# FACTORS THAT AFFECT ECONOMIC GROWTH

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***ABSTRACT:****The purpose of this research is to know the contribution of Gross Regional Domestic Product, population growth to per capita income partially, and effort that can be done to improve product quality, agricultural product and human resource so that they can increase people's income. The object of research is the city districts in Lampung Province. Multiple linear regression and descriptive regression analysis method, regression model of Gross Regional Domestic Product (GRDP) variable at Current Market Value(CMV) and Gross Regional Domestic Product at Constant Prices (CP), and total population have negative and significant impact to per capita income. Per capita income of 2014 was IDR 6,002,891, - if converted to World Bank 2014 lower income category was <US $ 1,045 or equivalent to IDR 13,585,000, This condition indicates that the year of 2015 is still in the status of lower income.*

**Keywords**: GRDP, population, income per capita.

## I. INTRODUCTION

Based on GRDP (Gross Regional Domestic Product) in 2014, agriculture sector contributed the highest by 35.54 percent, followed by hotel and restaurant trade sectors and manufacturing industry sectors respectively 19.94 percent and 15.52 percent. At this state, Indonesia still belongs to the middle class, meaning that the State is in a stagnant state of per capita income because it is unable to achieve higher income like developed countries do. It is worrying if in decades there is no change of human resources and infrastructure.From the above data it can be concluded that during the period of 2003 – 2014, we cannot be separated from Middle Income Trap (MIT) especially in low income area status (*lower income*).Kenichi Ohno [1] in his research on Middle Income Trap (MIT) in Vietnam mapped four stages in industrialization and defined MIT by category; MIT is described as a barrier between the second stage and the third stage of industrialization that cannot bereached by a country.Ohno [1] argues that in the second stage, a country is absorbing advanced expertise and technology from another country, but it already has supporting industries. Countries that are in this stage still receive help from abroad to run the industry. The third stage of industrialization is the mastery of management and technology, so that a country can produce goods with high quality without assistance from abroad.Ohno [1] argues that in the second stage, a country is absorbing advanced expertise and technology from another country, but it already has supporting industries. Countries that are in this stage still receive help from abroad to run the industry. The third stage of industrialization is the mastery of management and technology, so that a country can produce goods with high quality without assistance from abroad.Some experts agree that the main problem of MIT is the inability of a country to increase intensive knowledge-based production. Wing Thye Woo [2] in his research concluded that Malaysia could be spared from MIT if the government supports knowledge-based economy.Now it is constrained by problems related with Middle Income Trap. To avoid this, economic growth must be qualified; in this case a sustainable development is neededespecially in improving the living standard of the population classified in Middle Class in driving the wheels of the economy.Poverty was recorded at 14.21% or as many as 1,134,280 inhabitants. The percentage is also higher than the national poverty rate of 11.47% [3]. The development by the government at this time still has not given a significant impact on the progress of economic development, so it cannot be felt by the community. This stagnation of growth is due to economic activities that so far still unable to escape from the middle class income trap. Development orientation still revolves around the exploitation of natural resources rather than strengthening the processing industry based on natural resources. Middle income trap is not a time-determined challenge. That is, there is no time limit to the extent to which a country stops at the middle-income area level and then rises to a higher class. So, when Indonesia has not gone up to higherclass now, it is proven that we have been in a stagnant position for the last 5 years. So it is possible that we can get stuck on the Middle Income Trap.The government should strive for economic development to be oriented to the base of the processing industry and it is time to turn to quality because Middle Income is characterized by the dominance of quantity rather than that of quality. The longer we got trapped in the practice, the longer we are trapped in the Middle Income level. Then it is time to focus on quality improvement ranging from industry, products, and Human Resources (HR).

**Table 1: Real GRDP, Population, and Revenue of Per Capita Year2003-2014**

| Year | Real GRDP (inIDR. 000) | Population (person) | Income Per Capita (IDR/person) | Status |
|------|------------------------|---------------------|--------------------------------|--------|
| 2003 | 26,421,810,000. | 6,852,999 | 3,855,510.56 | lower income |
| 2004 | 27,692,386,000. | 6,915,950 | 4,004,133.34 | lower income |
| 2005 | 28,818,125,000. | 7,116,177 | 4,049,663.89 | lower income |
| 2006 | 30,268,083,000. | 7,211,586 | 4,197,146.51 | lower income |
| 2007 | 32,694,890,000. | 7,348,788 | 4,449,017.99 | lowerincome |
| 2008 | 34,414,653,000. | 7,437,414 | 4,627,233.74 | lower income |
| 2009 | 36,160,500,000. | 7,526,448 | 4,804,457.56 | lower income |
| 2010 | 38,378,425,000. | 7,608,405 | 5,044,214.26 | lower income |
| 2011 | 40,829,411,000. | 7,735,914 | 5,277,903.94 | lower income |
| 2012 | 43,526,870,000. | 7,835,308 | 5,555,221.31 | lower income |
| 2013 | 46,123,346,000. | 7,932,132 | 5,814,747.66 | lower income |
| 2014 | 48,768,423,375. | 8,124,156 | 6,002,891.05 | lower income |

Source: Data processed, 2015

Previous research by [4]examining economic growth is an important benchmark for determining the level of regional economic development. As the number of people continues to increase, economic needs are also increasing, so that annual income is needed. This study will prove whether economic growth can increase per capita income, how many people are still left behind, the number of people in Middle class stage, or who has advanced rapidly, so that the future can be a parameter of development, especially in areas experiencing economic quality growth problems.

## 2. MATERIALS AND METHODS
### Literature Review
Reni [5] states that economic growth has not been able to significantly reduce poverty due to the pattern of economic growth in Indonesia and the occurrence of inequality, so that the number of poor people cannot be reduced significantly without economic growth that benefits the poor. In this study, per capita GRDP is used to measure the level of prosperity of a region's population. If the data is presented periodically, it will indicate a change of prosperity. The development of the GRDP at Current Market Value(CMV) from year to year illustrates the development caused by changes in the production volume of goods and services produced and changes in the price level. Therefore, in order to measure changes in production volumes or productivity development significantly, the influence factor on price changes needs to be eliminated by calculating the GRDP at Constant Prices (CP). These CP calculations are useful, among others, in economic planning, projections and for assessing overall and sectoral economic growth. GRDP per capita is a picture of added value that can be created by each resident due to the existence of production activities. GRDP per capita value is obtained from total GRDP devided by the population.According to Jhingan [6] an increase in per capita income can raise the living standards of society if per capita income increases but per capita consumption falls. This is due to the increase in income that is only enjoyed by some rich people and not enjoyed by the poor.

### Population Growth on Economic Growth
The past research [7] stated that the correlation between the population variable with economic growth is 0.036 with a significance value of 0.785. This shows that the relationship between the population variable with economic growth is positively insignificant (0.770> 0.05) with the level of closeness of relationships in the strong category. In this study population growth has a negative and significant effect on economic growth. Economic growth is the development of economic activities over time that cause real national income to change. The rate of economic growth shows the percentage increase of real national income in a given year compared with the real national income in the previous year [8].Economic growth as a process of productive capacity building in an economy continuously or continuously over time so as to produce the level of income and national output to getting bigger [9]. The main factor or component in economic growth is population growth which in the following years will increase the amount of labor force. For technological advances, economic growth does not necessarily give rise to economic development and the improvement of people's welfare (income)[10]. This is because along with the occurrence of economic growth, population growth will also apply. If the economic growth rate is always low and does not exceed the rate of population growth, the average per capita income will decrease. Meanwhile, if in the long term economic growth is equal to the increase of population, then the country's economy is not experiencing the development (stagnant) and the level of prosperity of society does not progress. Thus, one of the important conditions that will realize economic development is that the rate of economic growth must exceed the rate of population growth [9].

**GRDP on Economic growth**

One of the main indicators for measuring the performance of regional economic development is its growth rate. Economic growth is not the only indicator capable of capturing all economic development performance, yet this indicator has provided a very useful overview to see the development of economic activity of a region. A more important aspect of economic growth is identifying the sources of growth in both the supply and demand sides. From the supply side, the growth is reflected in the increase of sectoral GRDP, while the demand side can be seen from the growth of consumption, investment, government expenditure and net exports from imports. For local governments is that by knowing the source of growth,policies can be taken policies to accelerate growth or slow the growth of certain sectors in accordance with the target of economic development to be achieved [11].

**Definition of Middle Income Trap**

Middle-income trap (MIT) refers to a condition in which middle-income countries are unable to maintain a stable rate of economic growth to achieve the new income groups as high-income countries, so they are stuck in the middle income group [12]. Another study stated that MIT is the state of a country in which stagnant growth in the middle income level and does not progress to the next level of economic growth to the level of high income [13, 14], slows down growth and continues to attach to the status of middle income [15].

Countries trapped in MIT have an inability to compete with low-income countries in terms of wage labor in the manufacturing industry, and the inability to compete with high-income countries in terms of expertise and innovation progress. These countries are not successful in shifting sources of economic growth from resources with low wages and capital to sources of growth in productivity [13] . This is similar to that of [16]that middle-income countries always face difficulties to move from commodity-producing countries to countries with expertise as an intensive source of economic drivers.

**Data and Data sources**

World Bank [14] in its study used the Gross National Income (GNI) variable per capita as an MIT proxy. GNI per capita is measured from Gross National Income which is the total value added income of the entire population of a country, both domestically and abroad [14]. GNI per capita is used as one of the benchmarks determining how a country's success in managing its economy. The use of GNI per capita is also used as a reference classification income of other countries in previous studies. Aviliani [12] uses GNI per capita as a dependent variable in her research journal entitled Addressing the Middle-Income Trap: Experience of Indonesia. Felipe [17] in ADB's working paper entitled: Tracking Middle Income Trap: What it is, who is in it, and

why it provides an approach to how a country can be called a country trapped in MIT. Felipe [17]classifies all countries of the world into four income groups based on per capita GDP. These countries are categorized as: (1) low-income countries; (2) lower-middle-income countries; (3) upper-middle income countries; and (4) high-income countries.

**Table 2: Parameter determination of Revenue Classification**

| Category | GNI per capita |
|---|---|
| Low income | < US $ 1.045 |
| Lower middle income | US$ 1.045 – US$ 4.125 |
| Upper middle income | US$ 4.125 – US$ 12.746 |
| High income | > US$ 12.746 |

Source: World Bank [14] (data processed)

Data Analysis Model in used is the model of calculation of real GRDP, Calculation of Economic Growth Rate and calculation model of Income per capita. Economic development states that to see the pace of development of a State and the development of the welfare level of its people, the increment of regional income and income per capita from time to time must be calculated [11]:Real GRDP (at Constant Prices) is used to measure the economic growth because GRDP value is not affected by price change with formula as the following:

$$Real\,GRDP_t = \frac{GRDP\,nominal}{IHK_t} \times 100\%$$

The rate of economic growth in a given year can be calculated:

$$G_t = \frac{GRDP\,real_t - GRDP\,real_{t-1}}{GRDP\,real_{t-1}} \times 100\%$$

Per Capita income is the average income of the population;

$$PI_t = \frac{Real\,GRDP_t}{Total\,Population}$$

$$PI = b_0 + b_1 GRDP \text{ at } CMV + b_2 GRDP \text{ at } CP + b_3 total\,population$$

**3. RESULTS AND DISCUSSION**

Population growth in the period of 1971 - 1980 was 5.77 percent per year and decreased from 1980 to 1990 to 2.67 percent per year. While in the period of 1990-2000, it was amounted to 1.01 percent.

The estimated population of 2013 reached 7,932,132 people with sex ratio of 105.43[3]. The degreeof population density still seems to be lame or uneven across regions, compared to the generally high population density in cities. City density for example reaches 3,183 people per square kilometer and other cities reach 2,484 people per square kilometer. Meanwhile , the population density in all regions is still below 650 people per square kilometer [3].
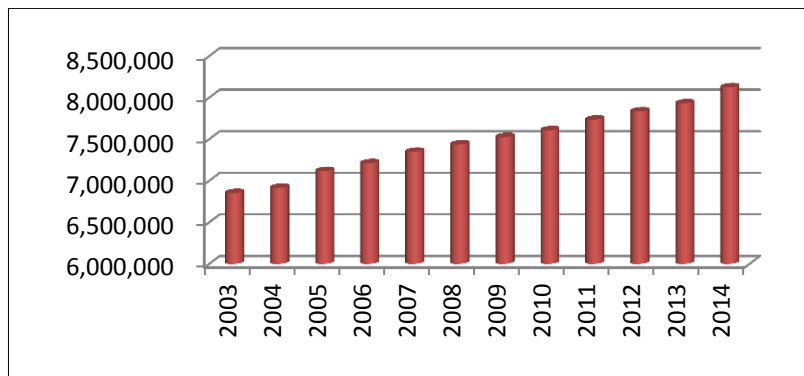
Source: Central Bureau of Statistics [3]

**Figure 1. Total Population Year 2003-2014**

Gross Regional Domestic Product (GRDP) is a quantity of gross added value generated by all business units that are within a region within a certain period of time. Based on GRDP calculation with base year 2000, the economic growth rate during the last 3 years has increased. In 2013, the economic growth rate increased by 5.97 percent. This figure is lower than the 2012 economic growth of 6.53% [3].
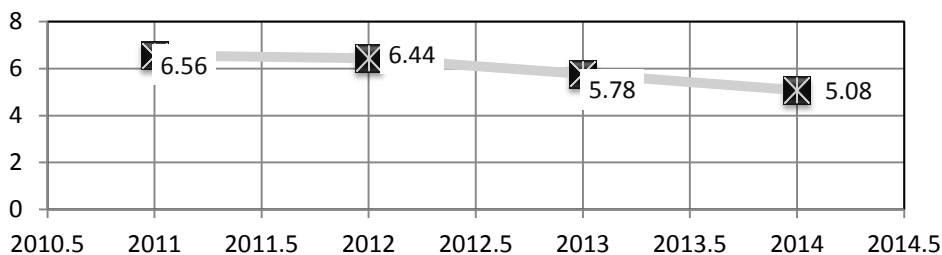


**Figure2: The growth rate of GRDPat CP 2000 by Business Field, 2011−2015**

**Table3: Growth Rate of GRDP at CP 2000**

| West Lampung | 5.64 | TulangBawang | 6.24 |
|---|---|---|---|
| Tanggamus | 5.95 | Pesawaran | 6.11 |
| South Lampung | 5.83 | Pringsewu | 6.68 |
| East Lampung | 5.20 | Tubaba | 6.19 |
| Central Lampung | 5.99 | Mesuji | 6.38 |
| North Lampung | 5.89 | Bandar Lampung | 6.35 |
| Way Kanan | 5.34 | Metro | 5.88 |

Source: data processed

The economic sector in 2013 experienced positive growth. Mining and quarrying sectors experienced the highest growth of 10.66%, followed by Electricity, Gas and Water Supply 10.05%. Financial Sector, Leasing and Corporate Services were in third position with a growth rate of 9.48%. The structure of community business field is still dominated by three main sectors namely agriculture sector, trade sector, hotel and restaurant, and processing industry sector. Based on the Gross Regional Domestic Product of 2013, the agricultural sector contributed 35.54 percent, followed by the trade sector of hotel and restaurant, and manufacturing industry sectors by 19.94 percent and 15.52 percent respectively [3]. Basically, MIT can be avoided if the region can achieve a certain economic growth rate every year [17]. Average per capita income growth should be achieved at each MIT level, either lower or upper [17].In lower MIT, the requirement for a country to be out of the lower middle income to upper middle income is that it should exceed the 28 year period and per capita income should grow at least at 4.7% per year.In upper MIT, the requirement of a country to be out of the upper middle income to high income is that it should not exceed the 14 year period and per capita income

**Table4: Testing of Multiple Linear Regression Model ANOVA**

| Model | Sum of Squares | Df | Mean Squares | F-test | p-value |
|---|---|---|---|---|---|
| Regression | 4.000 | 3 | 1.333 | 463892.029 | 0.001 |
| Residual | 0.000 | 1 | 0.000 | | |
| Total | 4.000 | 4 | | | |

$R^2 = 0.675$

should grow at least at a rate of 3.5% per year.Multiple Linear Regression Model.
Coefficient of determination (R ²) obtained value equal to 0,675. This implies that per capita income variable as a whole can be explained by the variable of GRDP at CMV, GRDP at CP and Total Population/life.The result of the analysis of multiple linear regression model of table 1 is obtained by the following equation:

I/C = -32.584 + 1.918 CMV + 1.271 CPB − 0.555 Total Population
here  I/C : Income/Capita,  CMV : GRDP atCMV, CP: GRDP at CP.

**Table 5: Multiple Linear Regression Model**

| Model | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | -32.584 | 1.840 | | -17.711 | .036 |
| GRDP at CMV | 1.918 | .108 | .278 | 17.711 | .036 |
| GRDP at CP | 1.271 | .012 | 1.271 | 110.000 | .006 |
| Total Population | -.555 | .009 | -.555 | -62.962 | .010 |

Dependent Variable: Per capita Income (IDR/life)

Hypothesis model regression test of multiple linear regressionswas obtained by value of variable regression coefficient of GRDP at CMV to per capita income obtained value equal to 1.918 with positive direction. The test result of the influence of GRDP at CMV to the per capita income shows that the t value of 17.711 and the significance of 0.036. The significance value of the test is smaller than the significance level α = 0.05. Thus, the GRDP at CMV has a positive and significant impact on per capita income.The value of regression coefficient of GRDP at CP to per capita income was obtained by value of 1,271 with positive direction. The result of GRDP at CP test to income per capita shows that t value is equal to 110.000 and has significance equal to 0.006. The significance value of the test is smaller than the significance level α = 0.05. Thus GRDP at CP has a positive and significant effect to per capita income. This analysis is not in line with [7] research that GRDP at CP has negative and significant impact to per capita income.The value of the regression coefficient of the population to income per capita was obtained by value of - 0.555 with negative direction. The test result of the population to income per capita shows the value of t test equal to -62.962 and significance of 0.010. The significance value of the test is smaller than the significance level α = 0.05. Thus, the number of residents has a negative and significant impact on per capita income.Furthermore, the regression model tests of GRDPat CMV, GRDP at CP and population (life) to per capita income with F distribution. The results of variables of GRDP at CMV, GRDP at CP and the number of population (life) to per capita income show the value of F arithmetic of 463.892, 029 and the significance of 0.001 (Table 5). The significance value of the test is lessthan the significance level of α = 0.05. Thus the regression model of GRDP at CMV, GRDP at CP, and population has significant effect to per capita income. The result of this research is in line with the theory and research result of [7].

## 4. CONCLUSION
It can be concluded that Lampung Province is still in the category of lower income. One of the causes is the inability to achieve the growth target during the period of 2003-2014. The growth is only 4.86% per year while the contribution of economic growth is 2.2%. Year 2014 is the minimum time limit to set as a country income. Quantitatively Regression model of GRDP at CMV and GRDP at CP and population has significant effect to per capita income negative direction of population to per capita income. It means that the number of residents has a negative and and significant impact to per capita income. The income per capita of 2014 was IDR 6,002,891 if converted to World Bank criteria,it was in the lower income category which was <US $ 1,045. This condition indicates that year 2014 was still in the status of lower income.

## REFERENCES
[1] Kenichi Ohno. (2009), The Middle Income Trap: Implications for Industrialization Strategies in East Asia and Africa, GRIPS Development Forum March 2009.
[2] Woo, Wing Thye. (2009), Getting Malaysia Out of the Middle Income Trap.Available at SSRN: https://ssrn.com/abstract=1534454                   or

http://dx.doi.org/10.2139/ssrn.1534454 , retrive on May, 20, 2017.

[3]    CBS Province of Lampung, Lampung , (2014), Poverty in Numbers.Central Statistic Agency Lampung Province.

[4]    OleraWeya,AmranT.Naukoko, andGeorge Manuel Kawung. (2015), Analysis of Economic Growth and Locally-Generated Revenue and PDRB in Province of Papua.Jurnal Berkala Ilmiah Efisiensi,15(5), p.59-65. (In Indonesian).

[5]    Reni MustikaPutri, (2013), Effect of Human Resource Quality, Economic Growth, and Gender Ratio on Poverty in West Sumatera Province. Jurnal Ekonomi Pembangunan, 1 (1), p.1-7. (In Indonesian).

[6]    Jhingan, M.L. (2014), The Economics of Development and planning (40th ed.), India,Vrinda publications PLtd.

[7]    Rochaida, Eny (2016). The Impact of Population growth on economic growth and prosperous family in East Kalimantan Province, Forum Ekonomi, 18(1), p.14-24 (In Indonesian Language).

[8]    Glewwe, EugeNieMaiga andHaochiZheng, (2014),The Contribution of Education to Economic Growth: A Review of the Evidence, with Special Attention and an Application to Sub-Saharan Africa. World Development, 59,p.379-393.

[9]    Alguecal, M., Cuadros, A., & Orts, V. (2011). Inward FDI and growth: The role of macroeconomic and institutional environment. Journal of Policy Modeling,33,p. 481–496.

[10]   Wong, PohKam, Ho, Yuen Ping and Autio, Erkko. (2005), Entrepreneurship Innovation and Economic Growth: Evidence from GEM data.Small Business Economics, 24, p.335–350, DOI 10.1007/s11187-005-2000-1.

[11]   ArsyadLincolin, (2014). Economics of Development, Publishing Section STIE-YKPN, Yogyakarta.

[12]   Aviliani, Hermanto Siregar, and Heni Hasanah (2014). Addressing the Middle-Income Trap: Experience of Indonesia.Asian Social Science; 10(7), p.163-172.

[13]   Asian Development Bank (ADB) (2012), Tracking the Middle Income Trap, What is it, Who is in it and Why? March 2012.

[14]   World Bank, (2014). East Asia Pacific at Work, Employment, Enterprise and Well-Being,January,2014.

[15]   Agenor, P-R., OCanuto, and M. Jelenic(2012), Avoiding Middle – Income Growth Traps, Economic Premise The World Bank, 2012.

[16]   Paus, E. (2012).Confronting the Middle Income Trap: Insightsfrom Small Latecomers.Studies in comparative International development, 47(2),p.115-138.

[17]   Felipe, Jesus.(2013), Structural Transformation and the Middle Income Trap Notes on Indonesia, paper in a conference:Avoiding The Middle Income Trap Lesson learnt and Strategies for Indonesia to Grow Equitably and Sustainably, Bali, 12-13 December 2013.