THE ANALYSIS OF INDONESIA ECONOMIC GROWTH: 
A STUDY IN SIX BIG ISLANDS IN INDONESIA

Teddy Christianto Leasiwal 
University of Pattimura Maluku 
E-mail: imanuel_tyo@yahoo.com 
Ir. M. Putuhena Street, Poka, Ambon, 97116, Maluku, Indonesia

ABSTRACT
This study attempts to investigate and analyze the factors determining and influencing the Indonesia's economic growth, and to see economic growth in the six big islands in Indonesia, using extension of the Solow-Swan model and endogenous growth models, by also adding the factors of education (EDU), the potential sectors utilization (PSU) as well as several other factors that Foreign Direct Investment (FDI), Political Stability and Security (STAB). The results of this study found that the variable of FDI, PSU, EDU and STAB, in general, have effect on the economic growth in Indonesia and on the existing six big islands. Not all of these variables affect the 6 islands which is due to the different characteristics of each island. It can be concluded that the FDI, is still one of the important sources for Indonesia, and six big islands to encourage economic growth of Indonesia's economic growth and six big islands in Indonesia against the use of potential sectors especially in natural resources. Political Stability and Security (STAB), the condition of Indonesia, and six big islands, are quite vulnerable to shocking security, making it have a strong effect on economic growth. Education (EDU) generally is able to contribute significantly to the economic growth of the islands. In Bali and Timor, education (EDU) can not encourage economic growth.

Key words: Economic Growth, FDI, Education, PSU, Stability, Fixed Effect Model (FEM), General Least Square (GLS).

ANALISIS PERTUMBUHAN EKONOMI INDONESIA: STUDI PADA ENAM KEPULAUAN BESAR DI INDONESIA

ABSTRAK

INTRODUCTION

One of the discourses in Indonesia is economic growth. This discourse covers problems deal with unemployment, inflation or rising prices of goods at the same time, poverty, income and so forth. Economic growth is important in the context of a country's economy as it can be one measure of growth or achievement of the nation's economy.

The development of economic growth in Indonesia has shown a positive trend from the year 1984-1997. For example, in 1998 it showed a decrease in economic growth that is -13.12%. It was due to financial crisis and the economic crisis in mid-1997, which continues to be a multidimensional crisis. This affected economic growth in Indonesia in 1998. In 1999-2003 the economy could grow again, although not as fast as in the previous years.

Indonesia's economy was better and more stable during 2003 as reflected in such an increase. Though the economic growth is still not sufficient to absorb the additional labor force, the number of unemployment still increases, in a sluggish world trade resulting in growth Indonesia's export volume, especially non-oil commodities, which is relatively low. In such situation, the nominal exports were greatly assisted the raising oil and non-oil commodity prices in the international market and the total value of exports in 2003 was increased significantly and became the main pillar of the current account surplus for 2003 (Bank Indonesia 2003).

Success of economic policy in any nation can be measured by the achievement of economic growth as planned such as reducing unemployment and having inflation stabilization. As such, any country should strive to achieve the optimal rate of economic growth by way of various policies in the economy. To do so, there must be surely the sectors that become the driving force for economic growth.

Some components of Gross Domestic Product (GDP) are the driving force for economic growth or an increase in GDP, including investment. Therefore, the policies adopted by the government of a country must be sought to create conditions that can create all things believed to increase in GDP, for achieving optimal conditions so that the desired economic growth can be achieved. Lipsey and Sjoholm (2002) study, whether foreign investors in the manufacturing sector pays lower wages than local investors investing in Indonesia found that foreign firms pay higher prices to provide increased educational labor than domestic investors.

Other studies by Borenstein, Gregorio, Lee (1995), use panel data models of how foreign direct investment FDI can affect economic growth. By doing so, a proportion of GDP, government spending, human capital stock are measured and the results shows FDI has a positive impact on economic growth despite it also depends on the human capital stock put in an investment purposes.

Investment in Indonesia is divided into two parts, namely the main manufacturing investment and natural resources investment. The investment particularly the foreign direct investment was divided into islands Indonesia islands in the western region of Indonesia, especially Java and more focus on the manufacturing sector. This is supported by some factors such as adequate infrastructure available in Java, a lot of labor, low wages, and the level of education. Thus, FDI can provide a multiplier effect, directly or indirectly spurring economic growth in the western region of Indonesia.

The above condition differs from other provinces in the east such as the island of Sulawesi, Papua, and Maluku which rely on the use of natural resources.

The regions belong to FDI in Indonesia have different characteristics, but in general, the sector has been concentrated on the exploitation of the potential which is based on natural resources (BKPMN 2008). In recent years, foreign investors are less keen to invest in Indonesia due to the unstable economic and political conditions. In addition, the economic growth in each of 6 major islands is driven by economic and non-economic variables with different character-
istics. Therefore, it makes economic growth in the six major islands have great influence.

The modern theory of economic growth, the crucial factors is not only L (labor) and K (Capital), but also the growth of T (contained in the capital goods and machinery), entrepreneurship (Kw), raw materials (BB), and material (Mt). In addition to this, other factors that the modern theory also considered to be very influential to economic growth are the availability and condition of infrastructure, laws and regulations, political stability, government policies (which include mirrored by government spending), the bureaucracy, and the basis of international exchange (TOT).

The role such factors above can be traced through the cases in the countries in the African continent. According to the results of existing studies (Tambunan, 1996), cessation of economic development in these countries is partly due to the low quality of its L, political instability, war, the government's financial deficit and the lack of infrastructure. Study by Ramirez et al. (1998) departed from the presence of two-way relationship between economic growth and human development (human development).

The most crucial one is from economic growth to human development. Both are from human development to economic growth. As based on the previous studies, the development will be carried out in this study. Development Model Analysis conducted by some previous researchers can be taken into account. Research conducted by Gani (1997) in Saleh, about the factors of economic growth in Papua New Guinea with a single equation but with four specifications of the model estimated in the period (1970-1992). Results show that empirically physical and human capital did not provide a significant result to the economic growth. Besides that, a study conducted by Sarwedi (2002) shows that the economic variables (GDP, Growth, Wage and Exports) have a positive relationship with FDI, while the non-economic variables, namely political stability have a negative relationship.

The above studies are consistent with the empirical findings of Schneider and Frey (1986) stating that political stability has a negative relationship with FDI. The analysis model used by Sarwedi is characteristic in a country, which is combined in a period of short-term and long-term using ordinary least square (OLS) calculations. This is done by applying the model Error-Correction Model (ECM) and Granger. What makes it different is that the Causality Test of the variables in this study includes the use of potential sectors, in which education factor affects the economic growth in Indonesia, particularly economic growth of the islands in Indonesia.

THEORETICAL FRAMEWORK
Economic Growth
The economy is basically a long-term macro-economic issue in which each period the people try to improve their abilities to produce goods and services. The goal can be in the form of an increase in real output (national income) and living standards (real income per capita) through the provision and deployment of the factors of production. Thus, economic growth is a function of a neoclassic production with the assumption that all inputs to the production as a whole can be grouped into three factors: capital, labor, and technology. The production function describes how the three factors combine economic input to produce output as measured by Gross Domestic Product (GDP).

Growth Theory: Neo-Classical Model
Unlike the Harrod-Domar model, neoclassical models allow the inter-factor substitution labor for capital. Neoclassical growth theory starts with the Solow-Swan models developed by Solow (Solow 1956) and TW Swan (Swan 1956) with the use of the Cobb-Douglas production function, mathematically expressed as follows:

\[ Y = F (Kt, At, Lt). \]  
(1)

In this case, it states that the output is a function of the number of input factors such as capital (K), labor (L) and technology productivity factor (A). From this equation it
can be said that the increase in output of goods and services, which is reflected by the Gross Domestic Product (GDP) can occur through an increase in labor supply, an increase in physical capital and increased productivity at all times.

**Solow Growth Theory**

**Solow Swan Model**

Solow growth theory uses the production function approach that has been developed by Charles Cobb and Paul Douglas, known as the Cobb-Douglas. Some economists who believe that the Solow growth model is the starting point for most economic analysis, even for models fundamentally different from the Solow model, which is easier to be understood by the Solow growth model. This model focuses on four variables: output (Y), capital (K), labor (L) and "knowledge" or "effectiveness of labor" (A). At any given time, the economy has a number of capital, labor, and knowledge output combinations.

**Endogenous Growth Theory and Total Factor Productivity (TFP)**

This endogenous growth theory is proposed by Lucas and Romer. According to Lucas, the accumulation of human capital, as well as the accumulation of physical capital, determines an economic growth. Yet, according to Romer, economic growth is influenced by the level of human capital through technological growth. Thus, the modified aggregate productions function:

\[ Y = AF (K, H, L). \]  

H is the accumulation of human resources, education, and training. According to Mankiw, Romer and Weil (1992) the contribution of each input to the equation is proportional to the national output. Investment on human resources through the education sector will generate higher national income compared with the less investment in the sector.

**Previous Studies**

It is essential to see some of the empirical studies conducted by the previous researchers. For example, research by Rana-Dowling (1988) for developing countries during 1965 - 1982 uses simultaneous equations. They concluded that the flow of foreign capital contributes to economic growth, foreign direct investment contributes to growth through both capital formation and increase the efficiency of investment, and foreign debt contributes higher than the flow of foreign capital.
does (Rana-Dowling 1988; Iwasaki 1986). Rana and Dowling (1988) use simultaneous equations consisting of a model of economic growth and savings. The results of this study indicate that the countries in Asia have general rate of economic growth which is significantly influenced by the performance of exports, domestic savings, and foreign direct investment. Political and economic stability in general are all the factors that determine in attracting foreign investment to spur economic growth in Asian countries.

When the microeconomic research found little evidence on the influence of foreign capital on economic growth, many macroeconomic studies show a positive relationship between FDI and economic growth. Carkovic and Levine (2002) use the model equations and the Dynamic Panel Data bank for concluding that the flow of FDI is not a major factor for economic growth. Still research and Ross Levine Maria Carkovic they illustrate that FDI increased dramatically since 1980 and many countries rely on tax incentives and subsidies to attract foreign capital. Rational economic explanations and frequently used are FDI and portfolio inflows improve the transfer of technology that would accelerate overall economic growth in the country.

Based on the research by Nagesh Kumar and Jaya Prakash Pradhan (2002) on the relationship between FDI and economic growth in 81 developing countries, including Indonesia, there are some evidences. For Indonesia’s statistical theory based (Granger Causality between FDI and Economic Growth), it can be seen the relationship between FDI and economic growth is bi-directional or the influence towards each other.

A study by Atrayee Ghosh Roy and Hendrik F. Van den Berg (2006) suggests that the relationship between FDI and economic growth is complex. Simple regression equation was used but unable to describe the actual conditions. Due to a two-way (bi-directional) between FDI and economic growth, it can be explained by the simultaneous equations model. So Roy and Berg (2006) using a simultaneous equations model to capture the bi-direction relationship between FDI share of GDP and economic growth. The model is estimated using time-series data covering the period 1970-2001. Effect of FDI / Y on economic growth is positive and statistically significant.

Thus, the growth of FDI has a positive contribution to economic growth and the level of social welfare in the long term over the period 1970-2001in USA. The estimates also stated that it is impossible to determine the relative rate of growth of FDI to GDP. Negative coefficient on GDP growth in the FDI equation or Y implies that the elasticity of FDI to GDP is less than one. He said the role of FDI in technology transfer usually focus on developing countries. Yet somehow, the flow of FDI was the highest among developed countries. So, these countries are ready or almost ready for the latest technological developments.

**RESEARCH METHOD**

**The Object of the Research**

The primary focus of this study is on Indonesia and 6 big islands in this country. Thus, the observed objects of this research are the provinces that are in the 6 big islands.

**Data of the Research**

This study used panel data approach. The data were in Indonesia during the period 2002-2008, with an annual database. The panel data were used in the form of annual time series data in the time period from 2002 to 2008 (7 years) and a cross section of some 28 provinces. So, the total data is 196 (7 x 28). The type of data used in this study is secondary data. These data consist of six variables that include economic growth, foreign direct investment, and the frequency of riots, educational level, employment and potential sectors.

**Research Model**

Panel data can explain the two kinds of information: information cross-section on the difference between the subject and time se-
ries information that reflects changes in the subject of time. When both these types of information are available, the analysis of panel data can be used. With repeated observations of the cross section data are sufficient; the analysis of panel data allows one to study the dynamics of change with the time series data. The combination of time series and cross section can increase the quality and quantity of the data with the approach that was not possible by using only one of these data (Gujarati 2003).

The data constraints: when the estimated regression time series data or cross-sectional, observation is found to be too small to produce efficient estimates. One solution to produce an efficient estimation is the linear regression model of panel data.

**Testing the Panel Unit Root**
In the data in the form of a panel or group, the data is necessary to test stationary with panel unit root tests. This is to see the stationery data, as well as to determine the level of integration (order of integration) of the group data. Time series data is used primarily on stationary problems. When the analysis of the data is not stationary, it will produce spurious regression and less meaningful conclusions (Enders 1995 and Thomas 1997).

Thus, the first step is to test and make the data into stationer. This study uses five types of unit root tests by means of Eviews Software version 6 such as (i) Levin, Lin and Chu (2002), (ii) Breitung (2000), (iii) In Pesaran and Shin (2003), (iv) the Fisher-type tests using ADF and PP tests (Maddala and follow Wu (1999) and Choi (2001), and (v) Hadri (1999) and Endy Dwy T and Donni F Grace 2006.

**Selection of Model Estimation in Panel Data**
As stated by Judge in Insukindro 2003, if the source data comes from a sample, the estimation of the random effect panel model is sufficient. However, if the data source is an aggregate one, the tendency is the fixed effect. Thus, the Hausman test is a model applied to decide the Data Panel model is the Random effect or Fixed Effect.

The main difficulty of the panel data model (merging observation time series and cross-sectional observations) is confounding factors which potentially contain the disturbance caused by the use of time series observations. The observation of cross-cutting and the interference is caused by the second. The use of cross-sectional observations yields the potential not to be consistency in terms of parameter regression, due to different data scales.

The use of time series observations bring about the autocorrelation among observations. Estimation techniques being adopted is GLS (Pindyck 1998). Thus this study uses GLS approach. This approach called panel data regression approach used for creating autocorrelation between observations approaches both orderly and cross-sectional (Insukindro et al. 2003).

Operational model GLS method, in this study:

\[
GE_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 PSU_{it} + \beta_3 STAB_{it} + \beta_4 EDU_{it} + \epsilon_{it}
\]

(3)

Description:

\[
\begin{align*}
GE & : \text{Economic Growth} \\
FDI & : \text{Foreign Direct Investment} \\
PSU & : \text{Potential Sector Utilization} \\
STAB & : \text{Security and Political Stability} \\
EDU & : \text{Education}
\end{align*}
\]

**DATA ANALYSIS AND DISCUSSION**

**Testing the Panel Unit Root**
When the variables are not yet stationary at the level, differencing data is done to reduce the data with previous data in order to obtain data in first differences or second difference with being stationary. The 6 variables above do not pass the test at the stage level. After the second test, there are 4 variables that are qualified to be stationary i.e. GE, FDI, EDU, and STAB as shown in Table 1. Conversely, the PSU does not pass at this stage, so that the next phase of testing on the second difference, the outcome variable is stationary. From the calculation, it can be seen that there is a stationary variable and pass Unit
Based on the results of GLS estimation in Table 2, the fixed effects model (FEM) shows better results than the random effects model (REM). It can be seen from the value of R-square ($R^2$) which is fixed effects model (FEM) to be better than the random effects model (REM). In addition, for selecting the best model, it uses the Hausman test (Gujarati 2003). For this study, estimated by Hausman test program Eviews version 6 and the results can estimate the value of Chi-square. The conclusion of the Hausman test is that when the null hypothesis (H0) is accepted, the model used is the random effects model (REM) and vice versa when the null hypothesis (H0) is rejected, the model used is the fixed effects model (FEM).

**Table 1**

Panel Unit Root Test Results on the Level, First Difference and Second Difference

<table>
<thead>
<tr>
<th>Variables</th>
<th>Types of Unit Root Test</th>
<th>Level</th>
<th>First Difference</th>
<th>Second Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE</td>
<td>LLC, Breitung, IPS, ADF &amp; PP</td>
<td>Non Stationary</td>
<td>Stationary</td>
<td></td>
</tr>
<tr>
<td>FDI</td>
<td>LLC, Breitung, IPS, ADF &amp; PP</td>
<td>Non Stationary</td>
<td>Stationary</td>
<td></td>
</tr>
<tr>
<td>PSU</td>
<td>LLC, Breitung, IPS, ADF &amp; PP</td>
<td>Non Stationary</td>
<td>Stationary</td>
<td></td>
</tr>
<tr>
<td>STAB</td>
<td>LLC, Breitung, IPS, ADF &amp; PP</td>
<td>Non Stationary</td>
<td>Stationary</td>
<td></td>
</tr>
<tr>
<td>EDU</td>
<td>LLC, Breitung, IPS, ADF &amp; PP</td>
<td>Non Stationary</td>
<td>Stationary</td>
<td></td>
</tr>
</tbody>
</table>

EDU=PDDK  
PSU=PSP

**Table 2**

Results of the Estimation with GLS method (REM and FEM)


<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Random Effects</th>
<th>Fixed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.314145</td>
<td>-2.197084</td>
</tr>
<tr>
<td>FDI</td>
<td>-4.40E-05</td>
<td>0.000488</td>
</tr>
<tr>
<td>PSU</td>
<td>-2.52E-09</td>
<td>-3.04E-10</td>
</tr>
<tr>
<td>STAB</td>
<td>0.044120</td>
<td>-0.033371</td>
</tr>
<tr>
<td>EDU</td>
<td>2.86E-05</td>
<td>0.001133</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.012918</td>
<td>0.755028</td>
</tr>
<tr>
<td>F stat</td>
<td>0.624894</td>
<td>16.30531</td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>3.146797</td>
<td>1.594428</td>
</tr>
</tbody>
</table>

Source: Processed data.

Root Test.

Based on the results of GLS estimation in Table 2, the fixed effects model (FEM) shows better results than the random effects model (REM). It can be seen from the value of R-square ($R^2$) which is fixed effects model (FEM) to be better than the random effects model (REM). In addition, for selecting the best model, it uses the Hausman test (Gujarati 2003). For this study, estimated by Hausman test program Eviews version 6 and the results can estimate the value of Chi-square. The conclusion of the Hausman test is that when the null hypothesis (H0) is accepted, the model used is the random effects model (REM) and vice versa when the null hypothesis (H0) is rejected, the model used is the fixed effects model (FEM).

**The Results of Hausman**

The results of the Hausman test yield the Chi-square value is presented in Table 3. Based on the Hausman test, it can be drawn a conclusion for the best models that is fixed effects model (FEM).

**Estimation of the GLS Method**

The results of economic growth estimation in Indonesia can be seen in Table 4. The results of FDI variable estimation indicate that FDI has positive and statistically significant for GE. The findings are consistent with the hypothesis that there is a positive effect of FDI on GE. This indicates that FDI, Foreign Direct Investment (FDI) plays an important role in promoting economic growth Indonesia and 6 big islands. The result of variable estimation shows that the utilization of the sector and the potential negative effect is not statistically significant to economic growth (GE). The variable of Education (EDU) has a positive sign. It can be described that education contributes positively to and statistically has significant effect on economic growth (GE). The result is certainly consistent with the hypothesis that there is a positive effect of education (EDU) on economic...
growth (GE). The political and security (STAB) variable shows that this variable negative effect.

The Economic Growth (GE) in Sumatra
The 4 independent variables in Table 5 show that economic growth (GE) in Sumatra has a positive relationship and statistically has significant effect. Yet, variable of STAB has a negative relationship with economic growth.

The Economic Growth (GE) in Java
The 4 variables in Table 6 show that economic growth is affected by FDI in Java, STAB, EDU (education) are proved by the positive relationship among the three variables with the economic growth in Java. Of the three variables, only 2 independent variables have a significant influence. These are the variable FDI, PSU, and EDU. On the contrary, the variables of PSU have a negative relationship statistically toward the economic growth in the island in Java province. This means that the provincial government's ability to manage potential in Java has already been maximal. Yet, this is not able to drive economic growth. This needs creativity and innovation so it is no longer raw materials but finished goods that already have added value.

The Economic Growth (GE) in Kalimantan
The 4 independent variables in Table 7 indicate that economic growth (GE) in Kalimantan has a positive relationship like FDI, PSU, EDU (education). However, the only variable that has statistically significant effect on economic growth is PSU and EDU or education.

The Estimation of Economic Growth (GE) in Sulawesi
The 4 independent variables in Table 8 provide evidence that economic growth (GE) in Sulawesi Island have a positive relationship as FDI, PSU, STAB and EDU (education). But
the PSU and EDU variable have no statistically significant effect on economic growth.

### Table 5: Results of Economic Growth Estimation in Sumatra Island

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-2.629553</td>
<td>1.163271</td>
<td>-2.260481</td>
<td>0.0282</td>
</tr>
<tr>
<td>FDI</td>
<td>0.002638</td>
<td>0.001028</td>
<td>2.566157</td>
<td>0.0133</td>
</tr>
<tr>
<td>PSU</td>
<td>4.34E-07</td>
<td>3.92E-08</td>
<td>11.05408</td>
<td>0.0000</td>
</tr>
<tr>
<td>STAB</td>
<td>-0.098960</td>
<td>0.030181</td>
<td>-3.278850</td>
<td>0.0019</td>
</tr>
<tr>
<td>EDU</td>
<td>4.50E-05</td>
<td>1.79E-05</td>
<td>2.519250</td>
<td>0.0150</td>
</tr>
</tbody>
</table>

Fixed Effects (Cross)
- R-squared: 0.705953
- Adjusted R-squared: 0.635382
- S.E. of regression: 1.769452
- Mean dependent var: 14.64640
- Sum squared resid: 156.5480
- F-statistic: 10.00341
- Durbin-Watson stat: 1.768296
- Prob (F-statistic): 0.000000
Source: Processed data.

### Table 6: Estimation of Economic Growth in Java

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-2.356651</td>
<td>2.758312</td>
<td>-0.854382</td>
<td>0.3992</td>
</tr>
<tr>
<td>FDI</td>
<td>0.000296</td>
<td>0.000126</td>
<td>2.355363</td>
<td>0.0248</td>
</tr>
<tr>
<td>PSU</td>
<td>-2.06E-10</td>
<td>2.33E-10</td>
<td>-0.882929</td>
<td>0.3839</td>
</tr>
<tr>
<td>STAB</td>
<td>0.117306</td>
<td>0.064011</td>
<td>1.832593</td>
<td>0.0762</td>
</tr>
<tr>
<td>EDU</td>
<td>9.44E-05</td>
<td>3.38E-05</td>
<td>2.791683</td>
<td>0.0088</td>
</tr>
</tbody>
</table>

Fixed Effects (Cross)
- R-squared: 0.586936
- Adjusted R-squared: 0.470762
- S.E. of regression: 0.611829
- Mean dependent var: 5.782433
- Sum squared resid: 11.97873
- F-statistic: 5.052209
- Durbin-Watson stat: 1.376001
- Prob (F-statistic): 0.000287
Source: Processed data.

### The Estimation of Economic Growth (GE) in Bali and Timor

The 4 independent variables in Table 9 show that economic growth (GE) in Bali and Timor has a positive relationship as the 2 variables: FDI and PSU while EDU (education) and STAB have a negative relationship with economic growth.

### The Estimation of Economic Growth (GE) in Maluku and Papua

Again the 4 independent variables in Table 10 reflect that economic growth (GE) in Maluku and Papua have a positive relationship as the two variables EDU (education and PSU. These have a significant effect on economic growth. The FDI variable and STAB have a negative relationship on economic growth.

### CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATIONS

In general, it can be concluded that the FDI is considered one of the important sources for Indonesia and 6 big islands to increase economic growth; Indonesia Economic Growth and 6 big islands in Indonesia is dependent on the utilization of potential sectors especially in natural resources in which are the powerful motivating factors; Safety Stability Factor (STAB), the condition of the State of Indonesia and 6 big islands is quite vulnerable to being unstable, thus this is the strong influence on economic growth; The factor of Education (EDU), generally is able to contribute significantly to the economic growth of Indo-
However, the other islands such as the island of Bali and the island of Timor, this factor can not encourage economic growth. This study contributes to the development of Economics in which this study has contributed to and completed the assessment studies on economic growth especially on the factors triggering economic growth. This study provides additional knowledge regarding the application of macroeconomic theory on the issues related to economic growth, particularly on the economic growth among the six big islands in the territory. The economic growth should be driven by the sectors which are considered more productive. The policy made must also encourage the economic growth because it important for improving the quality of education. The policy utilizing the potential sectors should also be accompanied by the living standard and environment sustainability. The policy also enables the nation to maintain political and security stability without caring any individual characteristics. It is required that the Indonesian government and local governments in the six major islands to actively become facilitators.

Some suggestions can be derived from the gist of the research findings. First of all, it is advisable for the local and central government to optimize the factors that can enhance the economic growth. Secondly, by considering the economic growth happen mostly in every province in Indonesia which is supported by the use of potential sectors, the government should issue a policy to safeguard and ensure the sustainability of the sector for potential income-generating and promoting regional

### Table 7
**Estimation of Economic Growth in Kalimantan**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-2.963213</td>
<td>3.070705</td>
<td>-0.964994</td>
<td>0.3461</td>
</tr>
<tr>
<td>FDI</td>
<td>0.000496</td>
<td>0.002626</td>
<td>0.188768</td>
<td>0.8522</td>
</tr>
<tr>
<td>PSU</td>
<td>3.20E-07</td>
<td>1.28E-07</td>
<td>2.512753</td>
<td>0.0207</td>
</tr>
<tr>
<td>STAB</td>
<td>-0.336768</td>
<td>0.229978</td>
<td>-1.464348</td>
<td>0.1586</td>
</tr>
<tr>
<td>EDU</td>
<td>7.10E-05</td>
<td>4.65E-05</td>
<td>1.525845</td>
<td>0.1427</td>
</tr>
</tbody>
</table>

Fixed Effects (Cross)
- R-squared: 0.847050, Mean dependent var: 5.752286
- Adjusted R-squared: 0.793517, S.D. dependent var: 3.115135
- S.E. of regression: 0.632057, Sum squared resid: 7.989928
- F-statistic: 15.82304, Durbin-Watson stat: 2.318380

Source: Processed data.

### Table 8
**Estimation of Economic Growth in Sulawesi**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-2.355103</td>
<td>1.696320</td>
<td>-1.388360</td>
<td>0.1803</td>
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<tr>
<td>FDI</td>
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<td>0.001144</td>
<td>0.574593</td>
<td>0.5720</td>
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<tr>
<td>PSU</td>
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<td>1.46E-07</td>
<td>0.671339</td>
<td>0.5097</td>
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<tr>
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<td>0.063577</td>
<td>4.274278</td>
<td>0.0004</td>
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<tr>
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<td>0.000109</td>
<td>2.90E-05</td>
<td>3.758234</td>
<td>0.0012</td>
</tr>
</tbody>
</table>

Fixed Effects (Cross)
- R-squared: 0.790394, Mean dependent var: 7.969157
- Adjusted R-squared: 0.717032, S.D. dependent var: 3.142582
- S.E. of regression: 0.819323, Sum squared resid: 13.42582
- F-statistic: 10.77390, Durbin-Watson stat: 1.141791

Source: Processed data.
economic growth in Indonesia. Finally, beside the above suggestion, it is also important for the government to create security and political stability, the essential factors in enhancing the economic growth. Thus, the local and central government should work hand in hand to promote such stability, particularly in big islands and the entire nation. The government’s policy should encourage economic growth starting from an increase.

REFERENCES
Bank Indonesia, 2003, Laporan Tahunan, Jakarta.
can Economic Association (Mar, 1928), pp. 139-165.


