indonesian workers to work abroad.

The countries that make up the majority of the dispatched goals of the migrant workers are Malaysia with a total number of migrant workers as many as 87,616. Followed by Taiwan with 77,087 people, Saudi Arabia with 13,538, Hong Kong with 14,434, and other countries such as Singapore, United Arab Emirates, Brunei Darussalam, Qatar, South Korea, and United State (LAKIP BNP2TKI, 2016)

The high number of sending migrant workers abroad will have an impact on the amount of remittances that become the country's foreign exchange received. BNP2TKI recorded the amount of remittances generated by TKI in 2015 reached US \$ 9,429 or around Rp 98,015 trillion, while in 2016 it decreased by US \$ 8.85.

The number of Indonesian Workers and Foreign Exchange resulting from the transfer of labor can be seen as follows:

**Table 1**

**The Number of Migrant Workers and National Foreign Exchange Reserve from the Delivery of Migrant Workers in 2014-2016**

Year	Number of Migrant Workers	Foreign Exchange Reserve (Billions of rupiah)
2014	429.872	103.749,6
2015	275.736	128.895,3
2016	234.451	118.908,6

Source : Ministry of Manpower and Bank Indonesia, 2017.

Based on table 1 above, it can be seen that the number of shipments and placement as migrant workers abroad has decreased since 2014-2016. Although the number of TKI placements has decreased in 2015, the country's foreign exchange generated is higher, this is different from 2014, the number of TKI is high, but the foreign exchange generated is low.

The decline in the number of sending and placement of migrant workers abroad is caused by the policies of several countries that limit the acceptance of foreign workers, especially non-skilled sectors such as households. The problem is when the number of migrant workers sent is high, but the foreign exchange is low due to the

decrease in remittances of migrant workers, especially countries such as Malaysia and Hong Kong.

Research on sending Indonesian Workers (TKI) abroad is interesting to study because the placement of TKI abroad has provided an additional source of foreign exchange reserve. According to Prihanto, (2013) the country's foreign exchange from migrant workers every year ranks at the second level after oil and gas. Despite the growth of this country's foreign exchange reserve often do not get guarantees of protection from the Indonesian government to the Indonesian migrant workers, it is evident that almost every year overseas workers experience legal problems, discrimination and torture, especially migrant workers who work in the household sector.

This study aims to determine the effect of the number of sending Workers (TK) abroad to the growth of the country's foreign exchange reserve in Indonesia.

In the second part of this paper discusses the theoretical review related to the variables discussed in this study, then the third section describes the methods and steps taken to analyze the effect of the Indonesia workers of overseas. Finally, the fourth and fifth sections will explain the results of the analysis obtained as well as conclusions and suggestions.

## 2. THEORITICAL REVIEW

### Foreign Exchange

Foreign exchange is a foreign currency deposit which is stored in several currencies which is a reserve that can be an important indicator to measure the strength of a country in term of international trade. Foreign exchange reserves are also an external asset of Bank Indonesia as a monetary authority that can be used to finance imbalances in the balance of payments. Bank Indonesia also intervenes in the market in order to maintain exchange rate stability, and maintain economic resilience (Bank Indonesia, 2014)

Septiani (2008) states that the influence of labor on foreign exchange earnings is 0.92. Priambada (2014), also stated that Indonesia obtained foreign exchange from sending labor to foreign countries more than Rp 100 trillion

annually. This is in line with research conducted by Yuningrum (2010) that Indonesian migrant workers play a large role in adding foreign exchange values.

### Labor

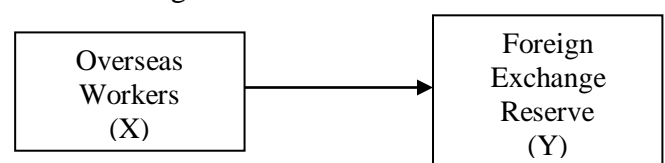
Workers are residents with a minimum age limit of 10 years without a maximum limit. This is based on the fact that in this age many young people have worked and are looking for work (Payaman, 2001).

The results of research conducted by Afriska, et al (2018) show that Indonesian labor migrants and remittances have a positive and significant effect on Indonesia's GDP per capita. Apart from supporting the country's economic growth, foreign workers also have a positive influence on the exchange rate.

Research conducted by Nizar (2014) showed that the growth in remittance inflows had a positive influence on the real Rupiah exchange rate. This means that an increase in the amount of remittance inflows will encourage appreciation the real exchange rate of the Rupiah against the United States dollar (USD).

### Conceptual Framework

The following is a conceptual framework scheme that will be used by researchers or writers in conducting research.



**Figure 2**  
**Conceptual Framework**

Based on Figure 1 above it can be seen that this study uses an independent variable namely labor abroad (X) while foreign exchange Reserve (Y) as the dependent variable. The variable is tested partially using t-test.

### Research Hypothesis

From the elaboration of the research objectives, the authors determine the hypotheses in this study are:

- H<sub>a</sub>: The number of workers sent abroad has an effect on the growth of Indonesia's foreign exchange reserve.
- H<sub>0</sub>: The number of workers sent abroad has no effect on the growth of the country's foreign exchange growth.

### 3. RESEARCH METHOD

#### Data and Data Sources

This study uses secondary data with time series data types. While the source of data in this study is the number of workers sent abroad and foreign exchange reserve in the year 1999-2017. The data is obtained from the Indonesian Central Statistics Bureau (BPS) and Bank Indonesia.

#### Data Analysis Method

This study analyzes the effect of Overseas Workers on Foreign Exchange Growth using the simple Linear Regression method to determine the effect of the number of sending Workers (TK) abroad on the growth of foreign exchange reserve in Indonesia, using the following equation:

$$Y = a + \beta X + e$$

Where :

- Y : The Growth of Foreign Exchange Reserve
- a : A constant
- $\beta$  : Regression Coefficient
- X : Overseas Workers
- e : Error Term

Meanwhile, to find out the significant level of regression coefficient of the independent variable to the dependent variable, the researchers use several tests, normality, classic assumption tests, t-statistics tests, and analysis of the coefficient of determination (R<sup>2</sup>).

#### Statistical Testing

To test the truth of the regression model, statistical testing is required including:

#### T test

T test was conducted to explain independent variables individually giving effect or not on the dependent variable. By using a significant degree

of 5%, the hypotheses to be tested in this study are:

- H<sub>0</sub> : Workers Abroad do not have a significant and positive effect on the State Foreign Exchange Growth.
- H<sub>1</sub> : Workers Abroad have a significant and positive effect on the State Foreign Exchange Growth.

T test criteria, H<sub>1</sub> is accepted and H<sub>0</sub> is rejected if the t-statistic value is greater than the t-table.

#### Determination Coefficient Test (R<sup>2</sup>)

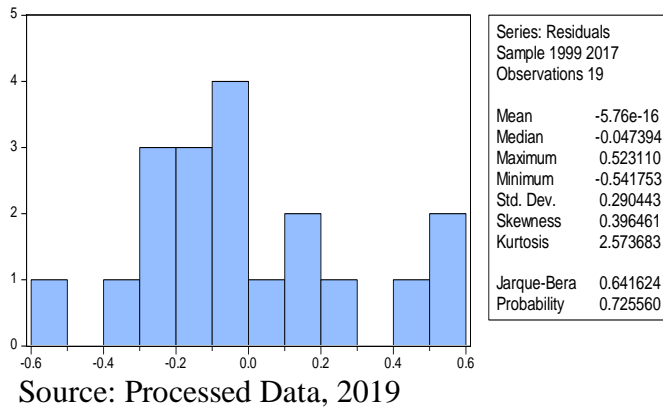
The coefficient of R<sup>2</sup> means that the percentage of the contribution of the independent variable (X) to the dependent variable (Y) while others contributions from other factors not included in the model (Rahim, 2013).

The coefficient of determination (R<sup>2</sup>) is used to measure how far the model's ability to explain the variation of the dependent variable. The coefficient of determination is between 0 and 1. A small R<sup>2</sup> value means that the ability of the independent variables to explain the variation of the dependent variable is very limited.

### 4. RESEARCH RESULTS AND DISCUSSION

#### Normality Test Results

This study uses the Jarque-Bera (J-B) Test to find out normal or abnormal regression models, disturbing or residual variables. By comparing the calculated J-B value with the value of  $\chi^2$  (Chi-Square) table. If the J-B value is calculated <value  $\chi^2$  tables, then the residual value is not normally distributed and if the J-B value is calculated > the value of  $\chi^2$  tables, the residual value is normally distributed.



**Figure 2**  
**Histogram of Normality**

To find out normal or abnormal regression models, disturbing or not residual variables, we can compare the calculated J-B value with the value of  $\chi^2$  (Chi-Square) table. Value of  $\chi^2$  table with  $df = 19 - 2 = 17 = 27.587$ . When compared with the Jarque-Bera value in the above figure of 0.641, it can be concluded that the residuals of the regression model, are normally distributed because the Jarque-Bera value  $<$  value  $\chi^2$  table or 0.641  $<$  27.587 with a significance value greater than 0.05.

### Classic Assumption Test

#### Autocorrelation Test Results

There are several methods that can be used to detect the presence or absence of autocorrelation, one of them with the LM-Test. The following results of data processing can detect autocorrelation:

**Table 2**

#### LM Test Autocorrelation Test Method

Breusch-Godfrey Serial Correlation LM

Test:

F-statistic	0.870922	Prob. F(2,15)	0.4387
Obs*R-squared	1.976785	Prob. Chi-Square(2)	0.3722

Source: Processed Data, 2019

Based on Table 2 above, it can be explained that the value of LM Test through Obs \* R-squared is 1.976785 with Prob. Chi-Square ( $X^2$ ) of 0.3722 is greater than 0.05. Thus it can be concluded that there is no autocorrelation in this study.

### Simple Linear Regression Results

After analyzing it, simple linear regression results can be performed. Estimation results can be seen in the following Table 3:

**Table 3**  
**Simple Linear Regression**

Dependent Variable: PERTUMBUHAN\_DEVISA

Method: Least Squares

Date: 07/10/19 Time: 08:40

Sample: 1999 2017

Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.009924	0.137054	0.072411	0.9431
JUMLAH_TKI	1.72E-07	3.08E-07	0.559890	0.5829
R-squared	0.018106	Mean dependent var		0.082605
Adjusted R-squared	-0.039653	S.D. dependent var		0.187938
S.E. of regression	0.191628	Akaike info criterion		-0.367219
Sum squared resid	0.624263	Schwarz criterion		-0.267804
Log likelihood	5.488577	Hannan-Quinn criter.		-0.350394
F-statistic	0.313476	Durbin-Watson stat		2.573492
Prob(F-statistic)	0.582858			

Source: Processed Data, 2019

The results of calculations using the regression method can be seen in the following equation:

State Foreign Exchange = 0.009924 + 0.00000172  
Number of TKI

From the formulation of the model above shows that the constant variable value is 0.009924 which means that if the number of TKI sending labour abroad is zero, then the country's foreign exchange growth value is 0.009924.

The coefficient value of the variable number of TKI sending labour abroad is 0.00000172 which means that if the number of TKI abroad increases per 1000 people, it will increase the country's foreign exchange reserve by 0.0172 or 1.72%.

### Determinant Coefficient ( $R^2$ )

The value of R Square in table 3 is 0.018106 or 1.8106%. This means that the independent variable, namely the number of migrant workers, can explain the dependent variable, namely the country's foreign exchange reserve of 1.8106%, while the remaining 98.194% is explained by

other variables not included in the regression model in this study.

### Hypothesis test

#### t Test Results

From the results of calculations in table 3 partial test between the number of migrant workers to the growth of foreign exchange obtained t value of 0.559890, and t table of 1.76131 or significance ( $0.5829 > 0.05$ ). Because the significance value is greater than 0.05 and the tcount is smaller than the t table, it can be concluded that sending migrant workers abroad has no effect on foreign exchange earnings so that the hypothesis proposed is rejected.

### Discussion

Based on the results of the study note that sending the number of migrant workers abroad has no effect on the country's foreign exchange growth. No effect on foreign exchange earnings based on this study is due to the strengthening of the Rupiah against several currencies in the destination countries of migrant workers such as Malaysia, Saudi Arabia and Korea, this has directly reduced foreign exchange earnings for the country. In addition, migrant workers often hold foreign money to be sent or exchanged into Rupiah, this is because TKIs are more likely to exchange foreign currencies when the value of the currency in their country appreciates against the Rupiah.

High inflation in some developed countries such as Singapore, the United Kingdom and several European countries have caused labor migrants to save money and only a small portion can be brought back to Indonesia. Therefore it does not guarantee that the large number of migrant workers will bring high state foreign exchange. Only migrant workers from the professional and official workforce group are able to contribute foreign exchange to the country in high numbers.

## 5. CONCLUSIONS AND SUGGESTIONS

### Conclusion

Based on the above research results, several conclusions can be drawn as follows:

The sending of the number of Indonesian Workers has no effect on the country's foreign exchange earnings from 1999-2017.

The number of migrant workers can explain the dependent variable, namely the country's foreign exchange of 1.8106%, while the remaining 98.194% is explained by other variables not included in the regression model in this study.

### Suggestion

Future studies are expected to use a longer research period with the aim of obtaining better results. In addition, the next research is expected to be able to add other independent variables besides the independent variables that already exist in this study.

Based on the research and discussion that has been done, the government needs to maintain the balance of the number of Indonesian workers, especially from the formal sector because remittance income as a source of foreign exchange has increased, thus unemployment has decreased, state financing has increased and public welfare has been achieved.

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