International Journal of Economics, Business and Accounting Research (IJEBAR)
Peer Reviewed – International Journal
Vol-6, Issue-2, 2022 (IJEBAR)
E-ISSN: 2614-1280 P-ISSN 2622-4771
https://jurnal.stie-aas.ac.id/index.php/IJEBAR

THE EFFECT OF BUYING DECISIONS ON MUTIARA CITY HOUSING IN BANJARBENDO VILLAGE, SIDOARJO REGENCY

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Abstract: *The purpose of present research was to investigate the Effect of Location, Promotion, and Sociality on the Buying Decision of Mutiara City Housing in Banjarbendo Village, Sidoarjo Regency, either partially or simultaneously. This study uses a quantitative method with a population of 327 housing buyers, the sample using the Slovin formula for a sample of 77 respondents. Data analysis is classical assumption test, multiple linear regression, validity test, reliability test, and hypothesis test. Findings of present research can be seen that the statistical t value resulting from the influence of Location (X1) on Purchase Decisions (Y) is 4.419 with a significance value of 0.000. The significance value is lower than the significant alpha 5% or 0.05. It indicates that there is a significant effect of Location (X1) on Purchase Decisions (Y), the t-statistical value resulting from the effect of Promotion (X2) on Purchase Decisions (Y) is 0.361 with a significance value of 0.719. The significance value is higher than the significant alpha 5% or 0.05. It indicates that there is no significant effect of Promotion (X2) on Buying Decision (Y). The lower value of the t statistic resulting from the influence of Sociality (X3) on Buying Decision (Y) is 9.532 with a significance value of 0.000. The significance value is lower than the significant alpha 5% or 0.05. It indicates that there is a significant effect of Sociality (X3) on Purchase Decisions (Y). The results of the analysis of the simultaneous influence test resulted in a calculated F value of 114.001 with a probability of 0.000. Test results present the probability <level of significance (= 5% or 0.05). It indicates that there is a significant effect of Location (X1), Promotion (X2), and Sociality (X3) simultaneously or together on Buying Decision (Y).*

Keywords: *Location, Promotion, Sociality, and Buying Decision*

1. Introduction

The accumulation of property (land, vehicles, facilities), mineral wealth, human resources (number and quality of population), technological advancements, access to information, the drive to innovate and develop oneself, and tradition all influence a country's economic growth.. work (Todaro & Smith, 2020). The economic development of a country is declared successful if the occurrence of economic growth is accompanied by a reduction in income inequality. Income inequality occurs when most of the population earns low income while high income is only enjoyed by a small portion of the population, one indicator that is often used to determine the gap in income distribution is the Gini ratio. Gini ratio values range between zero and one. If the Gini ratio is equal to zero, it means that the income distribution is very even because each population group receives the same share of income. However, if the Gini ratio is equal to one, it indicates that there is a perfect inequality of income

distribution because income is not evenly distributed. In short, the higher the Gini ratio, the more unequal the distribution of income in a region will be. On the other hand, the lower the Gini ratio means the more even distribution of income (Ilham & Pangaribowo, 2017).

Many researches on per capita income inequality have been carried out. The first research on inequality of income per capita was Kuznet's research in 1954. Kuznet examined inequality in various countries by cross section and found the phenomenon of an inverted "U". Kuznet claimed that at the start of the development of the country, average per capita income remained limited, and inequality seemed similarly modest. When the average income rises, inequality rises with it. Then, when the average income rises, inequality will reduce once more.For this reason, an area with high inequality needs to be controlled, because an area with high inequality will cause various problems, including decreasing welfare and increasing crime. Several provinces in the research object experienced expansion, such as East Kalimantan, South Sulawesi and Papua provinces. East Kalimantan Province underwent division into East Kalimantan and North Kalimantan Provinces on the basis of Law no. 20 of 2012. South Sulawesi Province underwent division into South Sulawesi and West Sulawesi Provinces on the basis of Law no. 26 of 2004. Meanwhile, Papua Province underwent division into West Papua Province and Papua Province on the basis of Law Number 24 of 2007. This study did not include North Kalimantan Province because in the year prior to 2013 the province had not yet been formed. In principle, regional expansion attempts to promote the community's well-being, by improving and accelerating services, democracy, regional economy, management of regional potential, security and order, harmonious relations between the center and the regions (Susanti, 2017).

The difference in economic conditions in the Western Region of Indonesia and the Eastern Region of Indonesia is a problem that will have to be remedied in the future.For the past five years (2011-2015) the participation of GRDP to the Western Region of Indonesia (KBI), that also comprises Sumatra, Java, and Bali, has been quite dominate, accounting for over 80% of GDP, while the Eastern Region of Indonesia (KTI) has only contributed approximately 20%.Inequality in regional growth may get a negative influence on a community's social life over time. (Ilham & Pangaribowo, 2017).

Economic development is felt throughout the community, especially in the provinces, as seen by the even distribution of income. Together with the economic conditions in the KTI which are significantly below the KBI, but not in line with the per capita income inequality that occurs in the KTI region. KTI has an average Gini index below the average Gini index of Indonesia. The income inequality per capita of provinces in KTI in 2015 was modest, ranged between 0.28 until 0.42. The Gini index value indicates that KTI province in 2015 had a low level of income inequality per capita. One of the provinces that shows the lowest income inequality per capita is North Maluku Province with a Gini ratio of 0.28 and the highest is West Papua Province with a Gini ratio of 0.42 followed by Southern Province with a value of 0.40, while the average Gini index all provinces in Indonesia is 0.40 (Sitorus, 2016).

The commitment of the Indonesian central government to achieve equity is stated in the National Medium-Term Development Plan (RPJMN)in year of 2015-2019. A main policy direction of national regional growtht is focused on accelerating equitable development between regions. Therefore, a regional development direction is needed that can encourage transformation and accelerate the development of the KTI region, namely Sulawesi, Kalimantan, Maluku, Nusa Tenggara and Papua, while maintaining the growth momentum in the Java-Bali and Sumatra regions. The contents of the 2015-2019 RPJMN include the

acceleration of industrialization, maritime-based national economic development and the development of human resources in order to create an educated workforce. For this reason, infrastructure development in Eastern Indonesia is a priority in order to achieve equity (Dadang, 2015). One of the phenomena of inequality in provincial income per capita in KTI is due to differences in infrastructure development. Infrastructure is the driving force of economic growth. The presence of infrastructure might stimulate production factors to boost their productivity, and vice versa if you ignore it will reduce productivity. Several studies show that the availability of infrastructure and GDP has a close relationship. The elasticity of GDP to infrastructure, i.e. the percentage change in GDP growth per capita as a result of a one percent increase in infrastructure availability, varies between 0.07 to 0.44 in various countries (UTAMI, 2015).

Infrastructure development in the form of transportation infrastructure (roads, seaports, and airports), electricity networks and installation of clean water networks is very important in improving the economy in an area. Infrastructure seemedto need both by individuals either by industry. Therefore, increasing infrastructure in Eastern Indonesia is intended to bring wealth and drive economic growth. Regions with sufficient infrastructure have greater advantages in attracting investment to enter their regions and will develop faster than those with minimal infrastructure conditions (Winata et al., 2018).

The condition of transportation infrastructure, especially in the long road sector in KTI Province, tends to be low, the average road length in KTI is only 12,824 Km. The province with the highest road length in 2015 was South Sulawesi with a length of 33,215 Km, while the lowest was North Kalimantan with a length of 1,301 Km (Dadang, 2015). The condition of water infrastructure is also in line with road infrastructure. The condition of water infrastructure in KTI province tends to be low compared to the national average. Figure 1.4 shows that the water infrastructure in KTI is low compared to the national average. For the average total KTI stood at 40.1 million m3 while the national average stood at 107.6 million m3.In each province KTI highest water infrastructure owned by the Province of East Kalimantan with numbers 149.79 million m3 while the lowest was West Sulawesi province stands at 6.16 million m3.(Aminah, 2017).

The condition of electricity infrastructure is also in line with road infrastructure. The condition of electricity infrastructure in the KTI province is also low compared to the national average, indicating that the electricity infrastructure in KTI is lower than the national average. The KTI average is at 444.27 Megawatts while the national average is at 1,678 Megawatts. In the province of KTI, the highest electricity infrastructure is owned by the Province of South Kalimantan with a figure of 1,671 Megawatts, while the lowest is West Sulawesi Province at 3.22 Megawatts. Electrical infrastructure is indispensable for various kinds of economic activities and is one of the main wheels of the community's economy to increase productivity (Maryaningsih et al., 2014).

The above shows that the level of infrastructure in Eastern Indonesia tends to be low. Only a few provinces have a high level of infrastructure availability. Southeast Sulawesi Province is the province with the highest ratio of road length, East Kalimantan Province with the highest ratio of distributed water and high ratio of installed electricity capacity. Some KTI provinces have very low infrastructure availability, for example Papua and West Papua. The existence of infrastructure is very important for increasing productivity. Good infrastructure will increase economic development and will reduce inequality (Maryaningsih et al., 2014). Based on the explanation of the 2015-2019 RPJMN targets, infrastructure development must

be able to overcome the problem of income inequality in each province. This is necessary because the higher inequality will hamper economic growth. Conversely, the lower the income inequality, the economic development of a region will increase. In line with this, a study done by (Seneviratne & Sun, 2013), concluded that the development of infrastructure will improve the distribution or decrease inequality in five ASEAN countries(Associationof South East AsianNations)

Based on some previous research linking infrastructure to income inequality has been carried out (Seneviratne & Sun, 2013) which tested whether there is an influence between infrastructure development both on economic development either income inequality in Latin America, recent research shows that infrastructure development will increase economic development and reduce income inequality. Likewise, a study conducted (Aly et al., 2019) concluded that infrastructure development will indirectly reduce income inequality. In addition to infrastructure, foreign investment (PMA) and education will also affect income inequality. This is supported by research conducted (Roberts et al., 2000) which states that an increase in Foreign Investment and the average length of schooling will reduce income inequality with a note that the increase in investment and education is followed by increases in investment and education in other sectors. Foreign investment, as defined by Law Number 25 of 2007 on Investment, is an investment activity conducted on the territory of the Republic of Indonesia by foreign investors, either with wholly foreign capital or in joint ventures with domestic investors.He shows thevalue realizationof PMA in each province in KTI. The KTI region on average has a low FDI value. Only the provinces of East Kalimantan and West Kalimantan have striking FDI values. Regions with high FDI are generally areas that are economically developed and have high productivity.

Apart from FDI, education is one of the factors that causes inequality to decrease. The high school enrollment rate will lead to an even distribution of income inequality (Gregorio & Lee, 2002). Increased school participation is supported by Permendikbud no. 19 of 2016 which requires 12 years of compulsory education, so that the concentration of education for the age of 16-18 years must be increased to improve the qualifications of the workforce which is currently dominated by graduates of basic education both at the national level and at the eastern level, showing the value of the School Participation Rate APS) in each province in KTI. The APS score in KTI is quite good, but there are still some provinces whose APS is below the Indonesian average. On a national scale, the APS is at 70.61 percent. The province that is far behind is Papua Province. Meanwhile, the highest APS value was East Kalimantan Province with a participation value of 61.96 percent.

Based on theory and data, it can be concluded that there is still income inequality in Eastern Indonesia which is in line with the availability of infrastructure, PMA and minimal education levels compared to Western Indonesia, so that through this research we will analyze the influence of infrastructure availability, FDI, school enrollment rates and level of education. unemployment is open to per capita income inequality. The availability of infrastructure needs to be analyzed because empirically it plays an important role in income distribution and is supported by other factors such as economic growth, FDI, school enrollment rates and open unemployment rates. As mentioned on the background which was explained, researcher conducted a study entitled "Inequality of Per capita Income in Eastern Indonesia".

This research needs to be carried out in the Eastern Region of Indonesia because the Eastern Region of Indonesia lags behind the Western Region in terms of development. In

addition, there is the problem of income inequality which is categorized as moderate in the Eastern Indonesia region. The results of the study are intended to be carried out into consideration by the government in determining future policy attitudes, especially in the field of infrastructure that can increase economic development and equity in Eastern Indonesia.

2. Research Method

This study is a quantitative study with a population of 327 housing buyers, the sample in this study using the Slovin formula which is known to be a sample of 77 respondents. Data analysis is a test of validity, reliability, classical assumption test, multiple linear regression. Findings of validity test presented that all results were valid by showing numbers above 0.02. The results of the reliability test showed that all variables were reliable, with numbers above 0.06. Hypothesis testing shows that the location of the building is significant for purchasing decisions. The sampling technique used non-probability sampling by using purposive sampling. In present research, data analysis used multiple regression analysis. After testing the proposed hypothesis, findings of present research can be seen that the t-statistical value resulting from the influence of Location (X1) on Purchase Decision (Y) is 4.419 with a significance value of 0.000. The significance value seems lower than the significant alpha 5%. It concludes that there is a significant influence Location (X1) on Purchase Decision (Y).

3. Results and Discussion

3.1. Model Analysis and Hypothesis Proving

In present research, panel data regression model was conducted applyingthree techniques, namely *Pooled Least Square* (PLS), *Fixed Effect Models* (FEM), and *Random Effect Models* (REM). Several tests seem to be used to determine an ideal model from the three techniques above, as well as the Chow test to considerate between the PLS and FEM models and the Hausman test to pick between FEM and REM models.

Findings of panel data regression conducting themethod *pooled least square* (PLS)in Table 4.1 show that the variables of road infrastructure (jln) and the open unemployment rate (tpt) get a significant positive influence on income inequality. Foreign Investment (InPMA) at a significance level of (α) 10% has a significant negative effect, and power infrastructure, water infrastructure, school participation rates as variables seem to get an insignificant effect on income inequality in the provinces of eastern Indonesia. This can be seen from the probability value which shows that it seems higher than the 10% significance level.

Table 1. Results of Regression *Pooled Least Square* (PLS), *Fixed Effect Models* (FEM), and *Random Effect Models* (REM).

		Dependent Variable :Income Inequality		
		PLS	**FEM**	**REM**
Constant	Coefficient	-0.1776743	-0.7569047	-0. 4425193
(Cons)	t-stat	-1.23	-3.20	-2.36
	Probability	0.221	0.002	0.018

Roadstreet	Coefficient	0.0008388	-0. 0029195	0. 0007844
	t-stat	3.96	-2.22	1.78
	Probability	0.000	0. 030	0.075
Water	Coefficient	-0.002548	-0. 0164345	-0.0083698
(Water)	t-stat	-2.78 -2.86		-1.59
	Probability of	0.115	0 007	0.004
Electricity	Coefficient	0.000384	-0. 0015521	-0. 0011395
(ELEC)	t-stat	to 2:11	0:45	-1.87
	Probability	0653	0 039	0062
Growth	coefficient	0.0007402	0.0020334	-0. 0006656
(growth)	t-stat	0.41	-1.77	-0.61
	Probability	0.681	0.083	0.540
PMA	Coefficient	-0. 0278641	-0. 0358114	-0. 0386804
(lnPMA)	t-stat	-2.94	-2.25	-3.02
	Probability	0.004	0. 029	0.003
School Enrollment Rate	Coefficient	-0.0015031	-0. 0088644	-0.0069439
(educ)	t-stat	-0.69	-4.08	-3.23
	Probability	0.493	0.000	0.001
Open Unemployment Rate	Coefficient	0. 0109495	0. 027753	0.0185045
(tpt)	t-stat	3.51	5.72	4.54
	Probability	0.001	0.000	0.000

Source: *output* STATA13.

Likewise with the regression results using the *fixed effect model*s (FEM). With an error rate (α) of 10% results reveal that the variables of road infrastructure, electricity/power, water, open unemployment, school participation rates, and foreign investment seem to get a significant effect on income inequality as evidenced by the probability value lower than significance level (α) 10 %. Looking at coefficient values of each of the above variables, only

the open unemployment rate variable has a positive coefficient value, while the other variables have negative values.

Other findings are provided in the *Random Effect Models* (REM), where at a significance level of 10% the variables of road infrastructure, electricity, water, open unemployment, school participation rates, and foreign investment have a significant impact on income inequality. However, coefficient value of road infrastructure variable and the open unemployment rate get a significant positive effect on the level of income inequality. While the variables of electricity infrastructure, water infrastructure, school participation rates, and foreign investment have a significant negative effect on the level of income inequality in the Eastern Indonesia Region (KTI) from 2011 to 2015.

3.2. Chow test

According to results of panel data testing with those three models above (PLS, FEM , and REM) it is necessary to carry out other tests to see the best model used in this study. To find out which model is the best, the first step that can be done is to compare each of the three models. First, the Chow test was conducted to determine an ideal model among the PLS and FEM models. Hypothesis in the Chow test can be presented as follows:

H_0: *Pooled Least Square* (PLS)

H_1: *Fixed Effect Model* (FEM)

Results of the Chow test can be showed from the probability value of Chow test in theregression results *Fixed Effect Model* (FEM). If the value of prob > F seems to be less than the error rate or = 10% then H0 is rejected and H1 is accepted which indicates the best model of PLS and FEM is FEM, but on the contrary if the value of prob>F gets higher than the error rate or = 10% this is indicate H_0 is received and H_1 rejected out which models are best used PLS model. The following are the results of the Chow test as follows:

Table 2. Chow Test Results

Hypothesis	**Value *Prob>F***	**Significance Level (α)**	**Conclusion**
H_0: *Pooled Least Square* (PLS) H_1: *Fixed Effect Model* (FEM)	0.0000	0.10 (10%)	So the model selected in this test is the *Fixed Effect Model* (FEM) at an alpha level of 10%.

Source: STATA 13 output.

Results of the Chow test in Table 4.2 show model selection between PLS and FEM models. When viewed from a probability value (Prob > F) 0.0000 on the error rate (α) 10% then$_{H0}$ is rejected and H_1 accepted. A conclusion of the hypothesis is that the best model both PLS either FEM based on test results is FEM.

3.3. Hausman Test

After performing the Chow test to considerate a model among the PLS and FEM models where the results show that FEM is the accepted model, another stepwill be the Hausman test. This kind of test will be used to see a right model used in research among FEM and REM. Hin the Hausman test are as follows:

H_0: *Random Effect Model* (REM)

H_1: *Fixed Effect Model* (FEM)

Hausman test results may be provided from the probability value (*pro > chi2*). If the value of *Prob> chi2* lower than error rate (α) 10% thenH_0 is rejected and $H_1$is accepted, this shows FEM models used in the study. Likewise, if the value of *Prob> chi2*higher than error rate (α) 10% then H_0 is received and H_1 rejected, and it can be concluded that the model that can be used is REM. The following are the Hausman test results below:

Table 3. Hausman Test Results

Hypothesis	Value *Prob> chi2*	Level Significance (α)	Conclusion
H_0: *Random Effect Model* (REM) H_1: *Fixed Effect Model* (FEM)	0.0002	0.10 (10%)	Then the model selected in this test is the *Fixed Effect Model* (FEM) at the 10% alpha level.

Source: STATA output 13.

The Hausman test results provided in Table 4.3 above reveal that selection of the model used between FEM and REM is in accordance with the results and the hypothesis that the best model is FEM. This is indicated by the probability value (*Prob>chi2)* 0.0002 less than the significance level (α) 10%.

3.4 Statistical

Testing F-statistical test is used to investigate significance of the independent variables on the dependent variable together or as a whole. Hypotheses in F-statistics test are as follows:

H_0: 1 = …2 … = n

H_1: At least one of is not equal to zero.

The test results in this F-statistical test are being compared the estimated F with the F value in the table. If F count < F table, then H0 is accepted and H1 is rejected, so it may be stated that the independent variables in the equation have no effect on the variation of the dependent variable together. While, if F count > F table or Prob value. F-Stat shows a number less than 10% alpha, then H0 is rejected so that it may be claimed that the independent variables in the equation have a joint effect on the variation of the dependent variable.

According to results of panel data regression applying*Fixed Effect Models* (FEM), the F-statistic probability value gets 0.0000 which indicates that the F-statistic probability value seems to be less than the 10% significance level (α). So the conclusion is that together the independent variables (road infrastructure, water infrastructure, electricity infrastructure, economic growth, foreign investment, school enrollment rates, and open unemployment rates significantly affect the dependent variable, namely the level of income inequality as seen from the Gini ratio). in the province of Eastern Indonesia from 2011 to 2015.

3.5 T-statistical

This kind of test seems to be a test of the coefficients of the independent variables partially. It may be carried out to provide the significant level of the independent variables

individually in influencing the variation of the dependent variable. The t-statistic test is as follows:

H_0 : 1 = 0, i = 0, 1, 2, …,n

H_{11} :0 The

T-statistic test can be done by comparing the t-count contained in the regression results with value of t table. According to number of observations, it is seemed that the value of t table is 1.67. If ni if t count is smaller than t table 1.67 to -1.67 (prob t-stat > significance level (α)) then H_0 is accepted and H_1 is rejected which indicates that there is no connection between the independent variable and the dependent variable. Vice versa if the value of t count > t table 1.67 and t count < -1.67 (prob t-stat < significance level (α)) then H_0 is rejected and H_1 is accepted which indicates that there is a connection between the independent variable and dependent variable.

Test results using the *Fixed Effect Model* (FEM) shown in Table 4.1 the results show that the t-value for the variables of road infrastructure, electricity infrastructure, water infrastructure, economic growth, foreign investment and school enrollment rates is smaller than the t-table at the limit of - 1.67, as well as the open unemployment rate variable with a t value of 5.72 which indicates that it is higher than the t table at the limit of 1.67, so the conclusion is that each independent variable has a significant effect on the dependent variable. It also seems to be evidenced by probability value of each variable less than a significance level () of 10%.

3.5 Analysis of Results

As well as results of the Chow test and Hausman test, it was found that the *Fixed Effect Model* (FEM) seemed as the best model applied in present research. After the *Fixed Effect Model* (FEM) cannot provided to violate classical assumption of multicollinearity, heteroscedasticity, and autocorrelation, the equation of the test result model may be presented as follows:

Test results with themodel are *fixed effect* provided to have value probability (*prob > F*) is 0.0000 which explains that the independent variable has a significant effect on the dependent variable. It is assumed by the R-square value of 0.4983, which explains that 49.83% of the independent variables influence the dependent variable, while 50.17% is classified by any variables outside the model. Each independent variable which is partially road infrastructure, electricity infrastructure, water infrastructure, open unemployment rate, school participation rate, and foreign investment with a probability value of less than a significance level of 10%, shows that each independent variable seems to have a significant effect. on the level of income inequality in several provinces of Eastern Indonesia (KTI).

In the equation above, it can be explained that the infrastructure variable related to the availability of roads in each province of Eastern Indonesia in 2011-2015 shows that every one kilometer increase in road length per area can reduce income distribution inequality by 0.002 Gini ratio with the assumption of *cateris paribus*. This result is reinforced by the probability value of the variable availability of road infrastructure of 0.030 which indicates that this variable of road infrastructure seems to have a significant influence on inequality of income distribution.

Another infrastructure variable that also has an influence is electricity infrastructure. Electricity infrastructure has 0.001as coefficient value which explains that eachincrease in availability of installed electricity infrastructure per capita can reduce the inequality of

income distribution by 0.001 Gini ratio. When viewed from the probability value, electricity infrastructure has a probability value of 0.039 with a significance level of 10%, which explains that partially electricity infrastructure seems to have a significant effect on income distribution inequality with the assumption of *cateris paribus*.

Another infrastructure variable that also has a major impact on the community is the amount of water distributed. The amount of water distributed gets 0.016as probability value with a significance level of 10%, followed the water infrastructure variable seen from the amount of water distributed has a significant influence on the inequality of income distribution. It is assumed by the coefficient value of the variable amount of water distributed by 0.016 which explains that each increase in the amount of water distributed by one cubic meter per person can reduce the inequality of income distribution by 0.016 Gini ratio. So the conclusion is that the amount of water distributed seems to have a significant negative effect on the inequality of income distribution with the assumption of *cateris paribus*.

In addition to the infrastructure variable, the economic growth variable also seems to be one of essential variables that influence rise and fall of income inequality. The variable of economic growth seems to have a significant negative effect on per capita income inequality. This is evidenced by testing that economic growth gets 0.002 as coefficient value and probability value of 0.082 which shows that significantly each increase in economic growth of an item will reduce income inequality by 0.002 Gini.

The contribution of local governments in creating an investment climate is also very important. The investment used in this research is Foreign Investment (PMA). From the test results, thevariable Foreign Investmenthas 0.040as coefficient value and 0.015as probability value, which means that significantly each increase in Foreign Investment one percent may reduce the inequality of income distribution by 0.040 Gini ratio. These results can be concluded that partiallyvariables foreign investment get a significant negative effect on the level of inequality of income distribution with assumption of *cateris paribus*.

Education is also a measure of the success of a region. The education variable that is proxied using the school participation rate from the test results has a coefficient value of 0.009 and a probability value of 0.000 which indicates that significantly each 1% increase in school participation rate can reduce the inequality of income distribution by 0.009 the Gini ratio.

The open unemployment rate is also one of the important variables that influence the rise and fall of income distribution inequality. The open unemployment rate variable seems to have a positive influence on inequality of income distribution. This is evidenced from the test results that the open unemployment rate has a coefficient value of 0.024 and a probability value of 0.000 which describes that significantly each 1% increase in the open unemployment rate can increase the inequality of income distribution by 0.024 the Gini ratio.

3.6 Hypothesis Testing

Goal of present research is to investigate the effect of availability of road infrastructure, an amount of electricity installed, water distributed, the open unemployment rate, school participation rates, and *foreign investment* on the inequality of income distribution in several provinces of Eastern Indonesia (KTI) in the period 2011-2015 years. As results of analysis applying the panel data regression method with the *Fixed Effect Model*, results of hypothesis testing may be provided below:

a. Based on the results of the F-statistical test, it provides that road infrastructure; distributed water, installed electricity, economic growth, foreign investment, school enrollment rates, and the open unemployment rate together have a significant effect on the inequality of income distribution in Eastern Indonesia (KTI) in the period 2011-2015. These results indicate that the test results with the existing hypotheses are appropriate.
b. Based on the results of the t-statistical test, it provides that road infrastructure; distributed water, the amount of electricity installed, economic growth, foreign investment, school participation rates, and the open unemployment rate have a significant effect on the inequality of income distribution in the Eastern Region. Indonesia (KTI) in the period 2011-2015. These results indicate that the test results with the existing hypotheses are appropriate.

3.7 Discussion

Equitable distribution of income is one of the benchmarks for the success of the central government and local governments in carrying out priority work programs for economic development. Economic development is widely seen as a multidimensional process While continuing to pursue quicker growth in the economy, addressing wealth inequality, and alleviating poverty, it incorporates many fundamental changes to social structure, societal attitudes, and national institutions. (Todaro & Smith, 2006).

The Indonesian economy is faced with imbalances that can ultimately disrupt economic stability. The imbalance in question is a structural one in the distribution of income by looking at the value of the Gini ratio. Of course there are other imbalances related to this income, such as regional inequality between the west and east (Juoro, 2013). Income inequality occurs when most of the population earns a low income while a high income is only enjoyed by a small portion of the population. This imbalance gives a negative signal to economic actors and encourages them to take actions that disrupt economic stability, such as depressing the value of the rupiah. Especially for relatively high inequality, this will polarize society resulting in increased structural barriers to sustainable growth.

The 2019 Medium Term Development Plan (RPJM) which contains the government's efforts in setting its targets to reduce the level of inequality in income distribution in Indonesia. According to the *World Bank* (2015) there are four causes of inequality in Indonesia. First, inequality of opportunity. The destiny of children from poor homes is influenced by a number of factors, including where they were raised and their parents' education. An unfavorable beginning could spell doom for them in the future. At approximately one-third of inequality is caused by variables outside an individual's control.

Second, there is inequity in the labor market. Highly qualified professionals earn more money, whereas the majority of the workforce has little opportunities to advance their careers. They are confined in low-wage, low-productivity jobs with poor pay. The third factor is wealth concentration. Financial assets owned by the wealthy, such as real estate or stocks, contribute to existing and future inequality.Fourth, it is inequity in the face of adversity. The poor and disadvantaged are disproportionately affected by shocks, limiting their ability to generate revenue or reinvest in healthcare and education.

In terms of public services in Indonesia, inequality arises because of poor public services for the lower classes, such as education, health services, clean water, and access to credit. This makes them unable to compete and improve their standard of living. This perspective gives the possibility of broader analysis such as social inequality. For example, lower levels

of education and knowledge prevent them from entering modern financial institutions (Rochman, 2013). This perspective gives the possibility to see that public service problems are not only procurement issues, but also suitability and quality.

The difference in economic conditions between the Western Region of Indonesia and Eastern Region of Indonesia has shown evidence that income inequality occurs. The average Gini index value of the provinces in KTI in 2011-2016 was modest, rangedbetween 0.31 until 0.421. Gini index value indicates that KTI province in 2011-2015 had a low level of income inequality per capita. When viewed from the regional contribution to GDP, the Western Region of Indonesia, which is supported on average by leading sectors, has a large contribution to National GDP reaching 80% and the other 20% contribution to GDP from the Eastern Region of Indonesia.

A great level of inequality in income distribution in Eastern Indonesia refers to the contributing factors reported by the *World Bank* above, indicating that the location of the region, education, and investment are the main reasons that determine it. If we look at the average human development index, the lowest in 2015 were in the provinces of Eastern Indonesia such as Papua (57.25), West Papua (61.73), East Nusa Tenggara (62.67), and Sulawesi. West (62.96). This data shows that there is a need for regulations to reduce the level of inequality in income distribution that occurs, such as increasing supporting infrastructure facilities which include the availability of road access, electricity availability, clean water availability, as well as education and health support infrastructure for the community.

Within economy, infrastructure seems to be a sort of political assets that is created by government investments. Familioni (2004: 16) mentions infrastructure as a basic essential service in the development process. The availability of infrastructure such as roads is an alternative to facilitate the flow of mobility of both people and goods to support regional development. Meanwhile, regional development implies an effort to generate potential in certain areas that become growing areas, both for settlements, plantations/agriculture, industries which are planned for other development areas. The smooth mobility of people and goods will have an impact on the area to develop. On the other hand, if the availability of road access is limited, it will hamper mobility and will increase the inequality of income distribution with areas that have adequate road access infrastructure.

When compared with the results of the analysis conducted, the results show that the road infrastructure calculated by the ratio of total road length to the population shows that it seems to have a significant negative influence on the level of inequality in income distribution in Eastern Indonesia. This result is reinforced by previous research conducted by Seneveratne and Sun (2013) which showed that the quantity and quality of infrastructure seemed to be a negative and significant influence on income inequality. This research is in line with several recent Indonesian government programs that emphasize the importance of infrastructure development, especially the construction of roads in Eastern Indonesia (KTI) with the aim of equalizing and reducing excessive inequality.

The infrastructure included in this study is not only the availability of road access, but also electricity infrastructure. Electricity infrastructure is measured by the ratio of installed electricity per capita in each province of Eastern Indonesia. The results of the analysis of the Secretariat of the National Team for the Acceleration of Poverty Reduction (TNP2K) revealed that there is a relationship between poverty and access to electricity/electrification. Along with clean water and sanitation, electricity is a necessary component of the basic

infrastructure. Availability to fundamental services such as education and health can be facilitated by the presence of electricity.

Empirical data shows that in Eastern Indonesia the ratio of installed electricity per capita is the highest in the province of East Kalimantan with an average of 2011 to 2015 of 0.18 watts/person. Meanwhile, the lowest installed electricity ratio is the province of West Sulawesi with an average of 0.006 watts/person. The test results show that every increase in the ratio of installed electricity per capita can reduce the level of income inequality per capita. The test results show that every increase in the ratio of installed electricity per capita can minimize the level of income inequality per capita.

A current capacity of distributed water is an important indicator for the welfare of the community. In this study, the amount of water distributed per capita from the estimated results shows that any increase in the amount of water distributed can greatly minimize the level of inequality in the Eastern Region of Indonesia. In Indonesia, the community's right to use water is guaranteed through the 1945 Constitution of the Republic of Indonesia and The Water Resources Law No. 7 of 2004 was enacted. Water availability has a significant impact on human life, and it may even be one of the reasons limiting a country's economic progress. Presents some data that presents the fact that water is very important role in economic development. Nationally, the availability of water in Indonesia reaches 694 billion cubic meters per year (Valkenburg et al., 2006). This amount is basically a potential that can be utilized, but the fact is that currently only about 23 percent has been utilized, of which only about 20 percent is used to meet the raw water needs of households, cities and industry, the other 80 percent is used to meet the needs of households. irrigation (Hartoyo, 2010).

The availability of infrastructure which includes roads, the availability of electricity, and the amount of water distributed are instruments in driving regional economic growth. In other words, quality of resources in the area must also be moved and innovated to compete in the labor market. This study also includes the open unemployment rate variable. Unemployment is one of the obstacles to the family's economy, where the community is unable to meet their needs. Unemployment is also one of the triggers for high levels of inequality.

That population growth usually triggers other problems such as the structure of the young age, the increasing number of unemployed, urbanization and so on (AMALIZA, 2019). Lincolin also added that population problems that affect the implementation and achievement of development goals in Indonesia are patterns of population distribution and labor mobility that are less balanced, both from an inter-island side, between regions, as well as between rural areas and urban areas, as well as between sectors. The results showed that the population showed a positive and significant influence on income inequality (Akai et al., 2005). This shows that the increase in population will also affect income inequality if there is no increase in labor productivity. The unemployment rate gets a positive relationship to the level of income inequality. This shows that if the unemployment rate is low, per capita income will increase (Yusica, 2018). This in turn can make a lower level of income inequality in an area as well. The results of the research conducted also support the previous research above. The results show that the influence of the open unemployment rate on the inequality of income distribution has a significant positive effect with a coefficient value of 0.02.

High unemployment in an area can be influenced by several indicators, including the low quality of existing human resources (HR). Human capital theory (human capital) seems to be a phrase used by economists to describe education, health, and other human qualities that can

increase efficiencyif these things are improved and improvements in human capital in the form of education and health will affect an individual's future income (Todaro, 2006).

One indicator to determine the high or low quality of human resources owned is through the human development index (IPM). The indicators forming the HDI include the level of education, health, and per capita income. Education is considered an important variable that can have a major influence on the productivity growth of its human resources. In this study, the education variable is represented by the school participation rate, where this variable is an illustration of the high school participation in Indonesia. The School Enrollment Rate (APS) is the percent of all kids in a given age group who are already in school compared to the population of that age group. For school age groups, APS calculations are commonly divided into three categories: primary school (7-12 years old), middle school (13-15 years old), and secondary school (beyond 15 years old around 16-18 years old).

The test findings present that school enrollment rate gets a negative influence on inequality of income distribution in Eastern Region of Indonesia. This means that every increase in the school enrollment rate can reduce the level of inequality in income distribution (Breen & Garcia-Peñalosa, 1999). Previous results concluded that the higher academic achievement, at least through secondary school, the lower income inequality. Groups with higher education will find it easy to get jobs with high wages so they can catch up with other groups with higher wages before. While other research by (Arham& Dai, 2019), also found that the avAminah, E. N. (2017). Pengaruh Infrastruktur Terhadap Pertumbuhan Ekonomi di Jawa Tengah Tahun 2012-2014. Universitas Muhammadiyah Surakarta.

Investment is one of the important instruments in contributing to a country's GDP. Investment in Indonesia is divided into 2 (two) namely Foreign Investment (PMA) and Domestic Investment (PMDN). One important aspect of Foreign Direct Investment (FDI) is the potential influence on economic growth in the host*country*. In the Harrod-Domar theory which explains the positive correlation between the level of investment and the percentage of economic growth, it can be said that the lack of investment in an area makes economic growth and the level of income per capita in the region low because there are no productive economic activities.

The results showed that Foreign Investment (FDI) had a significant negative influence. It proves that any increases in Foreign Investment in Eastern Indonesia Region (KIT) can reduce the level of income inequality. This is supported by research (Fang et al., 2015). The higher FDI in an area can provide a multiplier effect on the surrounding area by the emergence of new growth centers, so that economic growth is more evenly distributed and employment also increases.

4. Conclusion and Practical Implications

Findings and discussion regarding influence of the availability of road infrastructure, the amount of water distributed, the availability of the electricity network, the open unemployment rate, school participation rates, and foreign investment (PMA) on the inequality of income distribution in the Eastern Indonesia Region, it can be concluded concluded. Taken together, the influence of the availability of road infrastructure, water infrastructure, electricity infrastructure, Foreign Investment (PMA) school enrollment rates and the open unemployment rate have a significant effect on income inequality per capita in Eastern Indonesia (KTI) in 2011 to 2015 and partial, the influence of the availability of road infrastructure, water infrastructure, electricity infrastructure, foreign investment (PMA)

school participation rates and open unemployment have a significant effect on income inequality per capita in Eastern Indonesia (KTI) in 2011 to 2015.

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