THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT (FDI) IN BANTEN PROVINCE IN 2011-2015

A THESIS

Presented as Partial Fulfillment of the Requirements to Obtain the Bachelor Degree in Economics Department

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DECLARATION OF AUTHENTICITY

Hereby I declare the originality of the thesis; I have not presented someone else's work to obtain my university degree, nor I have presented someone else's words, ideas or expressions without any of the acknowledgments. All quotations are cited and listed in the bibliography of the thesis. If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, March 09th, 2018

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MOTTOS

“So verily with the hardship there is relief, verily with the hardship there is relief” (Quran, 94:5-6)

"Education is the most powerful weapon which can you use to change the world."
(Nelson Mandela)

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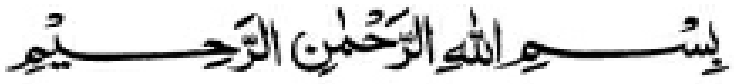

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TABLE OF CONTENTS

LEGALIZATION PAGE ii
APPROVAL PAGE iii
DECLARATION OF AUTHENTICITY iv
MOTTOS v
ACKNOWLEDGEMENT vi
TABLE OF CONTENTS x
LIST OF TABLE xii
LIST OF FIGURES xiii
LIST OF APPENDICS xiv
ABSTRACT xv
ABSTRAK xvi
CHAPTER 1 1
INTRODUCTION 1
1.1 Background 1
1.2 Problem Formulation 9
1.3 Research Objective 9
1.4 Research Contribution 9
1.5 Writing Systematics 10
CHAPTER II 12
LITERATURE REVIEW & THEORETICAL FRAMEWORK 12
2.1 Literature Review 12
2.2 Theoretical Framework 19
2.2.1 Investment 19
2.2.2 Foreign Direct Investment 22
2.2.3 The Theory of Foreign Direct Investment (FDI) 23
2.2.4 The Factors That Influence Foreign Direct Investment (FDI). 26
2.2.5 The Relationship Between Independent and Dependent Variables 32
2.2.6 Framework for Thinking 35
2.2.7 Hypothesis 36
CHAPTER III 37

RESEARCH METHOD 37
3.1 Type of Study 37
3.2 Data Collection Method 38
3.3 Research Variable 38
3.3.1 Dependent Variable 38
3.3.2 Independent Variable 39
3.4 Analysis Technique 40
3.4.1 Panel Data Method 40
3.4.2 Selection Panel Data Estimation Model 41
3.4.3 Hypothesis Testing 42
3.4.4 Model 44
BAB 1V 45
RESULT AND DISCUSSION 45
4.1 The Description of Banten Province 45
4.1.1 The Descriptive Statistics of Research Data 45
4.2 Panel Data Result 47
4.2.1 Common Effect Result 47
4.2.2 Fixed Effect Result 48
4.2.3 Random Effect Result 49
4.2.4 Chow Test and Hausman Test Result 50
4.3 Hypothesis Testing 53
4.3.1 T-test 53
4.3.2 Coefficient Determination R^2 55
4.3.3 F-test 55
4.4 Discussion 56
CHAPTER V 59
CONCLUSION AND RECOMMENDATION 59
5.1 Conclusion 59
5.2 Recommendations 60
References 61
Appendix 1 64
Appendix 2 66

LIST OF TABLE

Table 1.1 The Realization of FDI in Java Island in Periode 2011-2015 4

Table 1.2 The Realization of FDI in Several Sectors in Banten Province 6

Table 1.3 The Realization of FDI in Banten Province in Periode 2011-2015 8

Table 4.1 The Descriptive Statistics of Research Data in Banten Province 45

Table 4.2 Common Effect 47

Table 4.3 Fixed Effect..... 48

Table 4.4 Random Effect 49

Table 4.5 Chow Test 51

Table 4.6 Hausman Test..... 52

Table 4.7 Cross Effect..... 52

LIST OF FIGURES

Figure 2.1 Framework of the Research.....35

LIST OF APPENDICS

Appendix 1. Data of FDI, Economic Growth, Regional Minimum Wage and Labor Force per Regions (Three regions and four cities) in Banten Province in 2011-2015.

Appendix 2. Data Panel Test Using Eviews

ABSTRACT

This study aims to analyze the factors that determine foreign direct investment in Banten Province in the period of 2011-2015. Those factors are economic growth, regional minimum wage, and labor force. The data used in this research is secondary data from central bureau of statistics (BPS) and investment coordinating board (BKPM) of Banten province 2011-2015. The analysis used in this study is panel data analysis with fixed effect model. The sample data is the data from three regions and four cities in the province of Banten in the period of 2011-2015.The result of the analysis shows that the foreign direct investment in Banten province has been significantly influenced by economic growth and regional minimum wage. Economic growth and regional minimum wage give positive impact toward foreign direct investment. Meanwhile, labor force does not significantly affect the foreign direct investment in Banten province

Keywords: *FDI, Economic growth, Regional minimum wage, labor force.*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis faktor-faktor yang menentukan penanaman modal asing di Provinsi Banten pada periode 2011-2015. Faktor-faktor tersebut adalah pertumbuhan ekonomi, upah minimum regional, dan angkatan kerja. Data yang digunakan dalam penelitian ini adalah data sekunder dari badan pusat statistik (BPS) dan Badan Koordinasi Penanaman Modal (BKPM) Provinsi Banten 2011-2015. Analisis yang digunakan dalam penelitian ini adalah analisis data panel dengan model fixed effect. Data yang digunakan adalah data dari tiga kabupaten dan empat kota di Provinsi Banten pada periode 2011-2015. Hasil analisis menunjukkan bahwa penanaman modal asing di Provinsi Banten telah dipengaruhi secara signifikan oleh pertumbuhan ekonomi dan upah minimum regional. Pertumbuhan ekonomi dan upah minimum regional memberikan dampak positif terhadap penanaman modal asing. Sementara itu, tenaga kerja tidak berpengaruh signifikan terhadap penanaman modal asing di provinsi Banten

Kata kunci: *PMA, Pertumbuhan ekonomi, upah minimum regional, angkatan kerja.*

CHAPTER 1

INTRODUCTION

1.1 Background

Economic growth can be defined as the process of development of activities in the economy that cause increasing of goods and services which is produced in society. Economic growth is a process of changing a country's economic conditions in a sustainable way to a better state for a certain period. The economic growth which is rapidly growing continuously is the main condition for economic development. High economic growth will have a positive impact on economic development and welfare. The total number of people increasing every year, so the daily consumption needs also increasing, so it needs more revenue every year (Tambunan, 2011).

Good economic growth in a region has a good impact on economic development. The success of economic development in a region can be seen from its high economic growth. Therefore, each region sets up an elevated level of economic growth in the planning to realize economic development in its area. High sustainable economic growth is the main condition for the sustainability of economic development (Boediono, 1999). Development has the purpose to improve people's welfare and development always strives to create high regional economic growth.

As part of the implementation of national economic development, each province in Indonesia should be able to achieve high economic growth, and able to overcome the problems of development. Economic development is not only the

agenda of the central government, but also the agenda of each region in the country. Regional economic development is a process whereby local governments and communities manage the existing resources and set up a partnership pattern between local governments and the private sector to create an employment and stimulate the development of economic activities within the region (Arsyad, 2010). Therefore, the policy of economic development is conducted to achieve high economic growth by managing the potential and existing resources for each region.

According to Indah and Didit (2005) in Zaenuddin (2009) the development and economic growth in developing countries cannot be separated from the role of sources of funds from abroad. This happens because all developing countries cannot cover the needs of funds in the country. A typical problem that should be faced by developing countries is the scarcity of domestic funds (saving gaps) that are normally covered by foreign funds. Funds from abroad can be obtained from foreign debt or foreign direct investment (FDI). Conceptually, foreign direct investment is considered more profitable because it does not need the obligation of return to foreign parties as well as foreign debt. Investment is expected to drive Indonesia's economic growth. Due to the limited funds that owned by the government to drive economic growth, so the role of foreign investment or domestic investment are needed.

Investment is an important capital for a country to be able to carry out national development, therefore the government seeks sources of domestic financing and invites foreign investors to make an investment, and it can be called

as foreign direct investment. FDI means the flow of funds from a company abroad that is manifested in the form of companies in other countries (Hakim, 2002).

In the theory of economic development, it is known that the rate of economic growth and foreign investment has a positive reciprocal relationship. The higher the economic growth of a country, the greater part of the income that can be saved, then the created investment will be greater. In this case, investment is a function of economic growth. On the other hand, the greater the investment of a country, the greater the level of economic growth that can be achieved. Thus, growth is an investment function. In the context of national and regional development, investment has a vital role to promote economic growth (Yonathan, 2001).

Foreign direct investment (FDI) is a long-term investment for a developing country. Foreign direct investment can help economic development in terms of capital development and create jobs. The presence of foreign direct investment will bring up additional resources. Investment is a necessity for economic development, if the national income of society can increase then the ability of economy to produce goods and services also increase (Suwarno, 2008). Under the foreign investment law of 1967, foreign investment has become a complement to the financing of national development, even in the new foreign investment law of 2007, foreign investment can invest 100% to Indonesia by following some rules set by the government. Thus, foreign investment is not only become complement but also it becomes part of the financing of Indonesia's economic development and will continually improve and enhance national’s welfare.

Foreign direct investment is a crucial factor to promote and encourage growth in the national and regional economy. According to Putri (2014) foreign direct investment has a significant positive effect on economic growth in Java island. The investment in Java Island is still very attractive and very helpful for foreign investors to invest, because it is manageable and simple in getting license and good coordination among departments concerned.

Java Island is one of the islands in Indonesia. Administratively, Java Island consists of six provinces are Jakarta, West Java, Central Java, East Java, Special Region of Yogyakarta and Banten. Java island is the central of national economic development in Indonesia. Therefore, many investors still make Java island as main investment destination. the following table show the realization of foreign direct investment in Java Island.

Table 1.1

The Realization of FDI in Java Island in Period 2011-2015

(Thousand US $)

No	Province	2011	2012	2013	2014	2015
1	Jakarta	4,824,078.8	4,107,720.8	2,591,127.6	4,509,362.8	3,619,392.5
2	West Java	3,839,359.6	4,210,703.8	7,124,880.7	6,561,946.4	5,738,714.3
3	Central Java	174,964.9	241,512.6	464,299.6	463,360.6	850,397.6
4	DIY	2,407	84,939.2	29,578.5	64,891.2	89,105.8
5	East Java	1,279,765.1	2,298,776.2	3,396,254.1	1,802,505.9	2,593,377.3
6	Banten	2,171,692	2,716,263.7	3,720,210.3	2,034,627.1	2,541,968.5
Total		**12,292,267.4**	**13,659,916.3**	**17,326,350.8**	**15,436,694**	**15,432,956**

Sources: BKPMD Province Banten

Based on Table 1.1 above, the total of realization of FDI in Java island is dominated by West Java, Jakarta and Banten, then following by East Java, Central Java and Yogyakarta. It is interested to be discussed about Banten province, because Banten is the youngest province among them which has included to one of the three provinces that have domination in realization of FDI in Java island.

Banten province is the 30th province in Indonesia that established based on Law Number 23 Year 2000 concerning on formation of Banten province dated 17th October 2000. Banten province consists of four regencies and four cities. Geographically, the location of Banten Province is very strategic because it becomes the link between Java island and Sumatra island, as well as the capital city of Indonesia and West Java province as a potential market of Banten's products.

Although Banten is the youngest provinces in Java Island but economically, Banten is very potential for investment activities because there are many industrial factories, beautiful tourism places, mining industries, agribusinesses and agroindustry. The opportunity of investment in Banten are very huge especially in term of industrial sector, as they are supported by adequate access, such as Soekarno-Hatta International Airport, Merak Port, Jakarta-Merak Freeway to Tanjung Priok Port, and Jakarta-Merak Railway.

The investment in Banten province is divided into several focuses, In the northern part of Banten which consists of Serang city, Cilegon city, Tangerang city, South Tangerang city, Tangerang and Serang regency are more focused on developing industrial sector, trade and property. While in southern part of Banten

which consists of Pandeglang and Lebak regency are focused on developing of plantation, agriculture, fisheries, mining, and tourism sectors.

Economic growth in Banten province is inseparable from foreign direct investment. However, there are several issues is happened toward FDI in Banten, such as the condition of FDI is not evenly distributed in all sectors. The following table show about the realization of FDI in some sectors in Banten Province.

Table 1.2

The Realization of FDI in Several Sectors in Banten Province in Period 2011-2015 (Thousand US $)

No	Sectors	2011	2012	2013	2014	2015
1	Food crops & plantation	500	5,850	50	-	26.2
2	Farms	7,643.7	3,512.6	-	-	8,986.8
3	Forestry	-	172	-	-	-
4	Fishery	-	-	-	-	372.5
5	Mining	5,504.8	3,623.1	7,819.9	4,805.1	-
6	Food industry	175,118	127,170.9	165,949.6	383,678.9	24,653.9
7	Textile industry	152,582.7	176,465.4	63,268.7	42,481.1	4,681.7
8	Leather industry, Leather goods and shoes	146,904.4	90,070	37,654.5	94,874.4	29,104.4
9	Wood industry	-	2,242	1,068	666.7	586.2
10	Paper industry.	147,424.1	102,592.3	191,173.8	15,600.5	10,689.5

Sources: BKPMD Province Banten

Based on Table 1.2 above shown that the realization of foreign direct investment in Banten province approximately still dominated by industrial and mining sector which is located in some regions in north of Banten, while other sectors located in south of Banten such as fishery, forestry, farms and plantation obtain less fund from foreign investment.

Investment in Banten province is still concentrated in the industrial sector, it certainly brings the impact of economic disparities between regions. In the context of economic geography, it called as agglomeration, this issue has a strong possibility to occur in every region. There are several factors that cause agglomeration in a region, such as environmental technology, capital, human resources, and other factors which can affect the efficiency of production.

According to Bradley and Gans (1996) in Sodiq and Iskandar (2007) the agglomeration economy is an externality resulted from the geographic proximity of economic activity. Furthermore, the agglomeration economy can give a positive effect on economic growth rate. As the result, the region that included to the economic agglomerations area have higher growth rates than non-agglomerated areas.

Uneven distribution of the realization of FDI is one of the issue that give the impact to the total of the realization of foreign direct investment in Banten province. Based on the data from investment coordinating board (BKPM) the total of realization of foreign direct investment in Banten province during 2011-2015 tend to fluctuate.

Table 1.3

The Realization of FDI in Banten Province

in The Period of 2011-2015

Year	**FDI** (Thousand US $)	**Growth** (%)
2011	2,171,692.0	-
2012	2,716,263.7	25.07
2013	3,720,210.3	36.96
2014	2,034,627.1	-45.30
2015	2,541,968.5	24.93

Sources: BKPMD Province Banten

Based on the Table 1.3 above shown that the realization of foreign direct investment in Banten province in the last five years has increased and decreased or fluctuated. Agglomeration is one of the issue that caused the condition of FDI more concentrated in the industrial sector, the concentration in industrial sector caused the condition of FDI is not evenly distributed in all sectors, and it gives the impact to the total of the realization of FDI in Banten Province.

To stabilize and maximize the realization of foreign direct investment, Banten government should know the factors that influence the foreign direct investment. The factors that influence foreign direct investment is needed to analyze, because it will help the government to make the good policy to solve the uneven distribution issues and another issue that caused the fluctuation of the realization of foreign direct investment.

Based on the description above, this study is intended to examine the determinants of foreign direct investment (FDI) in Banten Province; they are Economic Growth, Regional Minimum Wage and Labor Force. Thus, the title of this research is formulated as follows **"The Determinants of Foreign Direct Investment in Banten Province**"

1.2 Problem Formulation

Therefore, based on the background above, the researcher raises some issues, they are:

1. Does Economic Growth Influence Foreign Direct Investment (FDI) in Banten Province?
2. Does Regional Minimum Wage Influence Foreign Direct Investment (FDI) in Banten Province?
3. Does Labor Force influence Foreign Direct Investment (FDI) in Banten Province?

1.3 Research Objective

Based on the problem formulation written above, this research aims to analyze the influence of Economic Growth, Regional Minimum Wage and Labor Force to the Foreign Direct Investment in Banten Province.

1.4 Research Contribution

The benefit from this research:

1. For the researcher, this research will give knowledge and a deep understanding of the determinant of foreign direct investment (FDI) in

Banten Province.

2. For the future researcher, it is expected that this research could be an alternative reference for further research related to the determinants of foreign direct investment (FDI)
3. For government, this research will be a reference in government policy making for knowing the determinants of foreign direct investment in region level to take the right policy in the future.

1.5 Writing Systematics

To simplify and clarify the writing of this thesis, the researcher uses systematics of writing so that it is more focused. It will be divided into five chapters, they are:

CHAPTER I: INTRODUCTION

This chapter has background of the study, problem identification, problem formulation, problem limitation, research objectives, research contributions, writing systematics.

CHAPTER II: LITERATURE REVIEW AND THEORITICAL FRAMEWORK

This chapter describes study of the results of research ever done in the same field as well as load the foundation of theory used to approach the issues that will be examined.

CHAPTER III: RESEARCH METHOD

This chapter describes data collection method, research variables and elaborates the method of analysis and data source that are used.

CHAPTER IV: DATA ANALYSIS & DISCUSSIONS

This chapter discusses data analysis, hypotheses testing, and research findings.

CHAPTER V: CONCLUSIONS & RECOMMENDATIONS

This chapter presents the conclusions, and recommendations for future researchers.

CHAPTER II

LITERATURE REVIEW & THEORETICAL FRAMEWORK

2.1 Literature Review

In finding the variables and analysis in this research, it is necessary referring to previous researches that discussed about the factors that determine foreign direct investment in national, provincial and regional.

Demirhan and Masca (2008) conduct the research entitled *"Determinants of Foreign Direct Investment Flows to Developing Countries: A Cross-Sectional Analysis*" this study aimed to explore, by estimating a cross-sectional econometric model, the determining factors of foreign direct investment (FDI) inflows in developing countries over the period of 2000-2004. The study is based on a sample of cross-sectional data on 38 developing countries. they used average value of all data for the 2000-2004 period. In the models FDI as dependent variable, and growth rate of *per capita* GDP, inflation rate, telephone main lines *per* 1,000 people measured in logs, labor cost *per* worker in manufacturing industry measured in logs, degree of openness, risk and corporate top tax rate as Independent variables. The result show in the main model, growth rate of *per capita*, telephone main lines and degree of openness have positive sign and are significant. Inflation rate and tax rate present negative sign and are significant. While Labor cost has positive sign and risk has negative sign. However, both are not significant.

The research conducted by Zaenuddin (2009) entitled *"Analisis Faktor-Faktor yang Mempengaruhi Investasi PMA di Batam"* The research is aimed to analyze factors influencing investment decisions in Batam. Secondary quantitative data are used to analyze the determinant factors of FDI in a certain industrial estate. Ordinary Least Square (OLS) method are employed and using panel data of 16 industrial areas for 3 years (2005-2007). The dependent variable is FDI /investment plan. The Independent variables are rental rate, maintenance fee, labor supply, export value and electricity. The result of regression analysis revealed that the variable of maintenance fee, labor and export influence the FDI in Batam. While variable of rental rate and electricity do not have significant effect.

The research conducted by Wafure and Abu (2010) entitled *"Determinants of Foreign Direct Investment in Nigeria: An Empirical Analysis*" This study is aimed to investigates the determinants of foreign direct investment in Nigeria. The error correction technique was employed to analyze the relationship between foreign direct investment and its determinants. The results show that the market size of the host country, deregulation, political instability, and exchange rate depreciation are the main determinants of foreign direct investment in Nigeria. While The authors recommend the following policies among others: expansion of the country's GDP via production incentives; further deregulation of the economy through privatization and reduction of government interference in economic activities; strengthening of the political institutions to sustain the ongoing democratic process; gradual depreciation of the exchange rate; and increased investment in the development of the nation's infrastructure.

Moses Muse Sichei and Kinyondo (2012) conducted research entitled "*Determinants of Foreign Direct Investment in Africa: A Panel Data Analysis*". The research used dynamic panel data estimation techniques. The study found several factors that affect FDI flows in Africa, including, agglomeration economies, natural resources, real GDP growth, and international investment agreements. The results showed that agglomeration economies are the most significant determinant of FDI inflows to Africa, real GDP growth positively influences the location of FDI and natural resources tends to attract resource-seeking FDI.

Jabri, Guesmi, and Abid (2013) entitled "*Determinants of Foreign Direct Investment in MENA Region: Panel Co-Integration Analysis*" This study aims to investigate the relationship between Determinants of Foreign Direct Investment (FDI) inflows and their determinants in MENA (Middle East and North Africa) region during the period 1970- 2010. The method using panel data techniques, they consider the both hypothesis economic dependencies and structural breaks. The result show that the macro determinants like openness, growth rate, exchange rate, and economic instability have a long-run impact on FDI inflows in their panel.

Fahmi (2013) conducted a research entitled *"Analisis Faktor-Faktor yang Mempengaruhi Investasi Asing Langsung (FDI) di Pulau Jawa"* This study used panel data covering six provinces in Java Island in 2001-2011. Independent variables used include the rate of inflation (IFL), gross regional domestic product (GRDP), density of road infrastructure (GDI), and the provincial minimum wage

(UMP), while the dependent variable used is foreign direct investment (FDI). Analysis of panel data revealed that the rate of inflation, gross regional domestic product and the density of road infrastructure had a positive effect on foreign direct investment, while the provincial minimum wage has no significant impact on foreign direct investment.

Teulon and Guesmi (2013) conducted research entitled "*Determinants of Foreign Direct Investments in the South Asian Association for Regional Cooperation*". The study aimed to investigate the relationship between Foreign Direct Investment (FDI) inflows and their determinants in six major countries in the South Asian Association for Regional Cooperation (SAARC) over the period from 1998 to 2010. The method of analysis used is panel data techniques, the result show that there are common variables of economic significance among the examined countries: macro determinants such as openness, growth rate, exchange rate, and economic instability have a long-run impact on FDI inflows in their panel. The results are given to a battery of tests, including panel unit root and panel cointegration tests.

A research conducted by Eliza (2013) entitled "*Analysis Pengaruh Variable Makroekonomi Terhadap Investasi Asing di Indonesia"* the method using *Error Correction Model* (ECM). In this research, foreign investment is divided into two types i.e. foreign direct investment and foreign portfolio investment. The result showed that the variable of gross domestic product and SBI interest rate could influence foreign direct investment in Indonesia in short and long term with positive influence. Meanwhile, inflation and exchange rate variables did not affect

foreign direct investment in Indonesia, either in the short term or long term. The results in this study also show that there are only gross domestic product variables that can influence foreign portfolio investment in Indonesia in the long term with positive influence. While inflation variable, exchange rate and interest rate of SBI have no influence, either in short or long term.

Pratama and Setiawati (2013) conducted the research entitled "*Analisis Beberapa Faktor yang Mempengaruhi Penanaman Modal Asing di Jawa Timur".* This research used secondary data for 12 years from 2001 to 2012 and multiple linear regression analysis calculations to determine the relationship and influence simultaneously and partial value of the variable Total Exports (X1), Inflation Rate (X2), Foreign Exchange Rates (X3), and the Gross Regional Domestic Product / GDP (X4). Against foreign investment variable as the dependent variable. The result show that the variable Total Value Exports, Inflation Rate, Exchange Rate and GDP Foreign exchange give the effect on foreign investment variable

Febriana and Muqorobbin (2014) in the research entitled *"Investasi Langsung di Indonesia dan Faktor yang Mempengaruhinya"* this paper aimed to know the effect of the economic growth, exchange rate, and export to foreign direct investment (FDI) in Indonesia during the period 1984 to 2013.The method used econometric model with Error Correction Model (ECM). The result shows that the variable of economic growth in short and prolonged periods affect positively and significant toward the foreign direct investment (FDI). The exchange rate of rupiah to US dollar affect positively and significant in the brief period, while in the long period, the exchange rate affects negatively and

insignificant toward foreign direct investment (FDI). In addition, the export affects positively and significant in the brief period, and it affects negatively and insignificant toward foreign direct investment (FDI) in the long period.

Research conducted by Nurcahyo et al. (2015) entitled "*The Influence of Macroeconomics Variables on Foreign Direct Investment (Empirical Study from Indonesia)"* aimed to analyze the mutual effects of foreign exchange rate, economic growth and inflation using a case study of Indonesia from 2002 to 2012. The study used Ordinary Least Square (OLS) method. The results showed that foreign exchange rate, economic growth, and inflation simultaneously influence the FDI in Indonesia while foreign exchange rate and economic growth had positive influence on FDI in Indonesia. However, individual testing showed that one that has no impact on FDI is inflation. Then the FDI in Indonesia depends on foreign exchange rate (IDR to USD) and economic growth than inflation rate.

Tambunan (2015) in the research entitled *"Pengaruh Kurs, Inflasi, Libor dan PDB Terhadap Foreign Direct Investment (FDI) di Indonesia"* The method using multiple linear regression analysis. In this research the independent variable is Exchange Rates (X1), Inflation (X2), Labor (X3), and GDP (X4), while the dependent is realization Foreign Direct Investment (Y). This study tested the hypothesis of regression coefficient (coefficient of determination, a significant test concurrent / F test, and the significant individual test / t test). The result revealed that the variable Exchange Rates, Inflation, labor and GDP at once / simultaneously have a major influence on the realization Foreign Direct Investment (FDI). The individual test / partial showed that Gross Domestic

Product variable acquired that contributes greater than the variable rate of Exchange Rates, Inflation and Libor on the realization Foreign Direct Investment (FDI).

Hoang and Bui (2015) held a research entitled *"Determinants of foreign direct investment in ASEAN: A panel approach".* This study aimed to analyze the factors of FDI inflows in ASEAN countries over the period 1991 to 2009 by using panel data. The results showed that the market size, trade openness, quality infrastructure, human capital, labor productivity are the main factors that have positive impacts on FDI inflows. Additionally, exchange rate policy, real interest rate, political risk and corruption also affect FDI inflows. Surprisingly, the cheap labor does not help to attract FDI to the region, because foreign investors are particularly interested in labor productivity. This study also shows that the Asian monetary crisis in 1997 affected the amount of FDI inflows, but not on the nature of FDI inflows in the region.

Based on the earlier literature review above, the researcher wants to re-examine economic growth, regional minimum wage, and labor force as independent variable with foreign direct investment as dependent variable. The difference of this research with previous research is located on independent variable in research Tambunan (2015) entitled "*Pengaruh Kurs, Inflasi, Labor dan PDB Terhadap Foreign Direct Investment (FDI) di Indonesia*" with research object of Indonesia, whereas in this research researcher use object of Banten province.

2.2 Theoretical Framework

2.2.1 Investment

According to Suparmoko (2009) investment is an expenditure that intended to increase or maintain a capital stock. Capital inventories consist of factories, machinery, offices, and other durable goods that used in the production process, and also that included in the capital stock are houses and supplies of goods which has not been sold or used in the long term. So, investment is an expenditure that adds to the stock of capital.

Economic theory defines investment as expenditures to buy capital goods and production equipment, in order to increase the capital goods in the economy that will be used to produce goods and services in the future. In other words, in economic theory, investment means spending activities to increase production capacity that available in an economy (Sukirno, 2011).

Investment is the placement of the funds at this time with the hope to make a profit in the future, and generally investment is divided into two, the first is investments in financial assets which undertaken in the money market and capital market, the second is investments in real assets. Investments in real assets can take the form of purchases of productive assets, establishment of factory, opening of mining etc., in the investment process showed that how should an investor make an investment decision on marketable securities and when it can be done (Halim, 2003).

2.2.1.1 The Basic of Investment Decisions.

According to Tandelin (2001) the basic of investment decision are expected rate of return, risk levels, and the relationship between return and risk.

a. Return

In the context of investment management, the investment profit rate is called return. The expected return by investors from the investments is compensation for the opportunity cost and risk of declining purchasing power due to the influence of inflation. In the context of investment management, it is necessary to distinguish between expected return and realized return. The expected return, is the level of return that is predicted by investors in the future. While the realized return or the actual return is the rate of return that has been obtained by investors in the past. The difference between the expected return and actual return is a risk that should always be considered in the investment process.

b. Risk

The greater the risk will be the greater the expected rate of return. Risk can be interpreted as a possible actual return that is different from expected returns. Especially in term of investment science, there is the assumption that investors are rational beings, it means that rational investor would not like uncertainty or risk. The Investors do not want to take the risks if the investment does not provide a reasonable expectation of return as a compensation for the risks that should be received. A bolder investor will choose a higher investment risk, with the expectation of a high rate of return, otherwise investors who do not dare to get a considerable risk, will not be able to expect a high rate of return.

c. The Relations of Risk Level and Expected Return

The risk level and expected return has a linear relationship. It means that the greater the risk of asset, will be the greater the expected return on that asset, and its reverse.

2.2.1.2 The Factors That Influence The Investment

According to Prasetyo (2009) there are several factors that can affect the quantity of investment, they are;

a. Interest Rate

If the interest rate is low then the investment rate will be high because the credit from the bank is profitable to invest. Conversely, if the interest rate is high, then the investment rate will be low because the credit level of the bank cannot provide an advantage in the investment project.

b. Marginal Efficiency of Capital (MEC)

If the expected profit (MEC) is smaller than the actual interest rate, then investment will not happen. If the expected MEC is higher than the real interest rate, then investment will be made. If the MEC level equals with the real interest rate, so the consideration of investment can be influenced by other factors.

c. Increasing In term of Economic Activity

If there is an expectation of increasing economic activity in future, although interest rates are greater than MEC, investments may still be done by investors who have a sharp instinct (Risk Seeking). Because investors thought that investment will have many advantages in the future. Although this instinctive

factor is not a major factor, it is important for investors to consider in making decisions.

d. Political Stability of Country

A more stable political condition of a country will give better investment condition. Thus, foreign or domestic investment in that country will increase. Due to the stability of political condition, lower country risk and investment profits will be better.

e. Investment Profit Rate That Would Be Obtained.

Higher rate of return on investment leads to greater level of investment. However, higher rate of return on investment will lead to higher the risk.

f. The Other factors

In addition to these five factors, investment is also influenced by other factors such as, the rate of technological progress, the forecast of the future economic situation, and the level of national income and its changes

2.2.2 Foreign Direct Investment

Foreign investment is an activity to transform the potential resources into one of the strengths of the real economy. The meaning of resources in this context are local resources which is processed and used to increase the prosperity of all people fairly and equitably, so that the development can be run well.

According to Anoraga (1995) foreign investment in Indonesia can be conducted in two forms of investment, namely portfolio investment and direct investment. Portfolio investment is an investment that is conduct through the capital market with securities instruments such as stocks and bonds. While direct

investment which is known as foreign investment is a form of investment that is made by building, buying, or acquiring the companies. Foreign direct investment has more advantages compared with portfolio investment, because foreign direct investment has a permanent type or long-term type and participates in the sector of technology, management skills and create new employment opportunities.

Based on the law of the Republic of Indonesia No. 1 Year 1967 that concerned with Foreign Investment. Article 1 stated that: "The definition of investment in this law is investment which is conducted directly under the provisions of this law and it used to explain the companies in Indonesia". It has meaning that the owner of direct investment should bear the risk of that investment. While according to the law of the Republic of Indonesia No. 25 of 2007 on investment, foreign investment is an investment activity to conduct business in the territory of the republic of Indonesia that conducted by foreign investors, whether using the full of foreign capital or in association with domestic investors.

2.2.3 The Theory of Foreign Direct Investment (FDI)

According to Anoraga (1995) there are several theories stated by some experts to analyze the factors that influence foreign direct investment.

a. Alan M. Rugman Theory

This theory explains that foreign direct investment is influenced by environmental variables and internalization variables. There are three types of environmental variables that be concerned are economy, non-economy, and government. The first type is economy variable, this variable arranges the whole

production function in the country, such as labor, capital, natural resources, and management skills. The second variable is non-economy, the sector that include to the non-economic variables are, political, cultural, and social in every country. The third factor is government variables, each country has its political specificity and then it must be considered by foreign investment companies which will be entered by foreign capital. Another factor that affects foreign direct investment is internalization variable or the specific advantage of the company, internalization variable is an internal advantage owned by multinational companies.

b. John Dunning Theory

John Dunning theory explains the factors that influence foreign direct investment through eclectic approach theory. This theory sets out three requirements that is required when a company will participate in foreign investment: the first is company's specific advantages, the second is internalization advantage, and the third is state’s specific advantages.

c. David K. Eitemen Theory

This theory explains there are three motives underlying foreign direct investment, they are, strategic motive, behavior motive and economic motive. The strategic motives are differentiated in terms of market seeking, raw materials, efficiency, knowledge and political security, while behavior motives are encouragement from the external environment and others of the organization based on individual and group needs and commitments, and economic motive is the motive for profit seeking by maximizing long-term profits and market price of the company's stock.

d. Robock & Simmond Theory

This theory is explained through a global approach, imperfect market approach, internalization approach, international production, product cycle model and the model of Marxist imperialism. As part of the company's growth, the scope of business will geographically change, this change because of environmental stimulation. Based on global approach, the internal forces that affects foreign direct investment are, technology development or new product, dependence on raw material sources, utilizing obsolete machines, and looking for larger markets. While the external forces that affects FDI are customers, governments, overseas expansion of competitors and the establishment of the European Economic Community (EEC).

e. Kindleberger Theory

Based on Kindleberger theory, the most sensitive aspect in the international economy is direct investment aspects. The United States and Britain seek to limit direct investment by companies that domiciled within the borders of these two countries to limit pressure on their balance of payments. Canada, European countries and Japan seek to limit foreign investment within their territory, so that their control of domestic resources will not disappear because of foreign ownership. Developing countries worried that foreigners will invest in their countries, they are worried about exploitation. On the other hand, they are worried that foreigners will not invest, because if the foreigners do not conduct the investment they will not get foreign capital and technology. Restrictions is

determined against investment in a line of activity that are considered weak against foreign influences or which are considered wasteful of natural resources.

2.2.4 The Factors That Influence Foreign Direct Investment (FDI).

The main determinants of investment are interest rates and returns on capital or profits, other factors affecting investments are forecasts about future economic conditions, technological advances, national income levels and corporate profits (Sukirno 2005). The economic conditions in region can be measured by economic growth and regional minimum wage, while According to Alan M. Rugman theory, the factors influencing of foreign direct investment in term of economy are labor, capital, natural resources, and management skills.

2.2.4.1 Economic Growth

Economic growth can be defined as the process of development of activities in the economy that caused increasing of goods and services which is produced in society. Economic growth is a process of changing a country's economic conditions in a sustainable way to a better state for a certain period. The economic growth that is rapidly growing continuously is the main condition for economic development, high economic growth will have a positive impact on economic development and welfare. The total number of people increasing every year, so the daily consumption needs also increasing, so it needs additional revenue every year (Tambunan, 2011).

GRDP is the total value added of goods and services generated from all economic activities throughout the region within a given period generally in one year. Gross Regional Domestic Product (GRDP) reflects the economic growth of a

region. Economic growth is an increasing the capacity in the long term of the country that concerned to provide various economic goods to its population. Increasing capacity is decided by advances and adjustments of technology, institution and ideology toward various existed demands (Todaro, 2000).

The important indicator to know the economic condition in an area in a certain period is shown by data of Gross Regional Domestic Product (GRDP), either at current prices or at constant prices. GRDP is defined as the amount of added value generated by all business units within a region or represents the total of all goods and final services that produced by all economic units in a region. The GRDP at current prices showed the value added of goods and services calculated using the prevailing prices every year, while GRDP on constant prices showed the added value of the goods and services calculated using the prevailing price at a given time as the basis price (Widodo, 2006).

GRDP can describe the ability of an area to manage its natural resources. The amount of GRDP produced by each region depends on the potential of natural resources and factors of production of the area. The existence of limitations in the provision of these factors will be caused the amount of GRDP varies between regions. GRDP at constant prices shows the rate of overall economic growth or every sector of the economy year by year and measures the growth rate of consumption, investment and foreign trade, inter-island trade or inter-provinces.

According to Prasetyo (2009) GRDP is the total of all final goods and services or all the added value that achieved by region within a certain of time (one year). To calculate the value of all productions that produced an economy in

certain year can be used by three ways of calculation, they are:

1. Production approach

In the production approach, the national income is calculated by calculating the value of production of goods or services that realized by various sectors of field of business in a region within a certain period (one year).

2. Expenditure approach

In the expenditure approach, the national income is the amount of value of household consumption expenditure, government consumption, gross domestic fixed capital formation, stock changes, and net exports (exports minus imports).

3. Income approach

In the income approach, the national income is derived by calculating the income that received by the factors of production which used to realize the national income.

Regional income data is one of the macro indicators that can show the condition of the regional economy every year. The benefits from GRDP at current or nominal price are shows the ability of economic resources produced by a region or province. Higher GRDP value shows the ability of higher economic resources as well, and it shows the income that can be enjoyed by residents of a region or province. The benefits from GRDP at constant prices showing the rate of overall economic growth or each sector of the economy year by year and measuring the growth rate of consumption, investment, and foreign trade, inter island or inter-province trade.

After looking at the GRDP description above, it can be concluded that GRDP is the overall value of goods and services produced by the community in an area within a certain time (one year). GRDP is also a measurement of the growth rate of a region. In this case, GRDP also means the amount of added value that comes from all units of production in a region within a certain period.

To calculate the economic growth of a region it can be used real GRDP data in every region from BPS. Economic growth can be calculated using this following formulation.

Eg = (GRDPt - GRDPt-1) / GRDPt-1 x 100%

Description:

Eg = Economic growth rate in percentage units (%)

GRDPt = Gross Regional Domestic Product in a year

GRDPt-1 = Gross Regional Domestic Product (in the previous year)

2.2.4.2 Regional Minimum Wage

Wage is one of the driving factor for improving work productivity because wage is the reward that will be accepted by someone after work, and higher wage would make employees increase their work productivity. The principle of the wage system should be able to ensure a decent living for workers and their families, and has a Social function, reflecting rewards for employment, and the incentives that given to the labor.

According to neo-classical theory to maximize the profit, each entrepreneur using the factors of production, so that each production factor used to receive or rewarded by the value of the increase of marginal results of the factors of

production. It means that the employer employs several employees in such a way, then the value of one's marginal return is equal to the wage the person receives. In other words, the level of wages paid by employers are:

W = vamp = mph x p

Where:

W = Labor cost (The cost that already paid by employer to the workers)

P = Price of sale the goods (production) in rupiah per unit of goods.

MPP_L = Marginal Physical of labor or increasing in employee marginal outcomes, measured in units of goods per unit of time.

$VMPP_L$ = Value of marginal physical product of labor or the value of increasing in marginal outcomes of workers or employees.

The value of the increase in the marginal output of employees of VMPPL, is the value of services that given by employees to employers. In other hand, the wage (W) paid by the employer to the employee as a feedback for employee services that give to employer. So, it can be concluded that according to neoclassical theory, employees earn wages equivalent with addition of its marginal results. In other words, in this case wages have the function as a reward for the work effort that given by person to the employer (Simanjuntak, 1985).

According to Sumarsono (2003) wages are a compensation from an employer to an employee for a work or service that has been done or will be done. This is declared or assessed in the form of money that decided based on an agreement or law, and it is paid on work agreement between employers and

employees including the allowance whether for the employees or for their families.

The minimum wage that set out in pp no. 8/1981 is stated as minimum regional and minimum sub-sectoral regional. In this case, minimum wage is the basic wage and allowance. The minimum basic wage is the least wage that stated minimally in regional, sectoral and sub-sectoral. based on DPP FPSI (Position Paper, August 1983) the definition of minimum wage as a starting wage that received by a worker or labor that can be used to satisfy their minimal life needs.

From the definition above, there are two essential elements are:

a. The starting wage is the lowest wage that must be received by the labor in the first time that he gets job
b. The minimum wage must be able to satisfy the minimum needs of the workers, such as the needs for clothing, food, and household purposes.

2.2.4.3 Labor Force

Based on BPS, labor is working age population that are 15 years old or older who work or have a job but temporarily not working, and who are looking for a job. According to Simanjuntak (1985) labor is the population who have already been working or are working, looking for work and who are doing other activities such as studying and taking care of the household. The people those looking for work, studying and taking care of the household, although not working, they are physically able to work at any time.

Labor consisted of two groups, the labor force and not the labor force. The labor force is population in working age who are engaged or tried to engage in

productive activities that are producing goods and services. The labor force consisted of the work as well as the unemployed and looking for work. Not a labor force consisting of three groups they are students, the people who take care of the household and the others or beneficiary income, they often named as a potential labor force because this group of people are able to offer their services to work.

The number of people that working depends on the amount of demand in the community, the demand is influenced by economic activity and wage rates. A large number of workers means increasing the number of productive labor. Increasing in labor productivity is expected to increase production. According to Nicholson W (1991) a function of production on a particular goods or service (q) is q = f (K, L) where K is capital and L is labor, then it shows the maximum number of goods or services that can be produced by combining alternatively between K and L, then if one input plus one additional unit and the other input is considered to be fixed it will cause additional output that can be produced (marginal physical product).

2.2.5 The Relationship Between Independent Variables and Dependent Variables

2.2.5.1 The Relationship Between Economic Growth with Foreign Direct Investment (FDI)

Good economic growth in a region has a good impact on economic development. The success of economic development in a region can be seen from its high economic growth. Therefore, each region sets up an elevated level of economic growth in the planning to realize economic development in its area.

High sustainable economic growth is the main condition for the sustainability of economic development (Boediono, 1999)

The problems in capital formation can be viewed from the point of supply or from the point of demand for capital. From the point of supply, capital formation is related to the people's ability in saving, saving can be used for investment and capital formation. Whereas from the point of demand, the formation of capital related with presence of interest the entrepreneurs to use capital goods in the production process,

According to Sukirno (2011) High national income will increase people's income, and later if the society have high income, the demand for goods and services will increase. Then the company's profits will get high growth and will encourage more of investments. Overall, if the national income grows higher, the investment will also increase.

The research of this variable is also supported by Research conducted by Nurcahyo et al. (2015) entitled "*The Influence of Macroeconomics Variables on Foreign Direct Investment (Empirical Study from Indonesia)".* It stated that economic growth has positive influence on FDI in Indonesia. Based on the earlier statement, it can be concluded that economic growth has significant positive relationship with foreign direct investment.

2.2.5.2 The Relationship Between Regional Minimum Wage and FDI

Based on the law of the Republic of Indonesia No. 13 of 2003 on labor, wage is an acceptance of return from employers to labor or workers for any work or service which has been done. The wage is assessed in the form of money that

has been signed according to agreement or regulation of law and paid based on agreement between employers and the labor or workers**.**

According to Sumarsono (2003) the first problem that can arise in wages is generally about different understandings and interests regarding wages among employers and employees. Employers consider that wage can be seen as a burden, because the larger the wages that paid to employees, the smaller the proportion of profits that can be achived by employers. Everything that issued by the employer in the case of employing a person regarded as a component of wages. On the other hand, employees and their families usually regard wages only as what they receive in the form of money (take-home pay). It can be concluded that the company considers wages as costs, increasing in labor cost will impact the decreasing the profits that can be achived. Thus, increasing in wage or regional minimum wage will have negative impact on investment.

The research of this variable is also supported by Research conducted by Anggrainy (2013) entitled "*Analisis Dampak Kenaikan Upah Minimum Kota (UMK) Terhadap kesempatan Kerja dan Investasi (Studi Kasus pada Kota Malang Periode 2001-2011)*" the result is from the simultaneous test, stated that the variable of UMK has a significant negative effect on investment in Malang.

2.2.5.3 The Relationship Between Labor Force and FDI

Labor productivity will play a significant role in the development of investment, especially in the industrial sector. The higher productivity will be give the better impact on the development of investment. On the other hand, unproductive labor will lead to high production costs that will harm the company

itself.

Labor is a key factor in increasing the investment. This is due to labor factors known as a production factor that can increase the efficiency of other production factors such as processing raw materials, operate the machine etc., therefore, the companies assume that labor as a principal factor in supporting its investment. This statement can be supported by Sumarsono (2003) the production function shown the relationship between the inputs of production factors and the output of the firm, by certain technology, the more workers and capital inputs that used, will achieved greater output produced. Thus, Labor force have relationship with foreign direct investment.

2.2.6 Framework for Thinking

The framework of this research can be explained through the following picture.

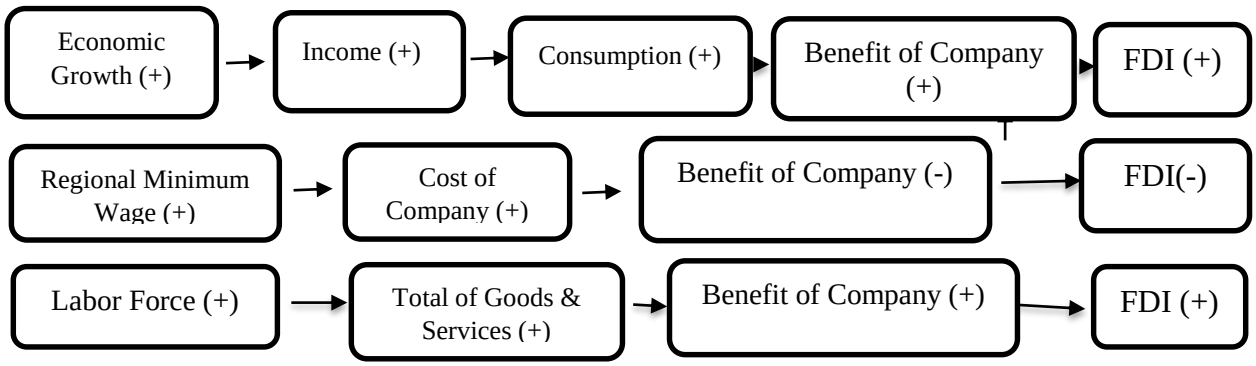

Figure 2. 1 Framework of the research

2.2.7 Hypothesis

Based on relevant theories and concepts, as well as earlier research results on factors influencing the flow of FDI, then a temporary answer can be given to the existing problems. The hypothesis in this research are:

1. Economic growth significantly has positive influence on FDI in Banten Province.
2. Regional Minimum Wage significantly has negative influence on FDI in Banten Province.
3. Labor Force significantly has positive influence on FDI in Banten Province.

CHAPTER III

RESEARCH METHOD

3.1 Type of Study

The type of study conducted by the researcher is quantitative research. This research uses quantitative method by generating numerical data or data that can be transformed into useable statistics. The type of data in this research is secondary data, the researcher reuses information as secondary data because it is accessible and more efficient to collect. Secondary data is data obtained directly from the source, such as a quote from the books, literature, reading scientific journals, which have relevance to the theme of the research. In this research, secondary data obtained through the central bureau of statistics, website (https://banten.bps.go.id) and investment coordinating board, website (http://bionline.bkpm.go.id)

Data used in this research are:

a. Foreign direct investment data of Banten province by districts 2011-2015.
b. Economic growth data which is processed from real gross domestic product data of Banten province by districts 2011-2015.
c. Labor Force data of Banten province by districts 2011-2015.
d. Regional Minimum wage data of Banten province by districts 2011-2015.

3.2 Data Collection Method

Method of collecting data that used in this research is the study of the literature. It is an attempt to obtain data by studying and analyzing the literature books and processed data. The collections of data in this study are intended to obtain materials that are relevant and accurate. The data used are secondary data by using a data collection method in studies of original documents from the BPS, BKPM as well as other library resources related with the research.

3.3 Research Variable

This research contains of independent variable and dependent variable. Dependent variable in this research is Foreign Direct Investment (FDI) of Banten province, Banten province consists of four regencies and four cities. The regencies are, Pandeglang, Lebak, Tangerang, and Serang, while the cities are, Tangerang city, Cilegon city, Serang city, and South Tangerang city, However because of uncomplete data of realization FDI In Pandeglang regency then the dependent variable and independent variable in this research consists of three regions and four cities in Banten province, and the independent variables are economic growth, labor force and minimum wage that can be defined as follows:

3.3.1 Dependent Variable

Dependent variable is a variable which is influenced by other variables. This study used foreign direct investment as a dependent variable. Foreign direct investment is the total of foreign investment approved by the government according to the activities of the economic sector in Banten province. The data

used in this research is taken from the data released by Investment Coordinating Board (BKPM) of Banten province that stated in form of thousand US Dollars.

3.3.2 Independent Variable

The independent variable is the variable that can affect another variable. Independent variables used in this study are:

a. Economic growth (X1)

Economic growth can be defined as the process of development of activities in the economy that cause increasing of goods and services which is produced in society and economic growth is also a process of changing a country's economic conditions in a sustainable way to a better state for a certain period. It stated in percent.

b. Labor Force (X2)

Labor force is calculated from the number of working age population that are 15 years old who worked as well as the unemployed in three regencies and four cities in Banten Province. The data that used in this research is taken from data released by the Central Bureau of Statistics of Banten province on period 2011-2015, it stated in units (people).

c. Regional Minimum Wage

Regional minimum wage is one of the driving factor for improving work productivity because wage is the reward that will be accepted by someone after work, and higher wage would make employees increase their work productivity. The wage used in this research for the analysis of foreign direct investment is the

minimum wage. Minimum wage is the lowest numeration wage set by government to pay for the workers. It stated in form of Indonesian Rupiah (IDR).

3.4 Analysis Technique

The processing of secondary data that have been collected from various sources is using some statistical program packages, such as Microsoft Excel 2013 and Eviews 9.0. In processing data activities, Researcher used Microsoft Excel 2013 to create tables and to analysis the data. Meanwhile, in the processing of regression data panel, the researcher used program package Eviews 9.0.

3.4.1 Panel Data Method

According to Gujarati (2013) panel data is combination between time series and cross section data. In other words, panel data are data obtained from some of the same individuals that are observed in certain period of time. The use of panel data allows researcher to be able to capture the characteristic between individuals and between different times. The advantages of using panel data regression are, the data panel is able to provide more data and more complete information. The use of panel data obtained a larger degree of freedom (df), so the result estimation is better. Combining the information from the time series data and cross section can solve the problems that arise because there is a problem removing variables (omitted variable). The panel data was able to reduce the collinearity between variables, and panel data better in detecting and measuring effect that in simply not being able to do by the time series data of pure and cross section.

Data panel regression has three standard estimation models, they are Polled Regression (Common Effect Model), Fixed Effect Model (Least Square Dummy Variable), and Random Effect Model.

3.4.2 Selection Panel Data Estimation Model

a. Chow Test

Chow test or F-test Statistics is used to figure out whether data regression techniques panel with fixed effects regression models of panel data without a dummy variable (common side effects) and to see the residual sum of squares (RSS). If the statistic value is greater than the significance level, then the null hypothesis will be rejected. So, the data is better using fixed effect model than common effect model

b. Lagrange Multiplier (LM) test

Lagrange Multiplier (LM) test which is developed by Breusch-Pagan could we used to find out whether a random effects model is better than common effects model. This method is based on the residual value method of common effects. The null hypothesis (H_0) that is used is that intercept is not a random or stochastic variable. In other words, the variance of the residual value is zero. If the results of the LM test is greater than the critical value of chi-square statistic, then the null hypothesis will be rejected, it means that exact estimation for regression data panel is a method of random effects rather than the method of common effects.

c. Hausman test

Hausman test can be used to find out the best model among fixed effects and random effects. Hausman test is used to choose the *Fixed Effect Model* (FEM) or *Random Effect Model* (REM). Therefore, it uses *Chi-Squares*. The hypotheses proposed are following:

H_0 : *Random Effect Model* (REM) is better than *Fixed Effect Model* (FEM).

H_1 : *Fixed Effect Model* (FEM) is better than *Random Effect Model* (REM).

Hausman test statistic follows the Chi Square statistic distribution with a degree of freedom as much as k, where k is the number of independent variables. If the value of the Hausman statistic is greater than the critical value, H_0 is rejected and the right model is a model Fixed Effect while conversely if Hausman statistic value is smaller than the critical value, the appropriate model is the model of Random Effect.

3.4.3 Hypothesis Testing

Hypothesis testing are useful for examining or testing whether the regression coefficient obtained significant or not. The intent of this significant is a regression coefficient value which is significantly is not equal to zero. If the slope coefficient is equal to zero, it can be said that there was not enough evidence to declare the independent variables had the effect on the dependent variable. Therefore, all the regression coefficients should be tested.

1. T-test

T-test is individual coefficient test. This test used to know the effect of significance of independent variable individually.

Hypothesis in T-test are:

$H_0 : \beta_i = 0,$

$H_1 : \beta_i \neq 0.$

If the probability value $t < \alpha = 0{,}05$ so reject H_0, means independent variable partially significance influenced dependent variable.

2. Coefficient Determinants (R^2)

Coefficient determination (Goodness of Fit) is an important measurement in the regression, because it can inform whether the regression model estimated is good. The value of R^2 reflects the extent of the variation of the dependent variable that can be explained by the independent variable X or how large diversity of the dependent variable that is able to be explained by the model. If R2 = 0, then the variation of the Y cannot be explained by X altogether and if R2 = 1 it means a variation of Y can be described by the X.

3. F-test

F-test is used to perform a test of hypothesis of the regression coefficient (slope) thoroughly/ simultaneously. F-test shows independent variables affect the dependent variables simultaneously.

The hypothesis in F-test are:

$Ho : \beta1 = \beta2 = \ldots = 0$

$H1 : \beta1 \neq \beta2 \neq \ldots \neq 0$

If F-test is greater than F critical H_0 is rejected. Rejected H_0 means there is at least one independent variable that influenced dependent variable.

3.4.4 Model

The influence of independent variable toward dependent variable systematically can be described in the following formula:

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e_{it}$

where:

Y : Foreign Direct Investment

X_1, X_2, X_3 : Economic Growth (X_1), Regional Minimum wage (X_2), Labor Force (X_3)

β_0 : Constanta

$\beta_1, \beta_2, \ldots, \beta_n$: The magnitude of the influence of independent variable toward the dependent variable

i : Regions and cities in Banten province

t : Series 2011-2015

e_{it} : *error term*

BAB 1V

RESULT AND DISCUSSION

4.1 The Description of Banten Province

Banten province is the 30th province in Indonesia established based on Law Number 23 Year 2000 concerning on formation of Banten province dated 17th October 2000. Banten province consists of four regencies and four cities. Geographically, the location of Banten Province is very strategic because it becomes the link between Java island and Sumatra island, as well as the capital city of Indonesia and West Java province as a potential market of Banten's products.

Banten is very potential for investment activities because there are many industrial factories, beautiful tourism places, mining industries, agribusinesses and agroindustry. The opportunity of investment in Banten are very huge especially in term of industrial sector, as they are supported by adequate access, such as Soekarno-Hatta International Airport, Merak Port, Jakarta-Merak Freeway to Tanjung Priok Port, and Jakarta-Merak Railway.

4.1.1 The Descriptive Statistics of Research Data

Table 4.1
The Descriptive Statistics of Research Data in Several Regions in Banten Province 2011-2015

LEBAK				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)
Mean	169,111.4	5.80	1,292,160.	569,606.0
Median	146,965.5	5.83	1,187,500.	560,384.0
Maximum	393,265.9	6.29	1,728,000.	614,548.0
Minimum	10,352.60	5.10	1,007,500.	549,378.0
Std. Dev.	162,162.2	0.43	308,542.5	25,755.20
CILEGON CITY				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)

Mean	1,215,404.	6.08	1,994,918.	181,670.2
Median	1,167,798.	6.62	2,200,000.	185,307.0
Maximum	2,069,486.	7.70	2,760,590.	186,664.0
Minimum	522,924.8	4.62	1,224,000.	170,476.0
Std. Dev.	628,294.4	1.33	678,822.9	6,779.319
SERANG				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)
Mean	471,359.7	5.59	1,926,020.	631,796.6
Median	544,516.5	5.41	2,080,000.	622,428.0
Maximum	614,802.9	6.10	2,700,000.	669,029.0
Minimum	246,897.9	5.02	1,189,600.	589,320.0
Std. Dev.	165,065.9	0.46	652,515.0	31,918.59
SERANG CITY				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)
Mean	17,657.90	7.24	1,745,289.	272,325.6
Median	14,087.80	7.30	1,798,446.	273,412.0
Maximum	34,074.20	8.33	2,375,000.	284,893.0
Minimum	2,770.500	6.29	1,156,000.	263,206.0
Std. Dev.	13,839.23	0.75	545,003.2	8,568.954
TANGERANG				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)
Mean	549,856.5	6.01	2,032,800.	1,436,330.
Median	508,607.1	6.17	2,200,000.	1,455,935.
Maximum	726,460.3	6.75	2,710,000.	1,513,501.
Minimum	420,523.8	5.35	1,285,000.	1,328,081.
Std. Dev.	127,151.4	0.63	606,019.6	69,645.88
TANGERANG CITY				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)
Mean	180,540.0	6.30	2,038,860.	968,262.4
Median	186,474.1	6.52	2,203,000.	986,487.0
Maximum	198,952.6	7.38	2,730,000.	1,001,174.
Minimum	153,263.5	5.15	1,290,000.	916,226.0
Std. Dev.	18,545.05	1.00	610,694.4	36,113.05
TANGSELCITY				
	FDI (Thousand US $)	Economic Growth (%)	Minimum Wage (Rp.)	Labor Force (Person)
Mean	32,021.74	8.29	2,033,800.	669,417.8
Median	10,852.30	8.66	2,200,000.	667,098.0
Maximum	104,187.6	8.81	2,710,000.	705,321.0
Minimum	4,296.000	7.20	1,290,000.	638,659.0
Std. Dev.	4,1764.75	0.68	604,479.3	26,806.67

Based on the table 4.1 above, shown that within five years the mean of the realization of foreign direct investment (FDI) in every region in Banten Province is strongly different, the highest mean of FDI in Banten province is in Cilegon city then following by Tangerang, and the lowest mean is in Lebak.

4.2 Panel Data Result

Panel data regression has three standard estimation models, they are Polled Regression (Common Effect Model), Fixed Effect Model (Least Square Dummy Variable), and Random Effect Model. The result of panel data calculation using Eviews are conclude as follow.

4.2.1 Common Effect Result

Common effect model is the simplest panel data model approach. It is assumed that there is the same behavior between individuals in different period of times, so that this model does not notice the dimensions of the individual and time. This research employs technique of the data regression of *cross section* or *time series*. In the panel data, it combines the *cross section* with *time series* data, then this combination data is treated as a combination observation to estimate the model by OLS *(Ordinary Least Square).*

Table 4.2
Common Effect

Dependent Variable: Y?
Method: Pooled Least Squares
Date: 03/07/18 Time: 01:30
Sample: 2011 2015
Included observations: 5
Cross-sections included: 7
Total pool (balanced) observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	890817.7	644436.4	1.382321	0.1768
X1?	-74173.23	73495.12	-1.009227	0.3207
X2?	0.059260	0.145662	0.406830	0.6869
X3?	-0.213945	0.203127	-1.053258	0.3004

R-squared	0.070078	Mean dependent var	376564.4
Adjusted R-squared	-0.019915	S.D. dependent var	460985.1
S.E. of regression	465552.7	Akaike info criterion	29.04705
Sum squared resid	6.72E+12	Schwarz criterion	29.22480
Log likelihood	-504.3234	Hannan-Quinn criter.	29.10841
F-statistic	0.778705	Durbin-Watson stat	0.664998
Prob(F-statistic)	0.514842		

4.2.2 Fixed Effect Result

There are different effects between individuals, namely the assumption of *Fixed Effect Model.* The difference in the intercept can be accommodated through the differences. Thus, by using the technique of dummy variables, the unknown parameter could be estimated.

Table 4.3

Fixed Effect

Dependent Variable: Y?
Method: Pooled Least Squares
Date: 03/07/18 Time: 01:34
Sample: 2011 2015
Included observations: 5
Cross-sections included: 7
Total pool (balanced) observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2171565.	1003154.	-2.164737	0.0402
X1?	334126.6	70078.09	4.767918	0.0001
X2?	0.355384	0.098040	3.624887	0.0013
X3?	-0.412517	1.146759	-0.359725	0.7221
Fixed Effects (Cross)				
_LEBAK--C	176510.4			
_TANGERANG--C	583321.7			
_SERANG--C	349840.9			

_TANGERANGCITY--C	-77826.64
_CILEGONCITY--C	721165.0
_SERANGCITY--C	-738189.1
_TANGSELCITY--C	-1014822.

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.867513	Mean dependent var	376564.4
Adjusted R-squared	0.819818	S.D. dependent var	460985.1
S.E. of regression	195678.1	Akaike info criterion	27.44129
Sum squared resid	9.57E+11	Schwarz criterion	27.88567
Log likelihood	-470.2225	Hannan-Quinn criter.	27.59469
F-statistic	18.18871	Durbin-Watson stat	2.553300
Prob(F-statistic)	0.000000		

4.2.3 Random Effect Result

Variation of generalized least squares estimation is called Random Effect Model (REM). Generalized least squares method is another name for the method of fixed effect and random effect. The estimation of the panel data with the *fixed effects* by the dummy variable technique shows the uncertain model used. To solve this problem, it uses residual variable known as *random effect.*

Table 4.4

Random Effect

Dependent Variable: Y?
Method: Pooled EGLS (Cross-section random effects)
Date: 03/07/18 Time: 01:37
Sample: 2011 2015
Included observations: 5
Cross-sections included: 7
Total pool (balanced) observations: 35
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1486733.	596986.4	-2.490398	0.0183
X1?	233905.1	61892.40	3.779222	0.0007
X2?	0.245897	0.089323	2.752896	0.0098
X3?	-0.163159	0.326443	-0.499809	0.6207
Random Effects (Cross)				
_LEBAK—C	68490.71			
_TANGERANG—C	342689.0			
_SERANG—C	261782.5			
_TANGERANGCITY—C	-140304.8			
_CILEGONCITY—C	768299.2			
_SERANGCITY—C	-538642.5			
_TANGSELCITY—C	-762314.1			

Effects Specification	S.D.	Rho
Cross-section random	341038.4	0.7523
Idiosyncratic random	195678.1	0.2477

Weighted Statistics

R-squared	0.258969	Mean dependent var	93593.73
Adjusted R-squared	0.187256	S.D. dependent var	254257.1
S.E. of regression	229218.6	Sum squared resid	1.63E+12
F-statistic	3.611202	Durbin-Watson stat	1.482307
Prob(F-statistic)	0.024030		

Unweighted Statistics

R-squared	-0.458581	Mean dependent var	376564.4
Sum squared resid	1.05E+13	Durbin-Watson stat	0.229095

4.2.4 Chow Test and Hausman Test Result

The kind of estimation model that used for this research analysis are based on two tests, they are Chow test and Hausman test. Chow test is used to decide the best model between common effect model and fixed effect model, while Hausman test is used to decide the best model between fixed effect model and random effect

model. The result of *Chow Test* and *Hausman Test* calculation using Eviews are concluded as follow.

Table 4.5

Chow test

Redundant Fixed Effects Tests
Pool: THESIS
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	25.079143	(6,25)	0.0000
Cross-section Chi-square	68.201698	6	0.0000

Source : Eviews 9.0

The result of the *Chow test* obtained the probability value is 0.0000 or smaller than $\alpha = 0.05$, it means H_0 is rejected. If H_0 is rejected so Fixed Effect Model is better than Common Effect model.

To identify the suitable model estimation for the research, it can continue with *Haussmann test*. In the *Hausman test* result, If the value of probability is smaller than the Hausman statistics value, then the null hypothesis will be rejected, it means that exact estimation for regression data panel fixed effects model is better compared to the random effects model. the decision in rejecting H_0 is carried out by comparing it with Chi square. If the value is <0.05 then H_0 is rejected so the models used are the fixed effects, conversely, if the rejection of H_0 is not significant or do not reject H_0 then model that used was random effect.

Table 4.6

Hausman Test

Correlated Random Effects - Hausman Test
Pool: THESIS
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.537981	3	0.0023

Source : Eviews 9.0

Based on table 4.6 showed the value of probability on a cross section random effect test shows the number of probability is 0.0023. It means the Hausman test accept H1 or p value < 0,05 then the preferred method being used is *fixed effect model.*

Table 4.7

Cross Effect

Regencies	Ci	C+Ci
_LEBAK—C	176510.4	-1995054.6
_TANGERANG--C	583321.7	-1588243,3
_SERANG--C	349840.9	-1821724.1
_TANGERANGCITY—C	-77826.64	-2249391,6
_CILEGONCITY--C	721165.0	-1450400
_SERANGCITY--C	-738189.1	-2909754,1
_TANGSELCITY--C	-1014822.	-3186387

Based on table 4.7 the result of cross effect from fixed effect model shows that Cilegon city has the highest value among others by -1450400 and the lowest value is Tangsel city by -3186387. It means the value of Y (FDI) in Cilegon city is decreased 1,450,400 thousand U.S Dollars when X1, X2 and X3 are zero, and

the value of Y (FDI) in Tangsel city is decreased 3,186,387 thousand U.S Dollars when X1, X2 and X3 are zero.

4.3 Hypothesis Testing

From the regression of *Common Effect, Fixed Effect* and *Random Effect* , the researcher found the most suitable model to analyze this research is used *fixed effect model,* (Table 4.3). The hypothesis testing of *fixed effect model* can be seen below.

4.3.1 T-test

The hypothesis presented in this test is the respective coefficients of the equation, that is zero or $\beta i = 0$. it means that there is no influence of independent variable toward dependent variable. Whereas the alternative hypothesis is $\beta i \neq 0$, which means there are influences from each of the independent variable to dependent variable. This testing is done by comparing the t-test and t-critical or by looking at the value of the probability of t-test. If the value t test > t critical or if the value of the probability $t < \alpha = 0.05$ then H_0 will be rejected, so the conclusion is independent variables partially significantly affect the dependent variable.

H_0 : partially independent variable has no effect toward dependent variable.

H_1 : partially independent variable has effect toward dependent variable.

The t-test results can be seen in table 4.3. If the value of prob. T-statistic (shown in Prob.) is smaller than the error rate a= 0.05 then it can be said that the independent variables affect significantly to dependent variable, while when the value of the prob. t statistic is greater than 0.05 error rate then it can be said that the independent variables do not affect significantly to the dependent variable.

The conclusion of t-test results is:

a. t-statistic test on economic growth use the hypothesis

H_0: $\beta 1 \leq 0$

H_1: $\beta 1 > 0$

Economic growth (X1) has the probability result 0.0001 or less than α 5%; it rejects H_0, which means that it has a significant effect. Therefore, the economic growth significantly had positive influence toward Foreign Direct Investment in Banten Province 2011-2015.

b. t-statistic test on Regional Minimum Wage (W), use the hypothesis

H_0: $\beta 2 \leq 0$

H_1: $\beta 2 > 0$

Regional Minimum Wage (X2) has the probability result 0.0013 or less than α 5%; it rejects H_0, which means that it has a significant effect. Therefore, the Regional Minimum Wage significantly had positive influence toward Foreign Direct Investment in Banten Province 2011-2015.

c. t-statistic test on Labor force (L), use the hypothesis

H_0: $\beta 3 \leq 0$

H_1: $\beta 3 > 0$

Labor Force (X3) has the probability result 0.7221 or more than α 5%; it does not reject H_0 which means there is no significant effect. Therefore, the labor force has no significant effect toward foreign direct investment in Banten Province 2011-2015.

4.3.2 Coefficient Determination R^2

Coefficient determination (R^2) is to see the level of appropriateness or suitability of the estimation model that is formed (goodness of fit). That is done by looking at the value of R^2 in the model. Table 4.3 showed coefficients determination (R^2) generated by the model is 0.867513, this figure means variable FDI is explained by variable Economic growth (X1), Regional Minimum Wage (X2) and Labor Force (X3) number by 86,75 % and the residual 13,25 % described by the other variables outside the model.

4.3.3 F-test

F test describes the evaluation of the simultaneous effect of independent variables on dependent variable. In the other words, F test is a test to evaluate how the influence of all independent variables together against the dependent variable (significant or not significant). The result from the multiple linear regression estimation value or probability of f-statistic in the number of 0.000000 in α 5%, it is found rejects H_0. It means that the Economic growth, Regional minimum wage and Labor force number simultaneously have significant effects toward the Foreign Direct Investment in Banten Province 2011-2015

Therefore, it can be concluded that the best regression equation model are as follows:

$FDI_{it} = -2171565. + 334126.6\ EG_{it} + 0.355384\ RMW_{it} - 0.412517\ L_{it} + e_{it}$

FD1 : Foreign Direct Investment

EG : Economic Growth

RMW : Regional Minimum Wage

L : Labor Force

i : Regions of Banten province

t : Series 2011-2015

e_{it} : Error term

4.4 Discussion

a. Economic Growth

Based on regression data panel model, the probability of economic growth is 0.0001, it is smaller than 5%, then economic growth is significantly affecting the number of FDI in Banten Province. The regression estimation panel data model obtained the coefficient of economic growth is 334126.6. It means, increasing 1 percent of economic growth will increase 334,126.6 thousand U.S Dollars in foreign direct investment. In other word, economic growth and FDI of Banten province significantly had positive relationship.

This result has similarity with the first hypothesis that assume economic growth significantly had positive influenced toward FDI, because when society have high income, it will increase the demand for goods and services, so the company will get high profits and it will encourage investor to invest more in that area.

b. RMW (Regional Minimum Wage)

According to the data obtained, the result of probability value of regional minimum wage is 0.0013, it is smaller than 5%. It means regional minimum wage significantly had influenced toward FDI in Banten province by significant level under 5%. The regression estimation panel data model obtained the coefficient of

regional minimum wage is 0.355384, it means that increasing in 1 IDR of regional minimum wage will increase 355.38 USD of FDI in Banten province. In other words, regional minimum wage and foreign direct investment of Banten province had significant and positive relationship.

This result had no similarity with the first hypothesis that assume regional minimum wage significantly had negative influenced toward FDI in Banten province. This result could be occured because regional minimum wage is the wage that stated by the regional government in order to protect the labors and improving the labor's welfare, when minimum wage is increasing, it will increase the labor productivity, high productivity will produce more goods and services and it will increase the companies income, then the investors more interested to invest in that company surrounding area, it happened as long as the wages are still in the balance of production. Thus, regional minimum wage significantly had relationship with foreign direct investment.

This result is supported by Hoang and Bui (2015) in a research entitled *"Determinants of foreign direct investment in ASEAN: A panel approach"* stated that labor productivity are the main factors that have positive impacts on FDI inflows, surprisingly, the cheap labor does not help to attract FDI to the region, because foreign investors are particularly interested in labor productivity.

c. Labor Force

The panel data regression showed that labor force had no impact to FDI in Banten province with the value of probability is 0.7221, it is greater than 5%. It means, the total number of labor force do not affect the number of FDI in Banten

province. Based on the result shown that labor force is not factor in determining foreign direct investment in Banten province, it happens because the condition of investment in Banten is dominated by industrial factors which is focus on capital investment rather than human capital.

This result is supported by the statement of Anzar (2016) in Kusumawardhani (2016) stated that investment in Banten province is dominated by basic chemical industries, metals and energy that include to the capital intensive sector, so increasing the investment in the province has no direct impact on labor force. In capital-intensive sector which is needed and required is skilled labor, and it cannot be fulfilled by educational institutions and other relevant institutions in Banten. Therefore, the company in capital intensive sector hired the skilled labor from other provinces so the local employment is declining.

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Based on the empirical results and discussion of determinant of foreign direct investment in Banten province from 2011-2015, it can be summed up as follows:

1. Factors that significantly influence foreign direct investment (FDI) of Banten province in 2011-2015 are economic growth and regional minimum wage (RMW).
2. Economic growth had positive impact toward FDI, then increasing in economic growth would have an effect on the increasing in the number of FDI of Banten province in 2011-2015.
3. Regional minimum wage had positive impact toward FDI, then Increasing in regional minimum wage would have an effect on the increasing in the number of FDI of Banten province in 2011-2015.
4. Labor force has no significant impact towards FDI of Banten province in 2011-2015.

5.2 Recommendations

Based on the conclusions of the results study, some recommendation given are as follows:

1. Economic growth is the most influential variable toward FDI among other variables and it has essential effect on determinant of foreign direct investment. Therefore, Banten government should maintain it. Because increasing economic growth in the regions can describe the demand condition of goods and services in that area, and also can describe the ability of that regions to manage its natural resource, so it will invite the investors to invest in Banten Province..
2. Regional Minimum wage is the variable that significantly gave positive impact to foreign direct investment. It means that minimum wage is important factors that should maintain by Banten government, because wage is one of the driving factor for improving work productivity. Labor productivity will play an important role in the development of investment, especially the industrial sector.
3. Labor force is the variable that gives no significant impact to foreign direct investment, therefore, Banten government should have the policy to improve the skilled labor in Banten Province, by knowing the factors that significantly influence the foreign direct investment in Banten province, then government should prioritize those sectors to maximize the realization of FDI without ignoring the other sectors.

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Appendix 1

Data of FDI, Economic Growth, Regional Minimum Wage and Labor Force per Region in Banten Province 2011-2015

NO	REGENCIES	YEAR	FDI (Y) (Thousand US $)	ECONOMIC GROWTH (X1) (%)	RMW (X2) Rp.	LABOR FORCE (Person) (X3)
1	Lebak	2011	10,352.6	5.99	1,007,500	549,378
2	Lebak	2012	28,509.4	5.11	1,047,800	558,752
3	Lebak	2013	146,965.5	6.29	1,187,500	564,968
4	Lebak	2014	266,463.4	5.83	1,490,000	614,548
5	Lebak	2015	393,265.9	5.80	1,728,000	560,384
6	Tangerang	2011	420,523.8	6.75	1,285,000	1,416,780
7	Tangerang	2012	633,547.4	6.17	1,527,000	1,328,081
8	Tangerang	2013	726,460.3	6.40	2,200,000	1,455,935
9	Tangerang	2014	460,143.8	5.37	2,442,000	1,467,353
10	Tangerang	2015	508,607.1	5.35	2,710,000	1,513,501
11	Serang	2011	347,530.8	6.10	1,189,600	657,679
12	Serang	2012	246,897.9	5.41	1,320,500	669,029
13	Serang	2013	544,516.5	6.04	2,080,000	589,320
14	Serang	2014	603,050.3	5.39	2,340,000	622,428
15	Serang	2015	614,802.9	5.02	2,700,000	620,527
16	Tangerang City	2011	186,474.1	7.38	1,290,000	945,334
17	Tangerang City	2012	198,952.6	7.07	1,527,000	916,226
18	Tangerang City	2013	193,255.3	6.52	2,203,000	986,487
19	Tangerang City	2014	170,754.7	5.15	2,444,301	1,001,174
20	Tangerang City	2015	153,263.5	5.37	2,730,000	992,091
21	Cilegon City	2011	1,167,797.6	6.62	1,224,000	185,874
22	Cilegon City	2012	1,583,416.3	7.70	1,347,000	180,030
23	Cilegon City	2013	2,069,485.8	6.69	2,200,000	170,476
24	Cilegon City	2014	522,924.8	4.62	2,443,000	185,307
25	Cilegon City	2015	733,394.8	4.77	2,760,590	186,664
26	Serang City	2011	30,083.3	8.33	1,156,000	274,594
27	Serang City	2012	14,087.8	7.42	1,231,000	263,206
28	Serang City	2013	7,273.7	7.30	1,798,446	265,523
29	Serang City	2014	2,770.5	6.85	2,166,000	273,412
30	Serang City	2015	34,074.2	6.29	2,375,000	284,893
31	Tangsel City	2011	4,296	8.81	1,290,000	667,098
32	Tangsel City	2012	10,852.3	8.66	1,527,000	638,659
33	Tangsel City	2013	32,253.2	8.75	2,200,000	650,259
34	Tangsel City	2014	8,519.6	8.05	2,442,000	705,321
35	Tangsel City	2015	104,187.6	7.20	2,710,000	685,752

Note :
*Tangsel City: South Tangerang City
* Banten province consists of eight districts, however because of uncomplete data of realization FDI (as dependent variable) In Pandeglang regency, then the dependent and independent variable only taken from three regencies and four cities.

Appendix 2

Result of Data Panel Test Using Eviews 9.0

Common Effect Model

Dependent Variable: Y?
Method: Pooled Least Squares
Date: 03/07/18 Time: 01:30
Sample: 2011 2015
Included observations: 5
Cross-sections included: 7
Total pool (balanced) observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	890817.7	644436.4	1.382321	0.1768
X1?	-74173.23	73495.12	-1.009227	0.3207
X2?	0.059260	0.145662	0.406830	0.6869
X3?	-0.213945	0.203127	-1.053258	0.3004

R-squared	0.070078	Mean dependent var	376564.4
Adjusted R-squared	-0.019915	S.D. dependent var	460985.1
S.E. of regression	465552.7	Akaike info criterion	29.04705
Sum squared resid	6.72E+12	Schwarz criterion	29.22480
Log likelihood	-504.3234	Hannan-Quinn criter.	29.10841
F-statistic	0.778705	Durbin-Watson stat	0.664998
Prob(F-statistic)	0.514842		

Fixed Effect Model

Dependent Variable: Y?
Method: Pooled Least Squares
Date: 03/07/18 Time: 01:34
Sample: 2011 2015
Included observations: 5
Cross-sections included: 7
Total pool (balanced) observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2171565.	1003154.	-2.164737	0.0402
X1?	334126.6	70078.09	4.767918	0.0001
X2?	0.355384	0.098040	3.624887	0.0013
X3?	-0.412517	1.146759	-0.359725	0.7221
Fixed Effects (Cross)				
_LEBAK--C	176510.4			
_TANGERANG--C	583321.7			
_SERANG--C	349840.9			
_TANGERANGCITY--C	-77826.64			
_CILEGONCITY--C	721165.0			
_SERANGCITY--C	-738189.1			
_TANGSELCITY--C	-1014822.			

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.867513	Mean dependent var	376564.4
Adjusted R-squared	0.819818	S.D. dependent var	460985.1
S.E. of regression	195678.1	Akaike info criterion	27.44129
Sum squared resid	9.57E+11	Schwarz criterion	27.88567
Log likelihood	-470.2225	Hannan-Quinn criter.	27.59469
F-statistic	18.18871	Durbin-Watson stat	2.553300
Prob(F-statistic)	0.000000		

Random Effect Model

Dependent Variable: Y?
Method: Pooled EGLS (Cross-section random effects)
Date: 03/07/18 Time: 01:37
Sample: 2011 2015
Included observations: 5
Cross-sections included: 7
Total pool (balanced) observations: 35
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1486733.	596986.4	-2.490398	0.0183
X1?	233905.1	61892.40	3.779222	0.0007
X2?	0.245897	0.089323	2.752896	0.0098
X3?	-0.163159	0.326443	-0.499809	0.6207
Random Effects (Cross)				
_LEBAK--C	68490.71			
_TANGERANG--C	342689.0			
_SERANG--C	261782.5			
_TANGERANGCITY--C	-140304.8			
_CILEGONCITY--C	768299.2			
_SERANGCITY--C	-538642.5			
_TANGSELCITY--C	-762314.1			

Effects Specification	S.D.	Rho
Cross-section random	341038.4	0.7523
Idiosyncratic random	195678.1	0.2477

Weighted Statistics

R-squared	0.258969	Mean dependent var	93593.73
Adjusted R-squared	0.187256	S.D. dependent var	254257.1
S.E. of regression	229218.6	Sum squared resid	1.63E+12
F-statistic	3.611202	Durbin-Watson stat	1.482307
Prob(F-statistic)	0.024030		

Unweighted Statistics

R-squared	-0.458581	Mean dependent var	376564.4
Sum squared resid	1.05E+13	Durbin-Watson stat	0.229095

Chow Test

Redundant Fixed Effects Tests

Pool: THESIS

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	25.079143	(6,25)	0.0000
Cross-section Chi-square	68.201698	6	0.0000

Hausman Test

Correlated Random Effects - Hausman Test

Pool: THESIS

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.537981	3	0.0023