THE IMPACT OF FOREIGN DIRECT INVESTMENT, DOMESTIC INVESTMENT, EXPORT PERFORMANCE, AND LABOR TOWARDS THE ECONOMIC GROWTH IN INDONESIA

THESIS

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PREFACE

All praises due to Allah, the Most Gracious and Merciful, for giving me the strength, and the determination to complete my study and by the grace of His Holy Prophet Mohammad who is forever a source of enlightenment, guidance and knowledge for humanity as a whole.

The thesis is proposed as partial requirements to acquire Bachelor Degree at Economic Department of Economic Faculty, Andalas University. The writer interested to research about "***The Impact of Foreign Direct Investment, Domestic Investment, Export Performance and Labor Forces towards the Economic Growth in Indonesia: Evidence from Endogenous Growth Model"*** The reason lying behind the chosen of this title are; firstly the presences of FDI through foreign firms in Indonesia is not quite enough to boost the economic growth, secondly, to know whether export, domestic investment and labor forces are able to encourage the economic growth in Indonesia. Lastly, by find out this case, we can determine the better policy to implement in macroeconomic.

The writer realizes that this thesis still far from perfection. It needs to be improved. For that reason, that writer gladly receive any constructive critics and suggestion from the readers in order to make the thesis better. Finally, writer hopes that this thesis is able to give benefits to anyone who read it's, especially for academician.

Padang, May 2011

ARDEFANNIE ADNAN

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CHAPTER I

INTRODUCTION

1.1 Background

The ultimate goal of countries is to increase the economic growth in order to improve standard of living and reduce number of poverty. Since any trade agreement established, international trade activities and investment growth rapidly around the world. Nowadays, developing countries have encouraged to foreign direct investment as an accumulative capital. Since global financial crisis was hit United State of America, the new power of economy and trading activity growth and move to Asia and Europe.

According to Arshad (2008), the role of foreign direct investment (FDI) has been widely recognized as a growth-enhancing factor in the developing countries. It plays an important role to economic development. Many developing countries compete to attract FDI, they realize it can stimulate the economic growth, but it can be implemented depend on certain condition such as stabile politics and economy, trade barriers, human capital, good infrastructure, and efficient bureaucracy.

The previous studies have been discussed about the certain precondition of implementation of foreign direct investment in country, for instance the host country's openness to trade, by Bhagwati, (1978), a certain level of development in the local financial markets, Alfaro, et al(2004), and a sufficient qualified human capital in the host country, Borenzstein et al, (1998). The changes on political

regimes from "Old Orde" to "New Orde" brought good investment climate. Suharto was successfully invited investor, in order to decrease the inflation rate at the time which is around 650% to 15% only for two years. Almost of developing countries rely on foreign direct investment for sustainable economic development. Through foreign direct investment, local firm able to increase their productivity by increasing their domestic investment. This is the starting point of local firm to hire much employment and other factor production to support their production. Mobilization of the economic growth associated with decreasing on number of unemployment. By increasing capital formation on domestic firm or foreign company, both firms able to absorb more skilled and unskilled labor.

According to Shahbaz, et al (2007), in the host countries, FDI creates a positives effect on the economic growth, because it comprises of certain very important factors like capital, technology management, and market access. As background of those conditions, Indonesian government launched the foreign investment law No. 1/1967 to encourage liberalization in 1967.

On August 14 1997, the growth of foreign direct investment in Indonesia was support by the changed of exchange rate regimes. The managed floating exchange regime replaced by flexible exchange rate which is open market access and implemented the real open economy. In 1994, government renew law No. 20 1994, government allow foreigner to invest in Indonesia capital around 95 %. It is change investment climate in Indonesia significantly. No wonder, Indonesia with

rich of natural resources becomes favorite investor destination. Important areas of FDI in Indonesia are; energy or mining, insurance, banking, hotel, food and beverages. The sources of foreign direct investment in Indonesia come from multinational companies such as Unilever, Freeport, Chevron Pacific Indonesia, Newmont, Exxon, Coca Cola, Semen Gresik, Allianz, Halliburton, Nestle, Honda, Schlumberger, etc.

Foreign direct investment is able to implement on two parts, macroeconomics and microeconomics. Here, the writer only focused to macroeconomics indicators such as; export, import, GDP, interest rate, exchange rate, saving, unemployment, government, and consumption. But then, writer just takes some variables which influenced by foreign direct investment such as: export, the economic growth in terms of Gross Domestic Product (GDP), domestic investment and employment.

Therefore, based on description above, writer interest to learn and observe more about "***The Impact of Foreign Direct Investments, Domestic Investment, Export Performance and Labor Forces towards The economic Growth in Indonesia: Evidence from Endogenous Growth Model ***".

Here writer investigates on foreign direct investment which becomes an engine to push export, increasing the economic growth and decrease unemployment in Indonesia. How investment can increase number of export in Indonesia. Through

foreign investment, it can accumulate capital and spread an opportunity on job field to absorb employment in order to reduce unemployment rate.

1.2 Research Problem

There are many factors affecting the economic growth in each country. Mostly developing countries shows positively rely on foreign direct investment to accelerate the economic growth. In contrary, for Indonesia those variables fluctuated since 1990-1997 after Asia financial crisis. As consequences foreign direct investment is no longer accelerate the economic growth as determinant at the time. Beside that the capability of society to invest is very low, and lack of national saving to fund economic development. Investment in Indonesia is less than other developing countries. In fact, FDI recipients in Indonesia oriented to five provinces such as DKI Jakarta, Riau, Jawa Barat, Kalimantan Timur and Sulawesi Tenggara.

The distribution of FDI is not widely spread to other provinces. Based on those problems, government find outs other financial sources to encourage accelerating of the economic growth, while they try to enhance foreign direct investment as a growth country sources. Furthermore, in many literatures show, relationship among FDI and gross domestic product might cause reducing unemployment. In fact, in Indonesia, especially in 5 provinces the unemployment rate still high and other province as well. Some previous research found that export may lead the economic growth through foreign direct investment role. While in Indonesia, the value of export still far from stimulates the economic growth,

because Indonesia rely on import commodities rather than export products, it may lead higher expenditure and threaten local producer.

1.3 Research Question

There are some questions posed in this research:

1. Does foreign direct investment able to accelerate the economic growth in Indonesia?
2. Do export, domestic investment, and labor force affect the economic growth in Indonesia?
3. Endogenous growth model can be implementing in Indonesia?

1.4 Research Objective

The main objective of this study is to explore the impact of FDI on Indonesian economy growth. The study also reviews the Indonesia's foreign direct investment and initiatives for attracting FDI over the years for enhancing the economic growth, investment and other indicators such as domestic investment, export performance and labor forces.

1.5 Research Advantages

The advantages of this research are:

1. To fulfill requirements of Bachelor of Economics in Economic Faculty, Andalas University.
2. For writer, to improve writer ability in writing report and doing research, especially in monetary and international trade sector.

3. This research can enhance our knowledge about foreign direct investment on the economic growth from provincial perspective.
4. For additional information, literature and comparison for future research.
5. For the writer is to improve a problem based on science and knowledge gained during writer studies at Andalas University

1.6 Limitation of study

This research estimates the impact of foreign direct investment on the economic growth, export performance and labor force in Indonesia over the period of 1990-2008. This research determine to empirical impact of FDI on Indonesia economy using macroeconomic tools. The writer classify the variables into two group where the economic growth as dependent variable and FDI, export, labor force and domestic investment as independent variables. The study tries to explore the question where high level of FDI leads higher level of the economic growth. In this research uses secondary data to see the influence of foreign direct investment, export, labor force, and domestic investment toward the economic growth. This research uses OLS (Ordinary Least Square).

1.7 Organization of Writing

This thesis divided into six chapters, which are:

1. CHAPTER 1: INTRODUCTION.

   This chapter consists of background, research problem, research question, research objectives, hypothesis, limitation study and organization of writing.

2. CHAPTER 2: THEORITICAL FRAMEWORK AND LITERATURE REVIEW.

   This chapter consists of The economic growth Theory, framework of The economic growth and Foreign Direct Investment, the relationship between foreign direct investment, export performance, domestic investment and labor force toward the economic growth. To support the literature review some explanation from empirical studies in the past, as proven.

3. CHAPTER 3: RESEARCH METHODOLOGY.

   This chapter consists of data source, analysis method, data analysis and another supporting concept.

4. CHAPTER 4: DEVELOPMENT OF VARIABEL.

   This chapter consists by an overview of the economic growth, the foreign direct investment flow, the development of export performance, an overview of domestic investment and labor force in Indonesia.

5. CHAPTER 5: RESULT OF RESEARCH.

   This chapter is result of empirical studies from this research.

6. CHAPTER 6: CLOSING

   This chapter consists of conclusion of the study and implication on the future research.

CHAPTER II

THEORETICAL FRAMEWORKS, LITERATURE REVIEW AND EMPIRICAL EVIDENCE

2.1 Theories

2.1.1 The economic growth Theories by Solow Model

Solow model is the earlier concept which represent about the economic growth related to capital inflow from abroad. Solow-type standard neoclassical growth models suggest that FDI increases the capital stock and thus growth in the host economy by financing capital formation (Brems, 1970). Admittedly, in neoclassical growth models with diminishing returns to capital, FDI has only a "short-run" growth effect as countries move towards a new steady state. Accordingly, the impact of FDI on growth is identical to that of domestic investment.

The Solow model (1956) allows the capital mobility and its accumulation. Still, the capital accumulation can explain only the short run the economic growth because the physical capital has decreasing turnovers in the long run. The apparent solution is to accept the existence of technological differences and that is the Solow's main contribution. He introduces the technology and knowledge among the production inputs, because both contribute to the factors productivity increase susceptible of the economic growth promotion. But technological changes are

supposed exogenous and that implies the inexistence of technological transfers between the nations, and consequently, the long-run the economic growth is limited.

In the Solow's short-run the economic growth (Solow, 1956), the final good is produced with two production factors (capital and labor)

$$Y = F(K, L) \dots\dots 1$$

.The capital stock increase is the result of that part of revenue saved and invested

$$\dot{K} = sY.$$

Consequently,

$$\dot{K} = sF(K, L) \dots\dots 2$$

As the population increasing is exogenous, it is supposed that labor force rise with a constant rate n;

$$L(t) = L_0 e^{nt} \dots\dots 3$$

The fundamental equation is obtained

$$\dot{K} = sF(K, L_0 e^{nt}) \dots\dots 4$$

and it allows for the identification of capital accumulation trend, under the hypothesis of total available labor force involved. The saving propensity s indicates how much of the net revenue is saved and invested. From here results the capital net accumulation during the current period. Added to the already existing stock, it led to the total available capital in the next period and the whole process repeat.

2.1.2 Endogenous Growth Theory

The endogenous growth models can be considered as a theoretical foundation for FDI led the economic growth hypothesis of a country. The endogenous growth theories state that the long-run growth of a country is not only influenced by the volume of physical investment but also depends on the efficiency of utilizing investment. Therefore, endogenous growth model focuses on incorporating organizational, managerial, technical and human skills, innovation and technological progress, and accumulation of knowledge endogenously in the growth theories are often brought by FDI (Romer 1986, Lucas 1988, Mankiw et al. 1992, Pugel 2007).

In order to explain the role of FDI in the long term growth of host countries, Lucas (1988, 1990), Romer (1986, 1987) and Mankiw (1992) amended the neoclassical growth model, especially the Solow growth model, by including the growth-driving factors of human capital as well as physical capital to explain the presence of FDI in developing host countries. According to E. Borensztein et al (1998) they consider an economy where technical progress is the result of 'capital deepening' in the form of an increase in the number of varieties of capital goods available, as in Romer (1990), Grossman and Helpman (1991) and Barro and Sala-i-Martin (1995). The economy produces a single consumption good according to the following technology:

$$Y = AK^{\alpha}H^{1-\alpha} \quad \ldots\ldots 1a$$

where A represents the exogenous state of 'environment', H denotes human capital, and K stands for physical capital. The state of environment comprises various control and policy variables influencing the level of productivity in the economy. They assume that human capital H is a given endowment. Physical capital consists of an aggregate of different varieties of capital goods, and hence capital accumulation takes place through the expansion of the number of varieties.

2.1.3 Foreign Direct Investment Theories

The traditional theory of FDI tries to explain why companies produce abroad instead of simply servicing the markets via exports. After all, multinational companies (MNCs) experience additional costs in producing abroad: higher costs in placing personnel abroad, communication costs (international phone calls, travel expenses for executives or even time costs due to mail delays), language and cultural differences, informational costs on local tax laws and regulations, costs of being outside domestic networks; they also incur higher risks. According to Dunning (1993) there is several motives companies decided FDI inflow to host country based on MNE's activity:

1. That designed to satisfy a particular foreign market, or set of foreign markets, viz. *market seeking*, or demand oriented FDI.
2. That designed to gain access to natural resources, e.g. minerals, agricultural products, unskilled labor, viz. *resource seeking*, or supply oriented FDI.

3. That designed to promote a more efficient division of labor or specialization of an existing portfolio of foreign and domestic assets by MNEs, i.e. *rationalized or efficiency seeking* FDI. This type of FDI, though related to the first or second kind, is usually sequential to it.
4. That designed to protect or augment the existing O specific advantages of the investing firms and/or to reduce those of their competitors, i.e. *strategic asset seeking* FDI.

One theoretical approach, introduced by Dunning (1977, 1981), the "OLI framework", considers FDI as determined by Ownership, Location and Internalization advantages which the MNC holds over the foreign producer; when these advantages outweigh the above costs, FDI arises. The ownership advantage includes a product or a production process to which other companies do not have access, such as a patent, blueprint or trade secret, to more intangible advantages such as reputation for quality. The location advantage stems directly from the foreign market, such as low factor prices or customer access, together with trade barriers or transport costs that make FDI more profitable than exporting.

Finally, the internalization advantage is a more abstract concept to explain why licensing may not be practiced; it derives from the companies' interest in maintaining its knowledge assets (such as highly skilled workers who know the companies' technology) internally. This avoids "defection" once the licensee has come to understand the technology and sets up his own companies, in competition

with the MNC. Informational asymmetries may also push MNCs to prefer foreign production over licensing, such as better knowledge of the domestic market by the licensee. The fear of being substituted with direct production in the presence of highly selling markets would provide incentive for the licensee to under-declare the potential absorption capacity of a market. Finally, advantages derive from the reduction of transaction costs (for contracting, quality assurance, etc.) that arise in case of licensing.

In order to analyze the effects of FDI on a host country's exports, it is useful to distinguish between horizontally and vertically integrated multinational companies. In the case of horizontal integration, the MNE produces the same product in multiple plants located in more than one country, while vertical integration implies that different segments of the production process are carried out in different countries. Horizontally integrated companies often arise because of trade barriers in the form of tariffs or high transport costs.

2.1.4 Export and The economic growth

Rubina Vohra(2001), investigated the association between the growth of exports and economic performance. The first model is the aggregate production function type specification in which the level of exports along with labor and capital enters as inputs in the general production function as:

$$Y = f(N, K, X) \qquad \ldots\ldots 1b$$

Where, Y is aggregate real output and N, K, and X represent labor, capital, and exports, respectively. There are several ways in which one can rationalize the notion that exports are a production input, in the sense that the level of exports affects aggregate output for given levels of labor and capital. Export may also facilitate exploitation of economic scale; make for increased capacity utilization, and strength inducement for technological change.

2.2 Dummy Variables

According to Gujarati (2003), a dummy variable is a qualitative explanatory variable in regression analysis. Dummy variable is also called binary or dichotomous variable because it only consists of two values. In regression analysis the dependent variable, or regressand, is frequently influenced not only by ratio scale variables (e.g., income, output, prices, costs, height, and temperature) but also by variables that are essentially qualitative or nominal scale, in nature, such as seasonal, sex, race, color, religion, nationality, geographical region, political upheavals, and party affiliation.

Since such variables usually indicate the presence or absence of a"quality" or an attribute, such as male or female, pre crisis or pasca crisis, black or white, Democrat or Republican, they are essentially nominal scale variables. One way we could "quantify" such attributes is by constructing artificial variables that take on values of 1 or 0, 1 indicating the presence (or possession) of that attribute and 0 indicating the absence of that attribute. In this study, dummy variables used are

dummy variables for Indonesia's economic condition, namely dum2 which "1" indicates crisis for 1997 to 1998 and "0" after crisis before and after the economic crisis

An economic crisis 1997-1998 led to the occurrence of instability at the macro economic conditions. This can lead to lack of confidence in the international market also domestic market and interfere to export activities. Economic crisis also impact to increasing number of unemployment. Some of industries were collapse. The instability economic condition effect to government revenue.

2.3 Literature Review

Writer has collected many references related to the aim of this thesis. All of the information to support this research taken from any journals. Some literatures, brought writer more critical to explore the main ideas and the empirical evidences from some countries will strengthen the theory and analysis about the linkages of FDI and other indicators on the economic growth.

This chapter describes the theoretical and empirical literature on foreign direct investment. Mainly, this chapter is divided into five sections, first section explains theoretical concepts of FDI itself, second section provides the research outcomes of previous empirical studies in the field of FDI and the economic growth, third section explain a previous studies on linkages between FDI and export performance on the economic growth, fourth section is about linkages of labor force

on the economic growth and the last section is about relationship of FDI and domestic Investment on the economic growth.

According to ML. Jhingan, (2000 page: 483), Foreign investment which is entering to region can be formed into private capital. Foreign private capital divided into direct investment and indirect investment.

- Direct Investment is kind of investment show that foreign investments allow to intervene whole or a part of company management system.
- Indirect Investment or called portfolio means, the investment by purchasing the obligation or stock of foreign investor but they don't able to conduct management.

During the past few years, the role of foreign direct investment (FDI) has become more important for developing countries and less developed countries. Indeed, it increased rapidly during the late 1980s and the 1990s. UNCTAD (1999) investigated that FDI inflow to developing countries increase as a whole around 52% between 2001to 2005.

According to the World Bank (2007), global FDI flows reached a record of 1.1$ trillion in 2006 and there has been a continuing rise in FDI inflows to developing countries. In recent years, FDI outflows from large developing countries are also on the rise.

Foreign direct investment is the process whereby resident of one country (the source country) acquire ownership of assets for the purpose of controlling the

production, distribution, and one other activities of a firm in another country (the host country).

The United Nation 1999 World OECD remarked, foreign direct investments can play a key role in improving the capacity of the host country to respond to the opportunities offered by the global economic integration. Expansion of trading activities in the whole world affect on entered of FDI to the host country through trade agreement between two or more country, in this case Indonesia should be take this challenges to attract FDI in order to encourage economic development.

Noorbahksh and Ali (2001), studied that FDI has become a very important agenda which is not only a source of finance and employment but also can be a medium for acquiring skills, technology, organizational and managerial practices and access to markets. In fact, some of MNC's able to transferring technology while host country lack of it to encourage production process. Beside, FDI very close relationship to job opportunities for local peoples. It can absorb more manpower with a cheap cost. It may effect to reducing production cost. In addition, by invest in host country more efficient rather than they produce in home country.

Many literatures explore the linkages of FDI and The economic growth. Borensztein, de-Gregorio, and Lee, (1998) state that FDI as a source of capitals are thought to be associated with higher overall growth rate.

Melina Dritsaki, Chaido Dritsaki and Antonius Adamopoulos (2004), investigated that foreign direct investments can contribute to the economic growth

because they tend to be more productive than the investments of local companies. In fact in Indonesia many megaprojects held by foreign investor, because they have capital sources and technology for efficiency production, while local investor has lack of capital as a financial sources. That's why local company's product is very low competitiveness.

Balasubramanyam et al. (1996) and Oseghale and Amonkhienan (1987) pointed out that many of the growth-driving factors identified by the new growth theory can be initiated and nurtured to promote the economic growth through FDI. FDI is positively associated with GDP, concluding that greater inflow of FDI will spell a better economic performance for the country. The role of FDI to host country is able to accelerate the economic growth.

While some studies show positive relationship exist to FDI and the economic growth, but then other expert detects negative relationship to both variables. The controversy has arisen partially due to data insufficiency in either cross country and time series investigation. Aitken and Harrison (1999) on international business research (2010) in their research did not found any evidence of a beneficial spillover effect from foreign firms and domestic ones in Venezuela over the 1979-1989 period. Similarly, Haddad and Harrison (1993) and Mansfield and Romeo (1980) found no positive effect of FDI on the rate of the economic growth in developing countries, Morocco.

In contrast, the analysis of Brecher and Diaz-Alejandro (1977), gives us evidence that foreign capital can lower the the economic growth by earning excessive profits in a country with severe trade distortions such as high tariffs.

Several recent literatures also show the relationship between FDI, export performance and the economic growth. Balasubramanyam et al. (1996) find that the influence of MNEs depends on the trade policy regime followed by host countries; the impact of FDI flows is significantly positive in economies which pursue an "export promotion" (EP) strategy and not significant in countries which are characterized by an "import substitution" (IS) policy. This is immediately understandable in a theoretical context of export-led growth. Their research indicated that additions to the stock of foreign owned capital are most effective in improving growth performance in countries implementing an EP policy.

In contrary, Giles J.A and C.L Williams, found a negative relation between exports and growth. These studies clearly indicate that FDI could be associated with export trade in goods, and the host country may enjoy an FDI led export growth. Export-FDI increasing is motivated by the desire to seek new sources of input such as raw material and intermediate goods. This kind of FDI is export increasing in the sense that the host country will increase its export of raw material and intermediate product to the investing country and other countries.

Some of literature describes the linkages of the economic growth and Employment. Borensztein, De Gregorio, and Lee (1998) argue that FDI has a

positive growth-effect when the country has a highly educated workforce that allows it to exploit FDI spillovers.

De Mello (1999), found that FDI may contribute to the economic growth where the transfer of technology raised the stock of knowledge in host country through labor training and skill acquisition, new management practices and organizational arrangements. Similar with Frimpong Joseph Magnus and Oteng-Abayie Eric Fosu, (2008), Noorbahksh and Ali (2001), Nguyen Phi Lan, (2006) state that FDI play a role in promoting human capital in host country, through managerial skill, skill acquisition, training, organizational arrangements and enhancement on R& D.

While Blomstrom, Lipsey, and Zejan (1994) find no evidence that education is critical, they argue that FDI has a positive growth-effect when the country is sufficiently rich. It means, the investor may invest to a country which has certain beneficial condition such as having lot natural resources, skilled labor or having good infrastructure.

On the other hand, more recent studies have shown a negative relationship to exist between FDI and home-country investments. Frimpong Joseph Magnus and Oteng-Abayie Eric Fosu, (2008) investigated inward FDI can stimulate local investment by increasing domestic investment through links in the production chain when foreign companies buy locally made inputs or when foreign companies supply source intermediate inputs to local companies.

Actually, the result of estimation in those previous studies whether positive or negative relationship. It is depend on host country procedural to implement foreign direct investment as beneficial financial resources. Borensztein et al., and de Mello, (1999) state other papers such influence is positive or negative according to the level of development of the recipient country.

2.4 Empirical Evidence

In this section, empirical evidence from previous study show the analysis between FDI, export, domestic investment, employment on the economic growth or one of variables may affect to the economic growth. The earlier studies of research find out, the investigation of estimation variables in some country compare to several times. There are several methods to indicate any relationship between variables. Beginning by the indication positive correlated of each variable that latest research got.

Majagaiya Kundan P. (2010) in his research, "A time series analysis of Foreign Direct Investment and The economic growth: A Case study of Nepal" indicates that there is positive relationship between foreign direct investment and gross domestic product. The result represent of Nepal economy and foreign direct investment from 1980-2006 estimate by using Ordinary Least Square and Granger Causality Test.

De Gregorio, (1992) analyzed a panel of 12 Latin American countries in the period 1950-1985. His results suggest a positive and significant impact of FDI on the economic growth.

Balasubramanyam, Salisu, and Sapsford (1996) analyses how FDI affects the economic growth in developing economies. They found that FDI has a positive effect on the economic growth in host countries with an export promoting strategy but not in countries using an import substitution strategy. Balasubramanyam et al (1999) also used cross sectional annual data averaged over the period 1970 – 1985 for a sample of 46 developing countries with different trade policy regimes. They found that the size of the domestic market, the companies climate in relation to local producer and interaction between FDI and human capital have an important influence upon growth performance.

Borenztein et al. (1995), introduced a new model showing the impact of FDI in the economic growth using an endogenous model growth model. They analyzed FDI flows from industrialized countries to 69 developing countries during 1970-1989. They argued that due to the direct FDI there is increase in capital accumulation and in host countries and transfer of technology lead increases productivity which causes the the economic growth of the host countries. Their result showed that FDI is an important vehicle of technology transfer, contributing more the economic growth than domestic investment where they make a case of minimum threshold stock of human capital necessary to absorb foreign technologies

and linkage between FDI and human capital and domestic investment are crucial to achieve the the economic growth.

Idris Jajri, in his research examines the influence of foreign direct investment over the growth in Malaysia for period of 1970-2003 by using multiple regressions found that FDI has played an important role in stimulating the Malaysia the economic growth. A strong market and macroeconomic stability encourage foreign investment.

Ahmad Ghazali (2010), analyzed the relationship between foreign direct investment, domestic investment and the economic growth in Pakistan for period of 1981-2008 by using vector autoregression models. He found that FDI has a significant effect on the economic growth. Domestic investment in Pakistan has a greater impact on the economic growth than FDI. It is support to the theoretical review that FDI has complementary effects on domestic investment.

In the other hand, Kim and Seo (2003) analyzed the dynamic relationship between FDI and the economic growth and domestic investment in Korea for the period of 1995-1999 using vector auto regression models. They found that there some positive effects of FDI on the economic growth but insignificant. However, their findings show that domestic investment negatively affected by FDI shock, and FDI does not crowd out domestic investment in Korea.

Sumei Tang E, A. Selvanathan and S. Selvanathan (2008) in their research foreign direct investment, domestic investment, and the economic growth in China

for period 1988-2003by using vector autoregression. They found that FDI has significant effect on China's the economic growth. Beside that China's domestic investment and the economic growth has positively correlated. China's domestic investment has a greater impact on growth than FDI.

In contrary some studies found negative relationship between FDI, export, domestic investment, and labor force toward the economic growth. Raj Kumar Rai (2009), studied investigate quantitative the role of FDI based on the macro economic data by implemented endogenous model developed by Balasubramanyam et al. The results from the OLS regression analysis showed that FDI has played negligible role in throughout the Korea's the economic growth. FDI accounted less than one percent of GDP (except few years after1998) where as domestic investment remained above 30 percent of GDP over the study period. FDI value is very small compare to domestic investment. The macro economic data study during 1980-2005 fails to support the significant role of FDI on growth case study evidences. Despite this, Korean firms upgraded their technological and managerial skills from foreign companies to be world competitive. Hence, the role of FDI in improving the quality of Korean firms can't be ignored to cause the economic growth in Korea.

Ismail Aktar and Latif Ozturk (2009) applies the Vector autoregression technique to investigate various interrelationship among FDI, export, unemployment and gross domestic product for period 2000:1 to 2007:4 in Turkey.

They found that FDI did not have any contribution to reduce unemployment rate in Turkey, then export show positive impact but insignificant on GDP.

Akinlo (2004) investigated the impact of FDI on the economic growth in Nigeria by using Error Correction Model and showed insignificant negative influence of FDI toward the economic growth.

De Mello (1999) attempted to find support for an FDI-led growth hypothesis when time series analysis and panel data estimation for a sample of 32 OECD and non- OECD countries covering the period 1970-1990 were made. He estimates the impact of FDI on capital accumulation and output growth in the recipient economy. They argue that technological progression and other external factors main source of the economic growth. Their argument is that long-run growth arises because of technological progress and population growths both were exogenous. Hence, according to neoclassical models of the economic growth, FDI will only be growth advancing if it affects technology positively and permanently

In contrary, Hadiji et al. (1995) examined the impact of foreign capital inflows on the economic growth in a cross sample of 33 developing countries from 1986 to 1992. The results indicated that foreign capital inflows stimulates growth initially beyond a certain threshold, however, the impact on growth appeared negative. The study concluded that too much foreign capital inflows could retard growth.

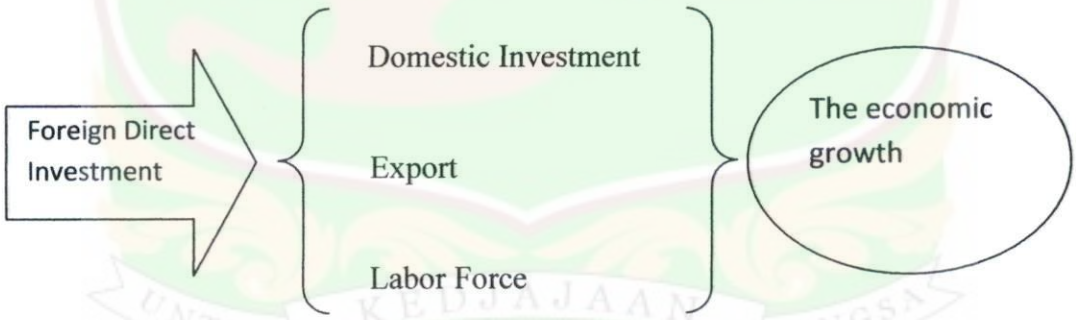
Some earlier studies found evidence that FDI has led to significant positive spillover effects on the labour productivity of domestic companies and on the rate of growth of domestic productivity in Mexico (Blömstrom and Persson (1983), Blömstrom (1986), Blomström and Wolf, (1994)).

2.5 Hypothesis

From several descriptions of the theory and previous research that has been described, it can be hypothesized as follows:

1. Foreign direct investment positively affect the economic growth
2. Export positively encourage the economic growth
3. Domestic investment positive influence an the economic growth
4. Labor force positive effect on the economic growth.

2.6 Conceptual Framework



From the conceptual framework, writer is able to summarize the analysis the function of foreign direct investment is able to accelerate economic growth. The process of entering foreign direct investment can be through foreign firms which invest in host countries for current potential sectors. One of foreign firm motivation

is expand the production, in order to close the global market and seeking for resources. Those reasons, impact to host countries, since foreign firm will not use production factors from abroad because spends a lot cost. Then foreign firm will hire employment from host countries, and dealing with local government for profit sharing. Indirectly local regions get impact from the presence of foreign firms, since it contribute on national income. Foreign firm which held production process in host countries will export the product to market especially global market.

CHAPTER III

RESEARCH METHDOLOGY

3.1 Research Scope

This research main focus is the linkages of foreign direct investment, domestic investment, export, employment to the economic growth. All of indicators will estimate from previous years.

3.2 Types and Sources Data

To process the data, writer needs relevant sources of data for estimation purpose. The type of data that writer uses time series and secondary data. The data derived from several official publications, such as the Central Statistical Bureau, Central Bank of Indonesia, Ministry of Trade and Industry Website, books, journals, papers and scientific works related to this research. Year data is data for 1990 until 2008. The data used in this research is time series data. Data analysis is used to prove the hypothesis rose in the study. The data analysis was used to determine how the influence of macroeconomic indicators, represented by FDI, domestic investment, exports and labor force to the economic growth in Indonesia. In this research uses OLS method. The data used in this research contains by:

a. GDP in Indonesia per year.

   To see the the economic growth, writer uses data from gross domestic product at constant 2000 prices, on billion of rupiah.

b. Foreign direct investment in Indonesia per year.

Writer uses foreign direct investment planning approvals by economic sectors on million of US dollar.

c. Domestic investment in Indonesia per year.

Here, writer uses domestic investment planning approvals by economic sector on billion of rupiah.

d. Export growth in Indonesia per year.

The value of export in this research is total export both oil and gas, and non-oil and gas on million of US dollars .

e. Labor force rate in Indonesia per year.

For data of labor, writer use labor force participation in thousand peoples a year.

Data	Measurement	Data Sources	Collecting Data
The economic growth	Billion of Rupiah	Central Bank of Indonesia	Indirect
Foreign Direct Investment	Million of US Dollars	Central Bank of Indonesia	Indirect
Export Performance	Million of US Dollars	Central Statistical Bureau and Ministry of Trade and Industry	Indirect
Labor Force	Thousand	United Nation Data	Indirect

Domestic Investment	Billion Rupiah	Central Bank of Indonesia	Indirect

3.3 Analysis of the Model

The main purpose of the study is to assess the linkages of FDI on the economic growth in Indonesia. The time period for this paper is 1990-2008. The theoretical model that is used to investigate the interaction of FDI and The economic growth is based on the following production function.

$$Y = A\,K^{\beta_1}L^{\beta_2} \ldots\ldots 2$$

Where Y is the output, K is capital and L is labor and A is the technology or the efficiency of production. This study employs based on the endogenous growth theory as developed by Balasubramanyam, Salisu and Sapsford, 1996 and Borensztein, Gragorio and Lee 1998. This model assumes that FDI contributes to the economic growth directly through new technologies and other inputs as well as indirectly through improving human capital, infrastructure and institutions and country's level of productivity depends on FDI, trade (export and import), domestic investment. The impact of FDI on the economic growth is analyzed by using the following econometric equation.

The model used can be specified as follows:

$$Y_t = \beta_0 + \beta 1 FDI_t + \beta 2 DInvest_t + \beta 3 Exp_t + \beta 4 Labor_t + \beta_5 dum + \mu_t \ldots\ldots 3$$

Where,

Y_t	=	Gross Domestic Product per years
FDIt	=	Foreign Direct Investment per years
DInvestt	=	Domestic Investment per years
Expt	=	Export of Oil and Gas, Non Oil and Gas per years
Labort	=	Labor Force participation on thousand peoples per years
Dum2	=	Dummy variable, equal to "1" means after crisis and "0" before crisis
β1, β2, β3, β4 β5	=	Regression coefficient
μ	=	Error variable
t	=	Years

The variables GDP, FDI, DI and exports are measure as billion of rupiah, for labor measure as thousand peoples and all of variables transform to ln. The model is extended to the work Borensztein, Gragorio and Lee and included other variables to observe the interaction between FDI and trade, domestic investment and human capital. Past studies had shown a positive impact of FDI, Export, human capital and domestic investment on the economic growth. The stock of efficient human capital is required to absorb the technologies brought by FDI and it determines whether the potential spillover effect is realized. The host country requires sufficient number of human capital to utilize the technologies brought by FDI, meaning that higher the level of human capital in the host country, higher the effect of FDI in the economic growth of the host country. The study assumes a positive relationship between FDI and GDP growth rate as well as a positive interaction between FDI and human capital in accelerating the the economic growth. The issue relating to the interaction between FDI and domestic investment; it is assumed that there is positive

interaction between FDI and domestic investment because FDI has is considered as an important medium for transferring capital, technologies and host countries that encourages the domestic investment level. The interaction term estimates the combined effect of FDI and domestic investment in the economic growth and a positive coefficient for the interaction term would indicate that FDI and domestic investment reinforce (complementary) to each other.

3.4 Methodology

3.4.1 Selection Model Test

In empirical research, the model should be used tested first, whether to use a form of linear or log-linear. Gujarati, 2004 studied the choice between a linear regression models or a log–linear regression model is a perennial question in empirical analysis. There are several methods that can be used in the selection of functional form empirical models such as Box-Cox transformation method, the method developed by MacKinnon, White, and Davidson, better known by MWD test, Bara and McAleer method known as molecular tests and methods developed Zarembaka (Econometrics Laboratory Module, 2003:40).

This study will use methods developed by MacKinnon, White, and Davidson (MWD test) to choose the form of empirical model functions. For the MWD can apply this test we first make two regression models assuming:

Regression Model: Linear

$$Y_t = \beta_0 + \beta_1 FDI_t + \beta_2 DI_t + \beta_3 Export_t + \beta_4 Labor_t + \mu_t \dots\dots 4$$

Regression Model: Log-Linear

$$lnY_t = \beta_0 + \beta_1 lnFDI_t + \beta_2 lnDI_t + \beta_3 lnExport_t + \beta_4 lnLabor_t + \mu_t \dots\dots 5$$

To illustrate this test, assume the following:

H0: Linear Model: Y is a linear function of regressors, the X's.

H1: Log–Linear Model: lnY is a linear function of logs of regressors, the logs of X's.

Where, as usual, H0 and H1 denote the null and alternative hypotheses.

There are several stages of MWD test; we should involve the following steps:

Step I : Estimate the linear model and obtain the estimated Y values. Call them *Yf* (i.e, Y).

StepII : Estimate the log–linear model and obtain the estimated lnY values; call them lnf (i.e, ln Y).

Step III : Obtain Z1 = $(ln\ Yf - lnf)$.

Step IV : Regress Y on X's and Z1 obtained in Step III.

Reject H0 if the coefficient of Z1 is statistically significant by the usual t test.

Step V : Obtain Z2 = (antilog of $lnf - Yf$).

Step VI : Regress log of Y on the logs of X's and Z2.

Reject H1 if the coefficient of Z2 is statistically significant by the usual t test.

3.4.2 Stationary Test

After checking whether the model is linear or log-linear, we need to check stationary of each variable, by using Augmented Dickey Fuller (ADF) test of stationary. If the variables are not stationary at the *level* or it will be stationary at *different levels* then continue by co-integration test, it will be used to apply the OLS.

The one of requirements to meet the VAR model is observed data by using stationarity test. There are several methods to test of presence of stationarity. Augmented Dickey Fuller (ADF), Z (Phillip and Peron, 1988), stationarity KPSS (Kwiatkosksi et al, 1992), and DP (Dickey and Pantula, 1987). The root of the unit is a way to test stationary and it is developed by Augmented Dickey Fuller(ADF). In principle, the root test unit is intended to observe whether a particular coefficient of the model have estimated the value of one or not.

In this study will use the unit root test through Augmented Dickey Fuller(ADF) test for knowing whether the data use in time series has a unit root problems or not.

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-i} + \varepsilon_t \qquad \ldots\ldots (6)$$

Several model constructed in this unit root test are:

- Model with Intercept

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-1} + \varepsilon_t \qquad \ldots\ldots (7)$$

- Model with Trends and Intercept

$$\Delta Y_t = \beta_1 + \beta_{2t} + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-1} + \varepsilon_t \quad \ldots\ldots (8)$$

- Model with None (without intercept and trends)

$$\Delta Y_t = \Delta Y_t = \delta Y_{t-1} + \alpha_i \textstyle\sum_{i=1}^{m} \Delta Y_{t-1} + \varepsilon_t \quad \ldots\ldots (9)$$

Variable Y_t is observed in period t, Y_{t-1} is the value of variable Y at a previous period. β_1 is a constant, β_2 is the trend coefficient, β_i is the coefficient of lagged variables Y. m is the long length.

The data is stationary when the average, variance and covariance at each lag is to stay at the same time. Usually, time series data is need to check stationary of each variable. Most economic time series generally integrated of order 1or called $I(1)$.

If the data of each variable is not stationary in at $I(0)$, it should differentiated to reach stationary condition, and differentiated in to I(1) and I(2). Stationary condition for differentiated will satisfy if Augmented Dickey Fuller value smaller than critical value, may be for I(1) even I(2). Hypothesis for this test:

- $H_0 : \delta = 0$ (presence of unit root, not stationer)
- $H_1 : \delta \neq 0$ (no unit root, or data is stationer)

3.4.3 Cointegration Test

Implementation of this test is to know whether regression residual stationary or not. If the data is co-integrated, it means the data has long term relationship among variables. There are several test for co-integration test; they are called CDRW (Co-integration Regression Durbin Watson), DF Test (Dickey Fuller), ADF test (Augmented Dickey Fuller) and Johansen Test. However, in this research we use Augmented Dickey Fuller method for co-integration test.

If there is a linear combination of non stationary variables integrated at the same time lag, then this condition is called cointegration (Enders, 2004). If two variables X and Y of time series are not stationary, but linear combination of both generates a new variables is stationary then between X and Y is called cointegrated. Cointegration used to obtain a stabe long term equation. Method analyse cointegration is Augmented Dickey Fuller test like composed to test stationary.

$\Delta ut = \varphi\ ut\text{-}1 + et$

Critical Values (CV) are from MacKinnon (1991)

Ho: $\varphi = 0$ => no cointegration (i.e. TS is greater than CV)

Ha: $\varphi < 0$ => cointegration (i.e. TS is less than CV)

3.4.4 Statistical Testing

To determine whether the model used is good or not, there are several criteria for statistical testing of the coefficient of determination or R-Sq, F test and t test.

3.4.4.1 The coefficient of determination/ R-Square (R^2)

According to Nachrowi and Usman (2002), to measure the adequacy of regression models, can be seen from the coefficient of determination (R-Sq). The value of determination coefficient is a measure that shows the large contribution of the explanatory variables against response variables. The greater the coefficient of determination, then the model better. R-Squared is a statistical term saying how good one term is at predicting another. If R-Squared is 1.0 then given the value of one term, we can perfectly predict the value of another term. If R-Squared is 0.0 then knowing one term doesn't help us know the other term at all.

More generally, a higher value of R-Squared means that we can better predict one term from another. Or we can say R-Squared is the square of the correlation coefficient between the dependent variable and the estimate of it produced by the regressors, or equivalently defined as the ratio of regression variance to total variance.

3.4.4.2 F-test

F test used to see whether the explanatory variables together (simultaneously) gave a significant effect or no effect on the dependent variable (Nachrowi and Usman, 2002). First step we have to do is create hypothesis:

Ho = independent variable have no significant effect to the dependent variable

Ha = independent variable significantly affect to the dependent variable

$$F - test = \frac{R^2/(k-1)}{(1-R^2)/(n-k)}$$

R^2 = determination coefficient

k = independent variable

n = total sample

F-table = $\{\alpha; df_1 = (k-1); df_2 = (n-k-1\}$

If F-test > F-table, Ho is rejected and we accept Ha, it means that all of independent variables together significantly affect dependent variable.

3.4.4.3 T-test

T-test is a test that aims to find out whether or not a significant regression coefficient. T-test used to see whether the explanatory variables individually significant effect or no effect on the dependent variable (Nachrowi and Usman, 2002).

Ho: $\beta = 0$

Ha: $\beta \neq 0$

Based on data, value of β will be tested, if $\beta = 0$ it means that coefficient of dependent does not have significant effect with independent variable. If $\beta \neq 0$ it means that coefficient of dependent have significant effect with independent variable. T-test:

$$\{\text{T-test}\} = \frac{\widehat{\beta}_j}{SE(\widehat{\beta}_j)}$$

$$\{\text{T-table}\} = \{\alpha; df = (n-k)\}$$

If t-test > t-table it means Ho rejected, it means $\beta \neq 0$ or β is statistically significant.

3.5 Classical Assumption Test

According to Santoso (1999), in making a multiple regression equation testing the assumptions needed to see whether the regression model that was created could be used. Regression model obtained from ordinary least squares method is the OLS regression model that produces linear unbiased estimator of the best (best linear unbiased estimator / BLUE) this condition occurs when filled several assumptions, called assumption-free classics including multicollinearity, heterocedastity, and autocorrelation.

3.5.1 Autocorrelation

Autocorrelation test is used to determine whether there is any deviation classical autocorrelation assumption, namely the correlation between residuals in

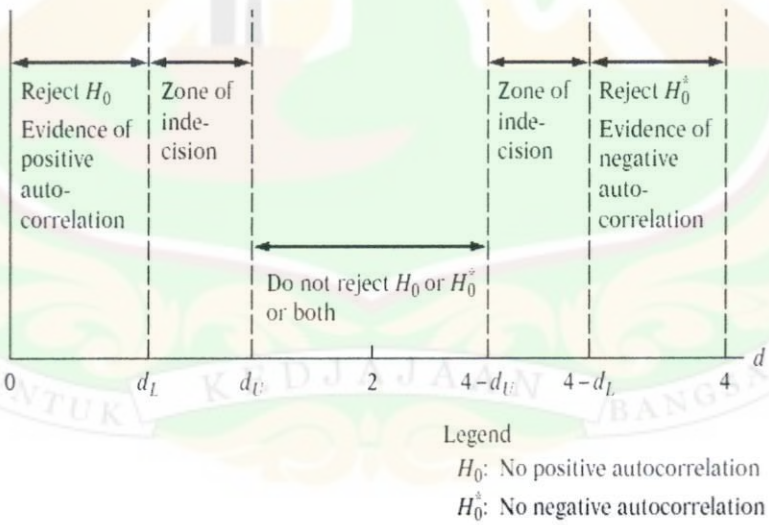
one observation with another observation on the regression model. Prerequisite that should be fulfilled is the absence of autocorrelation in the regression model. Testing method that often used is by Durbin-Watson test (DW test) with the following conditions:

a) If d is smaller than dL or greater than (4-dl) then the null hypothesis is rejected, which means there is autocorrelation.

b) If d lies between dU and (4-dU), the null hypothesis is accepted, which means there is no autocorrelation.

c) If d lies between dL and dU or in between (4-dU) and (4-dL), it does not produce definitive conclusions.

Figure 3.1
Durbin Watson *d* Stat



Value of dU and dL can be obtained from Table Durbin Watson statistics which depends on the number of observations and many variables that explain. Durbin Watson test formula as follows: (Alhusin, 2003):

$$d = \frac{\Sigma(e_n - e_{n-1})^2}{\Sigma e_x^2}$$

Description:
d = Durbin-Watson value
e = residual

3.5.2 Heteroscedastisity Test

Heterocedastity is a state where the residual variance from one observation to another observation occurred inequality (various). The occurrence of this phenomenon as a result of the inequality data and too varied data values examined. Heterocedastity will often encounter in cross section data. Time series data rarely contain elements heterocedastity, because in the residual time series data is expected to relate to each other between one observation with other observations (autocorrelation). Methods for detecting the presence or absence heterocedastity problem can be done informally or formally. We can use White's method without cross term (white heterocedasticity no cross term) to test the heteroscedasticity problem.

If the probability value of Chi-Squares on White's test results without cross terms greater α = 5%, it can be said that the model equation is not affected regression heterocedastity. There are several testing methods that can be used such as the Park Test, Test Glesjer, Seeing Patterns Regression Graphics, and Spearman Correlation Coefficient Test.

3.5.3 Multicolinearity

Double multikolinearitas created by *Ragner Frish.* It means there is a perfect linear relationship among independent variables in regression model.

Multikolinearitas happen in regression model because of :

a. Error theory in regression function formation;
b. Total observations that will be analyse in regression model are too small.

There are several method to examine the multikolinearitas :

- Using Variance Inflation Factor (VIF), if the value of VIF < 10, so there is no problem with multikolinearitas.
- Compare the value of individual coefficient determination (r^2) with (R^2)
- Through eigenvalue and condition index.

Multicollinearity has the meaning of a perfect linear relationship or a less than perfect linear relationship between independent variables in multiple regressions. To detect whether there is or not multicollinearity in a regression model, one method used is to look at the value of correlation coefficient (r) between independent variables. If the value of the correlation coefficient between each independent variable is less than 0.7 then the model can be declared free of the classical assumption of multicollinearity. If more than 0.7 we assume it has a very strong correlation between independent variables causing multicollinearity.

CHAPTER IV

AN OVERVIEW OF INDONESIAN ECONOMY

4.1 An Overview of The economic growth in Indonesia

The main indicator for economic development in one country is an the economic growth. The economic growth determines whether one country is scarce or wealth. In this research, to measure the economic growth annually, we use gross domestic product. Dolan et al. (1991) examined the economic growth is most frequently expressed in terms of increase in Gross Domestic Product (GDP), a measure of the economy's total output of goods and services.

In late 1970 to 1990, Suharto implements some policies in *new orde* to stabilize currency, eliminate inflation rate, reschedule foreign debt, and attract foreign investment. In 1970s crude oil price increases in international market led to soaring export value, and trigger the economic growth rate of 7%.

At the time Indonesia oriented to export oil and gas commodities, while crude oil boom, it brought the economic growth for Indonesia. Because many countries import more oil and gas from other countries to cover their supply. Most Asian countries were satisfied with this condition, their the economic growth increase around 8%, this moment called *Asian Miracle*.

Based on *Financial Economic Statistic* from Bank of Indonesia Indonesian, the economic growth increase from 1990 to the end of 1997, with the value of gross domestic product around 942.929,45 billion of rupiah to 1.506.602.70 billion of

rupiah. In 1995, Indonesia reached the highest the economic growth in late past 10 year, for 8.2%. At the time, consumption and investment plays important role to increase the economic growth. But in the mid of 1997 until 1998, gross domestic product slumped to 1.308.835,10 billion of rupiah with the economic growth in 1998 is -13%. Indonesia hit by economic recession. The economic growth fall down significantly as a result of crisis, where rupiah depreciation against dollar at the time was increase from 4.650 rupiah for 1 US in 1997 become 8.025 rupiah for 1 US$ in 1998.

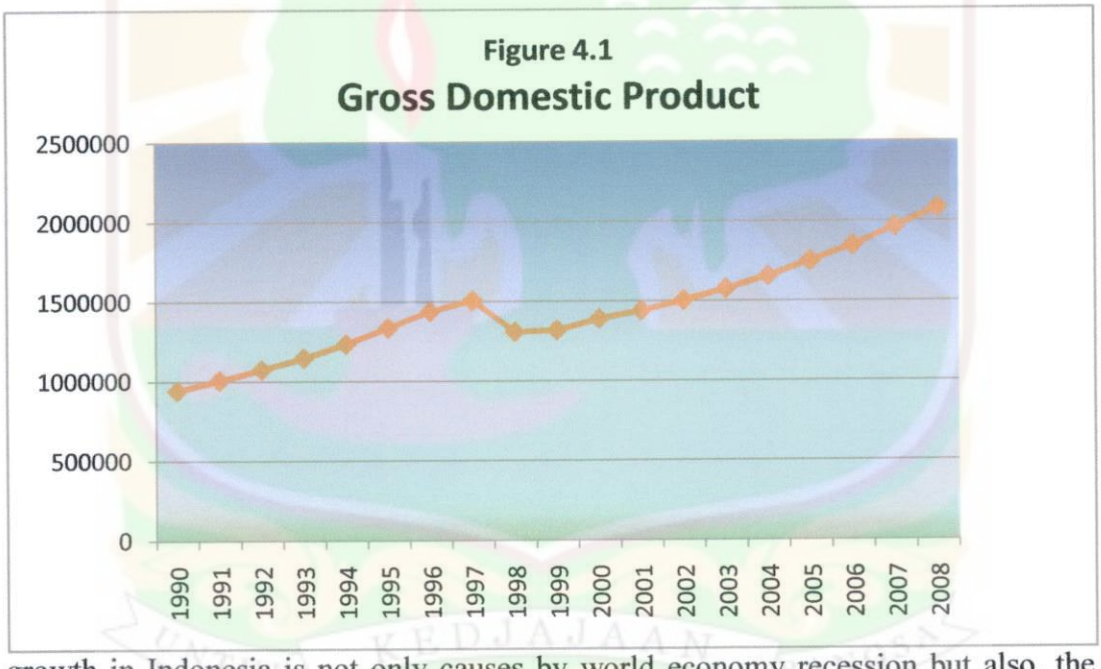
A drop in the economic growth is inseparable from the performance of the latest efforts of the private sector. This is due to the difficulty of obtaining raw materials imports as well as the burden of debt of countries that increasingly swelled in line with the weakening of the rupiah and high interest rates of the bank (Bank Indonesia 1999). Besides that, reducing on consumption and investment sharply also affect to the economic growth. Suharto tried to recovery economic situation at the time through REPELITA IV. In the following years, Indonesia need quite longer time for economic recovery rather than other Asian countries.

Slowly but sure, in 1999 gross domestic product increase 1.319.189,64 billion of rupiah. Although in the beginning of 2000 to 2008, the economic growth still increase in bad political condition, sluggish investment climate, highest level of crime and terrorism. It is prove that in 2000 the value of gross domestic product is

around 1.389.769,90 billion of rupiah increase to 2.082.316,90 billion of rupiah in 2008.

Economic recovery in Indonesia after the impact of the crisis is continuing to improve in 1999, up to 2000, the economic growth continued to increase up to 5.3% higher than Bank Indonesia expected in the early years of around 3%. Export and investment plays a role in the ongoing economic recovery in the year 2000 (Bapenas,2001). Economic performance in 2001 indicates low progression. The economic growth is around 3.64% less than year of 2000. The slow the economic growth in Indonesia is not only causes by world economy recession but also, the high risk and uncertainty.

Figure 4.1



Driven by macroeconomic instability, the economic growth showed an increase in 2002. Gross domestic product based on constant 2002 is around 4.5%

higher than previous year for 3.6%, with value of gross domestic product is 1.505.216 billion of rupiah. It is support by enhance on non oil and gas export commodities, improving on investment activities, improvement of income level, and competitive exchange rates. In subsequent years, indicates a sustainable enhancing on the economic growth. Indirectly, the Indonesian economy was also affected by the tragedy of the Bali bombing in late 2002 but the economic growth in 2003 did not show a decline.

In 2003, the economic growth improves for 1.577.171 billion of rupiah. But the economic growth is not accompanied by absorption of labor; as a result number of unemployed had increased. Increasing on the economic growth as a result of increasing on value of export for non oil and gas commodities, it is impact of increasing on prices for commodities non oil and gas in international market. The changing on economic structure affect to the economic growth, where Indonesia usually depends on agricultural sector and mining replace by manufacturing sector.

Although, Indonesia economy still on recovery from crisis, as well as the obligation of foreign debt repayment are still large to meet strong economic development, but fortunately it's followed by the economic growth in 2004 for 4.78% large than previous year. The value of gross domestic product at the time is 1.656.516 billion of rupiah. The economic growth in 2004 was supported by rising on public trust toward presidential election. Indonesia achieved stronger the economic growth in 2005 around 5.69% higher than last year. This effort reached

through vigorous expansion in consumption and investment, while import activities declined.

The Indonesian people entered the year 2006 with great un-expectation when the economy was rocked by soaring oil prices in the world market and increases in oil fuel (BBM) prices on the domestic market. Increasing of crude oil price in international market around 100 US$/barrel. The government's decision to cut of subsidized BBM. As a result is slump notably in the manufacturing sector in 2006 which mostly rely on oil fuel for production process. It's stimulating on commodities prices and indicates higher inflation. Like domino effect, the economic growth in 2006 decreases for 5.5% less than previous year for 5.6% as a result of booming of international oil prices. Different with the nominal value of gross domestic product improve from 1.750.815 billion of rupiah in 2005 to 1.847.292 billion of rupiah in 2006.

In August-Sept. 2007 the world's economy was jolted by the U.S. sub-prime mortgage crisis causing a loss of billions of U.S. dollars to number financial agencies in a number of countries in the world. Fortunately, Indonesia fared better, economic performance in Indonesia relatives good, drive by rising on value of foreign direct investment around 40.145.80 billion of rupiah or around 1.57% and improving on export performance for 18% large than last year. Three main sectors contributed to gross domestic product for past 3 years were manufacturing, trade and agriculture.

4.2 Foreign Direct Investment Inflows in Indonesia

FDI entered from wealth country to scarcity country which has a lot of resource to manage or from developed country to developing country. Recently, there are number of companies operates in other countries, motivated by expand production, close to potential markets and resources supply for production. Generally, developing country takes advantages such as capital accumulation which able transform to development purpose, reduce number of unemployment, although some foreign companies thought host country with low salary of employment is a prospect to gain, in fact, it is direct ways to increasing income per capita, open a link to expand products to international market and implementation of technology. Right now, Indonesia is in rank 9 as an interesting place to invest in 2009-2011, followed by Canada, Vietnam, Mexico, Poland, and France. China is in top position of investment destination to invest (World Investment Prospect, UNCTAD).

Kobrin (1977) studied that FDI can and does serve as a vehicle for the transfer of needed resources such as technology, managerial skills, marketing knowledge, export outlets and capital from industrialized to developing countries.

According to Gunardi (1997) there are two ways to implement foreign direct investment. First, subsidiary company which occurred through build new branch or purchase stock more than 50 %. Second, operate branch. Foreign company branch basically is divisions which build in separated geographical.

UNCTAD states there are several supported factors of FDI flow to Indonesia,

1. Market size around 20%
2. Local Market Capacity 16 %
3. Access to Natural resource 15%
4. Cheaper labor cost 13%
5. Regional or international market access 10%
6. Presence of supplier and partners 10%
7. Availability of skilled labor 7%
8. Competitor follow 5%
9. Stable and business friendly environment 3%

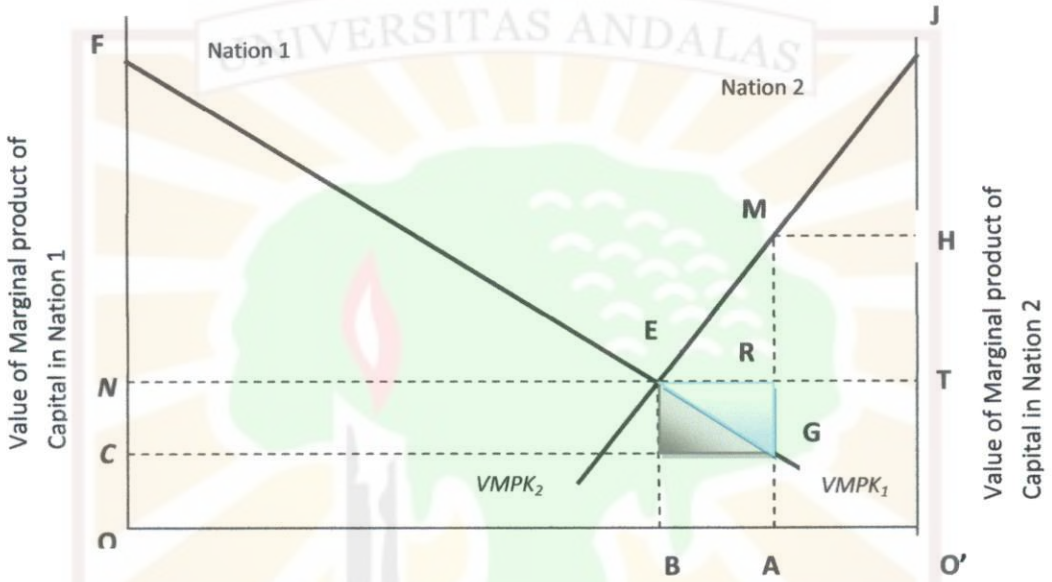
Source: Bank Indonesia

The benefits of foreign direct investment for domestic investor and host country;

1. FDI will increase capital accumulation and reserve in Indonesia
2. To pave the way for technology transfer
3. Introduce innovation products, transferring knowledge, transfer unskilled labor to skill labor, and managerial skill. It's close to creation new job field.
4. Encourage domestic investor to explore natural resources, since FDI more productive than domestic investment.
5. The provision of infrastructure which increasing the profitability of domestic investment

6. New demand for local inputs, that MNE's become agent to expand local product and bring it to global market.

Figure 4.2
The Effect on the Investing and Host Countries



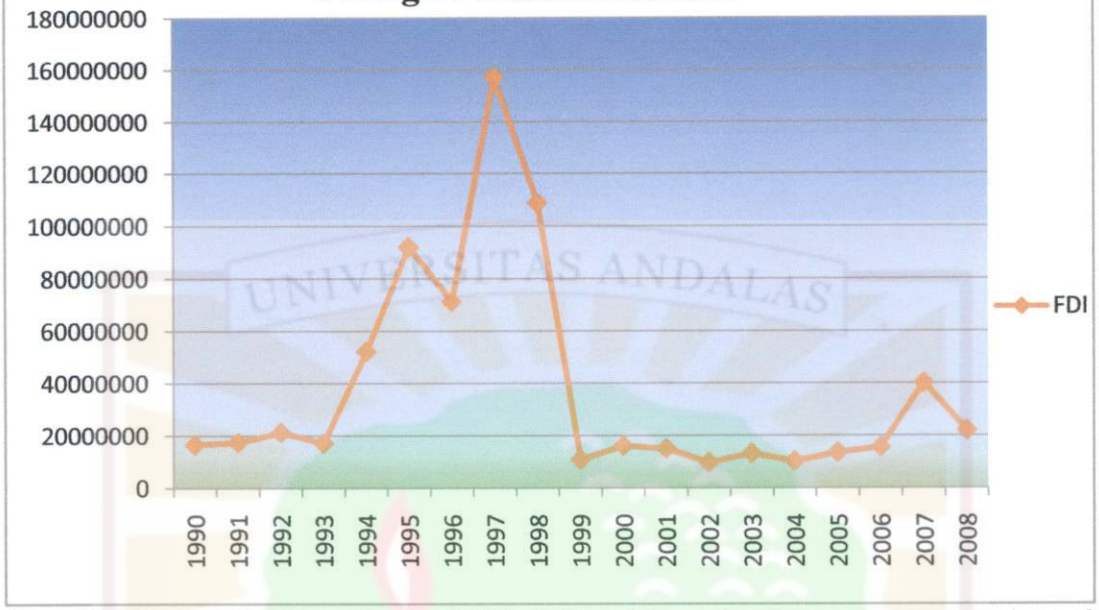
Sources: International Economic books

This figure explains about effects on the investing and also to the host countries. We examine there are two Nations (Nation1 and Nation2) with a total combined capital stock, OA belongs to Nation 1 and O'A belongs to Nation 2. The $VMPK_1$ and $VMPK_2$ curves give the value of the marginal product of capital for Nation 1 and Nation 2, respectively for various levels of investment. Nation 1 invest its entire capital stock OA domestically at a yield of OC. The total product is thus OFGA, of which OCGA goes to owners of capital in Nation 1 and remainder of CFG goes to other cooperating factors, such as labor and land. Similarly, in Nation

2 its entire stock O'A domestically at a yield of O'H. Total product is O'JMA, of which O'HMA goes to owners of capital in Nation 2 and the remainder of HJM goes to other cooperating factors. While free international capital movement are allowed. The return on capital is higher in Nation 2 (O'H) than in Nation 1 (OC), AB of capital flows from Nation 1 to Nation 2 (O'H) so as to equalize at BE (= ON= O'T) the rate of return on capital in the two nations. Total domestic product in Nation 1 is now OFEB, to which must added ABER as the total return on foreign investment, giving a total national income of OFERA. Through free international capital flows, the total returns on capital in Nation 1 increases to ONRA, while the total return on other cooperating factors decrease to NFE. This increases world output by EGM (the shaded area), of which EGR accrues to Nation 1 and ERM to Nation 2. Increase in total domestic product of ABEM in Nation 2, ABER goes to foreign investors, leaving ERM as the net gain in the domestic income in Nation 2.

Foreign direct investment in Indonesia is fluctuating year by year; it is show from 1990 to 2008. In 1990 to 1992, the foreign direct investment inflow to Indonesia increase around from 8.750 to 10.323 million of US dollar but the number of project approvals neither, the number of project approvals in 1990 is 432 less than 1992 which is around 305 projects. In 1993, FDI inflows decrease to 8.144 million of US dollar, although number of project approvals increase 329. Then, from 1994 to 1995, FDI inflows increase significantly from 23.724 to 39.914

Figure 4.3
Foreign Direct Investment



from 23.724 to 39.914 million of US dollar, follow by increasing in number of project approvals from 449 to 799 projects.

In 1996, FDI inflow decrease to 29.931 million of US dollar, with number of project approvals increase from last year becomes 959 projects. From 1997 to 1998, FDI inflows fluctuate from 33.832 million of US dollar which is decrease 200% than next year to 13.563 million of US dollar, different with FDI inflow the number of project approvals is increase from 790 to 1035 projects, this is occurred by economic crisis hit Asian countries at the time, Indonesia has large number of debt and instability of political condition became worse. In 1999, foreign investment tried to recover after crisis, government tried to build investors trust to invest. The value of foreign direct investment at the time is 10.890 million of US dollar. Next year, Indonesia is able investor trust since the increasing on value of foreign direct

investment for 16.075 million of US dollar with number of project 1524 more than last year around 1025 projects.

In the other hand, foreign direct investment based on planning approvals of economic sector by provinces, show 5 provinces have higher portion as recipient of foreign direct investment from 1999-2008. Generally, they are Riau, DKI Jakarta, West Java, East Java, East Kalimantan. Actually, the most distribution of FDI oriented to Java and Sumatera Island. The foreign direct investment flows fluctuate in each province. Sumatera represent by Riau provinces receive value of foreign direct investment around 6.956 million of US$ in 1999, Riau leads the highest value of FDI than other provinces, follow by West Java around 1.498,2 million US$. In 2000, DKI Jakarta and West Java leads the value of FDI in Indonesia for 3.273,1 million US$ and 3.137,5 million US$. In 2001, Papua receive highest value of FDI for 6.095,6 million US$, then follow by West Java for 2.780,0 million US$ and Riau around 2.095,4 million US$.

For next two years is dominate by DKI Jakarta, which receive the value of FDI for 3.373.4 million US$ increase to 5.611,5 million US$. In 2004, the highest value of FDI located in Central Java for 3.371,4 million US$. DKI Jakarta and West Java for the next term leads receive highest value of FDI for 5.206,1 million US$ and 4.212,4 million US$. In 2006, West Java dominate value of FDI around 2.958,9 million US$ follow by DKI Jakarta around 2.673,8 million US$ decrease than last year. Riau receive the value of FDI from1990-2008, the highest took place in 2007

for 13.704,1 million US$, which is follow by DKI Jakarta and West Java for 6.081,9 million US$ and 4.988,5 million US$. In the next years, DKI Jakarta receive again the highest value of FDI for 9.927,6 million US$.

The most nations that invested foreign direct investment in Indonesia from 1990-1995 are, Taiwan, Japan, Singapore, Hongkong, and England, with the totral value of investment around 1.056,5 million US$, 1.510,6 million US$, 1.460,2 million US$, 6.041,7 million US$, and 6.321,9 million US$. In 1996, Japan dominate on invest activities in Indonesia, with the value is 7.655,3 million US$. Follow by England in 1997 to 1998, as the most nation that invested in Indonesia for 5.473,6 million of US$ to 4.745,3 million US$.

3.4.4 Foreign Direct Investment and Multinational Entreprises (MNC's)

Tadaro (1999), defined FDI as investment by large multinational corporations with headquarters in the developed nations. Tadaro (1999) sees Multinational Corporation as enterprises that conduct and control productive activities in more than one country. Tadaro position clearly approximate Jhingan (2002), who view multinational corporation as a firm or enterprises w ith its headquarters in another country such as the United States, Britain, Germany, Japan etc. and also operates in other countries both developed and developing. According to Mohammad Sharif Karimi and Zulkornain Yusop, 2009 FDI is thought to open up export markets and to promote domestic investments through the technological spillovers and the resulting productivity increase.

The entry of an MNE in one sector of the host economy increases the intensity of competition in this sector, which may force some domestic companies to leave the market (Markusen and Venables 1999; Barrios et al. 2005). Since local product cannot compete to foreign product, indicates from the quality, etc. The best things of FDI related to domestic producers are, domestic producer able to supply the material to MNC's. Markusen and Venables (1999) show that strengthening the supply industries may benefit the domestic producers in the MNE's industry, through the mechanism of forward linkages, and that this positive side-effect can be stronger than the competition effect in the MNE's sector.

In addition, MNEs may facilitate access to foreign markets for the domestic producers by processing information about their home economies, or by lobbying for favorable treatment of exports from the host economy in their home countries (UNCTAD 1999, p. 240). All this may reduce the costs of entering foreign markets for domestic producers. There is a possibility that the links of foreign affiliates to MNE's intra-firm markets spread to (some of) the local suppliers.

3.5 Export Performance in Indonesia

In attempts to improve the economic growth, an export activity is one way to encourage it which implement by many countries. Export activities able to run, when Indonesia implements open economy. It is open chance for international trading and transaction between two countries or more. Indonesia as one of the developing countries have opened them to take part in international trade and world

the economic growth is very fast, and then demanded the ability to compete can participate in it.

Export will continue to occupy an important role as driving force in the domestic economy over the next decade; it is seen with many efforts to encourage export activities, whether conducted by government and employers. One of the way to boost exports is to increase the promotions to prospective buyers' by holding a number of exhibitions of Indonesian products both at home and abroad, not only in the target traditional exports countries such as United State, Western Europe and Japan, but also in nontraditional areas like the Middle East, Africa, Asia, Latin America and others.

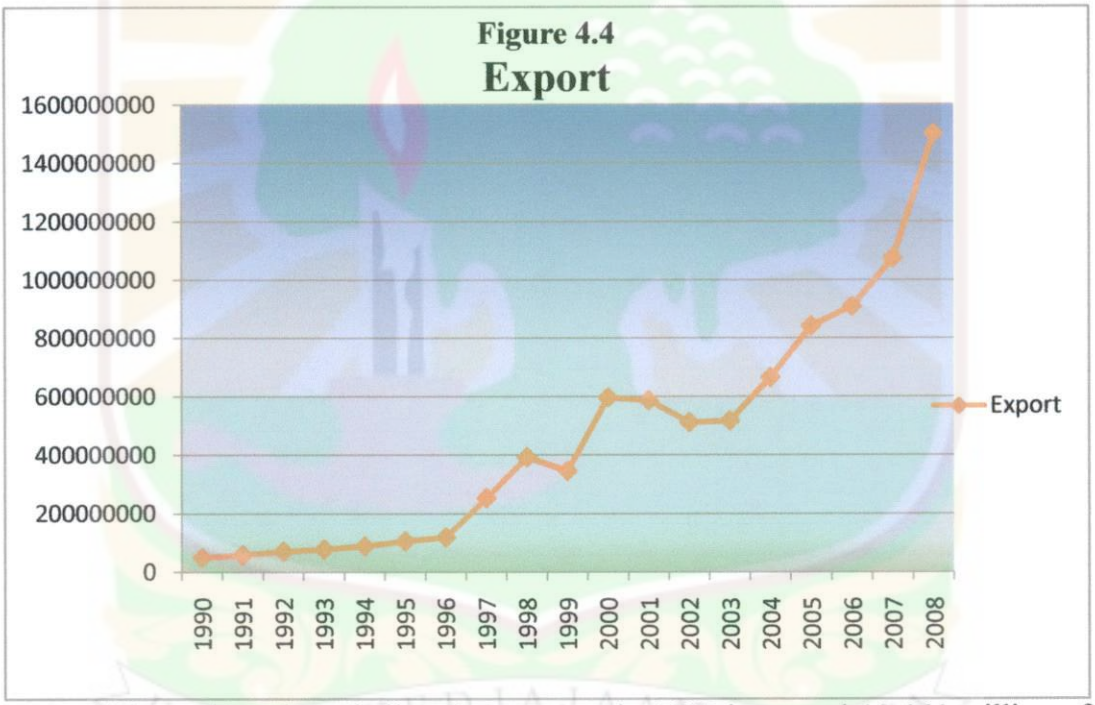
Today, Indonesia has been implement export promotion in order to accelerate national income, increase reserve and creating job field. Besides those advantages that exports offer, Indonesia able to improve capability to import goods. Because the lack of capital to produce some of goods to support production; example machine. In other words, export is one indicator that can support the economic growth.

Krueger (1978), studied that there are several reason, become background of export promotion is better than import substitution strategy for the economic growth. First, export growth may represent an increase in demand for the country's output and thus serves to increase real output. Second, an expansion in exports may promote specialization in the production of export products, which in turn may

boost the productivity level and may cause the general level of skills to rise in the export sector. This may then lead to a reallocation of resources from the (relatively) inefficient nontrade sector to the higher productive export sector. The productivity change may lead to output growth. This effect is called Verdoorn Law, P.J. Verdoorn who suggested it in 1949. The outward oriented trade policy may also give access to advanced technologies, learning by doing gains, and better management practices (e.g., Caves, 1970; Hart, 1983; Krugman, 1987; Ben-David and Loewy, 1996; Lucas, 1988; Rivera-Batiz and Romer, 1993; Romer, 1990) which may result in further efficiency gains. Third, an increase in exports may loosen a foreign exchange constraint (see, for instance, McKinnon, 1964; Chenery and Strout, 1966; Esfahani, 1991) which makes it easier to import inputs to meet domestic demand and so allow for output expansion. Outward orientation makes it possible to use external capital for development and so not suffering from a debt servicing problem and, it is argued, export promotion may eliminate controls that result in an overvaluation of the domestic currency.

Here, writer uses export both oil and gas and non oil and gas to show the effectiveness of export acceleration on the economic growth. Export growth fluctuating year by year. It was show export of oil and gas decrease from 1990 to the end of 1994, which value of export oil and gas in 1990, 11.071 million of US$ to 9.693 million of US$ in 1994, with highest percentage on total export for 37.38% of oil and gas export. In 1995 to 1997 export of oil and gas growth, but it was not quite longer because in 1998 to 1999 export of oil and gas decrease.

Figure 4.4



Where, the value of oil and gas export in 1995 is around 10.464 million of US$ became 11.622 million of US$ in 1997. As the impact of financial crisis in Southeast Asia, the value of export oil and gas in 1998 decrease around 7.872 million of US$ and slowly increase in 1999 for 9.792 million of US$. After

financial crisis shacked, Indonesia need quite longer time to recovery economic condition.

In the other hand, exports of non oil and gas contribute more revenue than oil and gas. Every year the value of export non oil and gas increase rapidly. From the graphic (see the table on appendix) above, the value of export non oil and gas increase from 1990 to 1997. In 1990 the value of export non oil and gas is around 14.604 million of US$ to 41.821 million of US$ in 1997. Not only export of oil and gas got impact from financial crisis, export of non oil and gas also influenced by it. The value of export non oil and gas is decrease from 40.975 million of US$ in 1998 to 38.873 million of US$ in 1999. The highest percentage on total export for non oil and gas occurred in 1998 was around 83.88%.

In 2000, export of non oil and gas increase around 47.757 million of US$. In the next period, exports of non oil and gas decrease become 43.684 million of US$. Then, from 2002 to 2008, export of non oil and gas increase significantly. The value of export non oil and gas in 2002 is around 45.046 million of US$ to 107.894 million of US$ in 2008. Manufacturing sector is important sector for export of non oil and gas. In summary, export growth in Indonesia as long 1990-2008 changing orientation, showed by shift in the oil and gas export to non-oil export.

Indonesia exports represent by five provinces which receive highest value of export based on goods and services. The five highest provinces receive of export good and service revenue divide into 3 islands. Sumatera Island, conduct by

province of Riau recipient export of goods and services revenue. The highest value export of goods and service that Riau receive is 80.055,122 million of rupiah in 2001. In Java Island, there are three provinces lead export of goods and services, such as DKI Jakarta.

Export of goods and services in this province always improve year by year. It's receive the highest value export of goods and services for 239.242,603 million of rupiah in 2008, the highest value export of goods and services in East Java is around 155.957,880 million of rupiah in 2008, and follow by West Java around 147.397,624 million of rupiah in 2005, and the last island which receive highest value export of goods and service is Kalimantan Island, especially East Kalimantan around 123.914,233 million of rupiah in 2008. Slowly, Indonesia tries to shift of export orientation from primer sectors to secondary and tertiary sectors or from agriculture production to manufacturing production.

Based on export destination countries, Japan is able to absorb greater Indonesia export commodities. Other export destination countries are United States of America, some of Europe and ASEAN countries etc. As emerging country, export is important to enhance the economic growth.

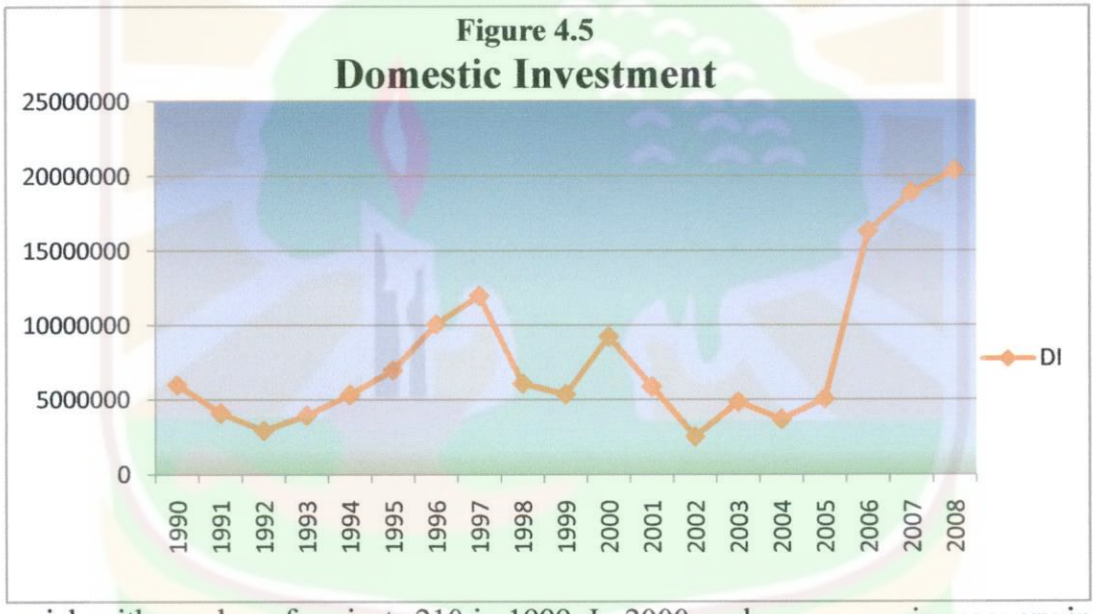
3.6 Domestic Investment Growth in Indonesia

Domestic investment is also contributes to the economic growth mobilization. It is show from the table below. From 1990 to 1992 there is no increasing on domestic investment which in 1990 is around 59.878,40 billion rupiah with total

project is 1329 to 29.341,70 billion rupiah with total project is 436. But this number is no longer decrease anymore in 1993 to 1997 the domestic investment increase from 39.450,40 billion of rupiah to 119.872,90 billion of rupiah followed by fluctuate of total projects in 1993 for 548 projects and 1997 for 718 projects.

Since Indonesia attacked by financial economic crisis by the end of 1998 until 1999, amount of domestic investment decrease significantly became 60.749,30 billion of rupiah with number of project 324 to 53.550 billion of

Figure 4.5



rupiah with number of projects 210 in 1999. In 2000, as long economic recovery in Indonesia followed by increasing of domestic investment for 92.327,70 billion of rupiah with number of project around 355. Indonesia economic recovery has done yet, in the next two year domestic investment decrease for 58.673,90 billion of rupiah to 25.262,30 billion of rupiah follow by decreasing total number of project from 249 to 184 projects.

Domestic investment fluctuate in the next two year, in 2003 domestic investment increase for 48.484,40 billion of rupiah with total project 181 less than a year before, then in 2004 domestic investment decrease became 36.747,60 billion of rupiah with total project 178. In the end of 2005 to 2008 domestic investment increase significantly, from 50.577,40 billion of rupiah to 203.634,10 billion of rupiah followed by increasing number of projects.

Through analysis of domestic investment planning approvals by provinces offer other view. Here, we can see not all of province contributes higher regional income for the economic growth, because lack of distribution of income or less national income of each province. Many things influence of domestic investment become less in each province, for example: fear of risk to invest, lack of capital, lack of human resource, lack of capabilities on implementation of technology and etc.

There are 5 highest provinces which has domestic investment. It is dividing into 4 islands. In summary, as long 2000 – 2008, the highest domestic investment in Sumatera represent by Riau Province for 33.814,30 billion of rupiah in 2000, but it is fluctuate year by year. In Java, it is dominate by West Java with the highest of domestic investment for 25.602,70 billion of rupiah in 2007. Different with other provinces, East Kalimantan has highest domestic investment for 53.796,3 billion of rupiah in 2006; although the rest year of the level domestic investment is fluctuate.

Last, South Sulawesi also contributes the highest domestic investment for 29.881,00 billion of rupiah in 2000.

3.7 Labor Force Development in Indonesia

Labor is one of indicators to observe economic development, based on United Nations Data sources, in every year in this research we can see increasing on labor force in Indonesia. Noorbahksh and Ali (2001) studied the importance of human capital as a resource that can attract FDI into the host countries, after all FDI will boost the economic growth. The presence of foreign direct investment associated to new job field for host country.

Although in other previous study found that foreign firm tends to choose a country which has strong economy, and good human capital In fact, in Indonesia now days there is a huge number of foreign firms that hire local people for production process.

Human capital stock in the host country is a prerequisite for production relocation across borders. An increase in investment productivity can be achieved only with sufficiently high levels of human capital in the recipient economy.

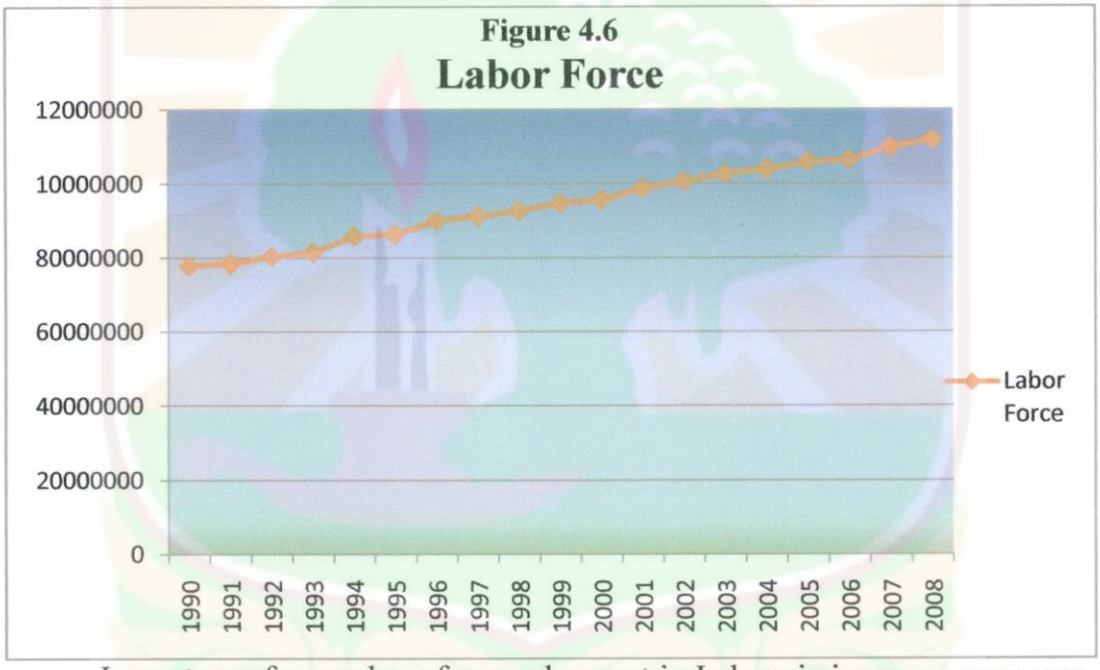
The development of labor force in Indonesia influenced by some factors (Yogaswara, 2008):

- The level of incoming migration for labor force from one region to other region

- The level of outgoing migration for labor force from one region to other region
- The level of labor force participation both males and females.
- Amount of youth fresh graduate and entering labor force.

From the graph below we can describe that since 1990 to 2008 labor force always increase. In 1990, total number of labor force in thousand peoples around 77802000 peoples to 111948000 peoples in 2008.

Figure 4.6



In contrary, for number of unemployment in Indonesia increase every year, for instance in 1990 for 1.952.000 peoples to 1999 for around 6.030.320 peoples. The early of 2000 Indonesia remarkable by decreasing of unemployment for 5.813.230 peoples less than year, at the time impact of export and investment become important key role on encourage growth. The next year until 2008, the number of unemployment increase rapidly.

In the other side, based on unemployment rate by provinces, we can conclude that unemployment level still higher. It is showing from 2000 to 2008, Jakarta has dominated highest level of unemployment around 9.55% in 2000 to 14.73% in 2005, and decrease in 2006 for 11.4%. Follow by West Java, for the next two year from 2000 to 2002 the rates of unemployment increase; 6.95% to 13.19%. The highest rate of unemployment rate during 2000 to 2008 in West Java is 14.73% in 2005.

CHAPTER V

EMPIRICAL RESULT AND ITS ANALYSIS

5.1 Method

This study aims to examine kind of factors which dominant might affect the economic growth in Indonesia. Data that used in this research is secondary data. More specific, writer used time series data. It takes from 1990-2008. The data contains by; the economic growth data by using gross domestic product as measurement, since this data is an the economic growth indicators. For investment data, writer use foreign direct investment planning approval by economic sector and domestic direct investment planning approvals by economic sector. For export data is taken from total export of non oil and gas and export of oil and gas. Last, the data of labor, which is taken from labor force participation on thousand peoples.

Writer use Microsoft Excel and Eviews 6 to processed and estimate the data, and see any indications of each variable have connection each others.

5.2 Empirical Results

5.2.1 MWD Test

In empirical study, to better we do selection model test usually called MWD test. The aim is to determine whether the model is linear or model log-linear before apply. From table below will examine the best form model to use.

Table 5.1
MWD Test for Linear

Dependent Variable: GDP
Method: Least Squares
Date: 04/22/11 Time: 15:59
Sample: 1990 2008
Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	-0.005162	0.002798	-1.845247	0.0879
DI	0.017595	0.004328	4.065505	0.0013
EXPORT	7.32E-05	0.000109	0.670800	0.5141
LABOR	34.08887	6.066966	5.618767	0.0001
Z1	-1242435.	206222.4	0.024733	0.6387
C	-1664605.	490091.1	-3.396521	0.0048

Data processed by Eviews 6, see Appendix

From the MWD test result above show the value of Z1 is 0.638 is not significant at level 5%. Then we continue to MWD test for log-linear.

Tabel 5.2
MWD test for Log-Linear

Dependent Variable: LN_GDP
Method: Least Squares
Date: 04/22/11 Time: 15:59
Sample: 1990 2008
Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_FDI	0.039435	0.018350	2.149010	0.0510
LN_DI	0.034030	0.026552	1.281626	0.2224
LN_EXPORT	-0.150161	0.066853	-2.246130	0.0427
LN_LABOR	3.196610	0.684250	4.671696	0.0004
Z2	-2.14E-07	2.32E-07	1.921667	0.0235
C	-42.80094	11.25226	-3.803765	0.0022

The value of Z2 for log linear model shows 0.023 which is significant with level 5%. Based on MWD test above, we can summarize the value of Z2 in log-linear model is significant, so we can apply the log-linear model.

5.2.2 Augmented Dickey Fuller

Table 5.3
Unit Root Test Result at Level and First Difference

Variables	Intercept		Trends & Intercept		None	
	t-stat	Prob.	t-stat	Prob.	t-stat	Prob.
ADF test for unit root test on the level series						
ln_gdp	-0.71	0.81	-2.3	0.41	3.79	0.99
ln_fdi	-2.29	0.18	-2.22	0.44	0.32	0.76
ln_di	-2.82	0.07	-2.95	0.17	0.51	0.81
ln_export	0.31	0.97	-1.08	0.9	4.24	0.99
ln_labor	-1.41	0.54	-1.35	0.83	6.26	1.00
ADF test for unit root test on the first difference series						
ln_gdp	-3.00	0.05	-2.88	0.19	-2.09	0.03
ln_fdi	-4.36	0.00*	-4.18	0.02*	-4.44	0.00*
ln_di	-3.94	0.00*	-3.87	0.03*	-3.94	0.00*
ln_export	-3.51	0.02*	-3.52	0.06	-2.09	0.03*
ln_labor	-7.32	0.00*	-7.56	0.00*	-0.19	0.59

Processed by Eview6 (see Appendix)
The sign (*) indicates stationary variable for whole variables are accepted by I(1)

From the table above, Augmented Dickey Fuller test statistic for unit root test with critical value 1%, 5%, 10%. For all in one unit root test none can satisfy Mc.Kinnon critical value to reach stationary condition variables because critical value has smaller value in comparing with t-statistic Mc. Kinnon for all variables and probability values are greater than 0.05.

The table represent that the probability value (with sign of star above) means is smaller than 0.05. So, stationary variables are accepted by first differentiated. In the table 5.1 the null hypothesis of the presence of unit root is accepted in I(1) at all for level of significant 5%. The result showed, the fluctuation of data obtained and

has a unit root at the level (1). In addition, all of variables in a model have a relationship.

5.2.3 Co-integration Test

After estimation by using ADF test, and got all variables satisfied to stationarity at difference at first difference, next continue to co-integration test. Co-integration test is a form of testing in dynamic model that aims to explore the possibilities of long term relationship among the observed variables. Observed variables co-integrated if the residual of regression holds in stationary condition. From the result of unit root test carried out, all variables have the same degree of integration (first differentiated or I(1)).

Table 5.4
Cointegration Test

Null Hypothesis: D(RESID01) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.916860	0.0013
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

Data is processed by using eviews 6

From the table 5.2 represent, by using ADF test statistic shows Mc. Kinnon critical values have smaller than t-test. All of variables co-integrated within the model. It is indicates, those variables have a long run relationship or in short term those variables adjust to each other to achieve long term.

The regression results can be simplified as follow:

Ln Y = 5.28 + 0.06 ln*FDI + 0.02 ln*DI + 0.34*ln EXPORT + 0.52* ln LABOR –

T-Test (2.926) (3.352) (-1.600) (4.211) (1.928)

0.01*dum2

(0.664)

Adj-R^2 = 0.97

F-test = 159.82

Durbin Watson Stat = 1.89

From the regression equation above, we can conclude that; while all independent variables are equal to 0 (zero), so the level of the economic growth which represent by level of GDP is (5.28) %. Based on calculation that was proceed by E-views 6, got the value of determinant coefficient adjusted (R^2) equal to 0.9778. It means, around 97% of the economic growth influenced by foreign direct investment, domestic investment, export and labor. The rest 3 % is determined by other factor.

Statistical test is used to see any influence of independent variables toward dependent variable. After estimation, the value of F-statistic for 159.82 while,

F-table:

$\{\alpha; df_1 = (k-1); df_2 = (n-k-1\}$

$\{0.05; df_1 = (4-1); df_2 = (19-4-1\}$

$(0.05, 3, 13) = 3.41$

F-stat > F-table , 159.82 > 3.41, it means foreign direct investment, domestic investment, export and labor significantly influence on the economic growth.

Based on equation above, the value of regression coefficient for foreign direct investment (FDI) is around 0.06, assumed increasing for 1%. While other independent variables such as; domestic investment (DI), export and labor are constant, so the economic growth will increase for 0.06%.

The value of regression coefficient for variable export is 0.34 assumed increasing for 1% while other independent variables are constant. The economic growth will decrease for 0.34%.

Different with other independent the value of regression coefficient for domestic investment (DI) is 0.02, and assumed increasing for 1%. While other independent variables are constant, it means the economic growth will increase for only 0.02%.

Last, the value of regression coefficient for variable labor is 0.52, its assumed increase for 1%, while other independent variables are constant. The economic growth will improve to 0.52%.

To investigate influence of independent variables to dependent variable, we use T-test. Where the estimation results for this research show the value of T-test for FDI is 3.352 while T-table 2.131. Here, we got T-test > T-table, so foreign direct investment is significant influence gross domestic product. A same thing with the value of T-test for export is 4.211 which greater than T-table 2.131; it means export is significant encourage gross domestic product. Different with those variables above, T-test for labor is around 1.928, less than T-table for 2.131. So, labor is

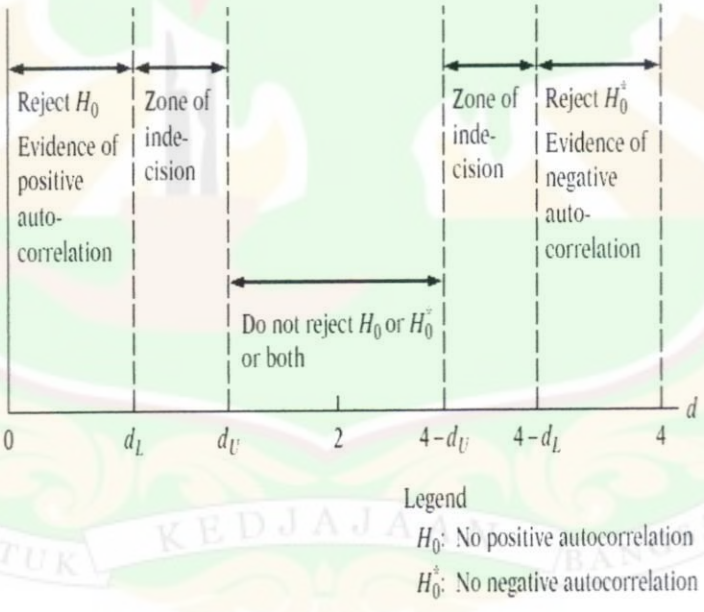
insignificant to accelerate the economic growth. Then, the value of T-test for DI show -1.600 which is less than T-table 2.1.31, we conclude that domestic investment also insignificant influence gross domestic product.

5.3 Classical Assumption Test

5.3.1 Autocorrelation test

Autocorrelation means that there is correlation between one intercept and the others. In this case, to know any indication of autocorrelation problem, able to use Durbin Watson tests. Estimation result show, the value of D-W statistic is 2.409212.

Figure 5.1
Durbin Watson *d* Stat



based on D-W *d* Stat figure above, from analysis result of D-W for 1.891, it is located on dU ≤ d < 4-dU or between 1.54 (dU) of lower border and 2.46 (4-dU) of upper border. In other words, the value analysis of D-W is no positive or negative autocorrelation.

There is another way to find indication of autocorrelation within a model, called *Breusch-Godfrey Method* or *Lagran Multiplier Test*. Through this method, we can have a look to the value of Chi-Squares probability. If the value is greater than 5%, it means there is no indication of autocorrelation. Here, the value of Chi-square test is 0.906, which absolutely greater than 5%.

5.3.2 Multicolinearity Test

To detect multicolinearity within the regression model, we can observe from coefficient correlation (r) between independent variables. If the value of coefficient correlation of each independent variable is less than 0.85, it means the model is free from multicolinearity. But if the value of coefficient correlation is greater than 0.85, it assumes strong correlation among independent variables or the model detects multicolinearity on it. On table 5 (see appendix), the highest correlation located on between variables labor, export and dummy korelasi, but multicolinearity result can be ignored since the value of R^2 is greater than those correlation independent value

In the research, we estimate and not found indication of multicolinearity within the model, because from the estimation result of coefficient correlation value less than 0.85. The greater values of coefficient correlation are on export and labor around 0.820.

5.3.3 Heteroscedasticity Test

In this research to detect heteroscedasticity problem on regression equation we use white heteroscedasticity without cross term method. If the value of Chi-

square is greater than 5%, indicate there is no heteroscedasticity on regression equation model. From estimation result, writer got the value of Chi-squares probability for 0.6838, which is greater than 5%. It means there is no heteroscedasticity problem on regress equation model.

5.5 Policy Implication

5.5.1 The Influence of Foreign Direct Investment toward The economic growth

We are able to investigate any influence of each independent variable on dependent variable through T-test. An estimation result show, the value of T-test from FDI is 3.352 while T-table 2.131, conclude that T-test > T-table. Regression coefficient for FDI is 0.035. It means FDI positive and significant influence on the economic growth. Based on the result, the case in Indonesia show FDI might contribute a small number to enhance the economic growth, it's not dominant factor to drive the economic growth.

This result is absolutely different with mostly previous studies which detect positive relationship between FDI and the economic growth. It might cause by lack of investor trust to invest, either it cause financial crisis in 1998, political condition, the higher degree of crime and terrorism act, legal certainty, regional autonomy and corruption. For almost 20 years, this research found FDI recipient oriented to Java Island, so for other provinces just rely on regional gross domestic product or export revenue.

There are several studies found that foreign direct investment has positive and significant on the economic growth. One of previous studies is N. Balamurali and C. Bogahawatte on "Foreign Direct Investment and The economic growth in Srilanka" state that This study examines the relationship between FDI and GDP in Sri Lanka using data from 1977-2003. The results indicated that FDI is a key determinant of Sri Lanka the economic growth after the 1977 period. Adeolu B. Ayanwale (2007) on "FDI and The economic growth, Evidence from Nigeria" found that FDI in Nigeria induces the nation's the economic growth. Although the overall effect of FDI on the whole economy may not be significant, the components of FDI positively affect the economic growth and therefore FDI needs to be encouraged.

5.5.2 The Influence of Domestic Investment on The economic growth

From the estimation result, T-test for DI is less than T-table. Where, the T-test for domestic investment is -1.600 less than T-table 2.131, it means domestic investment is insignificant. Regression coefficient for DI is -0.03, it is indicate that domestic investment show negative relationship and insignificant influence on the economic growth, the contribution of domestic investment is very small to improve the economic growth.

For Indonesia case, it is clearly that higher of domestic investment is conduct by 5 province in Indonesia, they are DKI Jakarta, West Java, East Java, Riau and East Kalimantan. An imbalance of domestic investment distribution also

affect to the economic growth. It might cause by, regional orientation for industry which is most located in java island, because the management operational, human resource and technology more develop than other provinces. The paranoid think about the higher risk of invest affect to society tended to consume rather than saving or invest, beside that it is occurred by complicated bureaucracy, corruption, which is leads to high costs of economic activity, mass exploitation of resources and stimulate capital flight.

In contrary, previous study Sumei Tang E, A. Selvanathan and S. Selvanathan (2008), investigated China's domestic investment and the economic growth has positive relationship even has greater influence on growth rather than FDI.

5.5.3 The Influence of Export on The economic growth

For variable of export, the T-test is 4.211 greater than T-table 2.131, in this research export is significant. Besides that, regression coefficient for export is 0.34. It indicates, export is positive and significant to encourage the economic growth, since the contribution of export is quite greater even than foreign direct investment. In other words, coefficient of export show 1% of increasing on export will increase the economic growth if other independent variables are constant and vice versa.

Similar with some of previous studies, which state that export variable has a positive significant relationship to the formation of the economic growth in some emerging countries. In this research, export show positive and significant to the

economic growth, it leads by increasing on export of non oil and gas commodities. Nevertheless, Indonesia faces of China's export product as competitors which is provides good quality and cheapest products. Here, producers may catch the opportunities from the demand of global market and create innovation on products which able to compete with foreign goods.

5.5.4 The Influence of Labor Force on The economic growth

In this research show, labor able to push the economic growth. Labor is other indicators to estimate the economic growth. If a labor can produce 10 products a day for company, company will be able to sell them to the market, and it will improve the economic growth indirectly. The economic growth takes place when a company gets revenue through selling the products. The estimation result indicates positive relationship between labor and the economic growth. It is shown from coefficient for labor is 0.52, while T-test is 1.928, greater than T-table 2.131. It means, labor is positive but insignificant influence the economic growth. So, increasing 0.52% of labors will increase the economic growth by assumed other independent variables are constant.

Some previous studies also explore that labor have positive relationship on the economic growth. In contrary, in this research indicates increasing on labor productivity will leads economic activities, but the portion of labor contribution on the economic growth still low. It might occur by a small number of skilled labors in Indonesia.

5.5.5 The Influence of Foreign Direct Investment, Domestic Investment, Export and Labor Force towards the Economic Growth

Writer concludes that, the influence of foreign direct investment, domestic investment, export and labor force towards the economic growth are able to run at the same time. While, foreign firm's needs to expand their production seeking resources and close to global market through do production process in abroad, indirectly the foreign firm deal with host countries for international transaction. Here, international trading activities starts both foreign firms and host countries.

When foreign firms decide to do production in host countries, it is impact to absorb more local employment. Since the highest cost of production if foreign firm decide to hire employment from abroad. The income per capita of local employment will increase as the presence of foreign firms. Then, local government will get the benefits from foreign firms productions also through increasing on national income that government receive as profit sharing.

Besides that, the presence of foreign direct investment is able to support export. Foreign firms is an important key to the global market, so when local supplier needs to expand their product to abroad, they needs foreign firms to entering the global market, it is affect to encourage of national or regional income.

CHAPTER VI

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Based on the empirical result, this research proves positive relationship between foreign direct investment, domestic investment, export and labor force towards the economic growth. Some variables have positive and significant influence the economic growth. They are foreign direct investment, and export.

This empirical result similar with previous study by Melina Dritsaki, Chaido Dritsaki and Antonius Adamopoulos (2004), they investigated that foreign direct investments can contribute to the economic growth because they tend to be more productive than the investments of local companies. Foreign direct investment in Indonesia must be improved as other financial sources for national income.

Now, Indonesia has relied on export promotion especially to non oil and gas commodities. Although in reality recently in Indonesia shows that export activities mostly located in Java, and Sumatera. Java gets bigger proportion because most of industries are took place there. On other hand, regional that have fewer industries such as Kalimantan and Papua only get smaller proportion. This case often creates gap among regional. Export actually could give positive impacts to the economic growth in Indonesia if it proved by the same proportion to each regional state or regional. The result of this research has proven by Balasubramanyam et al. (1996) they found that the influence of MNEs depends on the trade policy regime followed

by host countries; the impact of FDI flows is significantly positive in economies which pursue an "export promotion" (EP) strategy

Different with labor, it is show positive but insignificant encourage the economic growth. Similar with domestic investment indicates, positive relationship but also insignificant to accelerate the economic growth, because the contribution is small to enhance the economic growth.

In summary, for Indonesian case, the influences of domestic investment and labor force have a small portion on affecting the economic growth. The main causes on labor force aren't able to accelerate the growth, because Indonesia labor forces mostly unskilled labor, with low level of education. Then, low capabilities of local government within attract investor's impact to domestic investment inflows, besides that difficulty on build public trust, provide an easy business licensing, and spread a chance to other provinces for investment inflows affect to the lack of domestic investment.

In contrary, Sumei Tang E, A. Selvanathan and S. Selvanathan (2008), in their research foreign direct investment, domestic investment, and economic growth in China for period 1988-2003 by using vector autoregression. They found that FDI has significant effect on China's economic growth. Beside that China's domestic investment and economic growth has positively correlated. China's domestic investment has a greater impact on growth than FDI.

6.2 Recommendation

Some recommendations based on the result are:

1. Foreign direct investment indicates positive correlation to the economic growth. Since FDI has become more important the policy direction must focusing on emphasize the law of foreign investment, improve BKPM function as Investment Coordinator, build and develop proper infrastructure include in less potential regions, simplify the existing procedural and bureaucracy for foreign investor, enhance the quality of human capital, improving productivity and innovative capabilities of the economy, especially for manufacturing sector, combating corruption and suppress terrorism.
2. The role of domestic investment is also important to enhance the economic growth. Several policy to improve region domestic investment are: concentrate on developing new industries for their region growth and not solely for purpose of FDI inflow, develop small and medium enterprises, business credit loans with low interest, providing business training and managerial skill to boost local investor. Government to open more business opportunities to local investors to manage.
3. Some emerging countries rely on export performance to boost the economic growth. In fact, export bring more profit to home country through increasing reserves, expand local products selling, and pave new

job fields. So, policy must concentrate on role of export as growth engine and enhance on improving the competitiveness of exports products.

4. Labor force also indicates positive effect on the economic growth. Now days, professional manpower is becoming and increasingly important problem. So, we must focus on empower more effective workforce, educate the workforce and, broaden their knowledge, managerial skill and training, last but not least improving the competitiveness of educated labor.

Writer realizes that this research is still far from perfect. The study leaves the analysis by using vector autoregression or vector error correction model to the variables which correlated, in order to see relationship pattern from foreign direct investment, domestic investment, export, labor force on the economic growth for further research.

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APPENDIX

Table 1: Data on ln form

Years	lnGDP	lnFDI	lnDI	lnExport	lnLabor
1990	13.76	9.08	11.00	10.15	18.17
1991	13.82	9.08	10.62	10.28	18.18
1992	13.89	9.24	10.29	10.43	18.20
1993	13.95	9.01	10.58	10.51	18.22
1994	14.03	10.07	10.88	10.60	18.27
1995	14.10	10.59	11.15	10.72	18.27
1996	14.18	10.31	11.52	10.82	18.32
1997	14.23	10.43	11.69	10.90	18.33
1998	14.08	9.52	11.01	10.80	18.35
1999	14.09	9.30	10.89	10.79	18.37
2000	14.14	9.69	11.43	11.04	18.38
2001	14.18	9.62	10.98	10.94	18.41
2002	14.22	9.18	10.14	10.95	18.43
2003	14.27	9.49	10.79	11.02	18.45
2004	14.32	9.24	10.51	11.18	18.46
2005	14.38	9.52	10.83	11.36	18.48
2006	14.43	9.66	12.00	11.52	18.48
2007	14.49	10.60	12.15	11.64	18.52
2008	14.55	10.00	12.22	11.83	18.53

Table 2: Variables on rate (%)

Years	GDP	FDI	DI	Export	Labor Force
1990	6.48		2.06		57.30
1991	6.74	0.05	-0.31	0.19	57.10
1992	6.67	0.22	-0.29	0.21	57.30
1993	6.82	-0.19	0.34	0.11	56.60
1994	7.54	2.04	0.35	0.13	58.00
1995	8.22	0.77	0.31	0.19	56.60
1996	7.82	-0.23	0.44	0.13	58.30
1997	4.70	1.21	0.19	1.13	66.30
1998	-13.13	-0.31	-0.49	0.55	66.90
1999	0.79	-0.90	-0.12	-0.12	67.20
2000	5.35	0.48	0.72	0.73	67.76
2001	3.64	-0.06	-0.36	-0.02	68.60
2002	4.50	-0.35	-0.57	-0.13	67.76
2003	4.78	0.36	0.92	0.01	65.72
2004	5.03	-0.22	-0.24	0.29	67.54
2005	5.69	0.32	0.38	0.27	68.02
2006	5.51	0.15	2.22	0.08	66.16
2007	6.34	1.57	0.16	0.18	66.99
2008	6.01	-0.45	0.08	0.40	67.18

Data is processed

Table 3: Stationarity Test

Unit Root Test for Gross Domestic Product

ln_GDP at Level and Intercept
Null Hypothesis: LN_GDP has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.714060	0.8188
Test critical values:	1% level	-3.857386	
	5% level	-3.040391	
	10% level	-2.660551	

at level and Trends & Intercept
Null Hypothesis: LN_GDP has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.303619	0.4102
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

at level and None
Null Hypothesis: LN_GDP has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		3.796655	0.9997
Test critical values:	1% level	-2.699769	
	5% level	-1.961409	
	10% level	-1.606610	

at 1 difference and Intercept
Null Hypothesis: D(LN_GDP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.003063	0.0547

Test critical values:	1% level	-3.886751
	5% level	-3.052169
	10% level	-2.666593

at 1 difference and Trends & Intercept

Null Hypothesis: D(LN_GDP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.886262	0.1901
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

at 1difference and None

Null Hypothesis: D(LN_GDP) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.092061	0.0383
Test critical values:	1% level	-2.708094	
	5% level	-1.962813	
	10% level	-1.606129	

Unit Root Test for Foreign Direct Investment

At level and Intercept

Null Hypothesis: LN_FDI has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.293235	0.1843
Test critical values:	1% level	-3.857386	
	5% level	-3.040391	
	10% level	-2.660551	

at level and Trends & Intercept

Null Hypothesis: LN_FDI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.223418	0.4499
Test critical values:	1% level	-4.571559	
	5% level	-3.690814	
	10% level	-3.286909	

At level and None
Null Hypothesis: LN_FDI has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.323552	0.7680
Test critical values:	1% level	-2.699769	
	5% level	-1.961409	
	10% level	-1.606610	

at 1difference and Intercept
Null Hypothesis: D(LN_FDI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.365582	0.0039
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

at 1difference and Trend & Intercept
Null Hypothesis: D(LN_FDI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.189479	0.0215
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

at 1 difference and None
Null Hypothesis: D(LN_FDI) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.440942	0.0002
Test critical values:	1% level	-2.708094	
	5% level	-1.962813	
	10% level	-1.606129	

Unit Root Test for Domestic Investment

At level and Intercept
Null Hypothesis: LN_DI has a unit root
Exogenous: Constant
Lag Length: 3 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.826849	0.0780
Test critical values:	1% level	-3.959148	
	5% level	-3.081002	
	10% level	-2.681330	

At level and Trends & Intercept
Null Hypothesis: LN_DI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 3 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.950857	0.1759
Test critical values:	1% level	-4.728363	
	5% level	-3.759743	
	10% level	-3.324976	

At level and None
Null Hypothesis: LN_DI has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.511297	0.8162
Test critical values:	1% level	-2.699769	
	5% level	-1.961409	
	10% level	-1.606610	

at 1 difference and Intercept
Null Hypothesis: D(LN_DI) has a unit root

Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.947602	0.0089
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

at 1 difference and Trends & Intercept
Null Hypothesis: D(LN_DI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.879670	0.0373
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

at 1 difference and none
Null Hypothesis: D(LN_DI) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.941022	0.0006
Test critical values:	1% level	-2.708094	
	5% level	-1.962813	
	10% level	-1.606129	

Unit Root Test for Export

At level and Intercept
Null Hypothesis: LN_EXPORT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.314936	0.9722
Test critical values:	1% level	-3.857386	
	5% level	-3.040391	
	10% level	-2.660551	

At level and Trends & Intercept
Null Hypothesis: LN_EXPORT has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.082688	0.9038
Test critical values:	1% level	-4.571559	
	5% level	-3.690814	
	10% level	-3.286909	

At level and None
Null Hypothesis: LN_EXPORT has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		4.248370	0.9999
Test critical values:	1% level	-2.699769	
	5% level	-1.961409	
	10% level	-1.606610	

At 1 difference and Intercept
Null Hypothesis: D(LN_EXPORT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.519931	0.0205
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

At 1 difference and Trends & Intercept
Null Hypothesis: D(LN_EXPORT) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.522372	0.0689
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

At 1 difference and None
Null Hypothesis: D(LN_EXPORT) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.097909	0.0379
Test critical values:	1% level	-2.708094	
	5% level	-1.962813	
	10% level	-1.606129	

Unit Root Test for Labor

At level and Intercept
Null Hypothesis: LN_LABOR has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.417463	0.5491
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

At level and Trends & Intercept
Null Hypothesis: LN_LABOR has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.353888	0.8368
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

At level and None
Null Hypothesis: LN_LABOR has a unit root
Exogenous: None
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		6.261668	1.0000
Test critical values:	1% level	-2.708094	

	5% level	-1.962813
	10% level	-1.606129

At 1 difference and Intercept
Null Hypothesis: D(LN_LABOR) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.322013	0.0000
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

At 1 difference and Trends & Intercept
Null Hypothesis: D(LN_LABOR) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.564070	0.0001
Test critical values:	1% level	-4.616209	
	5% level	-3.710482	
	10% level	-3.297799	

At 1 difference and None
Null Hypothesis: D(LN_LABOR) has a unit root
Exogenous: None
Lag Length: 2 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.194612	0.5994
Test critical values:	1% level	-2.728252	
	5% level	-1.966270	
	10% level	-1.605026	

Data processed by Eviews 6

Table 4: ADF Co-integration Test

Null Hypothesis: D(RESID01) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.916860	0.0013
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

Table 5: Dummy Variable

Last updated: 05/04/11 - 07:29
Modified: 1990 2008 // dum2 = year=>1997

1990	0.000000
1991	0.000000
1992	0.000000
1993	0.000000
1994	0.000000
1995	0.000000
1996	0.000000
1997	1.000000
1998	1.000000
1999	0.000000
2000	0.000000
2001	0.000000
2002	0.000000
2003	0.000000
2004	0.000000
2005	0.000000
2006	0.000000
2007	0.000000
2008	0.000000

Data processed by Eviews 6

Table 6: Ordinary Least Square result

Dependent Variable: LN_GDP
Method: Least Squares
Date: 05/04/11 Time: 07:30
Sample: 1990 2008
Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_FDI	**0.069230**	0.020652	**3.352208**	0.0052
LN_DI	**0.029108**	0.024433	**-1.600585**	0.1335
LN_EXPORT	**0.348495**	0.082748	**4.211540**	0.0010
LN_LABOR	**0.528843**	0.274156	**1.928987**	0.0759
DUM2	**0.017030**	0.025617	**0.664780**	0.5178
C	5.283617	1.805266	2.926780	0.0118

R-squared	0.983992	Mean dependent var	14.16392
Adjusted R-squared	**0.977836**	S.D. dependent var	0.217699
S.E. of regression	0.032410	Akaike info criterion	-3.768583
Sum squared resid	0.013656	Schwarz criterion	-3.470339
Log likelihood	41.80153	Hannan-Quinn criter.	-3.718108
F-statistic	**159.8223**	Durbin-Watson stat	**1.891027**
Prob(F-statistic)	0.000000		

Data processed by Eview 6

Table 7: Classical Assumption Test

Heteroscedasticity Test

Heteroskedasticity Test: White

F-statistic	0.507852	Prob. F(5,13)	0.7656
Obs*R-squared	3.104778	Prob. Chi-Square(5)	**0.6838**
Scaled explained SS	0.990385	Prob. Chi-Square(5)	0.9633

Autocorrelation Test:

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.057337	Prob. F(2,11)	0.9446
Obs*R-squared	0.196029	Prob. Chi-Square(2)	**0.9066**

Data processed by using Eviews 6.

Correlation Matrix

Multicolinearity Test

	LN_FDI	LN_EXPORT	LN_DI	LN_LABOR	DUM2
LN_FDI	1.000000	0.414355	0.698602	0.275907	0.207393
LN_EXPORT	0.414355	1.000000	0.632008	0.820978	-0.055250
LN_DI	0.698602	0.632008	1.000000	0.453755	0.154806
LN_LABOR	0.275907	0.820978	0.453755	1.000000	-0.061928
DUM2	0.207393	-0.055250	0.154806	-0.061928	1.000000