THE INFLUENCE OF VILLAGE FUNDS, FAMILY HOPE PROGRAM (PKH), AND POPULATION ON POVERTY AT THEVILLAGE LEVEL IN KURUN SUB-DISTRICT, GUNUNG MAS DISTRICT 2018-2022

^{*1}Albert Easton

¹Master of Economics, Faculty Economics and Business ,University of Palangka Raya, Palangka Raya,Kalimantan Tengah

> Author's email: alberteaston01@gmail.com

*Corresponding author:alberteaston01@gmail.com

Abstract. This study aims to determine and analyze how the influence of the village fund program, the Family Hope Program (PKH) and the total population on poverty at the village level in Kurun District, Gunung Mas Regency in 2018-2022. Poverty is a very complex problem that needs to be addressed even though some developing countries have successfully carried out development in overcoming poverty. One of the poverty problems in Indonesia can be seen from the high poverty between urban and rural areas. Regional differences are also a feature of poverty that can be seen with the difference between rural and urban areas, poverty is more dominant in rural communities. The number of poor people in Indonesia in 2019 was 24.79 million. Factors that influence the emergence of poverty in Indonesia include low education levels, low health quality, limited capital, and increasingly limited employment opportunities. The method used in this research is the Panel Data Analysis method. The data used in this research is secondary data. Panel data is a combination of cross at the village level in Kurun District, Gunung Mas Regency and time series from 2018-2022. The panel data regression results with the selected model are the Fixed Effect (FEM) model. The results of this study indicate that the village fund variable has no negative effect on poverty in Kurun District, Gunung Mas Regency.he variable Family Hope Program (PKH) has no negative effect on poverty in Kecamatan Kurun, Gunung Mas Regency. The Total Population variable has a positive effect on poverty in Kurun Subdistrict, Gunung Mas Regency. It is concluded that village funds, the Family Hope Program (PKH) and population together affect poverty at the village level in Kurun District, Gunung Mas Regency in 2018-2022.

Keywords: Family Hope Program; Poverty; Total Population; Vilage Fund

1. INTRODUCTION

Indonesia is a unitary state consisting of provinces, regencies and cities. Each province, district and city has a local government that is governed by law. Provincial and district/city governments have statutory authority and are responsible for organizing and managing development activities in their respective areas. The relevant government structures at each level of government are responsible for implementing these activities. According to Novrianti & Tampubolon (2022) The organization of national development activities in Indonesia is one of the ways to achieve national ideals to create a prosperous, just and prosperous society, based on Pancasila and the 1945 Constitution of the Republic of Indonesia. According to Siska et al. (2023) According to the opinion, economic development is the process of meeting the material, spiritual, and social needs of the people of a country in order to live properly. develop themselves, and achieve social and economic development. Therefore, the poverty rate in Indonesia is considered a measure of people's welfare. According to Tarmizi (2020) Poverty is one measure of the socio-economic status of a country's development. The problem of poverty is still complex and requires attention, especially in developing districts/municipalities. According to a theory known as the "poverty cycle," according to Rachman et al. (2023) Poverty is a problem that involves a state of deprivation, where individuals lack the means to fulfill their basic needs. This theory

highlights how individuals trapped in a cycle of poverty experience underdevelopment, imperfect markets, and a lack of capital, which ultimately leads to reduced productivity. Based on the latest data, poverty is still a significant problem in Indonesia, especially in certain regions. (Statistik 2023). According to projections, the number of poor people in Indonesia is estimated to reach 14.38 million by 2022. The problem of poverty in Indonesia is evident in the significant gap between urban and rural areas.

The high poverty rate in both urban and rural areas indicates the disparity between these areas, which contributes to the problem. In particular, poverty is more widespread in rural areas compared to urban communities. Based on the latest data, the number of poor people in Indonesia is estimated to reach 14.38 million by 2022. According to the latest data, the urban poverty rate is 7.50%, while the percentage of poor people in rural areas decreased to 12.29%. The government plays an important role in facilitating the progress of village development, as highlighted by (Killay et al. 2022). The purpose of village funds is to improve public services in rural areas, reduce poverty, develop the economy in these areas, reduce the development gap between regions, and increase the capacity of rural communities as a development goal. (Asmapane and Divanti 2022) In addition to village funds, the government also provides other policy programs as an effort to accelerate poverty reduction in the village, such as the Family Hope Program (PKH). The Family Hope Program (PKH) has been implemented by the Government of Indonesia since 2007, and is an assistance program provided to poor families. The program has three important components, namely education, health, and social welfare. The objectives of PKH are to reduce poverty and break the cycle of poverty, improve the quality of human resources, and change behaviors that are less supportive of improving the welfare of the poor. This program is regulated in the Minister of Social Affairs Regulation No. 1/2018 and is a similar program that has been implemented in several countries with Conditional Cash Transfer (CCT). According to Saragi et al. (2021) The Family Hope Program (PKH) is a community program that aims to improve the quality of life through education and health. The purpose of this program is not only to reduce poverty, but also to open access for pregnant women and toddlers, the elderly and the disabled to benefit from health services and facilities. For school-age children, they benefit from education services. With this assistance, there is no reason for every Indonesian not to get health and education facilities. Every year, the population of a place/region increases along with the number of births, and if the population is controlled, the government will experience difficulties. As the population increases every year, so does the poverty rate. Population growth can reduce poverty, as long as people get jobs and fulfill their needs. According to Priseptian et al. (2022) development focuses more on improving the quality of human resources rather than building infrastructure to avoid increasing poverty. Indonesia has 34 provinces, and each province is closely related to urban and rural poverty. Below are data on rural and urban poverty rates in 34 regions in Indonesia. One of the largest provinces in Indonesia is Central Kalimantan, which consists of 13 districts and 1 city, with a population of 2.75 million people. The population in Central Kalimantan continues to grow, and the rate of population growth is relatively controlled. Gunung Mas Regency, one of the regencies in Central Kalimantan, has a total of 12 sub-districts. In the data released by Bappeda Gunung Mas Regency, it is stated that the total number of villages or sub-districts in Gunung Mas Regency is 127, consisting of 114 villages and 13 sub-districts. The population of Gunung Mas Regency in 2022 is 131,945 people and the number of poor people is 6.70 thousand people or 5.52% (percent). Over the last 4 years the number of poor people in Gunung Mas Regency has always increased. The following table shows the number and percentage of poor people in Gunung Mas Regency in 2018-2022. Poverty in Gunung Mas Regency is increasing every year. In 2018 the poverty percentage was 5.96% (percent) to 6.7% in 2022, which means a decrease of 0.74%. Although the decrease looks small, this shows that the program to overcome poverty in Gunung Mas Regency can be said to be successful.

A total of 114 villages in Gunung Mas District benefit from the central government's Village Fund Program and Family Hope Program. The amount of funds invested by the central government continues to increase from year to year. Through the Village Fund Program, the Family Hope Program (PKH), and the Population and Population Program, it is hoped that better development can be achieved in overcoming village poverty and the welfare of rural communities in Gunung Mas Regency can be improved. This can reduce poverty levels and encourage equitable economic growth between rural and urban areas.

2. LITERATURE REVIEW

2.1. Poverty

According to (Kuncoro 2006) argues that poverty is based on the vicious circle of poverty theory, which believes that the vicious circle of poverty is a pattern that affects each other so that it makes it difficult to achieve higher development and leads to poverty. Countries that still fall into the poverty category.

2.2 Village funds

According to Abdullah et al. (2022) Village funds are village revenues provided by the central government to villages. Village funds are funds obtained from the APBN and then channeled to the village through the APBD to fund the implementation of village governance, village development, develop village communities, improve the ability of village communities, and alleviate poverty.

2.3 The Family Hope Program (PKH)

The Family Hope Program (PKH) is a policy program developed by the government to overcome poverty in Indonesia. In general, the concept of policy is almost always associated with consistent fixed decisions and repetition of the actions of decision makers and the compliance of these decision makers. (Darmiyanti 2022). The government as a public authority) needs to solve problems that exist in the public sphere. This requires not only the formulation of a program (plan), but also the implementation of the program to achieve the objectives of the plan.

2.4 Population

According to Hafiz & Kurniadi (2024), The population of a country refers to all people living in the territory, often referred to as the "people" or subjects of thecountry. The word "people" in this article refers to a group of people who live together in a place and are related by gender. Population growth can be defined as the change in the population of an area in a certain period compared to the previous period, and this indicator is useful for predicting future population. The population of an area always changes periodically due to an imbalance in the number of births and deaths, that is, the number of births exceeds the number of deaths.

3. RESEARCH METHODS

The Data Used

The data used consists of: a) Village funds at the village level in Kurun Subdistrict, Gunung Mas Regency from 2018 to 2022; b) Family Hope Program (PKH) at the village level in Kurun Subdistrict, Gunung Mas Regency from 2018 to 2022; c) Number of poor people at the village level in Kurun Subdistrict, Gunung Mas Regency from 2018 to 2022.

Data Analysis

Data analysis uses the panel data regression model estimation method. Research on the effect of the Village Fund, Family Hope Program (PKH), and Population on

poverty at the village level in Kurun Subdistrict, Gunung Mas Regency, uses timeseries data for five years 2018-2022 and 65 cross-section data representing 13 villages in Kurun Subdistrict, Gunung Mas Regency in Central Kalimantan Province. The combination or pooling produces 65 observations with the panel data equation function can be written as follows:

 $Y_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \alpha_3 X_{3it} + s_{it}$

Where:

Y

 X_1

t

 X_2

= Poverty Level (People). = Village Fund (Million Rupiah). = PKH Fund (Million Rupiah).

X₃ = Total Population (Thousand).

 α_0 = Constant/intercept of the regression model.

 $\alpha_1, \alpha_2, \alpha_3 = \text{Regression}$

coefficient/estimator. s_{it} = Confounding variable (error term).i Village.

= The time period is 2018-2022.

This research uses panel data with the help of the Eviews10 program. The analysis used in panel data uses the Common Effect Model, Fixed Effect Model, and Random Effect Model approaches to select the best model used in the study. The three approaches taken in panel data analysis can be explained as follows:

=

1. Common Effect Model Approach

According to Agus Widarjono (2013) The Common Effect approach is a simple technique for estimating panel data by combining time series data and cross section data regardless of time and individual differences using the OLS method. This approach does not pay attention to the individual or time dimension, so it is assumed that there is no unobserved heterogeneity between individuals.

2. Fixed Effect Model Approach

According to Agus Widarjono (2013) Fixed Effect technique is a technique that estimates panel data by using dummy variables to see the difference in intercepts. This approach assumes that there are differences in intercepts within variables, butintercepts between time/time invariant are the same. In estimating the fixed effect model, we can use the dummy variable technique method to explain the difference. This estimation model is called Least Squares Dummy Variable (LSDV).

3. Random Effect Model Approach

According to Agus Widarjono (2013) Random Effect Model (REM) is an approach that overcomes the consequences of lack of degrees of freedom by reducing the efficiency parameter, the parameters of this study are region and time. TheRandom Effect Model (REM) uses the GLS (General Least Square) estimation method and does not use OLS (Ordinary Least Square) because it does notproduce efficient estimation results.

Furthermore, to be able to find out one model that is considered appropriate among the three models, it is necessary to conduct a Specification Test using the Chow Test, Hausman Test, and Lagrange Multiplier Test as follows:

 Determine between the Common Effect model and the Fixed Effect model. This panel data regression technique uses the F test to determine which model is better between Common Effect and Fixed Effect without dummy avariables by looking at the sum of Residual Sum of Squares (RSS), as follows:

$$RSS_1 - RSS_2/(n-1)$$

*F*hitung

Where:

$$\frac{1}{RSS_2/(nt - n - k)}$$

RSS₁ = Residual Sum of Squares teknik Common Effect Model (CEM).

- *RSS*₂ = Sum of Squares teknik Fixed Effect Model (FEM).
- n = Number of cross section data.
- k = Number of independent variable data.
- t = Number of time series data.

The hypothesis in the Chow Test is as follows: H_0 : Model Common Effect. H_1 : Fixed Effect Model

The criteria for drawing conclusions are as follows:

- 1. If the value of $F_{Count} > F_{table}$, then H_0 rejected so that the model used is *Fixed Effect*.
- 2. If the value of $F_{Count} < F_{table}$, then H_0 not rejected so that the model used is *Common Effect.*
- 2. Determine between the Fixed Effect model and the Random Effect model This panel data regression technique uses the F test to determine which model is better between Common Effect and Fixed Effect without dummy variables by looking at the sum of Residual Sum of Squares (RSS), as follows: The Hausman test is a test based on the idea that both OLS and GLS models are consistent but OLS is not efficient in its null hypothesis. Widarjono (2013). The Hausman Test hypothesis is an follows:

The Hausman Test hypothesis is as follows:

- H₀: Random Effec Model t.
- *H*₁: *Fixed Effect Model.*

Kriteria pengambilan kesimpulannya sebagai berikut:

- 1. If the value of *chi-square* (x^2) count > value *chi-square* (x^2) table, then H_0 rejected so that the model used is the Fixed Effect Model.
- 2. If the value of *chi-square* (x^2) count < value *chi-square* (x^2) table, then H_0 not rejected so that the model used is the Random Effect Model.

4. RESULTS AND DISCUSSION

The data analysis technique of this research is applied in several steps, including the panel data regression model. The panel data regression model is performed using three models, namely the common effect model, fixed effect model, and random effect model. Each model has advantages and disadvantages. Model selection depends on the assumptions used by the researcher and the fulfillment of statistical data processing requirements. Therefore, the first step is to select a model from the three available models. The collected panel data is estimated using the common effect model, fixed effect model, and random effect model. After obtainingthe results of the Joint Effect model and the Fixed Effect model, the Chow test was conducted. The test is needed to choose the most appropriate model between the Common Effect Model and the Fixed effect Model. The results of the chow test are as follows:

Table 1. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.598519	(12,49)	0.0000

The 4th International Conference on Innovations in Social Sciences Education and Engineering (ICoISSEE-4) Bandung, Indonesia, July, 20th, 2024

Cross-section Chi-square

68.322991

0.0000

12

Based on table 1 above, it can be explained that the results of the chow test in the tableabove show that the cross section probability value is 0,0000 atau < 0,05, then H_0 rejected. Therefore, the model chosen is fixed effect. Next we will do regression with random effect model. In the fixed effect and random effect tables, it is necessary to conduct a Hausman test to test which model is more appropriate to use between the Fixed Effect Model and the Random Effect Model. Therefore, the Hausman Test is carried out to find out.

Table 2. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.262870	3	0.0409
Source: Eviews 9, (2024)			

Based on table 2 above, the Hausman Test results show the value of *chi-square* (x^2) count by 8.262870. At the significance level α 5% (0,05). This value is greater than 0,05, This means H_0 rejected so that the model chosen is the Fixed effect Model.

Regression Analysis Statistical Testing

Coefficient of Determination (R² Test)

Coefficient of determination R^2 shows how much the percentage of variation in the dependent variable can be explained by the independent variables in the model. In this study, the coefficient of determination uses the value *adjusted* R^2 . Based on the results of panel data regression with the Fixed Effect Model approach, it shows the coefficient of determination *adjusted* R^2 by 0.893669 or 89,36 percent. This means that the variation in the dependent variable (Poverty) that can be explained by the independent variables in the model (Village Fund, Family Hope Program, Population, and *dummy*) is 89.36 percent. While the remaining 10.64 percent is influenced by other factors or other variables outside the model. Thus, in general, the model used can be said to be good enough to explain how the influence of the Village Fund, Family Hope Program, and Population on poverty at the village level in Kurun District, Gunung Mas Regency.

Simultaneous Significance Test (F Test)

Testing the effect of all independent variables in the model can be done with the F test. The F statistical test basically shows whether all the independent variables included in the model have a joint influence on the dependent variable.

Table 3. F Test Results

F-statistic	10.80590
Prob(F-statistic)	0,000000

Source: Eviews 9, (2024)

Based on table 3 above, the results of data processing show that the independenthe variables (Village Fund (X1), Family Hope Program (X2) and Population (X3)) significance F count is 10.80590 with a significance level smaller (0.00000) than 0.05. Thus the results of the analysis in this study indicate that together the independent variables (Village Fund (X1), Family Hope Program (X2) and Population (X3)) affect Poverty Y.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
	195.6516	32.54557	6.011619	0.0000
X1	1.08E-08	3.38E-08	0.318676	0.7518
X2	-1.22E-08	2.51E-08	-0.485214	0.6305
X3	0.020720	0.003911	5.298117	0.0000
Source: Eviews 9, (2024)				

Individual Parameter Significance Test (t Statistical Test) Table 4. Hausman Test Results

Based on table 4 above, it can be explained that the fixed effect model table, the

results of the calculation of the Village Fund (X1), Family Hope Program (X2) and

Population (X3) have an effect on Poverty Y as follows:

These results can be explained as follows:

- 1. From the estimation results, for the village fund variable, a t-count value of 0.318676. At the significance level α (0,05) obtained a t-table of 1,67022, then thet-count value > -t-tabel, then H_0 is not rejected so that the village fund variable individually does not negatively affect the poverty variable. This shows that thevariable of village funds individually does not negatively affect poverty at the villagelevel in Kurun District, Gunung Mas Regency in 2018-2022.
- 2. From the estimation results, for the PKH variable, the t-count value is 0.485214. At the significance level α (0,050 btained a t-table of 1.67022, then the value of t- count > -t-table, then H_0 is not rejected so that the PKH variable individually does not negatively affect the poverty variable. This shows that the PKH variable individually does not negatively affect poverty at the village level in Kurun District, Gunung Mas Regency in 2018-2022.
- 3. This shows that the Population variable individually has a positive effect on poverty. From the estimation results, for the total population variable, the t-count value is 5.298117. At the significance level α (0,05) obtained t-table of 1.67022, then the value of t-count < -t-table, then H_0 rejected so that the population variable individually has a positive effect on the poverty variable. This shows that thepopulation variable individually has a positive effect on poverty at the village level in Kurun District, Gunung Mas Regency in 2018-2022.

Economic Interpretation

The village fund variable does not negatively affect poverty at the village level in Kurun District, Gunung Mas Regency. This result can be said to be contrary to the theory of poverty, the role of the government in the distribution of village funds has not provided maximum results in poverty alleviation through the village fund policy, in this case village funds should be able to stimulate and even make. So, the main contributor to the poverty rate in rural areas. This may be due to village funds that are not well targeted, and village funds that prioritize village development over the poor can also cause village fund variables to have a negative impact on poverty.

This is supported by previous research by Novrianti & Tampubolon (2022) in his research states that the Village Fund has a positive and significant effect on the number of poor people in Pelalawan district, which is due to the fact that village funds still focus on physical development, which indirectly affects the number of poor people. The Family Hope Program (PKH) variable does not negatively affect poverty at the village level in Kurun District, Gunung Mas Regency in 2018-2022. This is theoretically due to the deprivation trap of Chambers (1987) in his research which states several elements that make it difficult for people to get out of the poverty trap. Some of these of physical weakness, isolation, vulnerability and helplessness where these conditions

afflict the poor with different levels of suffering from one another so that although materially the PKH program in villages in Kurun District is fulfilled, but because there are other elements outside the material elements that are not fulfilled which cause poor villagers in Kurun District to be trapped in a poverty trap, so PKH does not have a negative effect on poverty.

This is supported by previous research by Munawwarah Sahib (2021) in his research stated The results also show that the Family Hope Program has no negative and significant effect on poverty reduction in Bajeng District, Gowa Regency with a percentage of 38.4%. The 61.6% is influenced by other factors. The population variable has a positive effect on poverty at the village level in Kurun District, Gunung Mas Redency in 2018-2022. Based on the regression equation, the regression coefficient of population is positive, this means that the population variable has a positive and insignificant effect on poverty in 2018-2022 in Kurun District. The results of this study indicate that in the long term, population has a positive impact on poverty. There are several factors that make population an obstacle to developmentand have a positive impact on poverty. Population growth that is not accompanied by progress in other development factors will not increase income and demand. So population growth will actually lower wages and will also lower production costs. In addition, according to Malthus, sustained population growth is essential to support increased demand, but on the other hand there are concerns that strong population growth will have a negative impact on economic growth, which will have a negative impact on economic growth. Prospects for poverty alleviation and development efforts are diminishing.

This is supported by previous research by Siska et al. (2023) in his research stated that the population variable had a positive and insignificant effect on the poverty rate in Tolitoli Regency.

CONCLUSION

Based on the results of research that has been conducted on the effect of the Village Fund, Family Hope Program and population on the poverty rate in the Regency in Kurun District, Gunung Mas Regency. It is obtained that the Village Fund individually has no negative effect on poverty at the village level in Kurun District, Gunung Mas Regency in 2018-2022. The Family Hope Program individually has no negative effect on the poverty variable at the village level in Kurun Subdistrict, Gunung Mas Regency in 2018-2022. Population individually has a positive effect on poverty variables at the village level in Kurun Subdistrict, Gunung Mas Regency in 2018-2022. Village Fund, Family Hope Program, and Population together affect poverty at the village level in Kurun Subdistrict, Gunung Mas Regency in 2018-2022.

REFERENCES

Abdullah, Ristanto, Ministry of Finance, Directorate General of Treasury, and Gorontalo Province. 2022. THE EFFECT OF VILLAGE FUNDS ON POVERTY LEVELS IN GORONTALO. Vol. 4 No. 2 https://doi.org/10.37479/jeej.v4i2.14165.

Agus Widarjono. 2013. Econometrics: Introduction and Applications. Jakarta: Ekonosia.

Asmapane, Set, and Ferry Diyanti. 2022. ANALYSIS OF VILLAGE FUND ALLOCATION MANAGEMENT IN SALO PALAI VILLAGE. Vol. 7.

- Darmiyanti, Reza. 2022. "Implementation of the Family Hope Program (Pkh) in Poverty Alleviation in Indragiri Hilir Regency 2016-2020." *Jdp (Journal of Government Dynamics)* 5(2): 108-23. doi: 10.36341/jdp.v5i2.2776.
- Hafiz, M., and Anggi Putri Kurniadi. 2024. "The Effect of Population and Unemploymenton Poverty Level in West Sumatra." *JEBI (Journal of Economics and Islamic Business)* 8(2):20-27. doi: 10.15548/jebi.v8i2.864.
- Killay, Thimotina, Theresia Febiengry Sitanala, and Janet W. Litualy. 2022. "THE EFFECT OF VILLAGE FUNDS ON THE POVERTY RATE IN SOUTHWESTMALUKU DISTRICT." 2(2). Vol. 2 No. 2. doi:https://doi.org/10.30598/kupna.v2.i2.p116-124

- Kuncoro, Mudrajad. 2006. *Development Economics: Theory, Problems, and Policy*. UPP Akademi Manajemen Perusahaan YKPN.
- Munawwarah Sahib. 2021. "THE EFFECT OF THE FAMILY HOPE PROGRAM POLICY ON POVERTY REDUCTION IN BAJENG SUB-DISTRICT, GOWA DISTRICT." Vol. 1, No.2 DOI: https://doi.org/10.30984/maqrizi.v1i2.121
- Novrianti, Dahlan Tampubolon & Mardiana. 2022. THE EFFECT OF VILLAGE FUNDSAND VILLAGE FUND ALLOCATIONS ON POVERTY IN PELALAWAN DISTRICT. Vol. 2 No. 2. https://doi.org/10.52300/jemba.v2i2.7136
- Priseptian, Laga, Wiwin Priana Primandhana, and Faculty of Economics and Business, Veteran National Development University of East Java. 2022. "Analysis of Factors Affecting Poverty." *ECONOMIC FORUM* 24(1):45-53.
- Rachman, Arief, Sri Endang Kornita, and Dahlan Tampubolan. 2023. "THE EFFECT OF VILLAGE FUNDS, ECONOMIC GROWTH AND DIRECT EXPENDITURE ONPOVERTY IN RIAU PROVINCE IN 2016-2020." *Jesya* 6(1):408-21. doi:10.36778/jesya.v6i1.870.
- Siska T. Lembang, Josep B. Kalangi, Agnes L. Ch. P. Lapian. 2023. "The Effect of Economic Growth, Population and Human Development Index on Poverty in TanaToraja Regency." Volume 23, No. 8, Pages 1558-1564

Statistics, Central Bureau. 2023. "Percentage of Poor Population by Province (Percent)." *Central Bureau of Statistics*.

Tarmizi, Heri. 2020. INFLUENCE OF VILLAGE FUNDS AND HUMAN DEVELOPMENTINDEX ON Poverty IN ACEH PROVINCE. Vol. 5. https://doi.org/10.24815/jimekp.v5i4.16382